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# Export processing *in the Caribbean:* the Jamaican experience

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Export processing, also known as *maquila*, is a widespread activity in Mexico and Central America and is becoming increasingly important to economies in the Caribbean. Countries of the subregion have successfully attracted both foreign and domestic investment in offshore data processing and in the assembly and manufacture of garments, footwear, electrical and electronic equipment, toys and other goods for export. Investors are attracted by low labour costs, freedom from foreign exchange controls and bureaucratic restrictions, and by the promise of exemption from all taxes, including taxes on profits and duties on imports of equipment, raw materials and intermediate goods used in production for export. The local economies receive foreign exchange, since local currency must be purchased from the Central Bank for wages and other local expenditures. In addition, they benefit from generation of employment and from possible linkages with the domestic economy and transfer of technology. The present paper is a case study, based on research carried out in Jamaica in June 1993, of one country's use of this instrument for industrial development. It argues that the benefits to Jamaica are reduced by misguided policies that confine exporters to economic enclaves and limit their contact with the rest of the economy.

# I

## Introduction

With a population of two and a half million people, Jamaica is the largest of the 13 English-speaking countries that comprise the Caribbean Community (CARICOM). In land area, it is also the largest English-speaking island in the Caribbean, though its territory is only half that of Belize and slightly more than a tenth that of Guyana.

In the 1970s and early 1980s, Jamaica experienced a severe and prolonged economic recession. In fact, its gross domestic product (GDP) contracted at an average annual rate of 1.0% between 1970 and 1985: the worst performance by far of the 23 countries listed in ECLAC's *Statistical Yearbook for Latin America and the Caribbean*. The recession caused unemployment rates to exceed 25% of the labour force. Lack of employment opportunities, combined with social tension, stimulated considerable emigra-

tion of skilled labour, including managerial talent. In 1986 a modest recovery began that continues to this day. Nonetheless, the economy remains highly dependent on the export of a few traditional commodities, all of which face depressed prices in world markets. The value of exports of four commodities –alumina, bauxite, sugar and bananas– amounted to two-thirds of all merchandise exports in 1991 and 1992.<sup>1</sup>

In an effort to earn foreign exchange and to provide productive employment for its population, Jamaica has turned increasingly to the promotion of tourism and export processing. In 1992, gross tourist receipts were an estimated US\$850 million, up 11.3% from 1991. Exports of garments, which comprise the bulk of the export processing activity on the island, totalled US\$384 million in 1992, up 28.7% from 1991.

# II

## An overview of export processing

The Jamaican economy provides employment for more than 900 000 persons, of whom 100 000 work in the manufacturing sector, 26 000 in the hotel (tourism) subsector and 31 000 in export processing companies. Export processing thus accounts for more than 3% of all jobs in the economy and nearly a third of the manufacturing jobs. Although only partial data are available, there is little doubt that export processing positions are filled predominantly by women,

especially young women.<sup>2</sup> Some researchers argue that this has the effect of drawing secondary workers into the labour force rather than reducing the rate of unemployment of heads of households. On the other hand, young women in Jamaica are often single parents, and it is precisely this demographic group –young females– that exhibits the highest rate of unemployment on the island.<sup>3</sup>

The garment industry accounts for most export processing in Jamaica: two-thirds of the firms and nearly 90% of the employment. (table 1). Data

<sup>1</sup> The exact figures for exports of the four commodities were US\$788 million in 1991 and, because of declining prices, US\$682 million in 1992. Total merchandise exports in the same years totalled US\$1151 million and US\$1053 million respectively (Planning Institute of Jamaica, 1993, tables 3.1 and 3.4). The merchandise trade data exclude exports from free zones, but include exports of manufactures from factories in the customs territory. Local expenditures of Jamaica's free zone companies are classified as service exports. Export processing plants in the customs territory carry out exactly the same activities as those in the free zones, so this disparate treatment of exports from free zones and the customs territory is confusing for users of Jamaican trade statistics.

<sup>2</sup> It is reported that 88.9% of the employees were female in five garment plants operating in the Kingston Free Zone in the late 1980s (ECLAC, 1990, p. 34). In the Garmex Free Zone, according to unpublished data, females accounted for 86.0% of total employment in 1991 and 82.6% in 1992.

<sup>3</sup> In 1992 the unemployment rate was 15.7% for the entire Jamaican labour force, but it was 40.5% for women under the age of 25 and 17.9% for men under the age of 25 (Planning Institute of Jamaica, 1993, tables 16.7 and 16.8).

TABLE 1

## Jamaica: Export processing firms and employment in them, December 1992

|                                   | Firms  |       | Employment |       |
|-----------------------------------|--------|-------|------------|-------|
|                                   | Number | %     | Number     | %     |
| Customs territory <sup>a</sup>    |        |       |            |       |
| Garments                          | 50     | 71.4  | 15 300     | 90.1  |
| Data processing                   | 20     | 28.6  | 1 678      | 9.9   |
| Total                             | 70     | 100.0 | 16 978     | 100.0 |
| Free zones                        |        |       |            |       |
| Garments                          | 24     | 61.5  | 12 683     | 89.5  |
| Data processing                   | 6      | 15.4  | 867        | 6.1   |
| Telemarketing                     | 3      | 7.7   | 116        | 0.8   |
| Other                             | 6      | 15.4  | 506        | 3.6   |
| Total                             | 39     | 100.0 | 14 172     | 100.0 |
| Customs territory plus free zones |        |       |            |       |
| Garments                          | 74     | 67.9  | 27 938     | 89.0  |
| Data processing                   | 26     | 23.9  | 2 545      | 8.2   |
| Other                             | 9      | 8.2   | 622        | 2.0   |
| Grand total                       | 109    | 100.0 | 31 150     | 100.0 |

Source: ECLAC estimates based on data supplied by Jamaica Promotions Corporation (JAMPRO), Kingston Free Zone, Garmex Free Zone and Montego Bay Free Zone.

<sup>a</sup> Includes an unknown, but small, number of apparel plants outside the free zones that have obtained free zone status.

processing is the second largest export activity, but the 26 companies are small compared to manufacturing plants and employ only 8% of the sector's workers. Export processing establishments are located not only in the free zones, but also in cities, towns and villages throughout the island.

### 1. Free zone companies

Of the 109 companies engaged in export processing activities, a total of 39, accounting for 45.5% of the employment, are located in the island's three publicly-owned free zones (table 1). Kingston Free Zone, the oldest and largest of the three, is in the industrial heart of Kingston, adjacent to a modern port. It was established in May 1976, but got off to a slow start and did not attract many investors until after 1982. The Garmex Free Zone, the second largest, was established in 1987 only two kilometres from the Kingston Free Zone. The Montego Bay Free Zone, located south-west of Jamaica's second city and largest tourism destination, was established in 1982 but did not commence operations until 1985.

In 1989 Jamaica Digiport International (JDI) opened in the Montego Bay Free Zone to provide low-cost satellite communications for data processing and telemarketing companies. JDI offers its clients

speeds between 9 600 and 1 544 000 bits per second, international (800) toll-free numbers, credit card authorization for direct selling, and rates as low as 24 US cents per minute for calls to the United States.

Companies operating in the free zones must pay wages and other local expenses in Jamaican currency, but they are free to maintain foreign currency accounts and are exempt *in perpetuity* from taxes on profits, imports into the zone and exports to countries other than Jamaica. Most importantly, they are also freed from many of the administrative formalities of importing and exporting. Their main activity is the manufacture of garments, but Kingston Free Zone also contains a candy factory and an ethanol plant. In Montego Bay Free Zone there is a limited amount of data processing, telemarketing and assembly of electrical and electronic equipment.

### 2. Companies in the customs territory

Outside the free zones, there are some 70 companies engaged in export processing activities (table 1). They operate exclusively in the garment and data processing industries and employ, in aggregate, more labour than the free zone companies. With rare exceptions these companies, like their free zone counterparts, produce exclusively for export markets.

A few of the garment companies have obtained free zone status from the government. The remainder of the garment manufacturers, and some of the data processing firms, operate under the Export Industry Encouragement Act (EIEA), which dates back to 1956 and allows approved companies a holiday from taxes on profits and dividends as well as exemption from duties on capital goods and imported raw materials. These incentives are granted for a maximum of ten years, but it is a simple matter for a company to change its name every five or ten years and thus obtain the incentives indefinitely. The EIEA regime thus offers exporters in the customs territory nearly all the benefits associated with free zone status. The main difference is that EIEA exporters are not free from foreign exchange controls nor from quantitative restrictions on imports. In recent years, with the abolition of exchange controls and the removal of import quotas, there is even less distinction between the two regimes.

### 3. Garment manufacture

Employment in Jamaica's garment industry has increased from approximately 6 000 persons in 1982 and 1983 to more than 28 000 today (table 2). This implies an average rate of growth of more than 19% per annum between 1983 and 1992, but in fact employment grew much faster up to the end of 1987 than it did in later years.

These data do not distinguish between exporters and firms that produce for the domestic market, but in reality exporters account for all of this growth in employment and, particularly after 1983, for nearly all the numbers employed. Garment exports increased steadily from US\$10.7 million in 1983 to US\$384.4 million in 1992, with the largest growth occurring in the early years (1984 to 1988) (table 3). In 1991 and 1992 nearly 60% of the exports came from free zone companies, compared with 15% in 1982, 30% in 1983-84 and 55% in 1990. More than half the exports are garments made up from cloth cut in the United States, in order to take advantage of United States customs item 807 (recently renamed HS 9802.00.80) and pay duty only on the value added in Jamaica. Less than half the value of exports is accounted for by the "cut, make and trim" variety of garment manufacture, which creates more employment in Jamaica per dollar of exports even though the cloth is always imported.

TABLE 2

#### Jamaica: Employment in the garment industry, 1982-1992

(Number of persons employed)

|      | Customs Territory <sup>a</sup> | Free Zones | Total  |
|------|--------------------------------|------------|--------|
| 1982 | 5 741                          | 450        | 6 191  |
| 1983 | 4 958                          | 939        | 5 897  |
| 1984 | 5 125                          | 2 704      | 7 829  |
| 1985 | 5 320                          | 3 180      | 8 500  |
| 1986 | 11 527                         | 7 399      | 18 926 |
| 1987 | 12 752                         | 10 830     | 23 582 |
| 1988 | 14 089                         | 6 490      | 20 579 |
| 1989 | 17 986                         | 7 355      | 25 341 |
| 1990 | 14 200                         | 10 300     | 24 500 |
| 1991 | 16 500                         | 11 000     | 27 500 |
| 1992 | 16 000                         | 12 700     | 28 700 |

Source: ECLAC, based on data supplied by Jamaica Promotions Corporation (JAMPRO), Kingston Free Zone, Garmex Free Zone, Montego Bay Free Zone and the Jamaica Textile and Apparel Institute.

<sup>a</sup> Includes an unknown, but small, number of apparel plants outside the free zones that have obtained free zone status.

Increasingly, the cloth utilized in "Item 807" off-shore assembly is both manufactured and cut in the United States so as to qualify for the Caribbean Basin Initiative (CBI) Special Access Program (807A/9802A), also known as "Super 807". Under this programme, the United States has granted Jamaica generous quotas, known as Guaranteed Access Levels (GALs), and in 1992 Jamaica was the largest supplier of "Item 807" hosiery and underwear to the United States market. Even so, exporters did not suffer from quota restraints, for only 91% of the quota was filled in hosiery and 75% in underwear. The next highest use of a quota in 1992 was 65%, for knit shirts.

The United States is the principal market for Jamaica's garment industry: 80% of the industry's exports now go to that country, while the European Economic Community (EEC), which purchased 17.6% of these exports in 1992, represents the second largest market. The CARICOM market, which absorbed nearly a third of textile exports in 1982 and 1983, is now minuscule. The Canadian market, though growing, remains small: a reflection of the fact that textiles and clothing are not eligible for duty-free entry under CARIBCAN (the Canadian external trade, investment and industrial cooperation programme with the Commonwealth Caribbean).

TABLE 3

**Jamaica: Garment exports, 1982-1992<sup>a</sup>**

| Year | Total<br>(million US\$) | Free zone<br>(%) | CMT <sup>b</sup><br>(%) |
|------|-------------------------|------------------|-------------------------|
| 1982 | 14.1                    | 15.0             | 18.2                    |
| 1983 | 10.7                    | 30.9             | 29.9                    |
| 1984 | 27.4                    | 30.6             | 40.8                    |
| 1985 | 55.9                    | 47.8             | 39.7                    |
| 1986 | 101.7                   | 48.6             | 42.6                    |
| 1987 | 184.8                   | 46.3             | 45.3                    |
| 1988 | 220.9                   | 52.9             | 47.6                    |
| 1989 | 243.2                   | 49.6             | 41.4                    |
| 1990 | 277.8                   | 55.3             | 48.2                    |
| 1991 | 298.7                   | 59.3             | 46.6                    |
| 1992 | 384.4                   | 57.8             | 42.2                    |

Source: Jamaica Promotions Corporation (JAMPRO) (International Trade Division).

<sup>a</sup> Excludes exports to members of CARICOM.

<sup>b</sup> CMT refers to "cut, make and trim", as opposed to simple off-shore assembly of garments from pre-cut cloth.

#### 4. Data processing

Ten years ago only five data entry and processing firms existed in all of Jamaica, and for the most part they serviced the domestic market. The industry grew rapidly when the government offered Export Industry Encouragement Act (EIEA) incentives to firms that were willing to specialize in export markets, to the exclusion of domestic clients. These services are exported almost exclusively to the United States. In 1985 the government ruled that for data entry services, unlike manufactures, tax holidays and duty-free import privileges would henceforth be restricted to companies located in the free zones. In practice,

this means that companies must relocate to the Montego Bay Free Zone, for no facilities are available in either of the free zones in Kingston. The last EIEA incentives will thus end in the year 1995, and there is some question whether the data entry and processing industry will retain its present size of 26 firms with more than 2500 employees.

There is no technical reason to concentrate data processing in a single geographic location: the Digiport in Montego Bay can and does supply services over the local telephone lines to firms in Kingston and other parts of the island. Moreover, there is a cogent argument for decentralization because of the lack of public transportation, especially late at night, which is important in an industry that works at least two, and typically three, shifts each day.

Duty-free imports are less important to data processing firms than to manufacturers of garments, as the former do not import raw materials or intermediate goods. However, access to the latest capital equipment is important if data processing companies are to retain their competitive edge. Jamaica competes, for example, with northern Mexico, which has the advantage of proximity to the main market (the United States), and with the Philippines, which has the advantage of the English language and a fibre optical link to the United States. Moreover, data processing, unlike garment manufacture, is not protected by quota restrictions or international market sharing agreements. It is possible at the present time for a company to obtain a waiver of duties on the importation of specific capital equipment, but this is a costly and time-consuming process compared to the automatic exemption accorded by EIEA or free zone status.

### III

#### Nationality of ownership

In the free zones of Jamaica there is a striking absence of Jamaican companies. Of the 39 export processing firms located there, only three are owned by Jamaicans, and all are located in the Montego Bay Free Zone. Roberts (1991, p. 167) makes much of this fact in a recent thesis; in comparing Jamaican free zones to those in Mauritius, he notes approvingly that in the latter "domestic equity participation has increased from an estimated 30% in 1983 to 53% in 1990."

The absence of Jamaican ownership of free zone companies is largely a result of government policy. After all, the free zones were established to attract foreign, not domestic, investment. The Jamaican government requires free zone investment to be in foreign currency, and until recently it was illegal for residents of Jamaica to hold foreign currency or foreign currency accounts. The sole Jamaican garment manufacturer in a free zone used the subterfuge

of a joint venture with Cayman Island capital in order to bring foreign currency to Jamaica. The sole Jamaican data processing company has the name "Bay Telemarketing Agency" because it could only obtain approval to operate as a telemarketing agency, which requires almost no investment in equipment. The company soon diversified into data processing, abandoning telemarketing along the way.

This dearth of Jamaican free zone companies also reflects a preference of Jamaican entrepreneurs for locations away from the free zones. The manager of Bay Telemarketing said quite frankly that his company would move away from the zone, or at the very least establish a satellite office at another location, if that could be done without losing export incentives. His complaint was that the influx of data processing companies resulted in strong competition for a small pool of trained operators. Companies can train their own operators, but they inevitably lose them to other companies in the same building.

The Managing Director of Davon Corporation Ltd., the oldest and largest Jamaican-owned exporter of apparel,<sup>4</sup> feels that the requirement that foreign funds be invested was never a deterrent to his company's investment in a free zone. Rather, he listed three reasons for his company's decision to locate its plants away from the established free zones:

i) There are inevitable transportation bottlenecks when thousands of workers attempt to board buses at the same time.

ii) Labour difficulties in one free zone factory affect morale in all the other plants, for the workers socialise during lunch breaks and after work.

iii) Rental fees for free zone factory shells (US\$3.50 per square foot per annum in the Kingston Free Zone and US\$4.25 in the other two zones) are much higher than those for comparable facilities in other locations.

Outside the free zones there are 70 export processing establishments whose activities are virtually indistinguishable from the 39 free zone companies, and as many as 48 of these are owned by residents of Jamaica. It cannot be said with certainty that all 48 are Jamaican-owned, for in the case of the 20 data

processing firms operating in the customs territory it is only known that they are overwhelmingly owned by Jamaicans.

For all 109 export processing establishments, Jamaica is the largest nationality of ownership: quite likely 51 firms, or 46.8% of the total. Jamaican companies, however, are much smaller on average than foreign-owned companies, so they account for less than a quarter of total employment in the export processing sector (table 4). United States nationals are the second most numerous investors, with 36 plants. Hong Kong Chinese follow, with 13 plants, and South Koreans with 7. At the end of 1992 there was also one plant owned by U.K. investors and one by investors from Canada.

For the garment industry, Jamaica Promotions Corporation (JAMPRO) has tabulated historical data for the period 1982-1991 on exports by nationality of firm. These data are reported in table 5, but exports to CARICOM have been deducted from the exports of Jamaican companies on the (realistic) assumption that only Jamaican firms export to the protected CARICOM market. Jamaican companies dominated the industry from 1982 through 1984, with some participation by United States companies and a virtual absence of Asians (Hong Kong and South Korea). In 1985 and 1986 exports were split almost equally among the three groups of companies, and thereafter U.S. and Asian exports grew much faster than exports by Jamaican companies, so that by 1991 the Jamaican share had fallen to 20% while the shares of

TABLE 4  
Jamaica: Export processing firms by nationality, 1992

| Nationality          | Firms      |              | Employment    |              |
|----------------------|------------|--------------|---------------|--------------|
|                      | Number     | %            | Number        | %            |
| Jamaica <sup>a</sup> | 51         | 46.8         | 7 479         | 24.0         |
| United States        | 36         | 33.0         | ...           | ...          |
| Hong Kong            | 13         | 11.9         | ...           | ...          |
| South Korea          | 7          | 6.4          | ...           | ...          |
| Other                | 2          | 1.8          | 23 671        | 76.0         |
| <b>Total</b>         | <b>109</b> | <b>100.0</b> | <b>31 150</b> | <b>100.0</b> |

Source: ECLAC estimates based on data supplied by Jamaica Promotions Corporation (JAMPRO), Kingston Free Zone, Garmex Free Zone and Montego Bay Free Zone.

<sup>a</sup> Assumes all 20 data processing firms located outside the free zones are Jamaican-owned.

<sup>4</sup> Davon Corporation operates a plant in Kingston, another in Montego Bay (Windmill Garments) and a third near Ocho Rios (International Apparel). The company rents the Montego Bay factory shell from the government, and owns the other two properties.



U.S. and Asian exporters had increased to 39% and 41% respectively.

It is interesting to note in table 5 that the exports of Asian companies are overwhelmingly "cut, make and trim", i.e. cut and made up out of imported cloth

(inevitably from Asia) as opposed to assembly of pre-cut cloth. On the other hand, exports of both the Jamaican and the United States companies are predominantly, though not exclusively, of the "Item 807" offshore assembly variety.

TABLE 5

**Jamaica: Garments exports by nationality of firm, 1982-1992<sup>a</sup>**  
(Millions of US dollars and percentages)

|      | Jamaican companies |                   | US companies |                   | Asian companies <sup>b</sup> |                   |
|------|--------------------|-------------------|--------------|-------------------|------------------------------|-------------------|
|      | US\$               | %CMT <sup>c</sup> | US\$         | %CMT <sup>c</sup> | US\$                         | %CMT <sup>c</sup> |
| 1982 | 9.7                | 0.0               | 4.4          | 59.2              | 0.0                          |                   |
| 1983 | 7.2                | 11.0              | 3.4          | 67.7              | 0.1                          | 100.0             |
| 1984 | 20.7               | 33.4              | 6.4          | 61.9              | 0.3                          | 100.0             |
| 1985 | 18.2               | 1.6               | 20.2         | 21.9              | 17.5                         | 100.0             |
| 1986 | 30.0               | 8.2               | 36.7         | 15.9              | 35.0                         | 100.0             |
| 1987 | 62.1               | 7.1               | 50.8         | 14.6              | 71.8                         | 100.0             |
| 1988 | 68.5               | 15.9              | 68.9         | 16.0              | 83.5                         | 99.5              |
| 1989 | 72.6               | 11.5              | 88.7         | 12.4              | 81.8                         | 99.4              |
| 1990 | 68.1               | 15.1              | 101.5        | 15.7              | 108.1                        | 99.6              |
| 1991 | 60.0               | 9.7               | 116.6        | 10.4              | 122.1                        | 99.3              |
| 1992 | ...                | ...               | ...          | ...               | 155.3                        | ...               |

Source: ECLAC, on the basis of data supplied by JAMPRO (International Trade Division).

<sup>a</sup> Excludes exports to CARICOM.

<sup>b</sup> "Asian" companies are actually only predominantly Asian, since they include all non-US, non-Jamaican companies.

<sup>c</sup> % CMT refers to the percentage of the exports that are "cut, make and trim" as opposed to "Item 807" garments.

## IV

### Transfer of technology

Although export processing is universally valued as a means of employing large numbers of relatively unskilled workers, its value as a vehicle for the transfer of technology is frequently overlooked or even denied. Nonetheless, the importance to an economy of introducing workers for the first time to the rigours of an industrial environment, to notions of punctuality, quality control and deadlines, should not be minimized. Moreover, for local entrepreneurs offshore assembly provides a low-risk method of entering export activity, since under subcontracting arrangements the customer provides the raw materials, which drastically reduces the export processor's need for working capital. As the industrialist moves along his learn-

ing curve, gaining confidence and access to finance, he can begin to import and cut cloth, and eventually to make his own patterns and designs.

In the garment industry, Jamaican entrepreneurs have not yet moved very far along their learning curve, for most continue to specialise in the assembly of clothing. Nonetheless, Davon Corporation began some years ago to engage in CMT ("cut, make and trim") activities by subcontracting for a South Korean free zone company, as well as producing on the same basis for the Canadian market, using imported Canadian cloth. More recently, the company obtained a contract from a trading company for the production of a line of casual clothing in which Davon Corporation has full responsibility for

sourcing the raw materials, making the patterns and cutting the cloth in addition to the normal sew and trim operations. In essence, the Jamaican company will do everything except market the product. More typical, however, is the case of Classic Manufacturing, a well-managed Jamaican enterprise with a single plant near the Montego Bay Free Zone. Classic is nearly as old (though not as large) as Davon Corporation, but has never entertained the notion of doing any work other than "Item 807" assembly of trousers for the U.S. market.

Since Asian-owned companies cut most of the cloth that they use to manufacture garments, one might conclude that through the training of employees they transfer more technology to Jamaica than the U.S. or Jamaican companies that operate as "Item 807" subcontractors to firms in the United States. It is true that cutters are invariably men, whereas sewing machine operators in Jamaica are almost always women.<sup>5</sup> Moreover, there is typically a six-month training period before an unskilled person becomes a competent cutter. With regard to sewing machine operators, the largest garment factory in Jamaica requires three months to train such workers, and other garment producers report training periods of up to six months because of the low existing skills and lack of character traits such as discipline and punctuality of new entrants to the work force, while the manager of a South Korean company claims to require 12 months to train fully a sewing machine operator, but his plant produces dresses for the up-scale "boutique" market from cloth with difficult designs and texture.

A May 1993 survey of wages at factories in the Kingston Free Zone showed virtually no difference between cutters and sewing machine operators (table 6). If wages are a reflection of skill levels, then in terms of human resource development there is not much difference between cutters and machine operators, and the most that one can conclude is that CMT activities require a greater variety of skills rather than higher skill levels, compared to "Item 807" assembly.<sup>6</sup>

<sup>5</sup> The author observed male sewing machine operators at work in only two plants, and even in those plants the vast majority of operators were female.

<sup>6</sup> For a contrary view, see Kaplinsky (1993).

TABLE 6

**Jamaica: Wage rates in the free zone garment industry, May 1993<sup>a</sup>**  
(US dollars per hour)

|  | Minimum | Average |
|--|---------|---------|
| Sewing machine operator                      | 0.34    | 1.13    |
| Trainee sewing machine operator <sup>b</sup> | 0.34    | 0.68    |
| Cutter                                       | 0.34    | 1.13    |
| Spreader                                     | 0.34    | 1.01    |
| Presser and finisher                         | 0.34    | 1.13    |
| Storeman                                     | 0.34    | 0.68    |
| Mechanic                                     | 0.39    | 1.13    |
| Trainee mechanic <sup>b</sup>                | 0.39    | 0.56    |
| Maintenance staff                            | 0.39    | 1.13    |
| Supervisor                                   | 0.51    | 2.25    |
| Payroll clerk                                | 0.39    | 0.79    |
| Messenger                                    | 0.34    | 0.39    |

Source: Kingston Free Zone Company, Ltd.

<sup>a</sup> Wages based on standard 40-hour work week, excluding the cost of fringe benefits, which are a legal minimum of 18.8% (payroll taxes of 11.5%, including employer's contribution to the national insurance scheme, 9 public holidays and two weeks annual vacation).

<sup>b</sup> Training period not to exceed 12 weeks.

Although Jamaica has an abundance of unskilled labour, there is a definite shortage of skilled personnel, and nowhere is this more evident than in the case of management. Of the foreign-owned factories visited by the author, all but two relatively small ones were managed by expatriates. In fact, even Jamaican-owned companies resort to expatriate managers. In Montego Bay, for example, nationals of the United States manage each of the three large Jamaican-owned factories visited, while the Jamaican owners, for the most part, procure contracts and handle the finances. Expatriates are expensive compared to local managers, and the abundance of the former in Jamaican factories reflects a scarcity of the latter.

It is rare to see a Jamaican plant manager in factories producing garments for export, but people in the business claim that skills are improving: ten years ago even supervisors were imported from abroad, but now all supervisors are Jamaican nationals. On the positive side, although numerous high-level management positions are currently filled by expatriates, they will subsequently be available for a new generation of Jamaicans trained in fields such as industrial engineering. The knowledge that such

highly paid employment exists should encourage young Jamaicans to choose technical fields of study in the universities.<sup>7</sup> A shortage of skilled labour also affects the data processing industry, which prefers to hire high school graduates with typing abilities. Owners and managers of firms in the industry complain that they have difficulty recruiting data entry operators, and those that they do recruit have such poor general skills that they require a minimum of three to four months of training before they can even begin to do serious work. During the training period, they must be paid the legal minimum wage, even though their productivity is close to zero, and once trained, they often move to another employer, as there is fierce competition for the limited pool of trained data entry operators.<sup>8</sup> This, of course, is a classic case of externalities: the company that incurs the expense of training a worker is not able to recoup its investment, and therefore all firms invest too little in training new workers. It would be better if basic training were done outside the firm, with all firms in the industry sharing the costs. In addition, more of the cost would be borne by the trainee, for he or she need not be paid the minimum wage during training. The data processing firms in the Kingston

area have, in fact, begun a programme of this type for high school graduates in co-operation with a government vocational programme called Human Employment and Resources Training (HEART).

Data processing in Jamaica provides interesting growth prospects because it is constrained by supply rather than demand. Managers of firms in the industry claim that they could employ many more operators were they available. The requirements are functional literacy and good typing skills; trainees who start with a basic commercial education can easily learn to manipulate the programmes for data entry and word processing. Nonetheless, this is a highly competitive industry, in which Jamaicans must compete with firms throughout the world, so wages remain low despite the severe shortage of personnel.

Firms operating in the data entry and processing industry must keep abreast of technological advances in both software and hardware if they are to remain competitive. This they appear to be doing successfully in Jamaica. Many of the companies are now incorporating image scanners in their operations, for these devices markedly increase productivity for some types of data entry.

## V

### Labour costs

Export processing firms are subject to the same labour laws as any firm doing business in Jamaica. The minimum wage in 1993 was 300 Jamaican dollars for a 40 hour week, equivalent to 34 U.S. cents per hour at the then current rate of exchange. Work in excess

of eight hours per day, and any work on Saturday, must be paid at the rate of time-and-a-half. Double time is paid for work on Sundays or public holidays.

Piece rate systems are in effect in virtually all garment factories and data processing firms in Jamaica, with the result that the minimum wage is only a floor. Of course, workers who consistently produce much less than the equivalent of the minimum wage are dismissed. The manager of one free zone garment plant confessed that half of his sewing machine operators earned only the minimum wage. The manager of another garment factory, located outside the free zone, reported that his company requires operators to produce under the piece-rate system at least 80% of the minimum wage if they are to retain their employment.

With such strong productivity incentives, average wages are much higher than minimum wages. A survey of Kingston free zone companies in May 1993

<sup>7</sup> Higher education is, of course, not the only way to become a plant manager. Of the two Jamaican managers interviewed who work for U.S.-owned companies, one is an industrial engineer with a diploma in accounting, while the other has little formal education but successfully ran his own "Item 807" apparel factory before accepting employment with the overseas firm.

<sup>8</sup> There is also a shortage of trained, as opposed to trainable, sewing machine operators, but these do not move from company to company. The reason lies in the fact that garment manufacturers share employee lists, and refuse to hire a worker who comes from another company without first consulting with his or her former employer. Data processing firms, in contrast, compete rather than co-operate in the labour market.

revealed, for example, that (excluding overtime rates) the average pay of sewing machine operators (US\$1.13 per hour) was more than three times the minimum wage (US\$0.34). Even the average wage of trainees, in their first three months on the job, was twice the minimum wage (table 6).

A similar system is in effect for data entry operators, who are paid by the keystroke, or receive the minimum wage plus a productivity bonus. Survey data are not available for this industry, but in June 1993 managers mentioned average wages in the range of 500 to 600 Jamaican dollars per week, equivalent to 56-68 U.S. cents per hour. This is somewhat low for employees who have more formal education than the typical factory worker, but data entry operators work in quiet, air-conditioned offices, with flexible hours, so they enjoy greater non-pecuniary benefits than workers in the garment industry.

Piece rates are not used in the two electrical/electronic assembly plants on the island, but employees of these companies are eligible for group productivity bonuses, and they earn higher wages than sewing machine operators in the garment factories.<sup>9</sup> In telemarketing, telephone operators who answer toll free (800) numbers for hotel reservations and the like earn little more than the minimum wage. Direct sellers by telephone earn a basic wage plus commission on sales, and some of them do very well by Jamaican standards. Like data entry operators, telemarketing employees work in pleasant, air-conditioned offices.

Apart from the basic wage, the employer must also pay payroll taxes totalling 11.5%. This is in addition to the 6.5% deducted from the pay of the employee, who, in return, receives the benefits of the National Insurance Scheme. All employees receive pay for nine public holidays and two weeks annual vacation, which adds another 7.3% to the cost of labour. Employees are also legally entitled to up to two weeks of sick leave each year, and a medical certifi-

cate is required only for sick leave in excess of two consecutive days. To discourage misuse of sick leave, many companies pay their workers the unused sick leave days as a Christmas bonus at the end of the year. A female employee over the age of 18 who has worked for a minimum of twelve months is entitled to twelve weeks maternity leave, with eight weeks full pay.

Companies typically grant their employees additional fringe benefits that are not required by law, such as a punctuality bonus, free or subsidized lunches, free transportation to a central point (this is common practice in Montego Bay), additional health insurance, additional sick, vacation and maternity leave, and retirement benefits. These fringe benefits are more generous in the garment factories and assembly plants than in the data processing or telemarketing companies.

Jamaican law is quite permissive concerning retrenchment and layoffs. During the first three months, the employment of a worker can be terminated without notice and without paying any termination benefits. Afterwards, he or she must be given two weeks notice (or pay in lieu of notice), unless the worker has been employed for more than five years, in which case the notice is increased to four weeks. After ten years, the statutory notice is six weeks and after fifteen years it is eight weeks. If the employment is terminated through redundancy, there is further statutory provision of two weeks severance pay for every year of service after two years of employment up to ten years, and three weeks severance pay for each year of service in excess of ten years.

Unions are free to operate anywhere in Jamaica, provided a majority of workers in a company vote in favour of the union, but not a single free zone company at the present time is a union shop. A number of the garment producers operating outside the free zones are unionised, and labour relations in recent years have been good.

<sup>9</sup> The two plants also differ from garment factories in that they rely less on female labour. The electrical assembly plant has only male employees, while the electronic assembly plant has roughly equal numbers of male and female employees doing similar tasks for similar pay.

## VI

### Forward linkages

Since the Jamaican government is reluctant to allow free zone companies to compete with protected domestic firms, the free zones have almost no forward linkages with the rest of the economy. The free zone legislation makes provision for the export of goods from the free zones to the Jamaican customs territory upon payment of duty and with the consent of the Ministry of Industry, but to date such consent has been granted to only one company, a South Korean manufacturer of leather shoes that sells 10% of its output on the local Jamaican market.

Firms operating outside the free zones under the Export Industry Encouragement Act (EIEA) regime face severe obstacles if they attempt to produce for the local or subregional market, so all of them have opted to export the whole of their output to non-CARICOM markets. The only way they can legally supply the local market is by maintaining a physical separation in the factory between goods processed for export and goods processed for the local and CARICOM markets. However, the small size of the local market makes this unattractive. Even exporters that begin as producers of clothing for the local market soon specialize entirely in the export market, as the history of Davon Corporation illustrates very well.

Beginning in the late 1970s, Davon Corporation produced uniforms and other garments which it sold in Jamaica and exported to CARICOM countries. In 1981 the company began to expand, assembling clothing for the United States market under "Item 807" contracts. In 1984 the CARICOM market collapsed due to trade restrictions and the Jamaican market continued to shrink because of economic recession. Davon Corporation therefore elected to abandon production for the local and CARICOM markets and expand production for the United States market. All the workers who had been producing for the local market were made redundant and new, unskilled workers were hired and trained in their place.<sup>10</sup> The reason for this is the piece-rate system in effect in Davon's plants. In the words of the plant

manager, "the operators were used to receiving 35 minutes of credit for a pair of pants that, by international standards, contained no more than 19 minutes of work. It was easier to change personnel than to reduce the piece-rates to which they were accustomed." Of course, given the lack of specialization and short production runs for the domestic market, productivity was low and generous piece-rates were necessary.

In recent years, the Jamaican economy improved and Davon decided to sell uniforms once again in the domestic market, where it had already built up a reputation. However, the company no longer produces uniforms for the Jamaican market, but instead subcontracts the production and supplies the uniforms with its own label directly to hospitals, hotels and other institutions. Davon is thus a subcontractor of U.S. firms, but in turn subcontracts Jamaican firms to supply the local market. The company has yet to return to the CARICOM market.

The result of this regulatory environment is a segmented garment industry in Jamaica. One segment is modern, large-scale, efficient, highly productive and produces solely for the export market. The other segment is small-scale, largely unspecialized, with low productivity and produces for the domestic and, to a very limited extent, CARICOM markets. There is virtually no contact between the two segments; neither workers nor managers move from one segment to the other. The government prohibits sales by exporters in the domestic market out of a desire to protect the inefficient segment of the industry. Nonetheless, considerable contraband (from suitcase traders, not the exporters) enters the country, with the result that the protected local industry supplies only an estimated 20% of the clothing purchased by Jamaicans.

<sup>10</sup> For the record, it should be noted that Davon is unionised, and severance pay was negotiated for the dismissed sewing machine operators.

## VII

### Backward linkages

Export processing plants in Jamaica have not developed backward linkages for the same reason that they have not developed forward linkages: i.e., on account of government policy. In order for a Jamaican business to supply any product or service to a free zone or EIEA company, it must be a registered exporter. Registration is a bewildering bureaucratic process filled with multiple forms and considerable administrative discretion. One requirement for exporters, for example, is that they obtain each month a tax compliance certificate that must be stamped by six different agencies.

This "red tape" discourages the local purchase even of small items such as office supplies, despite the willingness of companies to source some of their inputs locally. In the Montego Bay Free Zone, for example, Hanover Manufacturing, which assembles electrical equipment, was interested in adding more local value to its product by importing unpainted screws and subcontracting the painting to a local firm. Two companies were interested in the contract until they discovered the cost in both time and money of obtaining and retaining an export registration. As a result, Hanover continues to import the screws painted and ready for assembly.

In this regulatory environment, it is not surprising that export processing companies often find domestic products to be uncompetitive with imports in price and quality. Non-EIEA companies in the customs territory receive a tax rebate of 7.5% on "exports" to EIEA and free zone companies, as they do on exports to any non-CARICOM market, but this is not sufficient to overcome the competitive disadvantage caused by bureaucratic obstacles and by taxes on imported raw materials.

Not a single exporter purchases cartons or other packaging material from local companies. Managers of garment factories and the managers of the two electrical/electronic assembly plants interviewed by the author were of the unanimous opinion that Jamaican packaging costs many times more than comparable imported packaging. When Fargo Electronics began production in 1992 in the Montego Bay Free Zone, its manager attempted to source in the local

market a variety of packaging materials, including paperboard boxes, plastic bubble packs and foam packaging. In all cases, he found very long lead times to begin production, high costs, and a requirement that the free zone company pay "up front" all the tooling costs.

Nonetheless, paperboard boxes are bulky items in which freight represents a large proportion of their CIF import cost, so an incentive exists to obtain this input locally. The largest garment producer in Jamaica (East Ocean Textiles, a Hong Kong company that employs nearly four thousand workers in the Kingston Free Zone) set up a box factory within its factory in September 1985. The factory houses modern equipment, including a boiler, the island's only double facer, cut & crease and printing machines. In it, a total of 35 employees produce an average of 40 000 boxes a month, a small portion of which are sold to other free zone companies.<sup>11</sup>

One activity does take place that might be interpreted as a backward linkage: subcontracting by free zone companies to companies that operate in the customs territory. Garment producers subcontracted a considerable amount of production in 1987 and 1988, when apparel exports were booming, and some subcontracting continues today. But these subcontracts can be awarded only to firms operating under the EIEA regime, so are actually "intra-export processing sector" purchases of services rather than linkages with the domestic economy. Moreover, unlike the case of subcontracting in South Korea, where "goods processed ... by the outzone activity" must be "components or intermediate products for production processes finalized in the export processing zone" (Healey and Lütkenhorst, 1989, p. 28), the Jamaican subcontractor carries out the entire process that would otherwise be effected by the contracting firm. Bongwon Apparel, for example, a South Korean

<sup>11</sup> For more details on the East Ocean Textiles box factory, see Kingston Free Zone Company Ltd. (1992).

company in the Kingston Free Zone, subcontracts the manufacture of blouses to Davon Corporation, an EIEA firm. Davon receives a container of cloth, thread and buttons from Bongwon, then cuts, makes and trims the blouses before returning the finished garments to Bongwon.

## VIII

### Conclusion

Jamaica's success in export processing is due in part to factors that are beyond the control of its government. Data processing and telemarketing benefit from proximity to the United States and from the fact that Jamaicans speak English. Garment exports are stimulated by Jamaica's preferential access, via quota allocations, to protected markets. There are few examples of the assembly of goods such as household appliances, toys or electrical equipment, which are not allocated country-specific quotas in the industrial countries.

Nonetheless, the Jamaican government's role in development of the island's export processing sector has been far from negligible. In the first place, it is the government that grants tax concessions to companies in the form of free trade status or Export Industry Encouragement Act (EIEA) incentives. In addition, the Jamaican government has encouraged investment through promotional activities, by making factory shells available for rental and by facilitating work permits for expatriate managers and technical personnel.

Export processing provides productive employment for more than 30 000 Jamaicans. Since most of the jobs require little training, and plant managers for the most part are expatriates, it is tempting to conclude there has been little transfer of technology and little development of Jamaica's human resources. There are grounds for believing that such a conclusion is unwarranted, however, for two reasons. First, many of these workers have been introduced for the first time to notions of punctuality, quality control and deadlines: in sum, to a work ethic. Secondly, although there are skilled jobs that are currently filled by expatriates, the fact that expatriates are more expensive than local employees means that Jamaicans will gradually fill these jobs as qualified applicants

In sum, the subcontracting that takes place in Jamaica does not represent a linkage of any kind with the Jamaican domestic economy. Backward linkages do not exist between export processing firms and the rest of the economy, and this is a result –intentional or not– of Jamaican government policy.

become available. Indeed, this has already happened in the case of supervisors, who are now recruited entirely from the local labour market.

A conspicuous failure of export processing in Jamaica is the almost complete absence of linkages with the domestic economy. Forward linkages are frustrated by policies designed to shield firms in the domestic economy from competition: with rare exceptions, Jamaican workers and their families are not allowed to consume the goods that they produce. Backward linkages have not developed because domestic firms face serious, virtually insurmountable obstacles when they attempt to sell their products and services to exporters. The Jamaican government does not restrict export processors to *physical* enclaves: in most cases, they are free to operate plants anywhere on the island, but the tragic fact is that its policies do confine them to *economic* enclaves isolated from the rest of the economy.

Writers on this subject frequently assume that export processing companies have a distinct preference for sourcing their raw materials from abroad, so that backward linkages will not occur, regardless of government policy. It is possible to list export processing zones where virtually all material inputs are imported from abroad. Well-known examples, in addition to Jamaica, are the Dominican Republic and the northern border of Mexico. On the other hand, zones do exist where exporters have developed important linkages to domestic producers.

Export processors in such diverse countries as South Korea, Mauritius and Saint Lucia are known to purchase a significant amount of material inputs from local producers. When South Korea opened the Mason Export Processing Zone in 1971, local factories supplied only 3.3% of the raw materials and intermediate goods processed by it, but this share

increased to 25% in just four years, and eventually reached 44% (Healey and Lütkenhorst, 1989, pp. 24-32; UNCTC, 1991, pp. 331-343). Mauritius, a small island in the Indian Ocean, also inaugurated in 1971 an export processing zone that attracted considerable Chinese investment in garment factories. By 1985, domestic producers were supplying 41% of all the intermediate inputs into the zone's garment industry, including nearly all the paperboard boxes, and a large proportion of the cloth, thread, buttons and trimmings (Hein, 1989, p. 48). In Saint Lucia, a tiny Caribbean island with 137 000 inhabitants, 15 export processing plants manufacture and assemble garments, electrical equipment and plastic novelty items. Fourteen of the 15 companies purchase all their paperboard boxes from a local factory, and they

rely on local suppliers for additional intermediate inputs as well (Willmore, 1993).

By implementing appropriate policies, these three countries have facilitated linkages between their export processing plants and the domestic economy. South Korea, Mauritius and Saint Lucia differ in many respects, but they have one thing in common: the authorities allow indirect exporters to import material inputs at duty-free prices, and encourage domestic producers to supply the export processing factories. This is not true in countries like Jamaica or the Dominican Republic, where, as a consequence of government policy, export processors import all their raw materials and intermediate goods.

(Original: English)

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