

# **AN APPROACH TO INDUSTRIAL POLICY FOR JAMAICA**

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# AN APPROACH TO INDUSTRIAL POLICY FOR JAMAICA

## Executive Summary

1. Industrial policy is about investment and growth in the productive sectors of the economy. It is only through such growth that we can hope to be able to provide a sustainable basis for dealing with the deep problems of unemployment and poverty in our society.
2. In Jamaica, growth essentially means exports, because of (a) the direct contribution of exports to GDP (80% recent estimate), and (b) spillovers to the rest of the economy.
3. The basic issue in industrial policy, then is: how best to create the appropriate conditions that are necessary to promote continued expansion of exports through growth of existing lines of production of tradeable goods and services and diversification into new lines. The strategic goal of the policy is export push.
4. In the contemporary world economic environment, a strategy of export push requires facing up to competitive pressures that have intensified in recent years, creating serious challenges and threats for Jamaica as well as opportunities and advantages. This situation poses the necessity for a creative response to seize hold of the opportunities and meet head-on the challenges.
5. Industrial policy is the response to this challenge. Other countries are doing it and we are behind in this respect. Any country that is unprepared for organizing an adequate response is likely to be outmaneuvered and left in the lurch.
6. The central focus of industrial policy is on the national effort to build and sustain competitive advantage, i.e. the ability to compete across many dimensions of the product: price, quality, design, packaging, delivery time, range and variety of products, innovation in new products. Competitive advantage is rooted in a dynamic and flexible structure of production. It rests on identifiable capabilities at the level of the firm, at the industry level, and in the social environment.
7. The core of the process of building competitive advantage is investment. This concerns investment by firms in replacing depreciated equipment, expanding and upgrading production facilities, in research and development, and in marketing and distribution. It concerns also investment by the state, in infrastructure and in human resources.
8. Since most investment is driven by profitability, the focus of industrial policy is ultimately centered on the conditions which govern profitability, i.e. the cost, risk, and return involved in undertaking investment. Industrial policy seeks to create conditions which serve to reduce cost and risk and raise the expected relative return on investment in production of tradeable goods and services.

9. Investment by firms and expenditure by the state (on both current and capital account) are necessarily interlinked (e.g. through provision of infrastructure, education and training, information services, government contracts). The linkages are a key factor in determining profitability of investment. Industrial policy seeks to exploit these linkages by selective interventions and targeted allocations of taxes and expenditure so as to build up the base of competitive advantage for the national economy.

10. Determining the specific component strategies to be pursued by industrial policy requires careful detailed analysis of the specific strengths and weaknesses of the different productive sectors in terms of their capacity to mount competitive strategies for export expansion and diversification.

11. This analysis is now being done, by a team of consultants appointed by the Planning Institute of Jamaica, for targeted sectors of the Jamaican economy. The analysis has so far revealed the following:

- (a) There are definite centers of dynamism and areas of weakness, identified on the basis of market performance in penetrating export markets and other quantitative and qualitative factors.
- (b) There are general factors affecting performance that cut across all the sectors and feed directly into the crucial variables of cost, risk, and return on investment. These factors are located both in the operating environment of the firms and in their internal conditions of production, organization, decision-making, and control.
- (c) There are striking differences among firms within a sector and across sectors, in terms of their production conditions, organizational competence, and managerial dynamism and, hence, in their capacity to mount a competitive strategy to deal with international competition.

12. On the basis of the analysis done to date, it is recommended that the industrial policy be based on selective interventions and targeted allocations centered around the following four component strategies (the 4 i's) as cornerstones of the policy:

- (1) specific infrastructural investments which reduce costs allround in the economy and establish, thereby, a level playing field for all firms, while reaping the benefit of linkages across sectors which such investments generate. Specific targets of the policy would be: (i) energy (ii) transportation (iii) roads and rail, and (iv) water, irrigation, and sewage.
- (2) development of information technology as a key strategic sector, not only for the export products that this is capable of yielding directly, but because it is a necessary foundation for upgrading production methods in all sectors, for accessing vast new opportunities offered by the information superhighway, and for improving the level of skill and efficiency of the labor force. Policies for human resource development at all levels, for promoting R&D, and

for Science and Technology, would be centered around the creative use of IT hardware and software.

- (3) re-orientation of the system of incentives to meet two essential conditions: (a) a strictly performance-based system geared to simple, uniform, transparent, and measurable criteria linked to export value and national value-added, (b) shifting the focus from fiscal incentives to a system of supply- and production-oriented incentives.
- (4) investment packaging of targeted projects in particular sectors, based on continuous collection and analysis of up-to-date information on local and global trends, coordination of relevant inputs from key state-agencies (JAMPRO, SRC, UDC, NDB, NIBJ, etc.), consultations and team-work with key actors in the private sector, and promotion of joint ventures and strategic alliances with international firms. Specific targets of opportunity have been identified so far in: agro-processing, industrial minerals, manufacture, and services. Others will emerge from further work.

13. There is a need also for integration and coordination among different policies currently being developed, or already in motion, so as to ensure consistency, effectiveness, and economy of effort. Among such policies are: Land and Environment Policy, Energy Policy, Transportation Policy, Science and Technology Policy, Human Resource Development Policy, Financial Policy, Labor Market Policy, International Policy. All of them need to be brought within a framework of coordination and integration that links them directly to Industrial Policy as the central element of the overall policy-mix.

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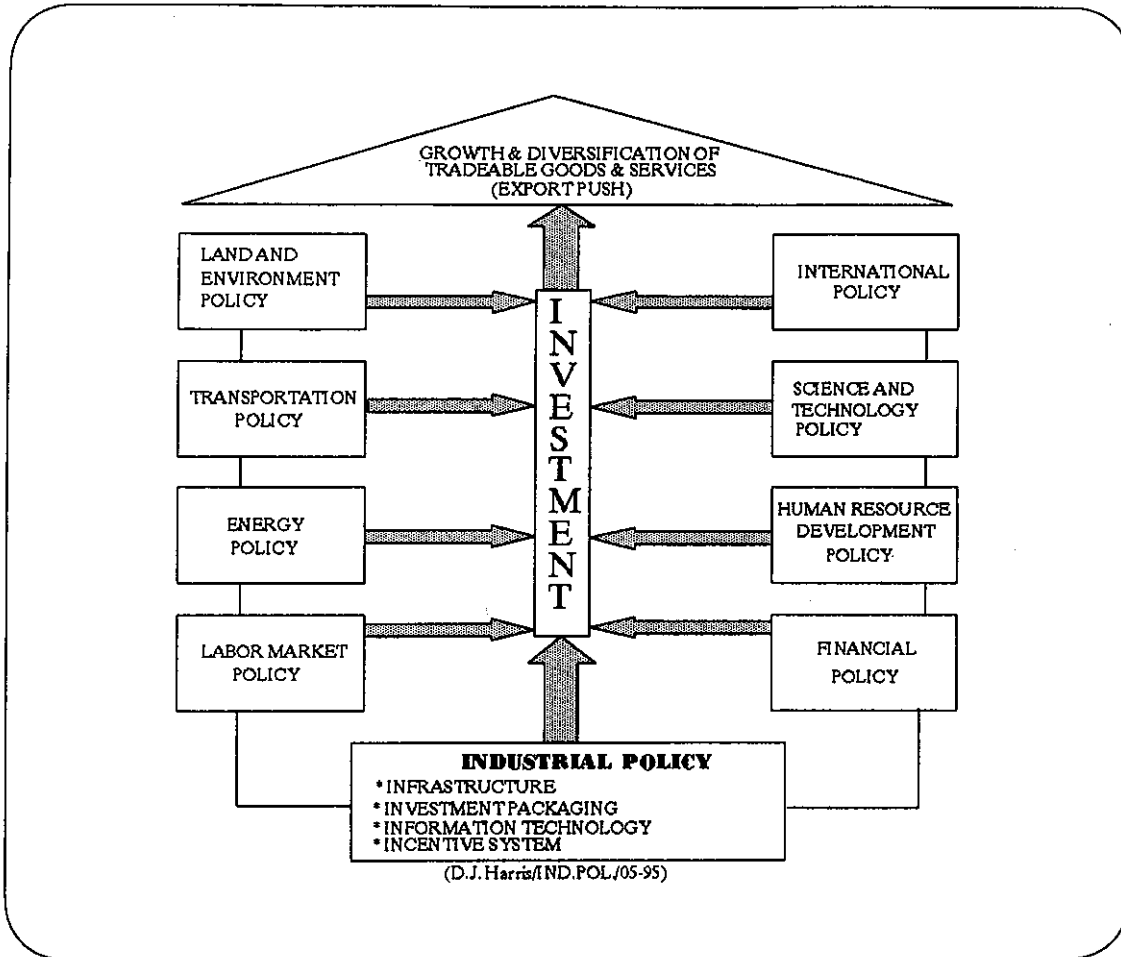


Figure 1. POLICY INTEGRATION FOR BUILDING COMPETITIVE ADVANTAGE

## CHAPTER 1

### INDUSTRIAL POLICY: GOALS, RATIONALE, ISSUES

#### 1.1 The Policy Goal

The singularly most important and crucial goal of industrial policy for Jamaica can be expressed in three simple words. It is: export, export, export!

Exports of goods and services currently constitute about 80 percent of Gross Domestic Product. This is therefore the primary source, directly and indirectly, of income and employment for the people of Jamaica. It is the chief source of the foreign exchange needed to acquire the imports from the rest of the world that are a necessary input to both consumption and production. It is also the locus of the main dynamic of growth and development in the economy. Given the small size of the domestic market, there is no alternative avenue for growth other than through exports.

The basic issue in industrial policy, then, is: how best to create the appropriate conditions that are necessary to promote the continued expansion of exports through growth of existing lines of production of tradeable goods and services and diversification into new lines.<sup>1</sup>

The concern for exports does not entail either neglect or exclusion of possibilities for efficient import substitution. Wherever such possibilities exist, they should of course be encouraged. They can make a definite contribution on the foreign exchange side, through saving of foreign exchange, and on the employment side, as well as in reducing the cost of inputs to exporters.

The point is, however, that, in the contemporary context of a liberalized economy, import

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<sup>1</sup> The strategy of "export push" that this policy-approach entails, has been subjected to two basic and general criticisms that can be readily dismissed. One is that, if all developing countries pursue this strategy, the world market is not big enough to absorb the implied increase in the overall level of exports. The fact is that, even with rapid growth, developing countries' exports would still remain a very small share of total world consumption. In terms of manufactures, it is estimated that their share of consumption in the European Community, North America, and Japan would have grown from 2.4 percent in 1980 to just 3.7 percent in 1988 if all developing countries' exports had grown as fast as those from S. Korea during this period (see World Bank, 1992). In Jamaica's case, of course, since exports are a miniscule share of the world market (merchandise exports were on average 0.14 percent of total OECD imports in 1991-1993), this criticism seems irrelevant. In any case, for any one country, if all others are doing it, there is no alternative but to do it too. The other criticism, that advanced countries are likely to engage in defensive reaction, seems irrelevant also in the particular case of Jamaica as a very small exporter. Insofar as there is a tendency to defensive reaction, that puts a premium on strategic bargaining which places a small country at a disadvantage. This, in turn, points to the need to develop a dynamic and flexible trade policy oriented to making strategic alliances to counter or neutralise the reaction.

For a review of various strands of the argument supporting the strategy of export push and indications of an emerging new synthesis, see Bradford (1994a, 1994b).

substitution must be founded on competitiveness based on productive efficiency in relation to prevailing standards in the international market-place. Furthermore, insofar as import substitution is efficient in this sense, it may become possible to mount on this basis a platform for successful export growth. Therefore, in both cases of export expansion and import substitution, the imperative of meeting the challenge of world-market conditions remains paramount. And there is no necessary contradiction, but rather mutual compatibility, between them.

Thus, the key concern of industrial policy turns uniquely on the effort to build and sustain competitiveness in relation to the international market-place.

International competitiveness, or competitive advantage, in this context, relates to the ability to compete across many different dimensions of the product: price, quality, design, packaging, delivery time, range and variety of products, innovation in new products. It is rooted in a flexible and dynamic structure of production that produces a changing mix of goods and services which can win for themselves a place ("niche") in the international market in competition against rivals. In this respect, competitive advantage is not a matter of a fixed production structure predetermined by a given and unchanging set of endowments. It is a matter of a constantly evolving structure of production, carved out of inherited initial conditions and incremental adjustments, utilising ongoing developments in science and technology and the learning that comes from education, training, and experience of the work force.

Competitive advantage, in this sense, does not simply exist. It has to be created.

At the core of the process of creating or building competitive advantage is capital formation or investment. This concerns investment by firms, in replacing depreciated equipment, in expanding production facilities, in modernising production with new technologies, in research and development as related to innovation in production processes and new products, and in marketing and distribution. It concerns also investment by the state, in infrastructure and in human resources.

Since most investment is driven by profitability, certainly investment by firms, and perhaps also by the state in some larger sense of profitability (i.e. social rate of return), the profitability of investment is a key feature of the process. It follows that the focus of industrial policy is ultimately centered on the conditions which govern profitability, i.e. the cost, risk, and return involved in undertaking investment. Industrial policy seeks to create conditions which serve to reduce cost and risk and raise the expected (relative) rate of return on investment in the productive sectors that produce tradeable goods and services.

Investment by firms and expenditure by the state (on both current and capital account) are necessarily interlinked (e.g. through provision of infrastructure, education and training, information services, government contracts). These linkages are a key factor in determining profitability of investment. Industrial policy seeks to exploit these linkages by selective interventions and targeted allocations of taxes and expenditure so as to build up the base of competitive advantage for the national economy.

## 1.2 The Competitive Challenge

Competitive advantage relates to the conditions of competition at the level of the world economy.

Far-reaching transformations are currently taking place in the world economy such as to alter fundamentally the conditions of competition. All countries participating in this economic arena, big and small, strong and weak, face the imperative of adjustment to these transformations. Each must strive, in its own way, to utilize all available mechanisms, means, and resources, to adapt to the changing circumstances in order to keep up with or ahead of the competition, or else lose out in the competitive race.

The competitive challenge facing Jamaica at this time comes from many sources:

- \* First is the global tendency to reduction of trade barriers, emerging out of the Uruguay round of GATT, culminating in the formation of WTO, and continuing to occur in various ways even now as nations accommodate to the pressures of the movement for free trade.

- \* On the other side, there is the dual tendency to formation of regional trade blocs, such as NAFTA, that devise complex protective measures for members and pose threats to the competitive position of non-members.

- \* At the same time, traditional patterns of preferential treatment in trade and aid under the Lome agreement between Europe and its former colonial states such as Jamaica are scheduled for gradual elimination.

- \* Dramatic political changes in Eastern Europe and China have thrust into the arena of competition many countries and producers that were previously out of the race.

- \* The technological requirements of competition are undergoing rapid change with new innovations in the technologies of production, transportation, communication, and information processing.

- \* Global financial systems are being restructured, with associated changes in mechanisms of finance, access to investment financing, and patterns of international mobility of capital.

- \* Transnational forms of corporate organization have adapted to these changes by strengthening and deepening their global reach so as to bring them into direct competition (and cooperation) with national firms.

For Jamaica, there are challenges and threats as well as opportunities and advantages in these developments. The key point is that this situation poses the necessity for a creative response to seize hold of the opportunities and meet head-on the challenges.

An essential feature of the situation is that Jamaica is placed in the position of being a "latecomer", coming from far behind not only the advanced industrial countries but also others (the so-called newly industrialized countries or NICs) that have forged ahead in the past 25 years, in terms of levels of income, consumption, productivity, technology, and diversification of the production base. The challenge, then, is to struggle to catch up while, in the meantime, the rest of the world is not standing still and some countries are rapidly moving ahead.

Comparative analysis of Jamaica's competitive performance (presented below in the form of a competitive matrix) provides a useful and relevant measure of the gap between Jamaica and other countries and regional groupings. The gap is measured in dynamic terms, by the difference in competitive performance as represented by the share in exports of products with increasing market share in OECD markets relative to products with decreasing market share during the period 1980-1992. This is an objective, performance-based measure, related to a crucial characteristic of performance from the standpoint of international competitiveness, namely, the capacity to penetrate export markets. On this measure, it turns out that Jamaica, even though gaining from increased market penetration, is still far behind other countries that made even larger gains during the same period. This gives new meaning to the old idea that a country has to run fast just to stay in the same place. Of course, it has to run even faster if it is to be able to catch up.

In this respect, Jamaica's position is not unique; it is like that of many other similarly placed countries today. However, taking the long-term viewpoint, there are many historical antecedents of countries in a similar position that were able to catch up (relatively speaking), for instance, Germany, France, and the USA in relation to Britain in the nineteenth century, Japan and the Asian Tigers in relation to all of Europe and North America in the twentieth century (see Maddison, 1991). There are useful lessons to be learned from these antecedents (see, for instance, Abramovitz, 1986; Gereffi & Wyman, 1990; Harris, 1995b). But every country has to try to find its own creative solutions, using whatever means are available to it, and appropriate to the times and conditions in which it operates.

### 1.3 Competitive Strategy for a Small Country

In principle, the competitive rivals of Jamaica, defined from the standpoint of the current market situation, are the whole world of producers who currently produce the same (or related) products as Jamaica currently exports.

But, taking a more dynamic view, competition must be seen in terms of the attractiveness of a country for new investment in both current and potential new product lines. From this standpoint, given the international mobility of capital, and allowing for differences in transportation costs, Jamaica's competitive rivals are the whole world.

In this context, competitive strategy for a small country may appear overwhelming, because of the size of the "world out there" and the edge that others have. The way out of this

dilemma is to choose the right competitive strategy. This requires a sharp focus on exploiting the specific advantages that give the country an edge (natural resources, human-resource specialties and talents, cultural products, geographical location, etc.) and on creating niches by a strategy of product differentiation (in terms of quality, "name recognition", "image", etc.).

Size, as such, is not an inherent disadvantage when the whole world is the market, not just the domestic market. It can be a distinct advantage, because winning a small share of the world market makes a big difference without "spoiling" the market. Focusing on the domestic market alone, while it may offer the advantage of learning to cope with the market, has the disadvantage of limiting the field of competition and the ability to compete. Broadening the market to include the regional market, in the form of CARICOM or ACS, opens up a wider range of opportunities and challenges and, for that reason, can provide a stepping stone into the world market.

#### 1.4 The Challenge of Unemployment and Poverty

The other side of the challenge facing Jamaica today arises from prevailing social conditions within the country. Chronic and persistently high rates of unemployment of the labor force have existed for a long time. In addition, a high proportion of families continue to live in conditions of poverty and deprivation. For many people, living conditions have deteriorated sharply in the past 15 years or more of economic crisis, structural adjustment, and their aftermath, leading to a buildup of social tensions and pressures for change (see Boyd, 1987; Le Franc, 1994). These problems cry out for urgent solutions.

Industrial policy, by itself, cannot directly provide solutions to these problems - it is not a panacea. They require to be addressed within the broader framework of an explicitly designed and targeted social policy. If they are not dealt with, they may have serious consequences, in turn, for the ability to implement any industrial policy.

However, within the specific framework of industrial policy, there is a definite role, and potentially wide scope, to make a contribution to alleviation and relief of these problems. This arises, for instance, from the potentially large spinoffs as well as direct gains for the small-business sector (the sector of highest direct employment-generation) from growth of exports. It arises also from the direct benefits for development of entrepreneurial initiative in that sector from an industrial policy that focuses on deregulation and improving the efficiency of public agencies.

Moreover, industrial policy necessarily entails, as a cornerstone of the policy, a strategy of human resource development through education and training of the labor force. This strategy, when integrated and combined with that of export-push, has the potential of creating a "virtuous circle" of development that significantly impacts on the problems of unemployment and poverty (see Birdsall and Sabot, 1994).

Ultimately, the success of industrial policy must be measured, at least in part, by its contribution to expanding productive capacity of the economy and raising labor productivity. Success in these areas is, in turn, a necessary condition for any sustained improvement in employment and in living conditions of the people.

The challenge that industrial policy faces, therefore, is to ensure success in building up the productive base of the economy so as to provide thereby a sustainable basis on which to tackle the social problems of unemployment and poverty.<sup>2</sup>

### 1.5 The Rationale for Industrial Policy

The central focus of industrial policy for Jamaica, then, is on the national effort to build and sustain competitive advantage in order to allow for continued and accelerated growth of production of tradeable goods and services in the context of a rapidly changing and increasingly competitive world economy.

The rationale for industrial policy comes in part from the need to develop a creative response to the challenges facing the country at this critical juncture, as outlined above, in both the international arena and the domestic sphere.

The fact is also that many other countries, certainly many of Jamaica's relevant rivals, are and have been for some time engaged in developing and implementing various forms of industrial policy to advance the interests of their own national economies. In this respect, some analysts see a pattern of "corporatism" in the design of national economic policy by "developmentalist states" (Wade, 1990). Others see in the current trend towards regionalism in trade policy the coexistence of both cooperative- and non-cooperative-game strategies among national economies (de Melo & Panagariya, 1992; Primo Braga & Yeats, 1992). In this dynamic context of formation of country strategies with a dual potential for conflict and cooperation, a country that is unprepared for organizing an adequate response is likely to be outmaneuvered and left in the lurch.

The rationale for industrial policy is based, in addition, on recognition of an elementary historical generalization, namely, that market forces, by themselves, without the supportive role of the state, cannot suffice to bring about sustained development of the productive base of the economy. Policy and action by the state are needed.

The question that this raises, of course, is: what form of policy, what kind of action, and what structure of the state itself are appropriate? To this, there is no general, all-embracing answer or rule to be followed. The currently heralded experience of the East Asian NICs exhibits

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<sup>2</sup> For a relevant discussion of the complex issues involved in the relation between international competitiveness and social equity, see ECLA (1992).

a range of possible types or models, not just one. Earlier experience of the European countries offers different models. Yet other models of more recent vintage and relatively successful performance are those of Chile, Costa Rica, Mauritius, Ireland, New Zealand. Our fellow member of CARICOM, Trinidad & Tobago, as an example closer to home, is currently laying down the framework of its own approach.

As concerns the experience of Jamaica, the idea of an industrial policy is not in itself a new thing. In a broad sense, namely, as a set of policy guidelines on the economic strategy to be pursued by the country and the initiatives and practices to be carried out by various public and private agencies in pursuit of that strategy, "industrial policy" has existed in various forms throughout our history. This was as much so in the early era of sugar and slave economy as in the successive phases of the free-labor, agriculture-based, export economy, and in the more recent phase of emergence of bauxite-alumina-tourism exports accompanied by protected import-substitution in the manufacturing sector.<sup>3</sup>

It must be said, furthermore, that one constant throughout our history has been the crucial role assigned to exports in economic policy. Therefore, this feature of industrial policy, also, is not new. In a sense, our economic survival as a nation has always depended on exports. Of course, if this was so in the past, it has become much more so today. As one index of this trend, in just the past quarter-century the share of exports of goods and non-factor services in GDP has mushroomed from around 30 percent to 80 percent in 1992. This development heightens very much the significance of exports for economic policy.

What is fundamentally new is the nature of the contemporary world arena and the position that the country occupies in this arena. In this respect, the initial conditions are much different today from those prevailing in previous times. Consequently, the policy regime adopted in those times cannot be considered appropriate today.

Concretely, the policy regime prevailing up to, say, ten years ago, was grounded in a structure of trade preferences with guaranteed access to export markets (in terms of quotas and prices), widespread protection of the domestic market, restrictive regulations administered by a highly centralized bureaucracy, public ownership and operation of a wide range of economic activities.

Various elements of this structure remain till today, but the structure as a whole is now

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<sup>3</sup> In the early colonial period, existence of an economic policy in this sense was perhaps more implicit than explicit, but the clear outlines of such a policy can be drawn from close analysis of the actual policies and programs of the colonial regime. A turning point occurs with the "Moynes Commission" Report (Report of the West India Royal Commission, Cmd. 6607, H. M. S. O., 1945), after which there begins to appear a clear and explicit articulation of economic policy, incorporating elements of an industrial policy, within the broader framework of a National Plan for development. The last such Plan in this sequence is the Jamaica Five Year Development Plan 1990-1995 (PIOJ, 1990). For a description and analysis of various features of the policies involved in this long line of policy development, see Simey, 1946; World Bank, 1952; Eisner, 1961; Girvan, 1971; Jefferson, 1972; Ayub, 1981.



undergoing significant change. The change is made inevitable, in part, by the pressure of changes occurring in the world at large. It is made necessary also by the lessons of our own experience.<sup>4</sup>

Given this change, the time has come for working out a new policy approach that is consistent with new conditions. In this changed environment, what must drive the new approach and what, then, distinguishes it from all previous policy is the focus on international competitiveness as the key element of policy.

Industrial policy, in this new approach, cannot be a return to notions of centralized planning on the basis of state directed and operated "commanding heights" of the economy. It cannot be a return to restrictive policies of protectionism that reward inefficient firms and penalise consumers and to administrative controls that build an anti-export bias into the economy. It cannot be the continued operation, without modification, of fiscal and other incentive schemes that fail to ensure key performance criteria in terms of productive efficiency, export growth, and increase of national value-added.

It does require, on the other hand, continuous long-range strategic analysis and planning on the part of both state agencies and private firms as the basis for determining, in their respective spheres, policy and action oriented towards the goal of building international competitiveness. It requires concerted and joint action between the state and private sector, working in partnership to identify areas in which such action may serve that goal. It requires coordination of the activities of key state agencies to achieve consistent and effective implementation of policy. And it requires political leadership that galvanizes action in all areas related to achieving the overall goal.

These requirements evidently point in the direction of institutional reform and modernisation as a necessary condition for pursuing this approach to industrial policy.

As concerns state institutions and agencies, the need for such reform is already recognized here in Jamaica (see Nettleford Committee Report, 1992; Davis, 1995), as well as abroad (see ongoing discussions abroad on "reinventing government" and on "governance").

As concerns firms in the private-sector, the need for their modernisation must be recognised to have at least equal importance. A recent study of Jamaican firms in four leading

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<sup>4</sup> There exists, by this time, a large cumulative literature of research and analysis, by Caribbean scholars and others, that critically examines the record of economic policy and performance in Jamaica and other Caribbean countries over the past forty years or so and points to some important lessons to be learned from this experience. There is now widespread agreement that many elements of the policy regime, at both the macro- and micro-level, have had adverse consequences, especially as regards creation of a structure of dynamic firms capable of withstanding the pressures of international competition. As to what are the requirements of a new policy framework appropriate to current conditions, some recent contributions to discussion of this question are Harris (1994), Girvan, et al. (1994), Pantin (1995).

export sectors highlights some of the key problems in this area (see AED/USAID, 1994).<sup>5</sup>

It follows from the foregoing arguments, that industrial policy is not a one-time thing. It does not begin and end with "the document". Furthermore, it does not happen overnight. Rather, it is a continuous ongoing process that has its own internal dynamic and feeds on its own momentum. It also involves a necessary commitment for the long haul.

### 1.6 The Size and Scope of the Required Effort

In order to give further specificity to the industrial policy, it is useful to try to get a measure of the overall size and scope of the required national effort.

Table 1.1 gives an indication of the broad structure of Jamaican exports in recent years. During the period 1989 to 1993, traditional exports, the largest component until 1991, have gone through a cycle involving a sharp decline from the peak in 1990 back to the 1989 level in 1993. Of the other components, the two most dynamic have been tourism and non-traditional exports, followed by other services.

Now, project forward over a time frame of 10 years from the actual levels in 1993. For this purpose, assume that total exports meet the objective of growing at the same historical rate as GDP in recent years, equal to 3.5 percent per annum. Assume, also, that tourism and other services grow at the same rate as total exports. As to traditional exports, future prospects for this component evidently differ much among the various sub-sectors within it. For some sub-sectors, prospects do not seem bright on the whole, due in part to the impending removal of trade preferences and restructuring of the global market. As a worst-case-scenario, assume that total traditional exports continue to stagnate at the average level of 1989-93. Re-exports also remain at the same average level for recent years. Then, there will exist at the end of ten years an export gap, amounting to \$654.5 million, that must be filled by non-traditional exports. This means that non-traditional exports must more than double (by a factor of 2.1) in ten years, or reach a level that is just below that of total traditional exports in recent years!

To meet an export gap of this projected magnitude evidently imposes a great challenge for non-traditional exports. And yet this challenge has to be met if the modest goal of simply maintaining growth of national product at the moderate rate of recent years is to be achieved.

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<sup>5</sup> As regards modernisation of firms in the contemporary environment of world competition, a relevant concept, derived from analysis of abundant empirical data, is that of the "intelligent enterprise" (see Quinn, 1992). It is based on the idea that the source of competitive advantage at the firm level lies in focusing on the development of core competencies that allow the firm to perform up to the level of international best-practice and acquiring complementary inputs through sub-contracting networks. In this conception, creating networks of interdependent firms is a key element of building competitive advantage. On other related aspects of this problem, see Porter (1990), Best (1990).

Table 1.1  
 EXPORTS OF JAMAICA  
 (US\$millions)

	1989	1990	1991	1992	1993	2003*
<u>Merchandise Exports</u>						
Traditional	712.7	899.6	830.1	735.8	714.0	778.4
Non-Traditional	252.6	223.1	226.5	296.0	313.8	654.5
Re-exports	35.2	34.8	94.1	21.8	16.7	40.5
<u>Services</u>						
Tourism	593.0	740.0	764.0	858.0	950.8	1,341.2
Other Services	297.6	305.0	278.7	324.4	350.5	494.4
Total Exports	1,891.1	2,202.5	2,193.4	2,236.0	2,345.8	3,309.0

Sources: PIOJ, Economic and Social Survey, 1993; BOJ, Balance of Payments of Jamaica 1993;  
 IMF, International Financial Statistics, August 1994.

\*projected levels, based on minimalist approach

This projection represents a sort of bench-mark or bottom-line scenario consistent with experience of the last five years or so. Other scenarios are worth exploring. Some further exercises along this line, based on more detailed product-by-product analysis and projection of export trends, are presented in the Appendix.

In general, growth in total traditional exports would relieve the burden of adjustment on non-traditional merchandise exports to meet the stipulated target growth-rate of 3.5 percent per annum. On the other hand, this target growth-rate itself is quite modest, representing a minimalist approach. To achieve significant improvement in per capita income and employment, a higher growth-rate scenario would be required. Besides, past performance of the Jamaican economy shows that it takes a higher growth rate of exports than that of GDP to sustain any given growth rate of GDP (see Harris, 1970, 1990). Projecting forward such high-growth scenarios for total exports would, in turn, increase the burden of adjustment all round on the different components of exports. In fact, there have been episodes in the past of growth of merchandise exports in real terms at up to 9.3 percent per annum on average, for instance, during the period 1950-65. Could such a performance be replicated in the next 10 years?

This sort of exercise serves to demonstrate concretely, in accordance with specified growth targets, the magnitude of the task involved over the next decade in building the conditions for export growth in the Jamaican economy. Whatever the magnitude it involves, this is the task that has to be faced in designing an industrial policy for Jamaica.

### 1.7 The Historical Background: Some Relevant Elements of Jamaica's Experience

Useful insights into the nature of the contemporary policy problem can be gained from a review of some relevant features of Jamaica's own historical record of growth.

Analysis of the long-term pattern of Jamaica's economic growth reveals a process of growth that occurs in waves or cycles related to an evolving pattern of specialization in production for the world market (see Eisner, 1961; Girvan, 1971; Jefferson, 1972; Ayub, 1981).

Initially, specialization is founded on favourable climatic and soil conditions united with "cheap" slave-labor and oriented to production of a single dominant agricultural product, i.e. sugar, for export to a guaranteed market. This mono-crop system provides, for a time, its own wave of expansion.

Subsequently, the weight shifts to bananas, an entirely new agricultural product, introduced from external sources, and founded on the same natural-resource advantage united now with low-wage, unskilled, free-labor, while continuing to benefit from a guaranteed export market. This new product provides a new wave of expansion, complementing the movement in sugar.

The process continues with a certain limited diversification of the product mix, to include

subsidiary lines of agricultural exports: citrus, coffee, cocoa, coconut, pimento, all based on the same nexus of advantages in natural-resources, low-wage unskilled labor, and guaranteed markets.

The next big wave of expansion comes in the 1950s and 1960s with the development of a new natural-resource-based metallic-mineral industry: bauxite-alumina. This development is combined with the take-off of tourism, a predominantly service-oriented industry which also rests to a significant extent on the advantages of natural-resources and geographical location. There occurs also, in this phase, a significant growth of manufacture.

Important features of this recent phase are as follows.

\* Development of the metallic-mineral industry brings to the economic structure for the first time, a major center of production that is highly capital-intensive, science- and research-oriented, and uses high-wage, high-skill labor. But its market is still a relatively sheltered one insofar as it is structured within the branch-plant, intermediate-input and transfer-pricing operations of the vertically integrated transnational firms that own and operate production.

\* Growth of manufacture takes place mainly through import-substitution within the framework of a highly protected domestic market and specific structure of income-tax and import-duty concessions and related incentives and is mostly oriented to assembly-type activities using low-wage labor.

\* The tourist industry is the first major center of economic activity in Jamaica to have faced fully and directly the imperative of international competition in open markets and to have managed to establish successfully a firm footing on the basis of its own competitiveness, albeit while benefitting all along from a well-developed structure of nurturing and support by government.

## 1.8 Issues for Industrial Policy

Several issues emerge from this historical experience that are of direct relevance to present concerns, as regards prospective lines and directions of future development of the economy and the role of industrial policy in that development.

### 1.8.1 One Big Engine, or Many Mini-Locomotives?

The growth-dynamic revealed by analysis of Jamaica's historical experience is one of a primary wave of expansion that is driven by one or two new products and accompanied by smaller secondary waves associated with (a) multiplier effects and spillovers from the primary wave (in the areas of commercial construction, residential real estate, wholesale and retail trade, domestic manufacture, and domestic agriculture) and (b) ongoing cycles in older export products.

To some observers, the existence of this historical dynamic leads to the presumption of a need to look toward one or two major new products as the basis for creating "the next wave" of expansion. According to this view, what is needed is a new "big engine" of growth.

This inference is to some extent based on the optical illusion of limiting one's focus to the moment that an industry becomes "big", thereby telescoping what in some cases, such as tourism for instance, is the long prior process of its nurturing and growth from a small and insignificant activity.

More fundamentally, the problem with this inference is that, by isolating and extrapolating one dimension of the complex pattern of growth in the past, namely the existence of a one- or two-product "pole" of growth, it tends to foreclose the future possibility of a more diversified pattern of growth based, not on one big engine, but on many mini-locomotives. In this regard, this inference thus serves to restrict the range of strategic options that are open for developing an industrial policy. In effect, it would lock the economy into continued dependence on a highly concentrated pattern of exports.

Besides, there may be no way of determining in advance which, if any, of many potential growth opportunities, that are now quite small, is likely to develop into a big engine. Given this inherent indeterminacy and the associated risks, the correct strategy is not to "put all your eggs in one basket". Rather, it is to pursue a portfolio of different opportunities, selectively chosen on the basis of systematic analysis of all relevant information, and appropriately packaged in accordance with a program of "investment packaging", with appropriate incentives and inducements for the investors, in the expectation that some of these opportunities will turn out to realise their potential and become successful in the end. This strategy of investment packaging of a diversified portfolio of growth opportunities is the recommended approach for Jamaica at this time.

#### 1.8.2 Picking Winners? Where and how to find them?

The idea of "picking winners" is a currently popular cliché that requires careful scrutiny to see what sense it makes, if any. It turns out that it begs more questions than it answers.

The problem with it, quite simply, is that you never know when you have a "winner" until you have it. But, exactly where and how do you find it? And what is to be done if, as sometimes (often) happens, you have a "loser"? There lies the rub. Until one has a meaningful and workable answer to these questions, the idea itself appears to lack substance and, hence, to point in no definite direction worth pursuing.

By looking back at the specific process of development of the tourist industry in Jamaica, one can find some useful answers to the question. However, this provides no guaranteed formula for success in other cases.

It is important to recognize, in this connection, that tourism is the only industry in Jamaica that has managed to reach the rank of a first-tier world-class industry (outclassing bauxite-alumina in this respect), starting from a very small and informal base, functioning largely on the basis of national ownership and control, and facing fully, directly, and intensely the imperative of international competition. This industry represents, therefore, a living, concrete, and "home-grown" example of the process of building and sustaining international competitiveness. If now it can be said to be a "winner", then the long, drawn-out, and costly process of getting there is what it takes to find a winner.

It seems, then, that there are important lessons here, from Jamaica's own experience (as distinct from that of other countries), for designing an industrial policy oriented to international competitiveness. From this standpoint, the history and current state of this industry merit careful attention and special analysis, geared to understanding "what made it work" in this case.

It seems clear, on the face of it, that there has been a specific industrial policy in operation in the tourist industry almost from the start. It has taken the form of a highly structured and evolving pattern of support by government, ranging from fiscal incentives, and subsidised advertising, to building of infrastructure and direct government ownership of hotel facilities. At the same time, the private-sector of local (national) entrepreneurs has exhibited a great deal of dynamism in terms of their capacity to penetrate international markets using creative marketing strategies, strategic alliances with foreign multinationals, mobilisation and leveraging of finance, and modern styles of corporate management.

This symbiosis of government support and private-sector dynamism appears to have worked rather well in this case to produce a definite winner, judging from relevant indices of economic performance (see OAS, 1994). Of course, in the history of this industry, there were also projects that turned out to be definite losers. Some of them still stand today as white elephants, testifying to the heavy fiscal and social cost of "picking losers".

The issue that this experience raises for industrial policy is whether this pattern is transferable, in appropriately modified form, to other sectors of the economy and, if so, how to make it work in other sectors in the present-day environment. The tourist industry, as a service industry heavily oriented to marketing, has its own specific and unique features. Other industries, for instance various forms of manufacture, processing of agricultural products and minerals, present quite different problems and new challenges. The sector studies of the current situation in those industries (done for the Industrial Policy Project) indicate that there are serious constraints, internal and external to the existing firms, which limit their capacity to mount a competitive strategy for growth. Industrial policy must pursue a focused strategy to deal with these constraints (more on this in subsequent chapters of this report).

The tourist industry itself, having now reached a relatively "mature" stage, is currently running into serious problems and difficulties of its own that require to be addressed by current industrial policy (see Consultant's Report on the Tourism Sector for the Industrial Policy Project).

### 1.8.3 Specialization Anchored in Natural Resources and "Low-Wage" Labor: Is That the Way to Go?

In the experience of Jamaica, the pattern of specialization has been based throughout on two essential ingredients: natural-resources, and (with the clear exception of bauxite-alumina) low-wage unskilled labor. Given the predominant role of these two elements in past development, certain issues arise in considering possibilities and strategies for future development.

First, there is a real and well-recognised trade-off between growth and environmental degradation. In the case of natural-resource-based industry, the environmental costs are direct and may be quite high. It is necessary to design a policy that deals explicitly with this tradeoff by adopting measures that seek to minimize environmental costs.

Second, there exists a notable global tendency for a shift away from natural-resource-based primary products towards knowledge-based and human-resource-intensive goods and services. From this observation, the inference is sometimes drawn that the correct policy for Jamaica is to promote a similar shift in industrial structure. However, that inference involves a fallacy of composition that is misleading in terms of policy. While it may well be the case that such a tendency exists at the global level, it does not follow that it must be so for each and every country. In Jamaica's case, there may still exist significant growth opportunities from exploiting existing natural-resource-based industry and developing new ones through research and exploration. Some areas of traditional manufacture may also offer significant prospects. From the standpoint of industrial policy, a way must be found to give full play to such opportunities and prospects instead of arbitrarily ruling them out of consideration.

Third, so far as use of low-wage unskilled labor is concerned, there are complex issues involved for industrial policy.

It is clear, on straightforward economic grounds, that as long as there exists widespread unemployment, any expansion of employment at the existing wage-level is to be welcomed. It is also clear, from analysis and experience, that the existence of low-wage unskilled labor is one of the factors (though not the only one) that determines competitive advantage in particular lines of production. One example of this in Jamaica's recent experience is the growth of the apparel industry (albeit under the special conditions of politically determined quota arrangements). Thus, an industrial policy geared to promoting competitive advantage and growth of employment cannot afford to turn its back on such growth opportunities.

There is a further complication. The concept of a "low wage" is a relative one. This is so in a two-fold sense. First, it is relative to the average wage prevailing in a given country. It therefore tends to drift upwards as the average wage rises, cultural and political norms about what constitutes an "acceptable" wage change, and institutions of the workers struggle to enforce a higher wage. Second, it is relative to conditions prevailing in other countries. Hence, if the wage is "low" in one country, it may be lower still in other countries.



This complication raises a double-sided problem for international competitiveness and, hence, for industrial policy driven by international competitiveness. In particular, a country that has managed to build up an export structure of particular industries on the basis of low-wage labor may lose out in international competition simply because other competitors enter the market at a wage which is lower still. Moreover, as the domestic wage inevitably rises, a country may lose existing industries for that reason also. This sort of "scissors effect" is especially likely, and has been shown by various studies, to occur in "footloose industries" of the assembly and turn-key type (see Flamm, 1984). In Jamaica's case, it points also to a certain precariousness in continuing to rely on the apparel industry as presently constituted.

Of course, even in the absence of a change in its wage relative to other countries, a country may also lose competitiveness in particular industries, because of technological changes on a global level. For instance, there is evidence of this effect in the global electronics industry, where rapid diffusion of automation has caused global restructuring such that transnational firms seek to relocate production facilities in high-wage high-skill locations (see Grunwald & Flamm, 1985). In this context, it turns out that a country may not only lose existing industry but also miss the bus for entering the industry at a higher technological level if it lacks the human-resource base of skilled labor to make the transition. One may ask whether this is the situation that Jamaica now faces as regards the current status and future prospects of the local electronics industry (see report prepared by consultants for the Industrial Policy Project).

The existence of these effects places a premium on flexibility and adaptability in industrial policy, in terms of building into the policy adequate mechanisms for dealing with adjustment to the dislocations arising from these effects.

To achieve the status of a high-wage economy entails a far-reaching process of transformation of the economic base, involving as key factors investment in new higher-productivity, higher-skill economic activities (moving up the ladder, so to speak) and investment in human resources through education and training. The growth of the Jamaican bauxite-alumina industry is an example of this process as it occurs at the industry-level and that industry constitutes today the single most important pole of economic activity of this type. Promotion of other activities of this type represent the other leg on which an industrial policy must stand.

In general, what this analysis points to, as far as concerns the employment- and wage-structure of export activities, is the need for industrial policy to pursue a strategy of walking on two legs. On the one side, the policy must allow scope for expansion of activities which are competitive at the existing wage for unskilled labor and, in this way, create opportunities for absorption of the large pool of unemployed/underemployed labor. On the other side, it must seek to diversify by moving up the ladder to high-wage, high skill, high-productivity activities.

#### 1.8.4 Continue to Hold on to all Existing Activities, or Should Some be Abandoned?

Of course, it is necessary to take advantage of what the country already has. This is a matter of making the best use of existing productive capacity and bringing into operation any unused or idle capacity. It means also that existing engines must be pushed (or, rather, driven) to expand insofar as there are profitable opportunities for doing so.

However, it is also necessary to recognise that specialization based on competitive advantage is a dynamic process. This entails that some sectors will atrophy and die and new ones come on stream due to changing global conditions and evolving capabilities, costs, and supply conditions of domestic producers.

The issue that this raises depends, in part, on the level of aggregation.

At the level of the firm, there is no doubt that some firms will "go under", and must be allowed to do so, as a consequence of their inability to cope with the requirements of competition in an open trading environment. This is a necessary implication of pursuing a policy focused on international competitiveness. At the same time, other firms, the more dynamically efficient ones, will survive and grow by developing adaptive capabilities and coping mechanisms.

At the level of the industry or sector as a whole, what one should observe therefore, as this process works itself out, is a process of restructuring as strategic shifts, new alliances, entry, and exit are made by different firms. The sector or industry as a whole may continue to operate, with a changing composition of firms that are on a stronger footing to find new opportunities for growth through diversification.

This process has been going on for some time in the Jamaican economy, specifically in the sectors of traditional agricultural exports, like sugar and bananas. In those cases, interestingly enough, it has occurred in an environment of sheltered markets protected by quotas, subsidies, and price guarantees. It is evidently driven by competitive factors which operate even in that environment and has accelerated in recent years in response to the imminent threat of changing market arrangements and restructuring of global production.

A similar process is clearly observable in recent years in the manufacturing sector. In this case, the process has been induced by a specific conjuncture of factors, internal and external, one of the most important being the recent steps taken towards liberalization of the trade regime. It is therefore an aspect of the process of adjustment to "opening up" the economy.

Faced with the changes now taking place in the manufacturing sector, some observers now ask: is the Jamaican manufacturing sector dead? To put the question in this way is not very helpful. The key point is that the manufacturing sector cannot continue to function, as it did in earlier times, on the basis of a high level of protection. The sector as a whole must be brought into line with the overall thrust towards international competitiveness. The role of industrial policy in this context is to provide the appropriate support mechanisms that would allow efficient

firms to survive and grow.

### 1.8.5 What Role for Protection?

One area in which there are definite and hard lessons to be learned from Jamaica's experience is that of protection for domestic industry.

The main lesson to be learned is that there are high costs of such a policy, especially as it has been pursued in recent times in the form of blanket protection of manufacturing industry to promote import substitution (see Ayub, 1981). The short term gains in employment that this policy ostensibly provides have to be set against those costs.

The most immediate cost is that which the consumer bears from having to pay higher prices for imported goods or for domestic substitutes that may often be of poor quality. Another is the cost in output foregone, from the proliferation of rent-seeking activities involved in securing access to import restrictions by those who benefit from them, and from the administration of such restrictions by public agencies.

From the standpoint of the goal of export expansion through international competitiveness, a policy of protection sets up basic contradictions and obstacles to the pursuit of that goal. This is because it directly and indirectly raises the cost of inputs to the exporter and, thereby, places the exporter at a competitive disadvantage in relation to other exporters in other countries. It also biases the structure of incentives for investment in favor of sheltered import-substituting activities that yield high and relatively risk-free returns and against riskier investment in exports. This anti-export bias has been shown to be a significant factor which explains the relatively poor export performance of Jamaica and other Caribbean countries in past years (see Harris, 1995a).

The cost of such anti-export/pro-import-substitution bias is usually thought of in terms of the static efficiency losses associated with the shift of resources towards production of high-cost import substitutes. There is something to this view. But no less significant, and perhaps more important in the long-term, is the dynamic effect that it has of building into the economy an investment inertia through creation of a structure of firms which thrive on safe and secure returns in sheltered activities with monopoly privileges and, in the process, fail to develop the learning experiences necessary to mount competitive strategies to deal with international competition.<sup>6</sup>

Of course, given the existence of protected industries to start with, there are adjustment costs involved in removing protection and moving to a more open trade regime. An argument can be made, in this case, for phasing of the adjustment process so as to reduce the "shock effect" of the adjustment and allow time for affected firms and sectors to make the adjustment

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<sup>6</sup> This dynamic effect is the antithesis of the "lenient" case for protection put forward by early development economists (see Myint, 1963).

in accordance with an announced and firm schedule. But this is not an argument for postponing the adjustment or avoiding it altogether.

Naturally, the option to introduce protection should be held in reserve. No government would want to give it up. The need to use it as a defensive weapon is clear in cases where dumping can be proved to exist.

If there is to be protection in other cases, it has to be handled on a case-by-case basis and the case must be established on demonstrable and acceptable grounds. It is important also to have a clear and explicit understanding of the overriding social goal that is to be achieved (employment? food security?) and try to avoid conflict with other goals, specifically with the goal of competitiveness in exports.

On economic grounds, the strongest case for protection, consistent with the goal of competitiveness, is based on the "infant industry argument". It is that an industry with the potential to become competitive is not likely to develop in the absence of protection because there are large costs (indivisibilities) in getting started and unit costs fall as the industry expands because producers gain the advantages of learning from experience and economies of scale. This argument points to a need for (a) limiting protection to demonstrable cases of this sort, (b) having an explicit time frame during which the industry must become competitive, and (c) a definite schedule for termination of protection.

In the contemporary international environment, any new initiative of protection must of course be consistent with rules and commitments subscribed to by the Government of Jamaica under the Uruguay-round agreements and the evolving supervisory and monitoring role of WTO (see Ministry Paper No. 3, GOJ, 1995). Developing countries like Jamaica currently have some leeway under the rules and this offers an opportunity to be called upon as warranted by a new industrial policy.

#### 1.8.6 What Role for Incentives?

The incentive system is a key element of an industrial policy. This much seems clear, on the basis of our own experience and the experience of other countries, for instance, the successful Asian NICs.

Jamaica now has a rather elaborate and complex structure of fiscal and related incentives, inherited from past policies and programs. The issue that must be faced at this time is: what is the specific form of incentive system that is appropriate to a new approach to industrial policy in the contemporary environment? Hence, what changes must be made in the existing system in order to meet present conditions and the objectives of a new policy approach?

In the present competitive world environment, every country, as well as regions within countries (compare development policies of state governments in the United States), competes

intensely to win a share of world investment and world markets by designing a package of incentives. There exists a wide array of such incentives. To remain on an equal footing in this arena, it may seem necessary to match everything that every other country does. But that would be a futile and wasteful strategy, if only because there are some incentives that work better than others, and some may not work at all.

A more effective strategy is to match others only to the level of what is recognised to be "best practice", i.e. to be selective. A country can also be innovative and develop its own "best practice", instead of simply copying what others do.

There are constraints on this strategy. An important one comes from the fiscal burden of fiscal incentives in terms of revenue foregone. Another, in the case of Jamaica, comes from being locked into the requirement of harmonization of fiscal incentives with other members of CARICOM.

But, given these constraints, there is room for innovation and new initiatives.

The core of a new initiative for Jamaica must be consistent with the approach to industrial policy. Accordingly, the following conditions must be met:

(a) The incentive system should be designed to be strictly performance-oriented, so as to ensure that there is some pay-back from what is being given up in terms of revenue foregone. To satisfy this condition, so far as fiscal incentives are concerned, there is a simple rule to follow consistent with the goal of international competitiveness and export growth, i.e. incentives must be directly related to the amount of export earnings generated. This rule has the advantage of offering a very simple, straightforward, objective, readily quantifiable, and easily monitored performance-measure. It can also be applied across the board to all exporters, not only the 100% exporters, with a built in incentive provided for incremental growth of exports and for increase in the value-added component. Insofar as it applies to all exporters, it is in this sense non-discriminatory. But the clear and deliberate objective is to discriminate in favor of exports.

(b) The focus of the incentive system should be shifted away from fiscal incentives as such to a system of supply- and production-oriented incentives. The aim here is to provide a range of services, organizational support, sector-specific technical assistance, training and information support, that effectively allows the firms to upgrade their production and marketing capabilities and, hence, enhance their international competitiveness.

There are practical models of incentive measures currently in use in other countries that satisfy these conditions. Perceived weaknesses in existing programs are driving many countries to move in this direction.

In Jamaica, the time is ripe to begin the process of systematically dealing with this issue. The stabilization of the macroeconomic environment achieved up to this point provides firms with a more favorable, less risky environment for long term planning of investment.

Liberalization of the trade regime, import duty reductions, and capital depreciation allowance, among other things, provide firms with significant cost reductions. Development of an industrial policy provides the opportunity to deal with the issue in terms of a clearly articulated set of long-term goals and objectives.

### 1.9 Conclusion

These issues cannot be resolved entirely in abstract and general terms. They require a more concrete and specific analysis, as the basis for a more concrete formulation of policy. This is the focus of subsequent chapters of this report.

## CHAPTER 2

### INTERNATIONAL TRENDS AND STRATEGIC INDUSTRIES

#### 2.1 The Analytical Problem

In order to give concrete structure to the industrial policy, in terms of the specific strategies to be pursued, it is necessary to carry out a careful and detailed analysis to identify precisely the areas of existing strength and weakness in the productive sectors.

The purpose of such analysis is to assess the capacity of those sectors to meet the competitive challenge in the international market-place. That assessment should enable identification of where the key dynamic centers are located, which are the centers that are falling behind, what are the sources of strength and weakness, and what can be done to strengthen and improve performance. The analysis serves, thereby, to clarify the options that are open for determining the policy. On the basis of this analysis, it is then possible to make informed judgements and reasoned choice of priorities, targets, sequences, and action plans.

To yield meaningful and useful results, this analysis requires focusing on two important and inter-related sets of conditions:

(1) Market performance and prospects of each sector.

Here the task is to evaluate long term trends in the relevant international market and Jamaica's record of performance in relation to those market trends. In this respect, the analysis should yield a useful measure of sectoral strength and weakness, in terms of actual success and failure in keeping up with the competition. The presumption here is that actual performance in relation to the relevant competition is the litmus test of competitive advantage.

(2) Productive capabilities, actual and potential, of each sector.

The task here is to evaluate the capabilities in different sectors, both established and emerging new ones, in terms of certain crucial sector-specific conditions.<sup>7</sup> This allows identifying how well those sectors of the Jamaican economy stand up in relation to best practice in the international economy. It becomes possible, thereby, to pinpoint the nature of any gap between existing conditions and international best practice and, hence, the requirements for catching up with the competition. It allows identifying, also, the specific constraints affecting performance from the supply-side that need to be addressed in developing the policy.

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<sup>7</sup> For an outline of critical sector-specific factors relevant to assessing sector capabilities, see the Memorandum: "Framework for the Sector/Industry Studies" in the Appendix.

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### 1.9 Conclusion

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It must be recognised, of course, that these two sets of conditions are mutually dependent. Markets are not simply independent and passive receptacles, but are actively made by price (hence cost) competitiveness, product quality, design, and "image creation" on the production side. On the other hand, market trends in consumer tastes and downstream activities can make or break the continued viability of production, depending on the capability of producers to cope with such trends. However, for analytical purposes, it is useful to distinguish these two sets of conditions while keeping in mind the necessity to recognise their interdependence.

While the focus on these conditions is a strictly necessary requirement for determining the sectoral strategies, it is not sufficient. There are still other issues that need to be addressed in developing the policy.

First, it is clear that past performance is no guarantee of future success. This makes it necessary to conceive the problem in dynamic terms, i.e. in accordance with the ongoing evolution of the international market, anticipated changes in market demand and supply conditions, and the developing potential of local producers as they adapt to the requirements of competition and are strengthened by the interventions of the industrial policy itself.

Second, there remains a problem of selectivity among the different sectors in the economy. Should all economic sectors participate, or only a selected few? Should the selected few be only the "winners", actual and potential? And what should be done about the current and potential "losers"? These questions pose hard choices on which decisions must be made in developing an industrial policy.

In a world without free trade, economic analysis suggests that policy should concentrate on the sectors considered to be the most likely winners (see, for instance, Krugman, 1984; Brander and Spencer, 1985). Within the present context in Jamaica of a liberalized and deregulated economy and the associated policy-framework of market-led growth, it is to be expected that the selection will be significantly determined by a market-based process. However, there is still room, within this approach, for collective choice and policy interventions. There are strong economic grounds to support the case and, therefore, this is a matter on which analysis can provide some guidance. But the issue cannot be settled entirely on analytical grounds. Beyond that it becomes a matter for the political process.

## **2.2 Other Relevant Criteria**

As indicated above, identification of strategic industries/products is necessarily and integrally connected with the evaluation of international market performance and productive capabilities. But there are, in addition, other relevant criteria related to broader social goals and strategic/policy considerations.

As the "Green Paper" (1994) indicates (p.ii):

"The main approach to the long-term development of key industries may be described as promotion of more diversified production based on:

- \* increasing value added
- \* strengthening linkages within the local economy
- \* increasing foreign exchange earnings and savings
- \* employment generation

...

Particular attention is being paid to industries which utilise the nation's human and natural resources, cultural heritage, and the environment..."

Accordingly, the criteria to be applied in the evaluation of sectors and for identifying targets of opportunity may be augmented to include the following list:

1. increasing foreign exchange earnings/savings
  - export performance and potential
  - efficient import substitution
2. increasing value added
3. strengthening linkages (inter/intra industry) within the local economy
4. utilising local natural resources
5. employment potential
6. developing the human resource base through providing opportunities for enhancing the level of skill and experience of the work force
7. food security
8. utilising the nation's cultural heritage
9. environmental friendliness.

With such a multiplicity of criteria it is not obvious that all can be simultaneously satisfied in every case; nor do they all need apply to every case. There may be a danger of overloading the problem with constraints. There may also be a problem of consistency among the different criteria, requiring close attention to the trade-offs involved.

These considerations suggest that there is a need here for flexibility in dealing with the matter on a case-by-case basis.

### 2.3 Methods for Evaluating Competitiveness

It is evident from the nature of the tasks involved, as defined above, that the development of sectoral strategies for the industrial policy involves a complex and broad-based program of analysis. The results of this analysis will feed into the process of decision-making and implementation.

As a first step in carrying out the analysis, an effort is made here to conduct a systematic evaluation of international competitiveness of Jamaican industries, drawing upon suitable and available tools of analysis.

Many different measures may be used to evaluate the international competitive strength of a nation's industries. Among the commonly used methods and practices, the following may be noted.

(a) The trade-balance approach

This approach examines the trade balance of each industry by comparing exports of the industry's various sectors with imports of competing products over a period of time. Improvement in the balance (increase in the export-import ratio) is regarded as indicating a stronger competitive position, and vice versa. See Balassa (1965), Hirsch (1967).

(b) The productivity/production cost approach

Here, the focus is on differentials in productivity, associated with the existence of different techniques and organization of production between countries (ranked in relation to international best practice) arising from the uneven nature of technological change and international technology transfer. Or, the focus may be strictly on production costs as such, as represented by unit wage costs and, sometimes, energy costs. See Salter (1966), Dosi & Soete (1983).

(c) International price performance

Distance from the international price frontier is measured by the ratio of domestic to international prices for comparable products at the appropriate exchange rate. An industry is regarded as internationally competitive when this ratio is less than or equal to one. Problems of comparability evidently arise in this case when products are differentiated by quality and performance. Also, non-price variables, integral to a complete account of competitive advantage, are left out of consideration.

(d) "Revealed" comparative advantage

Export performance of a nation's industries is evaluated by measuring changes over time in relative shares of individual industries in world exports. A normalised market share index is developed by dividing a country's share in exports of a particular product by its total share of combined world exports. Trade performance, as indicated by this index, is considered to "reveal" or reflect competitive advantage. See Balassa (1965).

(e) Business portfolio analysis

In addition to these approaches, there are various techniques of portfolio analysis, developed by business economists, that have been used to assess the competitive strength of firms and national industries in relation to their market position. See Gluck (1985), Porter (1980, 1990).

Each of these approaches has its own strengths and weaknesses. Each is suited to somewhat different, but overlapping, conceptual approaches to the analysis of competitive advantage. Viewed pragmatically, the choice among them may reduce simply to a matter of data availability.

## 2.4 The Market-Performance Test

Some results are presented here (see attached Tables) from a detailed analysis of available data on international market trends and Jamaica's performance in relation to those trends.

These results come from an attempt to operationalise the market-performance test as an initial basis for assessing existing competitive advantage of Jamaican industries. This is, of course, only an initial test. It is necessarily incomplete insofar as other criteria besides market performance are relevant. Nevertheless, the results should help to give direction to the process now underway (in the work being done on specific sectors) that, through a broader analysis, leads to the identification of specific targets of opportunity at the sectoral level.

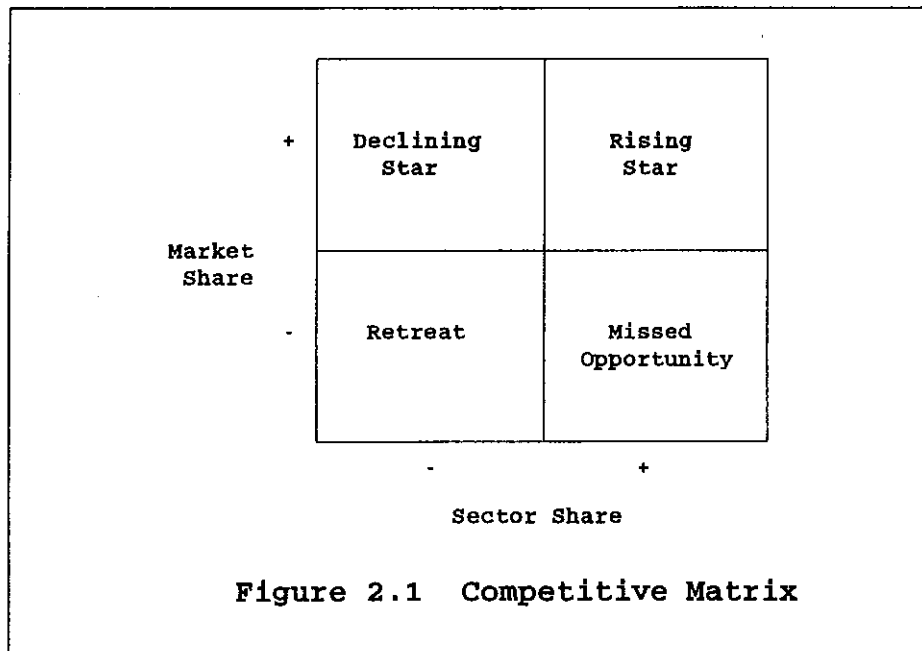
For this analysis, we have adopted the data-base and methods developed by ECLAC in the software program "Competitive Analysis of Nations" (CAN). The methodology is closely related to the revealed comparative advantage approach and has some elements in common with business portfolio analysis.<sup>8</sup>

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<sup>8</sup> For a brief description of the methodology of the CAN program see the Appendix. For its use in analysis of international competitiveness, see Mandeng (1991), Fajnzylber (1991).

In the CAN data-base, the reference market is limited to the OECD countries. Hence, it excludes the CARICOM market which, for some product categories of Jamaica's exports, is quite significant. But, overall, the share of Jamaica's CARICOM exports is quite small, about 6 percent of total merchandise exports in the period 1991-93. Hence, not much is lost by this exclusion. The data relate to merchandise-export sectors defined at the 3-digit level of the Standard International Trade Classification (SITC). Two reference periods are considered: 1980 (as an average of the three years 1979-81) and 1992 (average of 1991-93).

The focus of analysis is on Jamaica's changing market share relative to the overall evolution of the OECD market between these two periods as the basis for evaluation of competitive performance. On this basis a competitive matrix is derived which yields a classification of performance for all 3-digit sectors in terms of four distinct categories: (1) rising stars (2) declining stars (3) missed opportunities and (4) retreats. For the definition of these matrix categories, see Figure 2.1.



It should be emphasized that these are ex-post performance measures based on simple accounting procedures and are used here as a purely descriptive device. The 3-digit level of classification of products allows a sufficient level of detail to capture the essentials of sectoral performance. But it is still too aggregated to catch fine distinctions of individual product lines within sectors. Characteristics of the product mix within sectors can be identified from examining lower-level (4- and 5-digit) SITC data and from the sector survey reports.

As a supplement to these performance measures, additional measures are presented, using STATIN data on all merchandise exports of Jamaica to all markets (at 2-digit level of SITC). These provide useful and relevant information on the commodity structure, composition by factor intensity, market concentration, and growth of exports.

## 2.5 Results of the Analysis: Notes on the Tables

### Table 2.1

The market for Jamaica's exports is highly concentrated in the European Union and in the NAFTA region, with a marked tendency to decline in the former and increase in the latter in recent years. The CARICOM market represents a small and slightly diminishing share. The East Asian Market, which is today the world's fastest growing market-region, is a miniscule share, but the share of Japan has almost tripled in the past three years.

### Table 2.2

A similar pattern of concentration shows up in the composition of exports. At the 2-digit level of SITC, the top ten sectors constitute 94 percent of total merchandise exports in 1993. The bauxite and alumina sector (SITC section 28), which has the largest share by far, has been declining from the peak share of 79% in 1980 to just about a half in 1993. Among other large sectors, the sectors of sugar (section 06), vegetables and fruit (section 05), and coffee (section 07) declined sharply between 1970 and 1980 but have improved their position in the 1990s. The beverage sector (section 11) has also done 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.

### Table 2.3

Viewed in terms of growth rates, the pattern of export growth at the 2-digit level in the most recent period, 1990-93, has been highly uneven. It is quite striking that the fastest growing sectors (above 10 per cent annual rate) are located mostly in the manufactured goods category, albeit starting from a low base. The largest declines are also in the same category. So, it appears from the data in this table that the manufacturing sector has been undergoing a great deal of internal structural change.

### Table 2.4

This table shows the structure and trends in exports of manufactures classified by factor-intensity category. The classification scheme is a standard one, adapted from Lord (1992). The

result is of much interest from the standpoint of an evaluation of the technology and skill characteristics of the export structure. Evidently, the unskilled labour-intensive category predominates. Its share has increased by a factor of 6.5 in the period 1970-93, due chiefly to the role of the apparel sector. The human-capital/technology-intensive sector remains a very small component at around 3 percent of total exports. The natural-resource-intensive sector is smaller still, with nearly constant share of less than one percent on average. Natural-resource-intensive exports are, of course, a much larger share of total exports when minerals and agriculture are included.

### Table 2.5

This table gives summary statistics on competitive performance in exports using data and methodology from the CAN program. The results allow a direct comparison of competitive performance between Jamaica and other countries and regional groupings. The competitive analysis is presented in terms of a two-way breakdown of sectors for each country or region, i.e. sectors with increasing market share and those with decreasing market share between 1980 and 1992. The former are the dynamic sectors that have gained ground by increased market penetration. The latter, in contrast, are stagnant sectors that have lost ground.

In Jamaica, the dynamic sectors in this sense increased their share of total exports (contribution) from 10.92 percent in 1980 to 40.17 in 1992. Their market share relative to Jamaica's global market share (specialization) more than doubled, from .24 to .57. This is a remarkable performance in itself. But, in relative terms, it is not as good as that of Costa Rica and Trinidad and Tobago and is just about on par with that of Dominican Republic. In any case, the level of both contribution and specialization achieved by increasing sectors in 1992 still remains below that of other countries and regions, with few exceptions (Chile and Trinidad & Tobago), and pales by comparison with the Asian Tigers.

### Table 2.6

The adaptability index provides other summary measures of competitive performance, measured as the ratio of dynamic to stagnant sectors in terms of two dimensions, their contribution and market share. These results confirm the pattern revealed in the previous table.

### Tables 2.7 and 2.8

These tables contain the detailed results of the competitive analysis for the 3-digit sectors. Table 2.7 lists the top ten sectors (ranked by contribution) in each performance category, forty sectors altogether. Table 2.8 lists the complete set of all 3-digit sectors in each category, a total of 239 sectors altogether.

Overall, the share of each performance category in Jamaica's total exports in 1992 is as follows:

Rising Stars	32.93%
Declining Stars	16.43%
Missed Opportunities	7.24%
Retreats	43.40%

A summary list of the component items in each category is presented in the following pages.

### 2.5.1 Rising Stars

The rising stars are the top performers and most dynamic, with a growing market share of a growing market. They constitute about a third of total exports. They certainly represent a significant platform for building continued growth, at least in the short term, insofar as their market continues to be growing sectors of global trade. At the same time, one need not think of taking a position in or "targetting" only these sectors, because there is no guarantee of their future long-term growth-potential.

The apparel sector is the largest component of this category, with a 28.81% share of exports in 1992. It is followed by the food and beverage group, with a 2.6% share, consisting of non-traditional food crops, fresh and frozen fish, ornamental fish, processed foods, and non-alcoholic drinks. Then there is a wide diversity of other product lines, ranging from raw materials (limestone, gypsum), and processed materials (oils and fats), to chemicals (essential oils and perfumes), and light manufactures (leather and rubber products, footwear, textiles, and metal manufactures). Taken together, they form only a very small share (1.5%) of exports at present, and individually are quite miniscule. However, their past performance indicates a good potential for future growth.



### RISING STARS

<u>Product Category (SITC group number)</u>	<u>Share of Exports (% , 1992)</u>
Food and Beverages (0, 1)	<u>2.60</u>
Fresh vegetables, roots, tubers (054)	1.24
Fish and fish products (034, 035, 036, 037)	0.62
Processed foods (022, 046, 048, 062, 073, 098)	0.68
Beverages (111)	0.05
Limestone and gypsum (273)	<u>0.09</u>
Fixed Vegetable Oils and Fats (423)	<u>0.06</u>
Chemicals and Related Products (5)	<u>0.10</u>
Essential oils & perfumes (553, 554)	0.09
Manufactured Goods, classified chiefly by materials (6)	<u>0.33</u>
Leather, rubber, cork, wood, paper products (612, 625, 633, 635, 642)	0.10
Textile yarn, fabrics, made-up materials (653, 656, 657, 658)	0.20
Others (661, 663, 665, 672, 679, 684, 692, 696)	0.03
Machinery and Transport Equipment (7)	<u>0.50</u>
Electrical circuit breakers, machinery and appliances (772, 773, 775, 778)	0.25
Office machines and data processing equipment (752, 759)	0.15
General industrial machinery and equipment (742, 749)	0.05
Road vehicles and parts (781, 782, 783, 784)	0.02
Other machinery, equipment and parts (713, 714, 718, 725, 728, 737, 761, 762, 791, 792)	0.03
Miscellaneous Manufactures (8)	<u>29.23</u>
Clothing and accessories (842, 843, 844, 845, 846, 847, 848)	28.81
Footwear (851)	0.23
Other miscellaneous articles (812, 872, 873, 885, 893, 894, 895, 899)	0.19

## 2.5.2 Declining Stars

The declining stars are a small share, 16.43% of exports. Though declining, they are stars nevertheless, because of increasing market share, and can also provide a vehicle for growth. But they are vulnerable because they operate in sectors that are a declining share of global trade. This means that the strategy should definitely be looking elsewhere for new vehicles for growth.

The traditional lines of agricultural exports predominate in this category, and there is a wide range of smaller items consisting of raw materials, chemicals and manufactures.

<b>DECLINING STARS</b>	
<u>Product Category (SITC group number)</u>	<u>Share of Exports (% , 1992)</u>
Food, Beverages, and Tobacco (0,1)	<u>14.17</u>
Sugar (061)	7.01
Fruits and nuts (bananas, citrus, coconuts) (056, 057)	5.65
Coffee, cocoa (071, 074)	1.38
Tobacco (121)	0.04
Dairy products, cereal preparations, animal feedstuff (024, 047, 081)	0.09
Crude Materials, Petroleum Products, Oils & Fats (2, 3, 4)	<u>0.24</u>
Metalliferous and metal scraps (282, 286, 288)	0.18
Pulp and waste paper (251)	0.02
Cork and wood products (244, 246, 247, 248)	0.02
Chemicals and Related Products (5)	<u>1.85</u>
Organic chemicals (512)	1.60
Inorganic chemicals, fertilisers, resins, plastics (522, 523, 562, 584, 585)	0.25
Manufactured Goods, (6, 7, 8)	<u>0.17</u>
Textile yarn, fabrics, made-up materials (651, 652, 655)	0.07
Power generated machinery and equipment (712)	0.04
Non-metallic mineral manufactures (667)	0.03
Others (611, 673-678, 682, 721, 793, 881)	0.03

### 2.5.3 Missed Opportunities

The missed opportunities are the smallest share, 7.24%. They are losing competitive ground, because of declining market share. But they are also operating in dynamic market sectors. A strategy aimed at strengthening their competitive capabilities may be warranted in order to allow them to take advantage of available opportunities for expansion.

Alcoholic beverages are the largest component of this category (3.82%). It includes also preserved and prepared fruits and vegetables (0.46%), a dynamic segment of the processed foods market which offers strong opportunities for growth.

<b>MISSED OPPORTUNITIES</b>	
<u>Product Category (SITC group number)</u>	<u>Share of Exports (% , 1992)</u>
Food, Beverages, and Tobacco (0,1)	<u>4.71</u>
Alcoholic beverages (112)	3.82
Vegetables and fruit, preserved and prepared (058)	0.46
Tobacco manufactured (122)	0.43
Crude Materials, Chemicals, Manufactured Goods, & Others (2, 5, 6, 7, 8, 9)	<u>2.53</u>
Crude vegetable materials (292)	0.24
Furniture and parts (821)	0.17
Essential oils and perfumes (551)	0.10
Travel goods (831)	0.05
Others	1.97

### 2.5.4 Retreats

The retreats are on even weaker ground, because of declining market share in a declining market. They are the largest share, 43.4%, of total exports and include the bauxite-alumina sector. While there may be short-term gains to be had from growth of these sectors, their long term prospects appear to be relatively weak. This means that here, too, the strategy should definitely be one of looking elsewhere for new growth vehicles.

<b>RETREATS</b>	
<u>Product Category (SITC group number)</u>	<u>Share of Exports (% , 1992)</u>
Food, Beverages, and Tobacco (0,1)	<u>0.53</u>
Cocoa, spices (072, 075)	0.52
Meat and cereal preparations, live animals (001, 014, 045)	0.01
Crude Materials, Chemicals, Manufactured Goods, & Others (2, 5, 6, 7, 8, 9)	<u>42.87</u>
Bauxite and alumina (281, 287, 289)	42.79

## 2.6 A Strategy of Growth through Export Diversification

A further detailed analysis of the sectors must be made before one can draw firm conclusions about specific strategies for individual sectors. For that purpose, one needs to know more about the factors which account for the observed performance, from both the demand- and supply-side. It is necessary to recognise, also, that past performance is no guarantee of future success.

But, meanwhile, certain broad inferences can be drawn from these results. In sum, what emerges from this analysis is that there are clearly identifiable centers of export dynamism, based on the examined record of past performance and international market evolution. It is important to be able to pinpoint exactly what are these centers. They can be a focal point for design of an industrial policy. This is consistent with an essential principle of the policy, i.e. to start from existing centers of export dynamism and build on them to achieve further growth.

At the same time, there is a clear need for a strategy of looking towards the emergence and creation of new centers for sustaining the overall momentum of growth. In this sense, a push for continuing product diversification has to be a built-in element of the policy. Herein lies the real challenge for industrial policy, i.e. the need to keep running in order just to stay in the competitive race.

In examining possible avenues for export diversification, a key consideration is the growth potential viewed from the standpoint of world-market growth. For this purpose, it is useful to identify what exactly are the fast-growing sectors in world trade. This problem can be addressed using the CAN data-base for the OECD market.

Accordingly, the top 100 fastest-growing sectors in OECD imports are listed in Table 2.9. The items on this list constitute, of course, only a menu of market possibilities for diversification into fast-growing sectors. Naturally, to become eligible these possibilities would need to be examined further from the standpoint of feasibility and in terms of other relevant criteria.

It is interesting to ask: which of Jamaica's exports are currently included in this list of top 100 fastest-growing sectors? It turns out that, of Jamaica's top 40 exports (ranked by export share in 1992), 17 items are included. This subset is listed in Table 2.10. It consists of almost all the rising stars and missed opportunities, with a few minor omissions. These items together make up 33.09% of Jamaica's total exports in 1992. A strategy of growth through export diversification would seek to expand the number of items included in this list and their share in total exports.

## Chapter 3

### PRODUCTIVE CAPABILITIES AND CONSTRAINTS

#### 3.1 The Capacity for Production and Growth at the Sectoral Level

In seeking to assess the productive capabilities of the Jamaican economy, it is useful to examine the main features of the production structure and the growth-dynamic that has occurred in the recent past, considered at the disaggregated level of broadly-defined sectors in the national accounts.

To this end, Tables 3.1, 3.2, and 3.3, and Figure 3.1 present features of the production structure in terms of the sectoral composition of output, employment and labor productivity in recent years, as well as details of the sectoral growth-dynamic in terms of average annual growth rates of the different sectors for different sub-periods over the 43-year period of 1950-1993.

Looking first at the long-term pattern of growth, it is evident that, in the first half of this period, i.e. 1950-1973, growth of GDP occurs at a remarkably high and sustained rate overall of 5 to 6%. In terms of sectoral composition, it is driven by mining and manufacture. This is accompanied by rapid expansion of construction and basic infrastructure (electricity, water, transport, storage, and communication), with other services responding in like manner (especially finance and insurance, and government). The performance of the agricultural sector is much weaker over most of this period, though it picks up in the later years 1969-73.

The period 1974-1985 is one of generalized decline or stagnation in most sectors of the economy (with zero to negative rates overall). The decline is led (just as in the earlier growth phase) by mining and manufacture, and carries with it the sectors of construction, transportation, and distribution. One exception to this pattern of decline is the finance and insurance services sector which continues to expand throughout, though at a reduced rate. The government services sector also continues to grow at a high rate for a while, but a decline sets in in 1981-85 and continues up to the last years of the period. The agricultural sector, on the other hand, undergoes a sharp increase in growth and this continues at an accelerating pace into 1993.

The economy as a whole undergoes a recovery, in the form of a sharp burst of growth in 1987-1990. But this spurt is short-lived, as the 1990s mark a return to slower growth or decline in many sectors, led again by mining and manufacture. Agriculture, infrastructure and some of the services sectors have been the growth leaders in this latest phase.

A striking general feature of this growth pattern is the countervailing pattern of performance of the agricultural sector. It generally tends to lag behind when other sectors are booming and to perform better than average when a general slow-down occurs.

Growth of basic infrastructure suffered significant setbacks in the late 1970s and early 1980s, linked to cutbacks in the government sector which, up to then, had provided the main source of funding for these activities.

Table 3.1 gives further details of this broad picture of growth, by disaggregation of sub-sectors in agriculture and manufacture.

Within agriculture, it is domestic agriculture that provided the momentum of growth in the 1970s and early 1980s. Non-traditional agriculture ("other exports") took over in the 1980s and 1990s. Traditional agricultural exports, on the other hand, have generally declined.

In manufacture, growth has come mainly from food processing, beverages, apparel, leather products, furniture, rubber and plastic products, and non-metallic products.

So far as the manufacturing sector as a whole is concerned, a substantial build up of productive capacity occurred in the high-growth phase of 1950-1973, through investment in buildings, plant, and equipment. Subsequently, in the downturn, much of this capacity remained idle. Some existing capacity was brought back into production and new capacity built during the growth spurt of the late 1980s but became idle again in the 1990s. Other evidence indicates that there has been high levels of depreciation and very little net investment in the sector, with the main exception of activities in the Free Zone. All of this suggests that the sector as a whole is today operating with a capital stock that is of rather high average age, about 20-25 years, and consequently does not embody the most advanced and efficient methods of production.<sup>9</sup> This inference is supported by the sector studies discussed below. This internal situation within the sector evidently constitutes an handicap in terms of the sector's ability to respond to the new challenges of international competition.

Performance of the services sectors has been quite varied. Construction and installation as well as the distribution sector tend to fluctuate quite sharply, in line with broader fluctuations in the economy. In contrast, the sectors of finance, insurance, real estate, and business services have maintained positive growth rates overall. The financial services sector is a clear leader in growth over the entire period, with a sharp acceleration from the middle 1980s to the present.

Of special significance is the performance of export services. Altogether, non-factor services now make up more than half, 55.5% in 1993, of total exports of goods and non-factor services (see Table 3.4). Here, the tourist sector has played a key role. Throughout the 1980s to the present it has grown at an annual average rate of 11%. As a foreign exchange earner it now outranks the sectors of traditional agriculture and mining, coming to represent 40.5% of total export earnings in 1993 starting from 17.4% in 1980. The Other Services component of

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<sup>9</sup> There is, in any case, a question of how close to international best practice the equipment was when first installed, given that the investment occurred during the phase of heavy protection for import substitution (see Ayub, 1981).

exports has also grown substantially, almost doubling between 1980 and 1993. A large part of this component is attributable to the growth of the music and entertainment industry. There are also emerging new areas in financial services, information processing, and consulting.

It seems, then, that insofar as export structure of the Jamaican economy is concerned the dominant weight has shifted quite clearly to services. This transition evidently occurred around 1985.

In terms of the structure of employment and gross product, services also dominate (see Table 3.3).

Looking now at the productivity side of the picture, one finds that there are very large differences in productivity between different sectors of the economy (see Tables 3.2, 3.3, Figure 3.1). This difference is such as to constitute a striking element of dualism in the economic structure. The mining sector and the electricity-gas-water sector have the highest productivity levels, averaging ten times the national average. The services sectors as a group have a much lower productivity level than these two, though being higher than the national average. Recent trends in productivity have tended to compound this feature of the situation. The biggest improvements in productivity have been occurring in the goods-producing sectors of the economy. The most remarkable performance, in this respect, has come from the agricultural sector, where productivity has more than doubled between 1986 to 1994. In contrast, the services producing sectors have had very moderate productivity increase, amounting to only 15% in the same period.

From these results, it appears, then, that the shift towards a services-dominated economy, while it holds out the prospect of gains in employment, output, and export earnings, does not offer a strong potential for gains in the general level of productivity and associated level of per capita income, if present patterns of performance continue to hold.

This inference evidently poses a significant challenge for industrial policy. It calls for a strategy focused on mechanisms and methods that are geared to promoting areas of high productivity activity and improving productivity performance across the board.

### **3.2 Evaluation of Existing Capabilities**

Competitive advantage depends on a set of identifiable capabilities. These capabilities are the factors which determine the capacity for production and delivery of tradeable products/services that can win a place/niche in the market (domestic and international) in competition against rivals. They may be thought of, in the first instance, as existing at three different levels:



- \* firm level
- \* sector/industry level
- \* social level (institutional environment)

But, at all levels, they are quite clearly interlinked and mutually related.

The problem for analysis is to identify:

- (a) the capabilities that are specific to each sector/industry, given the characteristics of the firms that make up the sector/industry and the particular environmental factors that affect their operation;
- (b) the extent to which these capabilities are presently developed in the Jamaican context relative to "best practice" in the relevant global context;
- (c) specific points at which policy interventions by government and private-sector agencies may be most effective in enhancing/developing these capabilities.

A detailed list of the critical factors to consider in assessing the capabilities of the different sectors of the Jamaican economy is presented in the Appendix. The results of the sector studies carried out in this framework are discussed in the next section.

### 3.3 The Sector Studies

The sectors and sub-sectors targeted for special, detailed study were as follows:

**Agriculture:**

Non-traditional crops

**Manufacture:**

Food and Agro-Processing  
 Textiles, Apparel, and Sewn Products  
 Footwear and Leather Products  
 Furniture and Wooden Products  
 Packaging and Paper Products  
 Chemicals  
 Cosmetic and Pharmaceutical Products  
 Non-metallic Mineral Products  
 Metal Products  
 Electrical/Electronic Products

**Services:**

Tourism  
Music Entertainment  
Information Technology

The method of analysis by the consultants consisted of interviews, surveys, focus-group discussions, as well as analysis of data and statistical performance indices, giving rise to results of both quantitative and qualitative nature.

From a review of the analysis done to date, certain definite inferences can be made that provide useful input into the design of an industrial policy.

It seems clear, first of all, that there are definite centers of dynamism in the economy and others of weakness which can be exactly identified on the basis of both the market performance test and other quantitative and qualitative factors examined in the sector studies.

Second, it appears that there are general patterns that cut across all the different sectors, regardless of specific characteristics and peculiarities of each. Those patterns relate to key factors that affect operation of the firms in the sector. These factors are located both in the operating environment of the firms and in their internal conditions of production, organization, decision-making, and control. They feed directly into the crucial variables of cost, risk, and return on investment.

Third, there are striking differences among firms, within a sector, and across sectors, in terms of their production conditions, organizational competence, and managerial dynamism and, hence, in their capacity to mount a competitive strategy to deal with international competition.

### **3.4 Identifying Factors that Raise Operating Costs, Increase Risk, and Reduce Return on Investment.**

Investment is the prime mover in the growth of the economy. From the standpoint of industrial policy geared to building competitive advantage, a central consideration is to identify the factors that constitute binding constraints on the investment activity of firms. The sector studies indicate a broad range of such factors involved.

It is useful to distinguish between those factors that are internal to the firms and, hence within their direct control, and those factors that are part of their external environment and require to be dealt with by collective action.

### 3.4.1 Environmental Factors

Among the key environmental factors that constitute constraints for firms, as revealed in the above-mentioned studies, are the following:

(a) Finance

Cost of, and access to, credit for working capital and long-term investment, especially for smaller and medium enterprises.

(b) Infrastructure

This relates to a number of factors:

- \* the transportation system, for people and freight, by road and rail
- \* roads, their condition has greatly deteriorated in some areas, and in major urban centers there are serious problems of traffic congestion
- \* electricity, regularity and reliability of supply
- \* water supply, especially for irrigation in certain agricultural areas
- \* sewage facilities - in certain urban centers and communities, there are serious consequences for health and for business, and for the natural environment
- \* security, for the ordinary citizen at home and work (and in getting to work), and for the operation of business; crime; praedial larceny

(c) Supply of Skilled Labor/ Quality of Labor

General education and skills of the work force. Low level of technical knowledge and specific technical competencies in product design, engineering, materials analysis. Work ethic.

(d) Cost and Supply of Inputs

Cost of imported inputs, chiefly raw materials, capital goods, and spare parts. Regularity and reliability of domestic supply of : agricultural products for food processing, livestock for leather, packaging, supply of building space.

(e) Bureaucracy in government

Associated with regulation, control (e.g. customs), and inefficiencies of various sorts in the operation of public agencies, which create high transactions costs for firms.

(f) Supply of and access to Information

Related to market conditions, access to the distribution chain, supply networks, and to technical conditions: process technology, product specification. Weakness of aricultural extension services. Low level of research and development.

### 3.4.2 Internal Factors

Among the internal factors are:

(a) Organization of Production

Limited use of flexible specialization, just-in-time, and other best-practice methods. Design of efficient, incentives-oriented payment system.

(b) Technology

Limited use of computer control devices, information systems software and hardware, computer networks, and opportunities for application of information technology. Use of obsolete equipment and lack of repair.

(c) Managerial weaknesses

Related to delegation of authority, assignment of specialised tasks, attention to "systems control" and worker incentive schemes, and knowledge of management practices that have proved successful in other firms and in other countries.

(d) Entrepreneurial Dynamism

Risk aversion and investment inertia. Lack of strategic analysis and forward thinking as regards trends in national, regional and global markets, in technology, and investment finance.

(e) Labor-Management Relations

Work-place norms and working conditions. Mechanisms for worker initiative and participation in decision-making. Employee ownership schemes. Wage-bargaining mechanisms, conflict resolution, trade union practices.

### 3.5 Conclusion

The preceding list constitutes a litany of factors that impact directly or indirectly on the key variable of investment profitability. It would be useful to have some ranking of the various factors in terms of their order of importance and quantitative significance for firms in the economy. The sector studies do not provide the kind of information that would make it possible to establish a firm ranking of this sort. Other studies, based on opinion surveys, offer information that gives further insights into the situation but do not provide unambiguous results.

Meanwhile, it seems clear, in any case, that not all of these factors can be addressed by policy at the same time. Operationally, that would involve spreading effort and resources too thinly, with little possibility of having a significant effect on any one.

It is necessary, therefore, to pursue a focused strategy. The requirements of such a strategy are discussed in the next chapter.

## Chapter 4

### STRATEGIES FOR BUILDING COMPETITIVE ADVANTAGE

#### 4.1 Some Preliminaries

In approaching the task of operationalising industrial policy, there are some important preliminary matters to consider at the outset.

First, there are no quick fixes. Industrial policy seeks to address deep structural problems prevalent in the Jamaican economy and society over a long period of time. Many of the solutions to these problems are intrinsically of a long-term nature. They require institutional and organizational changes that take time to work themselves out. They require investments in various projects, for instance in infrastructure, education, research and development, that yield a return only over an extended period of time. They require mobilisation of large amounts of resources (finance, etc.) simply to get started.

It is therefore necessary to focus on developing a sequenced strategy that will work to produce results in the short term, in the medium term, and in the long term. It is necessary, also, to set realistic goals, feasible targets that can be met within the relevant time frame.

Most important, it is necessary to get the priorities right and in proper sequence.

In this respect, it is of great significance for getting started on the process of developing the industrial policy that the macroeconomic environment should be favorable. That is a matter of the first priority. Substantial progress is evidently being made on this front, in ways which are strictly necessary for industrial policy to work, for instance by improving the state of long-term expectations through reduced inflation, stabilization of exchange rate fluctuations, increased access to foreign exchange by exporters, reducing interest rates on finance for short-term working capital and long-term investment in the productive sectors, and raising the factors of credibility and predictability in government macroeconomic policy.

At the same time, steps already taken to liberalize the trade regime, by cutting tariffs on imported inputs, by removing licensing and controls, and by reform of customs procedures, have had significant effects at the micro-economic level in terms of reducing direct input costs of firms and the inefficiencies arising from high transactions cost and rent-seeking activity.

While there is much still to be done on these fronts, it seems that, at this point, the timing is just right for moving ahead with the national effort on industrial policy as the next priority in a sequenced strategy geared to long-term growth.

There are significant constraints to be reckoned with. They impose serious limits on the

kind of policy that can be effectively developed and implemented. It is necessary to be realistic about what can be expected to be effectively accomplished within these constraints. The aim is, of course, to push out the constraints in the long term, but in the short term there are real limits on what can be done, because of the constraints.

On the side of the state, a serious constraint lies in the administrative capacity of state agencies. There is also the financial constraint of the budget which, given the obligations of the debt overhang, confines the room for social investment well within the limit of the revenue yield. Pushing out the revenue yield and bargaining hard on the debt are evidently required strategies to relieve this constraint in the medium and longer term. Industrial policy can have a feedback effect on the financial constraint from the revenue side, to the extent that it is effective in its goal of stimulating growth in the productive sectors.

On the side of the private sector, there are real constraints, strikingly identified in the sector studies for the Industrial Policy Project (as discussed in the previous chapter) and in other studies (see, for instance AED/USAID, 1994). These constraints are associated not only with factors outside the immediate control of the individual firm, such as supply and reliability of infrastructure services, supply of skilled labor, and cost of finance, but also with internal factors of managerial competence, organization, and labor-relations. Adjustments need to be made in all of these factors in order to improve the performance capacity of the private sector in meeting the challenge of international competitiveness and in its response to industrial policy initiatives. The policy itself must also address these factors, working in the framework of a partnership between the state and private sector.

There are also external constraints, associated with contingency factors in the international environment. The possibilities for growth of Jamaican exports, while being greatly influenced by what Jamaican exporters do to improve their competitiveness at all levels (in production, marketing, and distribution) and by the guidance and support provided by the industrial policy, depend to a significant extent on long-term growth of the world economy and on recurring cycles in world production and demand. Long-standing arrangements for trade and aid in the framework of the LOME agreements are scheduled for gradual removal and elimination within a definite time frame. The process of extension of NAFTA and the interim arrangements for relations with the Caribbean under CBI and other frameworks remain subject to overriding political factors.

The existence of these multiple constraints, and there are others, some in the political sphere, that are not addressed here, does not mean that "our hands are tied" and there is little or nothing that can be done. It does not warrant negativism and pessimism. It means only that a way must be found to move within and around the constraints, and to move them out, so that some things can be done that need to be done.

## 4.2 Key Principles of an Industrial Policy for Jamaica

The relevant principles of an industrial policy for Jamaica were discussed in detail in Chapter 1. For present purposes, they may be summarised here as follows.

\* Industrial policy is about investment and growth in the productive sectors of the economy.

\* In Jamaica, growth essentially means exports, because of (a) the direct contribution of exports to GDP and (b) spillovers to the rest of the economy.

\* The strategic goal of the policy is export push. Specifically, it is oriented to promoting expansion of exports through growth of existing lines of production of tradeable goods and services and diversification into new lines.

\* The central focus of the policy is on the national effort to build and sustain competitive advantage.

\* Building competitive advantage involves choosing the right competitive strategy. For a small country, with a structure of firms that are small relative to the world average and a long history of protection from the vagaries and pressures of world competition, this task may appear overwhelming. The way out is to develop a sharp focus on identifying and exploiting the specific advantages that give an edge in the competition (natural resources, human-resource specialties and talents, cultural distinctiveness, geographical location, etc.) and on creating niches by a deliberate strategy of product differentiation (in terms of quality, "name recognition", "image", etc.).

\* The core of the process of building competitive advantage is investment. This concerns investment by firms in replacing depreciated equipment, expanding and upgrading production facilities, in research and development, and in marketing and distribution. It concerns also investment by the state, in infrastructure and in human resources.

\* Most investment is driven by profitability. Therefore, the focus of industrial policy is ultimately centered on the conditions which govern profitability, i.e. the cost, risk, and return involved in undertaking investment. Industrial policy seeks to create conditions which serve to reduce cost and risk and raise the expected relative return on investment in the sectors that produce tradeable goods and services.

\* Investment by firms and expenditure by the state (on both current and capital account) are necessarily interlinked (e.g. through provision of infrastructure, education and training, information services, government contracts). The linkages are a key factor in determining profitability of investment. Industrial policy seeks to exploit these linkages by selective interventions and targeted allocations of taxes and expenditure so as to build up the base of competitive advantage for the national economy.



These principles provide a foundation for giving a specific structure and proper focus to the industrial policy.

### 4.3 Developing a Focused Strategy

Not all of the factors considered to be relevant to industrial policy can be addressed by policy at the same time. Such an approach would involve spreading effort and resources too thinly, with little possibility of having a significant effect on any one of the relevant factors.

There is need, therefore, for developing a focused strategy. A focused strategy seeks to target key points for concentrating resources, programs, and action.

The key points for such concentration that emerge from the analysis done to date are the following.

#### 4.3.1 Solving The Problem of Infrastructure

The need for solutions to this problem is especially pressing because of the impact that it currently has in raising operating costs of all firms in the economy and, more broadly, on social costs due to lost output. Within the broad area of infrastructure, the key points for policy concentration are:

- (i) energy, (ii) transportation, (iii) roads and rail, and (iv) water, irrigation, and sewage.

A strategy focused on developing programs and action plans in these specific areas will have the immediate effect of lowering costs allround in the economy. The tradeable goods sectors especially will benefit from the attendant improvement in their cost competitiveness.

The effect on cost competitiveness is both direct and indirect. The indirect effect comes from the linkages among sectors and associated externalities that infrastructure development creates. For instance, an improved transportation system by road and rail permits location of new factories, export processing zones, and industrial parks in small towns outside the Kingston Metropolitan Area, decentralization of population centers, reduced urban concentration, and increased efficiency of farm operators in rural areas. The nexus of possible backward and forward linkages created in this way seems strongest between agriculture, agro-processing, and tourism.

Infrastructure development typically involves large scale investments with a long term payoff. In order to finance such investments, it is necessary to develop joint schemes (joint ventures, risk sharing, equity participation) between the government, local and foreign firms and multilateral financial institutions, with the packaging of such schemes being spearheaded by the government and through team work with the private sector. Examples of such schemes exist currently in the energy sector. In the case of road construction, new mechanisms of cost

recovery would need to be developed if equity participation of firms is to be secured.

#### **4.3.2 Exploiting the Uses of Information Technology**

Information technology is creating a world-wide revolution in communications, production technology, marketing, distribution, entertainment and leisure activities. It opens up vast new opportunities, not only in commerce, but also in education and scientific research. From the standpoint of production, its key feature is that it is a "basic" input (in the sense of Sraffa, 1960), which is to say, it enters directly and indirectly into production of itself and all other products. It therefore offers opportunities for creating linkages and externalities that few, if any, other industries can lay claim to. From the standpoint of human resource development, it is a powerful factor in learning, training, and skill formation.

Because of its widespread uses and far-reaching applications, information technology occupies today and for the foreseeable future a special and unique place as a basic requirement for building international competitiveness. A strategy focused on promoting development of this sector is warranted if Jamaica is to maintain or improve its competitive position relative to rivals that are ahead in exploiting the uses of IT.

#### **4.3.3 Re-orienting the Incentive System to Production**

#### **4.3.4 Investment Packaging**

Concentration on these two areas is complementary to and supportive of the strategic focus in the other two areas. In both cases, the strategy is geared to providing inducement mechanisms and focusing devices for investment.

The incentive system is to be made into an instrument for focusing firms investment decisions on productivity, production for export, and increasing national value-added. It is to be re-oriented specifically to addressing directly constraints facing firms in terms of production technology, management, marketing, and access to information.

Investment packaging is a strategy for mobilizing investment in targeted sectors and projects. It is an activist strategy involving analysis, feasibility studies, coordination of state agencies, and collaborative team work between government and private sector. It aims to remedy problems of investment inertia, risk aversion, and information, in getting investment started.

#### 4.4 Recommendations

On the basis of the analysis done to date, and consistent with the principles and requirements of the policy as outlined above, it is recommended that the industrial policy be based on the following four component strategies (the 4 i's) as cornerstones of the policy:

(1) promoting specific infrastructural investments which reduce costs allround in the economy and establish, thereby, a level playing field for all firms, while reaping the benefit of linkages across sectors which such investments generate. Specific targets of the policy would be: (i) energy (ii) transportation (iii) roads and rail, and (iv) water, irrigation, and sewage.

(2) development of information technology as a key strategic sector, not so much for the export products that this would yield in the short term, but because it is a necessary foundation for upgrading production methods in all sectors, for accessing vast new opportunities offered by the information superhighway, and for improving the level of skill and efficiency of the labor force. Policies for human resource development at all levels, for promoting R&D, and for Science and Technology, would be centered around the creative use of IT hardware and software.

(3) re-orientation of the system of incentives to meet two essential conditions: (a) a strictly performance-based system geared to simple, uniform, transparent, and measurable criteria linked to export value and national value-added, (b) shifting the focus from fiscal incentives to a system of supply- and production-oriented incentives.

(4) investment packaging of targeted projects in particular sectors of the economy, based on continuous collection and analysis of up-to-date information on local and global trends, coordination of relevant inputs from key state-agencies (JAMPRO, SRC, UDC, NDB, NIBJ, etc.), consultations and team-work with key actors in the private sector, and promotion of joint ventures and strategic alliances with international firms. Specific projects that are targets of opportunity have been identified so far in: agro-processing, industrial minerals, manufacture, and services. Others will emerge from further work.

There is a need also for coordination and integration among different policies currently being developed, or already in motion, so as to ensure consistency, effectiveness, and economy of effort. Among such policies are: Land and Environment Policy, Energy Policy, Transportation Policy, Science and Technology Policy, Human Resource Development Policy, Financial Policy, Labor Market Policy, International Policy. All of them must be brought within a framework of coordination and integration that links them directly to Industrial Policy as the central element of the overall policy-mix.

Figure 4.1 gives a broad view of the structure of policy integration and coordination emerging from this report and the above recommendations.

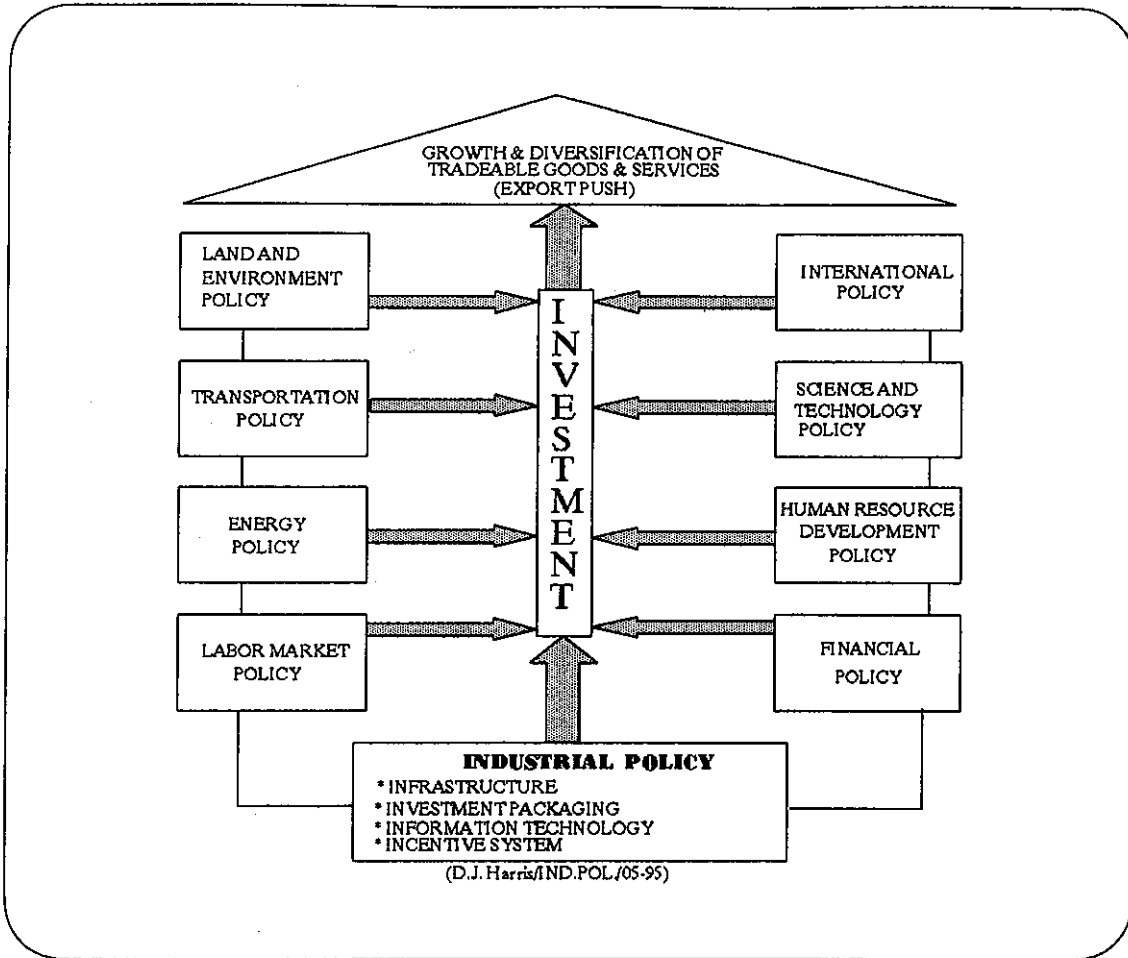


Figure 4.1. POLICY INTEGRATION FOR BUILDING COMPETITIVE ADVANTAGE

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Table 2.1  
DIRECTION OF EXPORTS  
by Trading Areas and Countries, 1989-1993

Trading Areas/ Countries	Percent of Exports				
	1989	1990	1991	1992	1993
CARICOM	6.99	6.28	5.86	5.67	5.62
Barbados	1.40	1.40	1.35	1.19	1.25
Trinidad & Tobago	3.20	2.81	2.83	2.52	2.08
EUROPEAN UNION	31.07	29.43	27.65	23.46	25.98
UK	16.00	16.99	18.52	17.34	14.27
Germany	0.30	0.29	0.33	0.42	0.52
Netherlands	12.05	12.19	9.69	5.41	6.22
NAFTA	49.62	39.38	42.52	48.16	47.74
Canada	13.20	10.68	11.06	11.55	11.11
USA	34.70	28.65	31.41	36.52	36.30
Mexico	1.72	0.05	0.05	0.10	0.33
EFTA	5.22	12.21	12.23	13.59	8.73
Norway	4.70	10.33	7.83	11.02	8.26
AFRICAN LOME	2.87	4.72	4.14	5.02	5.87
Ghana	2.65	4.55	3.93	4.81	5.76
CACM	0.25	0.05	0.07	0.06	0.03
LAIA	1.64	1.18	1.26	0.34	0.95
OPEC	0.02	0.01	0.03	0.01	0.35
OTHER COUNTRIES		6.39	5.58	3.36	
Hong Kong	0.09	0.02	0.13	0.04	0.01
Puerto Rico	0.16	0.13	0.09	0.41	0.44
Japan	0.93	0.69	0.85	1.46	1.83
Russia	2.66	4.44	2.40	0.41	0.82
Singapore	0.00	0.00	0.01	0.01	0.01
Korea, South	0.55	0.01	0.00	0.01	0.00

Source: STATIN, External Trade

Note: Area totals do not sum to total exports because some countries are members of multiple trading areas.

Table 2.2  
 Jamaica: Percentage Composition of Exports, at SITC 2 digit level, 1970-1993.  
 Overall Rank by Category

Section #	Section name	1970	1980	1990	1991	1992	1993
	<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>
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%	8.19%	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, 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%
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 of 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 vehicle)	0.00%	0.00%	0.03%	0.04%	0.04%	0.04%
74	General industrial machinery and equipment nes and machine 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 Pyrotechnic Products	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%

Table 2.3  
 Jamaica: Annual Average Growth of Exports (US\$), 1990-1993.  
 Ranked by Growth Rate

Section #	Section name	
	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%
08	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%
64	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 of paperboard	20.95%
01	Meat & 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 vehicle)	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 machine 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%
00	Live animals chiefly for food	N.A.
21	Hides, skins and furskins, raw	N.A.
23	Crude rubber	N.A.
24	Cork and wood	N.A.
32	Coal, coke and briquettes	N.A.
34	Gas, natural and manufactured	N.A.
41	Animal oils and fats	N.A.
43	Animal and vegetable oils and fats, processed, and waxes	N.A.
56	Fertilizers manufactured	N.A.
57	Explosives and Pyrotechnic Products	N.A.
71	Power generating machinery and equipment	N.A.

76	Telecommunications and sound recording and reproducing apparatus	N.A.
79	Other transport equipment	N.A.
87	Professional, scientific and controlling instruments and apparatus nes	N.A.
96	Coins (other than gold coins)	N.A.
97	Gold, non-monetary	N.A.
99	Other nes	N.A.
98	Special transactions not classified according to kind	N.A.
94	Animals nes (including zoo animals)	N.A.
95	Firearms of war and ammunition thereof	N.A.

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Source: "External Trade", STATIN, Government of Jamaica.

Table 2.4

Jamaica: Exports of Manufactures by Factor Intensity Category at 2 digit level of SITC, 1970-1993.  
Percentage of Manufactures

Section #	Section name	1970	1980	1990	1991	1992	1993
5, 6, 7, 8	All Manufactures	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	<b>Human Capital/Technology-intensive</b>	<b>39.34%</b>	<b>54.86%</b>	<b>27.21%</b>	<b>23.55%</b>	<b>15.24%</b>	<b>13.32%</b>
51	Organic Chemicals	1.17%	0.00%	0.19%	0.64%	0.05%	0.04%
53	Dyeing, Tanning and Colouring Materials	5.22%	3.44%	1.01%	1.04%	0.54%	0.50%
54	Medicinal and Pharmaceutical Products	2.46%	4.06%	2.23%	1.60%	1.79%	1.71%
55	Essential Oils and Perfume materials	15.37%	12.24%	10.75%	8.85%	6.17%	5.48%
57	Explosives and Pyrotechnic Products	0.00%	0.00%	0.00%	0.03%	0.04%	0.06%
58	Artificial Resins and Plastic Materials and Cellulose Esters and Ethers	0.00%	1.00%	0.37%	0.20%	0.21%	0.20%
59	Chemical Materials and Products, nes	2.59%	2.62%	1.00%	0.81%	0.46%	0.44%
62	Rubber manufactures nes	0.03%	0.74%	4.47%	5.23%	2.56%	2.02%
67	Iron and steel	0.89%	9.96%	0.86%	0.05%	0.03%	0.01%
68	Non-ferrous metals	0.72%	2.80%	0.75%	0.44%	0.45%	0.25%
69	Manufactures of metal nes	5.26%	6.67%	2.46%	1.98%	1.23%	1.36%
71	Power generating machinery and equipment	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%
72	Machinery specialized for particular industries	0.00%	1.14%	0.01%	0.04%	0.01%	0.06%
73	Metalworking machinery	0.00%	0.06%	0.25%	0.19%	0.05%	0.13%
74	General Industrial machinery and equipment nes and machine parts nes	1.68%	0.94%	0.37%	0.56%	0.34%	0.14%
75	Office machines and automatic data processing equipment	0.00%	0.00%	0.00%	0.02%	0.00%	0.05%
76	Telecommunications and sound recording and reproducing apparatus	0.00%	0.85%	0.03%	0.00%	0.00%	0.00%
77	Electrical machinery, apparatus and appliances nes and parts	3.71%	7.99%	2.11%	1.55%	1.10%	0.59%
78	Road vehicles (including air cushion vehicle)	0.00%	0.01%	0.23%	0.28%	0.18%	0.17%
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	0.16%	0.17%	0.06%	0.03%	0.01%	0.04%
87	Professional, scientific and controlling instruments and apparatus nes	0.08%	0.03%	0.00%	0.00%	0.00%	0.04%
88	Photographic apparatus, equipment and supplies and optical goods nes,	0.00%	0.03%	0.03%	0.00%	0.00%	0.02%
	<b>Unskilled Labour-intensive:</b>	<b>40.28%</b>	<b>23.71%</b>	<b>64.43%</b>	<b>67.46%</b>	<b>76.39%</b>	<b>79.61%</b>
61	Leather, leather manufactures nes and dressed furskins	0.50%	0.09%	0.02%	0.00%	0.01%	0.00%
65	Textile yarn, fabrics, made-up articles nes and related products	1.58%	2.19%	0.79%	1.81%	1.00%	0.62%
82	Furniture and parts thereof	0.80%	5.73%	2.35%	2.29%	1.58%	1.59%
83	Travel goods, handbags and similar containers	0.46%	0.21%	0.91%	0.66%	0.28%	0.06%
84	Articles of apparel and clothing accessories	33.47%	12.86%	58.75%	60.96%	72.76%	76.81%
85	Footwear	3.48%	2.64%	1.61%	1.75%	0.75%	0.52%
	<b>Natural Resource-intensive:</b>	<b>11.17%</b>	<b>7.18%</b>	<b>4.19%</b>	<b>5.02%</b>	<b>5.37%</b>	<b>4.44%</b>
52	Inorganic Chemicals	0.00%	3.94%	1.54%	2.59%	2.87%	2.54%
56	Fertilizers manufactured	2.22%	0.00%	0.00%	0.00%	0.00%	0.00%
63	Cork and wood manufactures (excluding furniture)	0.09%	0.31%	0.18%	0.17%	0.14%	0.34%
64	Paper, paperboard and articles of paper pulp, of paper or of paperboard	1.46%	1.72%	0.40%	0.33%	0.42%	0.37%
66	Non-metallic mineral manufactures nes	7.40%	1.20%	2.07%	1.92%	1.94%	1.19%
	<b>Other Manufactures</b>	<b>9.21%</b>	<b>14.26%</b>	<b>4.17%</b>	<b>3.97%</b>	<b>3.00%</b>	<b>2.63%</b>
89	Miscellaneous manufactured articles nes	9.21%	14.26%	4.17%	3.97%	3.00%	2.63%

Source: "External Trade", STATIN, Government of Jamaica.

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Table 2.5  
 COMPETITIVE MATRIX  
 (Selected Countries/Areas; 1980, 1992)

Countries/ Areas	Increasing Sectors				Decreasing Sectors							
	Market Share (%)	Contri- bution (%)	Speciali- zation	Market Share (%)	Contri- bution (%)	Speciali- zation	Market Share (%)	Contri- bution (%)	Speciali- zation			
	1980	1992	1980	1992	1980	1992	1980	1992	1980	1992		
<u>Caribbean</u>	.17	.20	15.21	49.48	.33	.70	.79	.50	84.79	50.52	1.57	1.72
Barbados	.01	0	56.45	52.19	1.23	.74	.01	.01	43.55	47.81	.80	1.62
Dominican Rep.	.04	.13	23.54	80.04	.51	1.13	.11	.08	76.46	19.96	1.41	0.68
Jamaica	.02	.03	10.92	40.17	.24	.57	.11	.11	89.08	59.83	1.65	2.03
Trinidad & To.	.01	.01	1.93	11.96	.04	.17	.37	.15	98.07	88.04	1.81	2.99
<u>C. A. C. M.</u>	.13	.19	15.87	47.96	.35	.68	.59	.50	84.13	52.04	1.55	1.77
Costa Rica	.02	.07	11.11	49.70	.24	.70	.11	.16	88.89	50.30	1.64	1.71
<u>L. A. F. T. A.</u>	1.73	2.96	18.04	48.81	.39	.69	6.67	7.44	81.96	51.19	1.51	1.74
Chile	.03	.08	6.10	19.97	.13	.28	.41	.75	93.90	80.03	1.72	2.72
<u>4 Asian Tigers</u>	6.08	7.84	80.20	90.85	1.75	1.29	1.27	1.89	19.80	9.15	.37	.31
Singapore	.56	1.33	50.26	90.41	1.10	1.28	.47	.34	49.74	9.59	.92	.33

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

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Table 2.6

**COMPETITIVE MATRIX**  
**Adaptability Index, on All Sectors**  
**(Selected Countries/Areas; 1980, 1992)**

Countries/ Areas	Adaptability Index on			
	Market Share		Contribution	
	1980	1992	1980	1992
<u>Caribbean</u>	.21	.41	.18	.98
Barbados	1.53	.46	1.30	1.09
Dominican Republic	.36	1.67	.31	4.01
Jamaica	.14	.28	.12	.67
Trinidad & Tobago	.02	.06	.02	.14
<u>C. A. C. M.</u>	.22	.38	.19	.92
Costa Rica	.15	.41	.12	.99
<u>L. A. F. T. A.</u>	.26	.40	.22	.95
Chile	.08	.10	.06	.25
<u>4 Asian Tigers</u>	4.78	4.14	4.05	9.93
Singapore	1.19	3.93	1.01	9.43

Source: ECLAC, Analisis de la Competitividad de Los Paises,  
 versión 2.0, Diciembre 1994.

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Table 2.7

COMPETITIVE MATRIX  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 (Top 40 products ranked by export share in 1992)  
 SITC 3-digit categories

	1980				1992			
	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
<b>** Rising Stars</b>								
* 84	Articles of clothing and apparatus and accessories							
846	Under garments							
845	outer garments and other garments							
843	Outer garments, women's, girls' and infants' of textile fabrics							
842	Outer garments, men's and boys' of textile fabrics							
844	Under garments of textile fabrics							
* 05	Vegetables and fruit							
054	Vegetables, fresh, chilled, frozen or simply preserved (including dried leguminous vegetables) roots, tubers and other edible vegetable pr							
* 03	Fish, crustaceans and molluscs, and preparations							
036	Crustaceans and mollusc, whether in shell or not, fresh (live or dead), chilled, frozen, salted, in brne or dried crustaceans, in shell, s							
* 09	Miscellaneous edible products and preparations							
098	Edible products and preparations, n.e.s.							
* 77	Electrical machinery, and appliance, n.e.s.							
772	Electrical apparatus for making and breaking electrical circuits and for the protection of electrical circuits etc.							
* 85	Footwear							
851	Footwear							



**COMPETITIVE MATRIX**  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 (Top 40 products ranked by export share in 1992)  
 SITC 3-digit categories

1980				1992			
MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE

**\*\* Declining Stars**

* 06 061	Sugar and sugar preparations Sugar and Honey	1 1351	8.0412	17 5000	0.4595	1 7002	7 0144	30.3577	0.2311
* 05 057	Vegetables and fruit Fruits and nuts (not including oil nuts), fresh or dried	0.2102	2.5331	3.2400	0.7818	0.4063	5.5669	7.2543	0.7674
* 51 512	Organic chemicals Alcohols, phenols, phenol-alcohols, and their halogenated	0.0020	0.0072	0.0304	0.2367	0.3895	1.6028	6.9545	0.2305
* 07 071	Coffee, tea, cocoa, spices, and manufactures Coffee and coffee substitutes	0.0410	0.5931	0.6324	0.9379	0.2714	1.3827	4.8459	0.2853
* 52 522	Inorganic chemicals Inorganic chemical elements, oxides and halogen salts	0.0001	0.0005	0.0013	0.3554	0.0367	0.2015	0.6562	0.3071
* 28 288	Metalliferous and metal scraps Non-ferrous base metals waste and scrap, n.e.s.	0.0231	0.0980	0.3560	0.2752	0.0384	0.1364	0.6866	0.1986
* 05 056	Vegetables and fruit Vegetables, roots and tubers, prepared or preserved, n.e.s.	0.0220	0.0624	0.3385	0.1842	0.0312	0.0826	0.5563	0.1484
* 02 024	Dairy products and birds' eggs Cheese and curd	0.0004	0.0017	0.0065	0.2677	0.0112	0.0523	0.1995	0.2622
* 28 282	Metalliferous and metal scraps Waste and scrap metal of iron or steel	0.0029	0.0090	0.0454	0.1986	0.0190	0.0476	0.3385	0.1405
* 52 523	Inorganic chemicals Other inorganic chemicals organic and inorganic compounds of precious metals	0.0050	0.0178	0.0766	0.2327	0.0109	0.0452	0.1945	0.2322

COMPETITIVE MATRIX  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 (Top 40 products ranked by export share in 1992)  
 SITC 3-digit categories

		1980				1992			
		MARKET SHARE	CONTRI- BUTION	SPECIAL- ISATION	SECTOR SHARE	MARKET SHARE	CONTRI- BUTION	SPECIAL- ISATION	SECTOR SHARE
**	<b>Missed Opportunities</b>								
* 11	Beverages								
	112 Alcoholic beverages	0.5034	4.6864	7.7614	0.6038	0.3200	3.8200	5.7140	0.6685
* 93									
	931 Special transactions and commodities not classified according to kind	0.0600	0.8370	0.9258	0.9040	0.0575	1.8448	1.0260	1.7980
* 05	Vegetables and fruit								
058	Fruit, preserved and fruit preparation	0.1337	0.5636	2.0615	0.2734	0.0778	0.4612	1.3894	0.3320
* 12	Tobacco and tobacco preparations								
	122 Tobacco manufactured	0.5823	1.1787	8.9781	0.1313	0.1048	0.4301	1.8711	0.2299
* 29	Crude animal and vegetable materials								
	292 crude vegetable materials, n.e.s.	0.0508	0.2643	0.7828	0.3377	0.0355	0.2375	0.6334	0.3750
* 82	Furniture and parts								
	821 Furniture and parts thereof	0.0092	0.0940	0.1422	0.6615	0.0086	0.1677	0.1533	1.0943
* 55	Essential oils and perfumes								
	551 essential oils, perfume and flavor materials	0.1430	0.1937	2.2044	0.0879	0.0528	0.1033	0.9420	0.1096
* 83	Travel goods								
	831 Travel goods etc.	0.0307	0.0895	0.4731	0.1891	0.0079	0.0488	0.1418	0.3439
* 89	Miscellaneous manufactured articles, n.e.s.								
	898 Musical instruments and parts and accessories	0.0236	0.0996	0.3643	0.2735	0.0035	0.0430	0.0625	0.6871
	892 Printed matter	0.0015	0.0114	0.0235	0.4825	0.0015	0.0171	0.0264	0.6462

COMPETITIVE MATRIX  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 (Top 40 products ranked by export share in 1992)  
 SITC 3-digit categories

		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
<b>** Retreats</b>									
* 28	Metaliferous and metal scraps								
287	Ores and concentrates of base metals, n.e.s.	5.1521	76.1084	79.4308	0.9582	4.8456	42.7849	86.5200	0.4945
* 07	Coffee, tea, cocoa, spices, and manufactures								
075	Spices	0.6486	0.3890	9.9997	0.0389	0.4591	0.2976	8.1982	0.0363
072	Cocoa	0.1467	0.8953	2.2615	0.3075	0.0955	0.2266	1.7055	0.1328
* 91									
911	Postal packages not classified according to kind	0.1477	0.1022	2.2780	0.0448	0.0976	0.0576	1.7426	0.0330
* 89	Miscellaneous manufactured articles, n.e.s.								
896	Works of arts, collectors' pieces and antiques	0.0065	0.0310	0.1002	0.3092	0.0038	0.0204	0.0673	0.3032
* 00	Live animals chiefly for food								
001	Live animals chiefly for food	0.0009	0.0039	0.0136	0.2863	0.0006	0.0028	0.0107	0.2613
* 23	Crude rubber								
233	Synthetic rubber latex synthetic rubber and reclaimed rubber etc.	0.0019	0.0047	0.0298	0.1567	0.0004	0.0010	0.0078	0.1222
* 42	Fixed vegetable oils and fat								
424	other fixed vegetable oils, fluid or solid	0.0017	0.0044	0.0262	0.1678	0.0006	0.0009	0.0102	0.0915
* 29	Crude animal and vegetable materials								
291	crude animal materials, n.e.s.	0.0063	0.0117	0.0975	0.1203	0.0005	0.0009	0.0096	0.0906
* 97									
971	Gold, non-monetary (excluding gold ores and concentrates)	0.0004	0.0041	0.0055	0.7519	0.0001	0.0008	0.0015	0.5084

Table 2.8  
COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

1980				1992			
MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE

**\*\* Rising Stars**

* 02 022	Dairy products and birds' eggs Milk and Cream	0.0001	0.0003	0.0016	0.1558	0.0008	0.0031	0.0138	0.2226
* 03 034	Fish, crustaceans and molluscs, and preparations Fish, fresh (live or dead), chilled or frozen	0.0033	0.0201	0.0509	0.3945	0.0082	0.0944	0.1462	0.6456
035	Fish, dried, salted or in brine smoked fish (whether or not cooked before or during the smoking process)	0.0000	0.0000	0.0000	0.0692	0.0005	0.0006	0.0081	0.0732
036	Crustaceans and mollusc, whether in shell or not, fresh (live or dead), chilled, frozen, salted, in brine or dried	0.0037	0.0194	0.0574	0.3377	0.0556	0.5238	0.9935	0.5272
037	crustaceans, in shell, s Fish, crustaceans and mollusc, prepared or preserved	0.0000	0.0001	0.0004	0.1625	0.0008	0.0033	0.0134	0.2494
* 04 046	Cereal and cereal preparations Meal and flour of wheat and flour of meslin	0.0000	0.0000	0.0000	0.0075	0.0000	0.0000	0.0000	0.0108
048	Cereal preparations and preparation of flour or starch of fruits or vegetables	0.0089	0.0223	0.1366	0.1630	0.0365	0.2028	0.6516	0.3112
* 05 054	Vegetables and fruit Vegetables, fresh, chilled, frozen or simply preserved (including dried leguminous vegetables) roots, tubers and other edible vegetable pr	0.0749	0.6078	1.1542	0.5266	0.1187	1.2339	2.1197	0.5821
* 06 062	Sugar and sugar preparations Sugar Confectionery(except chocolate confectionery) and other sugar preparations	0.0275	0.0222	0.4244	0.0523	0.0779	0.0963	1.3915	0.0692

COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 07	Coffee, tea, cocoa, spices, and manufactures								
073	Chocolate and other food preparation containing cocoa, n.e.s.	0.0017	0.0032	0.0263	0.1217	0.0209	0.0548	0.3735	0.1466
* 09	Miscellaneous edible products and preparations								
098	Edible products and preparations, n.e.s.	0.0607	0.1200	0.9362	0.1281	0.0639	0.3074	1.1410	0.2694
* 11	Beverages								
111	Non-Alcoholic beverages, n.e.s.	0.0094	0.0043	0.1446	0.0299	0.0452	0.0577	0.8063	0.0715
* 27	Crude fertilizers and minerals								
273	Stone, sand and gravel	0.0430	0.0604	0.6623	0.0913	0.0458	0.0900	0.8175	0.1101
* 35	Electric current								
351	Electric current	0.0000	0.0000	0.0000	0.1030	0.0000	0.0000	0.0000	0.1167
* 42	Fixed vegetable oils and fat								
423	Fixed vegetable oils, 'soft', crude, refined	0.0000	0.0000	0.0000	0.1256	0.0260	0.0647	0.4647	0.1393
* 51	Organic chemicals								
513	Carboxylic acids, and their anhydrides, halide, peroxides, and their halogenated	0.0000	0.0001	0.0005	0.2412	0.0001	0.0005	0.0016	0.3084
515	Organic inorganic and heterocyclic compounds	0.0000	0.0000	0.0000	0.3401	0.0000	0.0003	0.0006	0.4582
516	Other organic chemicals	0.0000	0.0000	0.0000	0.1679	0.0007	0.0031	0.0130	0.2407
* 53	Dyeing, tanning and colouring materials								
531	Synthetic organic dyestuff, etc.	0.0000	0.0000	0.0001	0.1533	0.0003	0.0012	0.0056	0.2121
533	Pigments, paints, varnishes and related materials	0.0000	0.0001	0.0003	0.1998	0.0001	0.0003	0.0008	0.3160
* 55	Essential oils and perfumes								
553	Perfumery, cosmetics and toilet preparations (excluding soaps) etc.	0.0101	0.0198	0.1558	0.1271	0.0118	0.0679	0.2105	0.3226
554	Soap, cleansing and polishing preparations	0.0053	0.0107	0.0812	0.1323	0.0053	0.0188	0.0942	0.1992
* 57	Explosives and pyrotechnic products								
572	Explosives and pyrotechnic products	0.0000	0.0000	0.0000	0.0232	0.0000	0.0000	0.0000	0.0293
* 58	Artificial resin and plastic minerals								
583	Polymerization and copolymerization product etc.	0.0001	0.0009	0.0010	0.9372	0.0002	0.0045	0.0037	1.2184

COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 59	Chemical materials and products, n.e.s.								
591	Disinfectants, insecticides, fungicides, weed killers and anti-spouting products etc.	0.0000	0.0000	0.0000	0.1615	0.0000	0.0000	0.0000	0.1736
592	Starches, inulin and wheat gluten etc.	0.0000	0.0000	0.0003	0.1047	0.0001	0.0002	0.0011	0.1790
598	Miscellaneous chemical products, n.e.s.	0.0001	0.0008	0.0016	0.4840	0.0003	0.0035	0.0053	0.6609
* 61	Leather and leather manufactures, n.e.s.								
612	Manufactures of leather or composition leathers etc.	0.0003	0.0002	0.0038	0.0578	0.0004	0.0007	0.0077	0.0963
* 62	Rubber manufactures, n.e.s.								
625	Rubber Tyre, Tyre cases, interchangeable Tyre treads etc.	0.0004	0.0026	0.0059	0.4344	0.0026	0.0238	0.0470	0.5068
* 63	Cork and wood manufactures, n.e.s.								
633	Cork manufactures	0.0000	0.0000	0.0000	0.0212	0.0000	0.0000	0.0000	0.0263
635	Wood manufactures	0.0013	0.0038	0.0200	0.1920	0.0146	0.0706	0.2612	0.2704
* 64	Paper, paperboard, and articles of paper pulp								
642	Paper and Paperboard, cut to size or shape etc.	0.0003	0.0014	0.0048	0.2790	0.0008	0.0057	0.0134	0.4276
* 65	Textile yarn, fabrics, made-up articles, n.e.s.								
653	Fabrics, woven, man-made fibers	0.0000	0.0001	0.0003	0.4052	0.0006	0.0044	0.0107	0.4063
656	Tulle, lace, embroidery, rubbers, trimming etc.	0.0001	0.0001	0.0014	0.0582	0.0712	0.0836	1.2707	0.0658
657	Special textile fabrics and related products	0.0002	0.0007	0.0030	0.2474	0.0020	0.0098	0.0354	0.2781
658	Made-up articles, wholly or chiefly of textile materials	0.0004	0.0014	0.0064	0.2130	0.0199	0.1028	0.3560	0.2889
* 66	Non-metallic mineral manufactures, n.e.s.								
661	Lime, cement, and fabricated construction materials	0.0001	0.0001	0.0010	0.1374	0.0003	0.0012	0.0059	0.1959
663	Mineral manufactures, n.e.s.	0.0000	0.0001	0.0002	0.1953	0.0002	0.0007	0.0029	0.2341
665	Glass ware	0.0003	0.0008	0.0049	0.1725	0.0006	0.0021	0.0099	0.2105
* 67	Iron and steel								
672	Ingot and other primary forms of steel or iron	0.0000	0.0000	0.0000	0.3474	0.0000	0.0000	0.0000	0.4141
679	Iron or steel castings, forgings and stamping	0.0000	0.0000	0.0000	0.0335	0.0000	0.0000	0.0000	0.0502
* 68	Non-ferrous metals								
684	Aluminum	0.0000	0.0000	0.0001	0.7313	0.0001	0.0013	0.0016	0.8052
688	Uranium depleted in u235 and thorium, and their alloys	0.0000	0.0000	0.0000	0.0002	0.0000	0.0000	0.0000	0.0020
* 69	Manufactures of metals, n.e.s.								
692	Metal containers for storage and transport	0.0010	0.0016	0.0160	0.0977	0.0106	0.0247	0.1893	0.1304
696	Cutlery	0.0000	0.0000	0.0000	0.0820	0.0000	0.0000	0.0001	0.0944

COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

	1980				1992				
	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	
* 71	Power generated machinery and equipment								
713	Internal combustion piston engine and parts etc.	0.0001	0.0008	0.0010	0.7805	0.0001	0.0015	0.0014	1.0467
714	Engines and motors, non-electric (other than those of group (712, 713 718) parts	0.0002	0.0014	0.0034	0.4055	0.0006	0.0079	0.0098	0.8075
718	Other power generating machinery and parts	0.0000	0.0000	0.0000	0.0796	0.0000	0.0000	0.0000	0.1007
* 72	Machinery specialized for particular industries								
725	Paper mill and pulp mill machinery and parts	0.0001	0.0002	0.0020	0.1143	0.0017	0.0045	0.0303	0.1472
728	Other machinery and equipment specialized for particular industries and parts	0.0004	0.0032	0.0055	0.5754	0.0005	0.0076	0.0094	0.8091
* 73	Metalworking machinery								
737	Metal-working machinery and parts	0.0000	0.0000	0.0000	0.1287	0.0000	0.0001	0.0007	0.1469
* 74	General industrial machinery and equipment								
742	Pumps (including motor and turbo pumps) for liquid and parts	0.0004	0.0017	0.0069	0.2514	0.0008	0.0044	0.0134	0.3271
749	Non-electrical parts and accessories	0.0001	0.0007	0.0008	0.8274	0.0025	0.0476	0.0447	1.0659
* 75	Office machines and automatic data processing equipment								
752	Automatic data processing machines and units thereof	0.0002	0.0028	0.0032	0.8637	0.0009	0.0483	0.0164	2.9401
759	Parts, n.e.s. and accessories (other than covers and carrying cases) suitable for use solely	0.0009	0.0077	0.0143	0.5403	0.0033	0.1002	0.0591	1.6962
* 76	Telecommunications and sound recorders and re equipment								
761	Television receivers	0.0000	0.0000	0.0000	0.2573	0.0000	0.0002	0.0005	0.4296
762	Radio-broadcast receivers	0.0000	0.0000	0.0000	0.3689	0.0000	0.0002	0.0004	0.4363
* 77	Electrical machinery, and appliance, n.e.s.								
772	Electrical apparatus for making and breaking electrical circuits and for the protection of electrical circuits etc.	0.0005	0.0046	0.0077	0.5964	0.0129	0.2439	0.2300	1.0606
773	Equipment for distributing electricity	0.0001	0.0002	0.0012	0.1821	0.0002	0.0016	0.0036	0.4534
775	House-hold type, non-electrical and electrical equipment, n.e.s.	0.0000	0.0000	0.0000	0.4957	0.0000	0.0002	0.0002	0.7415
778	Electrical machinery and parts	0.0001	0.0008	0.0010	0.7590	0.0001	0.0030	0.0024	1.2326
* 78	Road vehicles								
781	Passenger motor vehicles	0.0000	0.0005	0.0001	3.8488	0.0000	0.0047	0.0008	6.0886
782	Motor vehicle for transport of goods etc.	0.0000	0.0000	0.0000	0.8122	0.0001	0.0012	0.0011	1.0236
783	Road motor vehicles, n.e.s.	0.0000	0.0000	0.0000	0.1335	0.0000	0.0000	0.0000	0.1951
784	Parts and accessories, n.e.s., for motor vehicles for the heading 722,781,782 or 783	0.0001	0.0021	0.0011	1.9587	0.0002	0.0099	0.0038	2.5846

COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

	1980				1992			
	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 79 Other transport equipment								
791 Railway vehicles	0.0000	0.0000	0.0000	0.0937	0.0000	0.0000	0.0000	0.1246
792 Aircraft and associated equipment	0.0003	0.0052	0.0045	1.1568	0.0004	0.0134	0.0080	1.6636
* 81 Sanitary, plumbing, heating and lighting fixtures								
812 Sanitary, heating, plumbing and lighting fixtures	0.0001	0.0004	0.0022	0.1811	0.0002	0.0010	0.0031	0.3213
* 84 Articles of clothing and apparatus and accessories								
842 Outer garments, men's and boys' of textile fabrics	0.0471	0.3509	0.7264	0.4831	0.1697	2.2335	3.0304	0.7370
843 Outer garments, women's, girls' and infants' of textile fabrics	0.0193	0.1907	0.2983	0.6393	0.1437	2.9781	2.5659	1.1606
844 Under garments of textile fabrics	0.1782	0.4874	2.7471	0.1774	0.3297	1.8748	5.8876	0.3184
845 outer garments and other garments	0.0076	0.0662	0.1168	0.5668	0.3918	7.1908	6.9950	1.0280
846 Under garments	0.1287	0.6115	1.9836	0.3083	1.5787	14.3991	28.1884	0.5108
847 Clothing accessories, of textile fabrics	0.0003	0.0006	0.0051	0.1100	0.0474	0.1337	0.8461	0.1580
848 Articles of apparel and clothing accessories of other than textile fabrics	0.0002	0.0008	0.0027	0.2990	0.0049	0.0318	0.0868	0.3668
* 85 Footwear								
851 Footwear	0.0001	0.0015	0.0020	0.7587	0.0122	0.2270	0.2178	1.0422
* 87 Professional, scientific and controller instruments								
872 Medical instrument and appliances	0.0002	0.0006	0.0037	0.1728	0.0004	0.0029	0.0077	0.3837
873 meters and counters, n.e.s.	0.0000	0.0000	0.0000	0.0375	0.0000	0.0000	0.0000	0.0440
* 88 Photographic, apparatus, equipment and supplies and optical goods, n.e.s.								
885 Watches and clocks	0.0000	0.0001	0.0004	0.3175	0.0001	0.0006	0.0017	0.3534
* 89 Miscellaneous manufactured articles, n.e.s.								
893 Articles, n.e.s. of materials of the kind described in Section 5, 58*	0.0001	0.0011	0.0021	0.4979	0.0003	0.0060	0.0060	1.0036
894 Babies carriages, toys, games, and sporting goods	0.0008	0.0065	0.0118	0.5504	0.0019	0.0376	0.0335	1.1247
895 Office and Stationary supplies	0.0000	0.0000	0.0002	0.0824	0.0000	0.0001	0.0008	0.1498
899 Other miscellaneous manufactures articles, n.e.s.	0.0085	0.0363	0.1312	0.2769	0.0199	0.1477	0.3553	0.4157



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Jamaica: Exports to OECD Countries, 1980 and 1992  
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1980				1992			
MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE

**\*\* Declining Stars**

* 01	Meat and meat preparations								
011	Meat and edible meat offals, fresh, chilled or frozen (except meat and meat offal unfit or unsuitable for human consumption)	0.0000	0.0000	0.0000	1.0149	0.0000	0.0000	0.0000	1.0019
012	Meat and edible meat offals (except poultry liver), salted, in brine dried or smoked	0.0000	0.0000	0.0000	0.0751	0.0000	0.0000	0.0000	0.0532
* 02	Dairy products and birds' eggs								
023	Butter	0.0000	0.0000	0.0000	0.1621	0.0000	0.0000	0.0000	0.0813
024	Cheese and curd	0.0004	0.0017	0.0065	0.2677	0.0112	0.0523	0.1995	0.2622
025	Eggs, birds', and egg yolks, fresh dried or otherwise preserved, sweetened or not	0.0000	0.0000	0.0000	0.0528	0.0000	0.0000	0.0000	0.0258
* 04	Cereal and cereal preparations								
041	Wheat (including spelt) and meslin, unmilled	0.0000	0.0000	0.0000	0.3113	0.0000	0.0000	0.0000	0.2072
042	Rice	0.0000	0.0000	0.0000	0.0596	0.0000	0.0000	0.0000	0.0517
043	Barley, unmilled	0.0000	0.0000	0.0000	0.1076	0.0000	0.0000	0.0000	0.0488
044	Maize (corn), unmilled	0.0000	0.0000	0.0000	0.4736	0.0000	0.0000	0.0000	0.1904
047	Other cereal meal and flour	0.0000	0.0000	0.0000	0.0061	0.0118	0.0011	0.2110	0.0051
* 05	Vegetables and fruit								
056	Vegetables, roots and tubers, prepared or preserved, n.e.s.	0.0220	0.0624	0.3385	0.1842	0.0312	0.0826	0.5563	0.1484
057	Fruits and nuts (not including oil nuts), fresh or dried	0.2102	2.5331	3.2400	0.7818	0.4063	5.5669	7.2543	0.7674
* 06	Sugar and sugar preparations								
061	Sugar and Honey	1.1351	8.0412	17.5000	0.4595	1.7002	7.0144	30.3577	0.2311
* 07	Coffee, tea, cocoa, spices, and manufactures								
071	Coffee and coffee substitutes	0.0410	0.5931	0.6324	0.9379	0.2714	1.3827	4.8459	0.2853
074	Tea and mate	0.0000	0.0000	0.0000	0.0751	0.0011	0.0009	0.0202	0.0451
* 08	Feeding stuff for animals (not including unmilled cereals)								
081	Feeding stuff for animals (not including unmilled cereals)	0.0004	0.0039	0.0060	0.6448	0.0034	0.0315	0.0609	0.5169
* 09	Miscellaneous edible products and preparations								
091	Margarine and Shortening	0.0000	0.0000	0.0000	0.0311	0.0000	0.0000	0.0000	0.0192
* 12	Tobacco and tobacco preparations								
121	Tobacco, unmanufactured tobacco refused	0.0074	0.0273	0.1141	0.2391	0.0117	0.0379	0.2089	0.1813
* 21	Hides, skins and furskins								
211	Hides and Skins (except furskins), raw	0.0018	0.0051	0.0270	0.1895	0.0057	0.0114	0.1027	0.1112
212	Furskins, raw (including astrakhan, caracul, Persian, broadtail and similar skins)	0.0000	0.0000	0.0000	0.1540	0.0000	0.0000	0.0000	0.0198

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Jamaica: Exports to OECD Countries, 1980 and 1992  
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		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 22	Oil seed and oleaginous fruit								
222	Oil seeds and oleaginous fruit, whole or broken, of kind used for the extraction of 'soft' fixed vegetables oils	0.0000	0.0000	0.0000	0.6115	0.0000	0.0000	0.0000	0.2939
223	Oil seeds and oleaginous fruit, whole or broken, of kind used for the extraction of other fixed vegetables oils	0.0000	0.0000	0.0000	0.0469	0.0062	0.0017	0.1099	0.0155
* 23	Crude rubber								
232	Natural rubber latex natural rubber and similar natural gums	0.0000	0.0000	0.0000	0.2222	0.0000	0.0000	0.0000	0.1012
* 24	Cork and wood								
244	Cork, natural, raw and waste (including natural cork in blocks etc.)	0.0000	0.0000	0.0000	0.0050	0.0000	0.0000	0.0000	0.0030
246	Pulpwood (including chips and wood waste)	0.0001	0.0002	0.0017	0.1236	0.0021	0.0034	0.0370	0.0917
247	other wood in rough or roughly squared	0.0000	0.0003	0.0006	0.5595	0.0001	0.0004	0.0012	0.3221
248	Wood, simply worked, and railway sleepers of wood	0.0003	0.0042	0.0050	0.8434	0.0009	0.0114	0.0158	0.7209
* 25	Pulp and waste paper								
251	Pulp and waste paper	0.0019	0.0184	0.0293	0.6282	0.0029	0.0225	0.0513	0.4385
* 26	Textile fibres (other than wool tops)								
261	Silk	0.0000	0.0000	0.0000	0.0241	0.0000	0.0000	0.0000	0.0138
263	Cotton	0.0000	0.0000	0.0000	0.2793	0.0008	0.0019	0.0147	0.1258
264	Jute and other textile best fibers, n.e.s., raw or processed	0.0000	0.0000	0.0000	0.0056	0.0000	0.0000	0.0000	0.0009
265	Vegetable textile fibers (other than cotton and jute) and waste of such fibers	0.0000	0.0000	0.0000	0.0261	0.0000	0.0000	0.0000	0.0106
266	Synthetic fibers suitable for spinning	0.0000	0.0000	0.0000	0.1162	0.0012	0.0019	0.0219	0.0863
267	Other man-made fibers suitable for spinning	0.0000	0.0000	0.0000	0.0402	0.0000	0.0000	0.0000	0.0359
268	Wool and other animal hair (excluding wool tops)	0.0000	0.0000	0.0000	0.2681	0.0000	0.0000	0.0000	0.1188
269	Old clothing and other old textile articles rags	0.0000	0.0000	0.0000	0.0199	0.0010	0.0003	0.0179	0.0145

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1980				1992			
MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE

* 27	Crude fertilizers and minerals								
271	Fertilizers, crude	0.0000	0.0000	0.0000	0.1351	0.0016	0.0011	0.0285	0.0387
274	Sulphur and unroasted iron pyrites	0.0000	0.0000	0.0000	0.0554	0.0000	0.0000	0.0000	0.0174
277	Natural abrasive, n.e.s. (including industrial diamonds)	0.0000	0.0000	0.0000	0.0553	0.0000	0.0000	0.0000	0.0361
278	Other crude minerals	0.0000	0.0000	0.0000	0.2996	0.0001	0.0002	0.0008	0.2049
* 28	Metalliferous and metal scraps								
282	Waste and scrap metal of iron or steel	0.0029	0.0090	0.0454	0.1986	0.0190	0.0476	0.3385	0.1405
286	Ores and concentrates of uranium and thorium	0.0000	0.0000	0.0000	0.0132	0.0000	0.0000	0.0000	0.0073
288	Non-ferrous base metals waste and scrap, n.e.s.	0.0231	0.0980	0.3560	0.2752	0.0384	0.1364	0.6866	0.1986
* 32	Coal, coke and briquettes								
322	Coal, lignite and peat	0.0000	0.0000	0.0000	0.9544	0.0000	0.0001	0.0002	0.6165
323	Briquettes coke and semi-coke of coal, lignite or peat retort carbon	0.0000	0.0000	0.0000	0.1354	0.0000	0.0000	0.0000	0.0503
* 33	Petroleum, and petroleum products and related materials								
333	Petroleum oils, crude oils, and crude oils	0.0000	0.0000	0.0000	17.5130	0.0000	0.0000	0.0000	5.8109
334	Petroleum products, refined	0.0000	0.0003	0.0001	4.6445	0.0001	0.0040	0.0019	2.0606
335	Residual petroleum products, n.e.s. and related materials	0.0000	0.0000	0.0000	0.3101	0.0000	0.0000	0.0000	0.1497
* 34	Gas, natural and manufactured								
341	Gas, natural and manufactured	0.0000	0.0000	0.0000	1.9956	0.0000	0.0000	0.0000	1.1166
* 41	Animal oils and fat								
411	Animal oil and fat	0.0003	0.0003	0.0046	0.0680	0.0009	0.0004	0.0155	0.0291
* 51	Organic chemicals								
512	Alcohols, phenols, phenol-alcohols, and their halogenated	0.0020	0.0072	0.0304	0.2367	0.3895	1.6028	6.9545	0.2305
* 52	Inorganic chemicals								
522	Inorganic chemical elements, oxides and halogen salts	0.0001	0.0005	0.0013	0.3554	0.0367	0.2015	0.6562	0.3071
523	Other inorganic chemicals organic and inorganic compounds of precious metals	0.0050	0.0178	0.0766	0.2327	0.0109	0.0452	0.1945	0.2322
* 56	Fertilizers, manufactures								
562	Fertilizers, manufactured	0.0000	0.0000	0.0000	0.3418	0.0004	0.0018	0.0069	0.2566

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		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 58	Artificial resin and plastic minerals								
584	Regenerated cellulose cellulose nitrate, cellulose acetate etc.	0.0010	0.0012	0.0152	0.0795	0.0012	0.0013	0.0222	0.0561
585	other artificial resins and plastic materials	0.0000	0.0000	0.0000	0.0356	0.0037	0.0009	0.0667	0.0130
* 61	Leather and leather manufactures, n.e.s.								
611	Leather	0.0008	0.0027	0.0127	0.2109	0.0014	0.0050	0.0252	0.1992
* 65	Textile yarn, fabrics, made-up articles, n.e.s.								
651	Textile yarn	0.0003	0.0028	0.0042	0.6848	0.0024	0.0268	0.0437	0.6144
652	cotton fabrics, woven	0.0027	0.0159	0.0408	0.3886	0.0080	0.0450	0.1435	0.3133
655	Knitted or crocheted fabrics	0.0000	0.0000	0.0000	0.1196	0.0013	0.0024	0.0239	0.1024
* 66	Non-metallic mineral manufactures, n.e.s.								
662	Clay and refractory construction materials	0.0000	0.0000	0.0000	0.2163	0.0000	0.0000	0.0000	0.1884
667	Pearls, precious and semi-precious stones	0.0001	0.0009	0.0008	1.1548	0.0019	0.0301	0.0340	0.8865
* 67	Iron and steel								
673	Iron and steel bars, rods, angles, and shape and sections	0.0000	0.0000	0.0000	0.6204	0.0003	0.0021	0.0052	0.3942
674	Universals, plates and sheets, of iron or steel	0.0000	0.0000	0.0000	0.9683	0.0001	0.0016	0.0019	0.8444
675	Hoop and strip, of iron or steel, cold and hot rolled	0.0000	0.0000	0.0000	0.1372	0.0000	0.0000	0.0000	0.0000
676	Rails and railway track construction material	0.0000	0.0000	0.0000	0.0257	0.0000	0.0000	0.0000	0.0202
677	Iron or steel wire etc.	0.0000	0.0000	0.0000	0.1002	0.0010	0.0013	0.0177	0.0746
678	Tubes, pipes of iron or steel	0.0000	0.0000	0.0000	0.6129	0.0001	0.0010	0.0026	0.4058
* 68	Non-ferrous metals								
682	Copper	0.0000	0.0000	0.0000	0.7787	0.0003	0.0032	0.0059	0.5397
683	Nickel	0.0000	0.0000	0.0000	0.1681	0.0000	0.0000	0.0000	0.1113
685	Lead	0.0000	0.0000	0.0000	0.0987	0.0000	0.0000	0.0000	0.0257
687	Tin	0.0000	0.0000	0.0000	0.1670	0.0000	0.0000	0.0000	0.0315
689	Miscellaneous non-ferrous base metals	0.0000	0.0000	0.0000	0.1143	0.0000	0.0000	0.0000	0.0695
* 71	Power generated machinery and equipment								
712	Steam and other vapor power units	0.0009	0.0006	0.0144	0.0443	0.0641	0.0359	1.1454	0.0314
* 72	Machinery specialized for particular industries								
721	Agriculture machinery	0.0001	0.0004	0.0014	0.3171	0.0002	0.0008	0.0037	0.2272
722	Tractors etc.	0.0000	0.0000	0.0000	0.2864	0.0000	0.0000	0.0000	0.1720
723	Civil engineering and contractors and plant and parts and equipment	0.0000	0.0000	0.0000	0.4872	0.0000	0.0000	0.0000	0.3023

**COMPETITIVE MATRIX**  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 (SITC 3-digit categories)

1980				1992					
MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE		
* 79	Other transport equipment								
793	Ships, boats etc.	0.0001	0.0007	0.0017	0.4198	0.0012	0.0074	0.0217	0.3426
* 88	Photographic, apparatus, equipment and supplies and optical goods, n.e.s.								
881	Photographic apparatus and equipment, n.e.s.	0.0001	0.0004	0.0016	0.2608	0.0009	0.0038	0.0161	0.2361
<b>** Missed Opportunities</b>									
* 05	Vegetables and fruit								
058	Fruit, preserved and fruit preparation	0.1337	0.5636	2.0815	0.2734	0.0778	0.4612	1.3894	0.3320
* 11	Beverages								
112	Alcoholic beverages	0.5034	4.6864	7.7614	0.6038	0.3200	3.8200	5.7140	0.6685
* 12	Tobacco and tobacco preparations								
122	Tobacco manufactured	0.5823	1.1787	8.9781	0.1313	0.1048	0.4301	1.8711	0.2299
* 29	Crude animal and vegetable materials								
292	crude vegetable materials, n.e.s.	0.0508	0.2643	0.7828	0.3377	0.0355	0.2375	0.6334	0.3750
* 51	Organic chemicals								
514	Nitrogen-function compounds	0.0000	0.0001	0.0001	0.3469	0.0000	0.0000	0.0000	0.6044
* 53	Dyeing, tanning and colouring materials								
532	Dyeing and tanning extracts, and synthetic tanning materials	0.0075	0.0016	0.1149	0.0141	0.0013	0.0004	0.0226	0.0172
* 54	Medicinal and pharmaceuticals products								
541	Medicinal and pharmaceutical products	0.0079	0.0838	0.1216	0.6889	0.0004	0.0093	0.0068	1.3796
* 55	Essential oils and perfumes								
551	essential oils, perfume and flavor materials	0.1430	0.1937	2.2044	0.0879	0.0528	0.1033	0.9420	0.1096
* 58	Artificial resin and plastic minerals								
582	Condensation, polycondensation and poly addition products etc.	0.0000	0.0002	0.0004	0.4042	0.0000	0.0000	0.0000	0.4764
* 62	Rubber manufactures, n.e.s.								
621	Materials of rubbers etc.	0.0001	0.0001	0.0007	0.0954	0.0000	0.0000	0.0000	0.1245
628	Articles of rubber, n.e.s.	0.0009	0.0015	0.0136	0.1112	0.0000	0.0001	0.0007	0.1701
* 64	Paper, paperboard, and articles of paper pulp								
641	Paper and Paperboard	0.0001	0.0015	0.0012	1.2463	0.0000	0.0000	0.0000	1.5238
* 66	Non-metallic mineral manufactures, n.e.s.								
664	Glass	0.0001	0.0003	0.0011	0.2133	0.0001	0.0003	0.0012	0.2873
666	Pottery	0.0015	0.0039	0.0236	0.1648	0.0008	0.0024	0.0142	0.1661

COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

	1980				1992			
	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 69 Manufactures of metals, n.e.s.								
691 Structures and part of structures	0.0003	0.0009	0.0054	0.1666	0.0000	0.0000	0.0000	0.2192
694 Nails, screws, nuts, and bolts	0.0004	0.0014	0.0070	0.2068	0.0000	0.0000	0.0000	0.2219
695 Tools for use in the hand or in machines	0.0003	0.0013	0.0039	0.3296	0.0001	0.0007	0.0020	0.3597
697 Household equipment of base metals, n.e.s.	0.0012	0.0037	0.0180	0.2078	0.0003	0.0011	0.0052	0.2231
699 Manufactures of base metals, n.e.s.	0.0004	0.0034	0.0056	0.6054	0.0001	0.0011	0.0015	0.7500
* 71 Power generated machinery and equipment								
716 Rotating electric parts and plants	0.0002	0.0006	0.0024	0.2638	0.0001	0.0010	0.0026	0.3778
* 72 Machinery specialized for particular industries								
724 Textile and leather machinery and parts	0.0004	0.0021	0.0059	0.3526	0.0001	0.0006	0.0015	0.3616
726 Printing and bookbinding machinery and parts	0.0009	0.0027	0.0133	0.2002	0.0002	0.0010	0.0036	0.2807
727 Food-processing machines and parts	0.0049	0.0056	0.0752	0.0751	0.0005	0.0009	0.0081	0.1074
* 74 General industrial machinery and equipment								
741 Heating and cooling equipment and parts	0.0003	0.0017	0.0049	0.3416	0.0001	0.0013	0.0024	0.5486
743 Pumps (other than liquid pumps) and parts	0.0005	0.0028	0.0072	0.3913	0.0001	0.0007	0.0012	0.5726
744 Mechanical handling equipment and parts	0.0003	0.0019	0.0044	0.4306	0.0001	0.0009	0.0016	0.5654
745 Other non-electrical machinery and parts	0.0017	0.0085	0.0256	0.3324	0.0005	0.0042	0.0095	0.4415
* 75 Office machines and automatic data processing equipment								
751 Office machines	0.0001	0.0007	0.0017	0.3925	0.0000	0.0002	0.0006	0.3950
* 76 Telecommunications and sound recorders and reproducing equipment								
763 Gramophones, including record players and tape decks	0.0002	0.0009	0.0025	0.3470	0.0001	0.0004	0.0009	0.4800
764 Telecommunications equipment, n.e.s., and parts	0.0008	0.0099	0.0118	0.8391	0.0005	0.0153	0.0092	1.6600
* 77 Electrical machinery, and appliance, n.e.s.								
771 Electric power machinery	0.0003	0.0008	0.0052	0.1457	0.0001	0.0006	0.0019	0.3182
774 Electrical apparatus for medical purposes and radiological apparatus	0.0012	0.0025	0.0180	0.1374	0.0008	0.0035	0.0141	0.2481
776 Thermionic, cold cathode and photo-cathode valves and boots	0.0002	0.0024	0.0030	0.8034	0.0000	0.0007	0.0004	1.8662
* 78 Road vehicles								
785 Motorcycles, motor scooters and other cycles	0.0008	0.0037	0.0117	0.3167	0.0000	0.0002	0.0006	0.3503
786 Tractors and other vehicles, not motorized	0.0024	0.0046	0.0372	0.1227	0.0001	0.0004	0.0026	0.1437

**COMPETITIVE MATRIX**  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 (SITC 3-digit categories)

		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 82	Furniture and parts								
	821 Furniture and parts thereof	0.0092	0.0940	0.1422	0.6615	0.0086	0.1677	0.1533	1.0943
* 83	Travel goods								
	831 Travel goods etc.	0.0307	0.0895	0.4731	0.1891	0.0079	0.0488	0.1418	0.3439
* 87	Professional, scientific and controller instruments								
	871 Optical instruments and apparatus	0.0004	0.0004	0.0057	0.0658	0.0000	0.0000	0.0000	0.1293
	874 measuring, checking and controlling instruments and apparatus and parts and accessories, n.e.s.	0.0009	0.0106	0.0135	0.7815	0.0006	0.0112	0.0098	1.1518
* 88	Photographic, apparatus, equipment and supplies and optical goods, n.e.s.								
	882 Photographic and cinematographic supplies	0.0008	0.0045	0.0127	0.3525	0.0005	0.0037	0.0087	0.4287
	884 Optical goods, n.e.s.	0.0007	0.0016	0.0107	0.1548	0.0000	0.0000	0.0000	0.1725
* 89	Miscellaneous manufactured articles, n.e.s.								
	892 Printed matter	0.0015	0.0114	0.0235	0.4825	0.0015	0.0171	0.0264	0.6462
	897 Jewelry, goldsmiths' and silversmiths' wares etc.	0.0039	0.0151	0.0594	0.2539	0.0004	0.0036	0.0081	0.4368
	898 Musical instruments and parts and accessories	0.0236	0.0996	0.3643	0.2735	0.0035	0.0430	0.0625	0.6871
* 93	93								
	931 Special transactions and commodities not classified according to kind	0.0600	0.8370	0.9258	0.9040	0.0575	1.8448	1.0260	1.7980
* 95	95								
	951 Armoured fighting vehicles, armed of war, and ammunition therefore, and parts of arms, n.e.s	0.0039	0.0046	0.0600	0.0766	0.0000	0.0000	0.0000	0.1188
<b>** Retreats</b>									
* 00	Live animals chiefly for food								
	001 Live animals chiefly for food	0.0009	0.0039	0.0136	0.2863	0.0006	0.0028	0.0107	0.2613
* 01	Meat and meat preparations								
	014 Meat and n\meat offal, prepared or preserved, n.e.s. fish extracts	0.0000	0.0001	0.0003	0.1716	0.0000	0.0000	0.0000	0.1351
* 04	Cereal and cereal preparations								
	045 Cereals, unmilled (other than wheat, rice, barley and maize)	0.0047	0.0064	0.0732	0.0872	0.0010	0.0007	0.0178	0.0401

COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 07	Coffee, tea, cocoa, spices, and manufactures								
072	Cocoa	0.1467	0.6953	2.2615	0.3075	0.0955	0.2266	1.7055	0.1328
075	Spices	0.6486	0.3890	9.9997	0.0389	0.4591	0.2976	8.1982	0.0363
* 23	Crude rubber								
233	Synthetic rubber latex synthetic rubber and reclaimed rubber etc.	0.0019	0.0047	0.0298	0.1567	0.0004	0.0010	0.0078	0.1222
* 24	Cork and wood								
245	Fuel wood (excluding wood waste) and wood charcoal	0.0128	0.0015	0.1973	0.0076	0.0000	0.0000	0.0000	0.0073
* 28	Metalliferous and metal scraps								
281	Iron and other concentrates	0.0171	0.1635	0.2636	0.6202	0.0000	0.0000	0.0000	0.2937
287	Ores and concentrates of base metals, n.e.s.	5.1521	76.1084	79.4308	0.9582	4.8456	42.7849	86.5200	0.4945
289	Ores and concentrates of precious metals(other than gold)	0.0020	0.0043	0.0309	0.1383	0.0000	0.0000	0.0000	0.0549
* 29	Crude animal and vegetable materials								
291	crude animal materials, n.e.s.	0.0063	0.0117	0.0975	0.1203	0.0005	0.0009	0.0096	0.0906
* 42	Fixed vegetable oils and fat								
424	other fixed vegetable oils, fluid or solid	0.0017	0.0044	0.0262	0.1678	0.0006	0.0009	0.0102	0.0915
* 43	Animal and vegetable oil and fats								
431	Animal and vegetable oils and fat etc.	0.0003	0.0003	0.0054	0.0638	0.0000	0.0000	0.0000	0.0469
* 51	Organic chemicals								
511	Hydrocarbons, n.e.s., and their halogenated	0.0003	0.0022	0.0039	0.5554	0.0000	0.0000	0.0000	0.2869
* 52	Inorganic chemicals								
524	Radio-active and associated materials	0.0000	0.0001	0.0003	0.3637	0.0000	0.0000	0.0000	0.2054
* 61	Leather and leather manufactures, n.e.s.								
613	Furskin, tanned or dressed	0.0004	0.0005	0.0057	0.0819	0.0000	0.0000	0.0000	0.0240
* 63	Cork and wood manufactures, n.e.s.								
634	Veneers, plywood, reconstituted wood and other wood, worked, n.e.s.	0.0004	0.0020	0.0065	0.3020	0.0000	0.0000	0.0000	0.2917
* 65	Textile yarn, fabrics, made-up articles, n.e.s.								
654	Textile fabrics, woven, other than of cotton or man-made fibers	0.0010	0.0033	0.0161	0.2066	0.0001	0.0002	0.0013	0.1837
659	Floor coverings, etc.	0.0131	0.0638	0.2026	0.3147	0.0001	0.0006	0.0024	0.2516



COMPETITIVE MATRIX  
Jamaica: Exports to OECD Countries, 1980 and 1992  
(SITC 3-digit categories)

		1980				1992			
		MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE
* 67	Iron and steel								
	671 Pig iron, spiegeleisen , sponge iron or steel powders and shots	0.0001	0.0006	0.0019	0.2975	0.0000	0.0000	0.0000	0.2187
* 68	Non-ferrous metals								
	681 Silver, platinum and other metals	0.0000	0.0004	0.0006	0.5559	0.0000	0.0000	0.0000	0.2523
	686 Zinc	0.0017	0.0024	0.0267	0.0885	0.0001	0.0001	0.0015	0.0868
* 69	Manufactures of metals, n.e.s.								
	693 Wire products	0.0001	0.0001	0.0015	0.1011	0.0000	0.0000	0.0000	0.0937
* 71	Power generated machinery and equipment								
	711 Steam and other vapor generating boilers etc.	0.0010	0.0004	0.0151	0.0257	0.0000	0.0000	0.0000	0.0239
* 73	Metalworking machinery								
	736 Machine-tools for working metal and parts and accessories	0.0000	0.0001	0.0003	0.5332	0.0000	0.0001	0.0002	0.4853
* 88	Photographic, apparatus, equipment and supplies and optical goods, n.e.s.								
	883 Cinematographic film, exposed and development etc.	0.0031	0.0007	0.0481	0.0144	0.0028	0.0005	0.0497	0.0103
* 89	Miscellaneous manufactured articles, n.e.s.								
	896 Works' of arts, collectors' pieces and antiques	0.0065	0.0310	0.1002	0.3092	0.0038	0.0204	0.0673	0.3032
* 91									
	911 Postal packages not classified according to kind	0.1477	0.1022	2.2780	0.0448	0.0976	0.0576	1.7426	0.0330
* 94									
	941 Animals, live, n.e.s.	0.0051	0.0008	0.0786	0.0100	0.0023	0.0004	0.0412	0.0099
* 96									
	961 Coin (other than gold coin) not being legal tender	0.0136	0.0204	0.2099	0.0971	0.0031	0.0001	0.0560	0.0023
* 97									
	971 Gold, non-monetary (excluding gold ores and concentrates)	0.0004	0.0041	0.0055	0.7519	0.0001	0.0008	0.0015	0.5084

TABLE: 2.10  
 COMPETITIVE MATRIX  
 Jamaica: Exports to OECD Countries, 1980 and 1992  
 Items included in the Top-100 fastest growing OECD imports  
 ( limited to Top 40 exports ranked by export share)  
 SITC 3-digit categories

1980				1992			
MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE	MARKET SHARE	CONTRI-BUTION	SPECIAL-ISATION	SECTOR SHARE

**\*\* Rising Stars**

* 03	Fish, crustaceans and molluscs, and preparations								
036	Crustaceans and mollusc, whether in shell or not, fresh (live or dead), chilled, frozen, salted, in brine or dried crustaceans, in shell, s	0.0037	0.0194	0.0574	0.3377	0.0556	0.5238	0.9935	0.5272
* 09	Miscellaneous edible products and preparations								
098	Edible products and preparations, n.e.s.	0.0607	0.1200	0.9362	0.1281	0.0639	0.3074	1.1410	0.2694
* 77	Electrical machinery, and appliance, n.e.s.								
772	Electrical apparatus for making and breaking electrical circuits and for the protection of electrical circuits etc.	0.0005	0.0046	0.0077	0.5964	0.0129	0.2439	0.2300	1.0606
* 84	Articles of clothing and apparatus and accessories								
842	Outer garments, men's and boys' of textile fabrics	0.0471	0.3509	0.7264	0.4831	0.1697	2.2335	3.0304	0.7370
843	Outer garments, women's, girls' and infants' of textile fabrics	0.0193	0.1907	0.2983	0.6393	0.1437	2.9781	2.5659	1.1606
844	Under garments of textile fabrics	0.1782	0.4874	2.7471	0.1774	0.3297	1.8748	5.8876	0.3184
845	outer garments and other garments	0.0076	0.0662	0.1168	0.5668	0.3918	7.1908	6.9950	1.0280
846	Under garments	0.1287	0.6115	1.9836	0.3083	1.5787	14.3991	28.1884	0.5108
* 85	Footwear								
851	Footwear	0.0001	0.0015	0.0020	0.7587	0.0122	0.2270	0.2178	1.0422

**\*\* Missed Opportunities**

* 05	Vegetables and fruit								
058	Fruit, preserved and fruit preparation	0.1337	0.5636	2.0615	0.2734	0.0778	0.4612	1.3894	0.3320
* 12	Tobacco and tobacco preparations								
122	Tobacco manufactured	0.5823	1.1787	8.9781	0.1313	0.1048	0.4301	1.8711	0.2299
* 55	Essential oils and perfumes								
551	essential oils, perfume and flavor materials	0.1430	0.1937	2.2044	0.0879	0.0528	0.1033	0.9420	0.1096
* 82	Furniture and parts								
821	Furniture and parts thereof	0.0092	0.0940	0.1422	0.6615	0.0086	0.1677	0.1533	1.0943
* 83	Travel goods								
831	Travel goods etc.	0.0307	0.0895	0.4731	0.1891	0.0079	0.0488	0.1418	0.3439
* 89	Miscellaneous manufactured articles, n.e.s.								
892	Printed matter	0.0015	0.0114	0.0235	0.4825	0.0015	0.0171	0.0264	0.6462
898	Musical instruments and parts and accessories	0.0236	0.0996	0.3643	0.2735	0.0035	0.0430	0.0625	0.6871
* 93	Special transactions and commodities not classified according to kind	0.0600	0.8370	0.9258	0.9040	0.0575	1.8448	1.0260	1.7980



**Table 3.1 (continued)**  
**Growth Rate of Gross Domestic Product by Sectors, Sub Sectors, and Sub-Periods, 1950-1994**  
 (% per annum, Producer's Values, at Constant Prices)

Sectors	1950-1965	1969-1973	1974-1980	1981-1985	1987-1990	1991-1994	% Share of GDP (1994)
Electricity & Water	11.2	10.05	0.70	3.75	6.59	2.70	4.49
Construction & Installation	5.8	0.61	-12.04	0.96	12.15	-1.43	8.87
Distributive Trade	4.1	5.77	-5.60	-1.21	4.99	3.30	21.27
Transport, Storage & Communication	6.6	5.91	-2.01	2.97	5.95	5.80	11.38
Finance & Insurance Services	6.4	10.30	1.99	2.12	14.71	16.88	15.64
Real Estate & Business Services	2.3	3.99	0.65	0.45	3.98	4.25	8.31
Government Services	6.5	11.60	6.20	-1.86	0.21	-0.55	6.73
Miscellaneous Services	..	7.58	-3.94	3.08	4.98	0.52	4.06
Household & Private Non-Profit Institutions	..	12.93	-11.90	2.79	2.29	-7.19	0.49
<u>Less: Imputed Service Charges</u>	..	4.30	4.32	-4.16	16.50	24.04	16.99
<b>Total GDP at Constant Prices</b>	5.3	6.03	-2.59	0.25	5.74	1.09	100

D. J. Harris/IND. POL/05-95

Source: Calculated from data of STATIN, National Income and Product 1992, and National Income and Product, Preliminary Report 1994. Data for 1950-1965 from Harris (1970). Data for 1969-1985 from Harris (1994).

**Table 3.2**  
**Indices of Labor Productivity, 1986-1994**  
(1986 = 100)

	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Goods Producing Sectors</b>	100.00	104.22	109.39	122.05	140.90	139.52	139.74	150.07	152.47
Agriculture, Forestry, Fishing	100.00	130.23	132.80	125.72	145.02	142.12	158.52	195.5	212.86
Mining	100.00	102.46	97.87	124.42	135.82	202.62	173.64	129.57	158.89
Manufacturing	100.00	88.84	90.48	98.69	126.88	128.22	125.94	128.93	131.77
Construction	100.00	94.03	93.55	91.87	90.04	88.60	87.64	82.98	72.81
<b>Services Producing Sectors</b>	100.00	105.98	101.88	107.28	100.04	101.07	107.68	106.30	111.70
<b>Aggregate</b>	100.00	105.98	101.88	107.28	114.21	113.62	115.45	117.04	115.80

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Source: Calculated from data of PIOJ, in Economic and Social Survey Jamaica, various years.

**Table 3.3**  
**Labor-Productivity, Employment Share, and Output Share, by Sector and Sub-Sector**  
**Average, 1992-1994**

	Labor Productivity J\$'000	Employment Share (%)	Output Share of GDP (%)
<b>I. GOODS</b>	<b>20.26</b>	<b>42.83</b>	<b>44.57</b>
Agriculture, Forestry, Fishing	5.88	25.10	7.43
Mining and Quarrying	239.49	0.73	9.00
Manufacturing	34.53	10.80	18.77
Construction and Installation	27.04	6.87	9.43
<b>II. SERVICES</b>	<b>24.31</b>	<b>55.47</b>	<b>68.77</b>
Electricity, Gas, and Water	167.19	0.50	4.47
Transport, Storage, and Communication	49.98	4.23	10.80
Finance, Insurance, Real Estate and Business Services	83.04	4.90	20.97
Wholesale & Retail, Hotels & Restaurant Services	24.18	20.43	25.13
Community, Social, and Personal Services	5.72	25.43	7.33
<u>Less: Imputed Service Charges</u>	-	-	13.33
<b>AGGREGATE</b>	<b>19.69</b>	<b>100.00</b>	<b>100.00</b>

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Source: Calculated from data of PIOJ, in Economic and Social Survey Jamaica, various years.

**Table 3.4**  
**Composition of Exports**  
**Share (%) of Total Exports of Goods & Non-Factor Services**

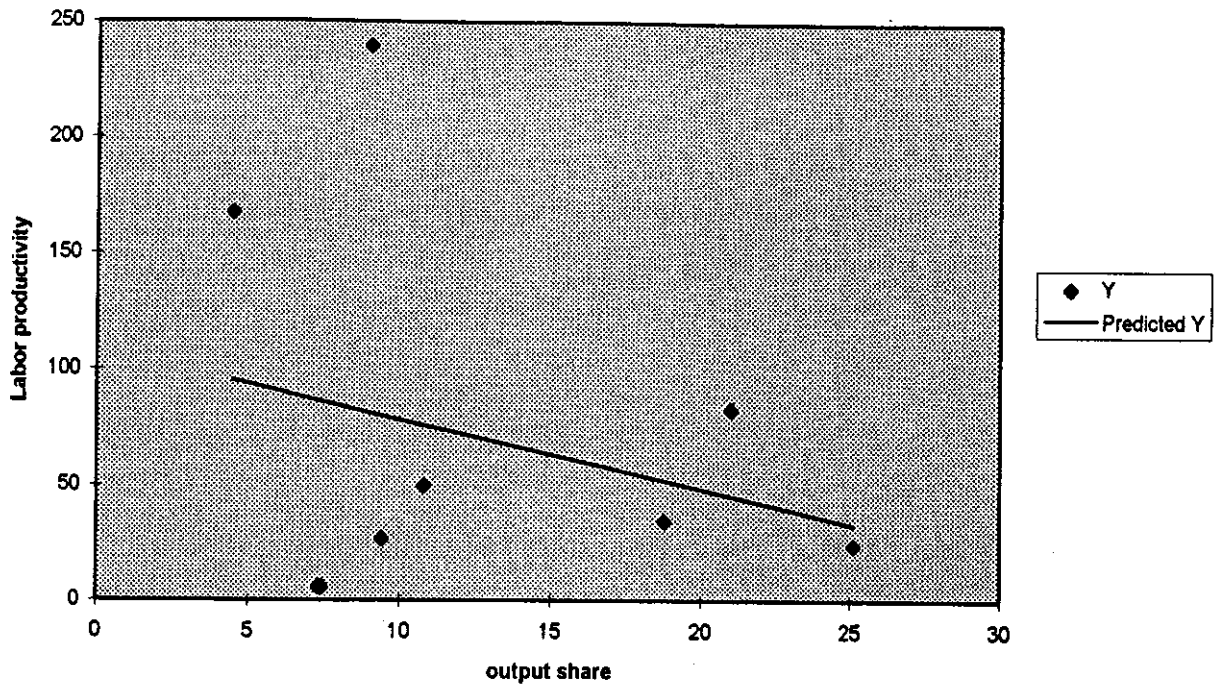
	1980	1985	1990	1991	1992	1993
<b>Total Merchandise Exports</b>	69.6	48.0	51.2	52.1	47.2	44.5
<b>Total Non-Factor Services</b>	30.4	52.0	48.9	47.9	52.8	55.5
Merchandise Freight & Insurance	1.2	0.7	0.7	0.7	0.3	0.3
Other Transportation	7.0	10.6	8.6	7.6	8.5	7.1
Travel Receipts	17.4	34.3	32.7	34.8	38.4	40.5
Other Services	4.8	6.4	6.8	4.9	5.7	7.6
<b>Total Exports of Goods &amp; Services</b>	100	100	100	100	100	100

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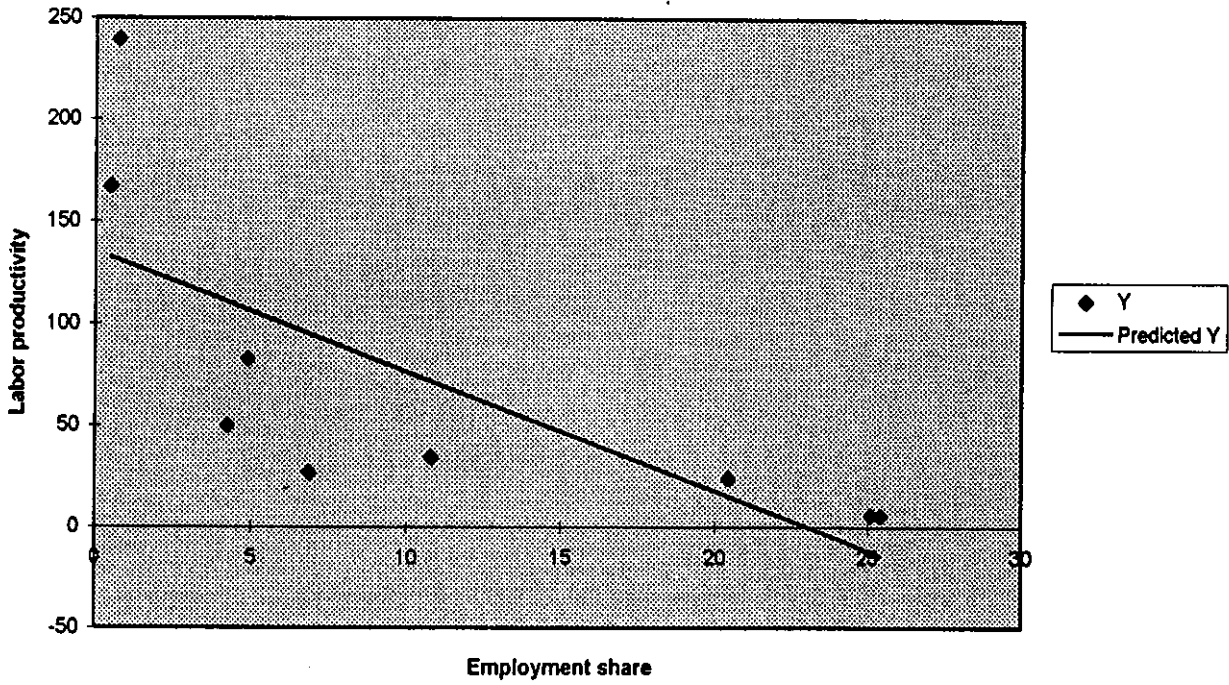
Source:: PIOJ, Economic and Social Survey, various issues; BOJ, Balance of Payments, various issues;  
 STATIN, External Trade, various issues.

FIGURE 3.1

Labor Productivity vs Output Share



Labor productivity vs Employment





## APPENDIX 1

### Methodology of the CAN Program

(Excerpted from ECLAC, "Competitive Analysis of Nations," Version 1.1, Manual, pp. 4-7)

The methodology of evaluation in which CAN is based measures the level of penetration and participation of nations in a given trade environment. It relies on market-share and shift-share analysis while adopting some elements from business management studies. The major aspect of the methodology refers to the combination of changes in a country's trade structure and changes in market pattern. Together, these changes are considered to determine significantly the patterns of international trade and competitiveness.

The approach is essentially descriptive and aims at summarizing the international competitive position of a country or a group of countries without intending to include all explanatory factors. It is based on a simple accounting framework. Sectoral competitiveness is associated with a country's relative participation in world trade in any given sector. A country's overall competitiveness is understood as a combination of its sectoral competitiveness and the relative dynamism of world trade in that sector.... The breakdown of competitiveness into trade performance and adaptability helps to understand better the forces shaping international trade.

The methodology provides a consistent evaluation framework and terminology. It is based on the following indicators:

- \* Sector shares, which indicate a sector's share in world trade;
- \* Market shares, which indicate the country's share in world trade in any given sector;
- \* Contribution, which indicates a particular sector's weight in a country's trade;
- \* Specialization, which compares the market share of a country in world trade in a given sector to its global market share in overall world trade.

These trade indicators describe most essential elements of the patterns of international trade and are the basic parameters on which the CAN reports are founded. The methodology explicitly refers to a given period of time to measure the evolution of the above indicators. The reference period consists of two points in time. Changes of the indicators refer to an increase or decrease at the second point in time with regard to the first. The

meaning of the indicators varies with the kind of trade flow that is considered. CAN normally evaluates either imports or exports of a given marketplace from and to third-party countries. The evaluation is based on relative terms of value shares. The software ... is presented with regarded to the data base on imports to the OECD only... OECD imports are understood to be those of the OECD as a whole - that is, the data base does not distinguish between any of its members.

Formally,

$$s_i = M_i/M, \quad \text{sector share, share of imports of sector } i \text{ in total imports (M) to OECD market;}$$

$$s_{ij} = M_{ij}/M_i, \quad \text{market share, share of country } j \text{ in imports of sector } i \text{ to OECD market;}$$

$$s_j = \sum_{i=1}^n (s_{ij} \cdot s_i), \quad \text{global market share of country } j;$$

$$c_{ij} = M_{ij}/M_j, \quad \text{contribution, share of OECD imports of sector } i \text{ from country } j \text{ in total OECD imports from country } j;$$

$$k_{ij} = s_{ij}/s_j, \quad \text{specialization of country } j \text{ in sector } i.$$

## APPENDIX 2

### MEMORANDUM

TO: Sector Specialists/Consultants  
FROM: Donald J. Harris  
RE: Sector Studies

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### FRAMEWORK FOR THE SECTOR/INDUSTRY STUDIES

#### Goals

\* Analysis and evaluation of competitive advantage in particular sectors of the Jamaican economy.

\* Formulation of policy recommendations relevant to development of an industrial policy for Jamaica.

#### Approach/Methodology

Competitive advantage depends on a set of identifiable capabilities, existing at different levels:

- \* firm level
- \* industry level
- \* social capabilities (institutional environment)

These capabilities are the factors which determine the capacity for production and delivery of tradeable products/services that can win a place/niche in the market (domestic and international) in competition against rivals.

The problem for analysis is to identify:

- (a) the capabilities that are specific to each sector/industry;
- (b) the extent to which these capabilities are presently developed in the Jamaican context relative to "best practice" in the relevant global context;
- (c) specific points at which policy interventions by government and private-sector agencies may be most effective in enhancing/developing these capabilities.

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Critical Factors to Consider

For assessing capabilities, focus on the following factors (to the extent relevant and specific to each sector):

## 1. Product mix

- range and diversity of existing product mix
- current pattern of evolution in international market
- quality and performance standards for delivery to market
- proportion of production for local market and for export

## 2. Marketing and sales effort

- size and scope of the required effort
- role of advertising, packaging, and "image"
- structure of the distribution chain

## 3. Research and development

- innovation in products and production process
- role of scientific research, in-house or external agency
- access to information on state-of-the-art methods & ideas
- receptivity to new ideas, mechanisms for adoption

## 4. Technology

- degree of mechanization of production
- use of computer systems and controls
- skill levels of the work-force (role of on-the-job training, formal education)
- use of raw materials, and sources (imported or domestic)
- productivity and efficiency in use of inputs

## 5. Management and organization

- skills, techniques, and practices of management
- structure of control and decision-making
- efficiency, flexibility, and adaptability to change
- labor-management relations

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## 6. Cost Structure

- (a) capital: fixed capital (machinery, buildings),  
working capital
- (b) labor/human resources: skill levels, wage rates
- (c) raw materials: domestic, imported
- (d) transportation costs
- (e) fuel/energy costs

## 7. Finance

- sources, access, cost of finance
- forms of finance: debt, equity, internal funds
- domestic/foreign capital, joint ventures
- venture capital

## 8. Infrastructure Requirements

- electricity, telecommunications, water
- transportation system (road, railway, air, ship)
- energy system

## 9. Ancillary/support services

- repair, maintenance, consultant services
- government support services
- university, college and business-school based services

## 10. Industry structure

- size of firms, number of firms, conglomerates/cartels
- ownership structure, domestic and foreign (joint ventures)
- does size matter, and how?
- scale economies
- conditions and requirements of entry/start-up of new firm
- role of networks ("clusters"), business associations, and cooperatives

## 11. Linkages

- intra-industry and inter-industry (domestic and foreign)
- backward and forward linkages (up-stream and down-stream)
- form of linkage (production, marketing, finance)

## 12. Entrepreneurial dynamism

- outlook/prospects for expansion as seen by existing firms
- amount and type of new investment projects currently undertaken/planned by existing firms
- rate of formation and mortality of new firms
- who are the leading actors?

## 13. Foreign exchange generating capacity

- capacity to earn and/or save foreign exchange

## 14. Environmental impact

- conservation/pollution of environment
- environmental/health standards for market entry

Some Questions to be Answered

1. What is your (and/or other experts') projection of earnings from the sector for the next year to five years, under (a) best-case scenario, (b) worst-case scenario, and (c) average performance for recent years?
2. What is your best estimate of the potential contribution to additional employment, given the current level of employment in the sector?
3. What is the potential of the sector for up-grading the skills of the work-force, through on-the-job training and new hire of skilled workers?
4. What is your (and/or other experts') ranking of the problems/constraints currently affecting output and investment in the sector?
5. What set of new incentives and policy initiatives would most help to secure improved performance in the sector?

Add whatever factors, questions, issues, and answers (not mentioned above) which you consider to be important for this analysis.

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