### Abstract

This paper discusses the role of Export Processing Zones (EPZ) with special reference to the Dominican Republic. Three factors in particular are responsible for the expanding EPZ sector in the Dominican Republic (DR), and in turn have influenced its trajectory: 1) characteristics of the DR's labor force, 2) its geographic proximity to the United States, and 3) its market access to that country. Among the labor force characteristics are wage rates, labor availability and skills, with the latter appearing to be least important. Geographic proximity to the US, combined with an efficient communications and transportation infrastructure, and US preferential trade programs such as the Caribbean Basin Initiative are also factors of particular relevance to the DR's EPZ program. This model, however, is not likely to contribute to sustainable economic growth in the long run.

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# The Role of Export Processing Zones: The Case of Dominican Republic

### 1. Introduction

In the case of the Dominican Republic, it is possible to identify three factors in particular which have produced high occupancy levels in its Export Processing Zones (EPZs) (as will be mentioned later, these factors are also responsible for shaping the role of EPZs in the Dominican Republic). These are: 1) characteristics of its labor force; 2) its geographical location (close to the USA) and 3) opportunities for market entry through such schemes as Section 807 of the USTS.

On the other hand, while relegating assembly processes to EPZs located overseas may be described by authors such as Grunwald and Flamm as the "cutting edge of continued growth in the foreign investments" of industrialized country transnational corporations, from the point of view of the host country, the impact of this trend may not be unambiguously beneficial. In effect, a number of issues and concerns have been raised, in particular regarding the proliferation of production sharing operations in EPZs throughout the world. These will be discussed in the following sections together with the factors mentioned above, which have favored the Dominican Republic as a site for EPZ industries.

### 2. Labor

In the case of the Dominican Republic, author Andres Dauhajre et. al. indicates that the creation of jobs is the main purpose behind the

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establishment of EPZ's, adding that: "These have become an important source of employment in a country that by 1988 had an unemployment rate which fluctuated between 19% and 29%, depending on the source." From the point of view of most firms interested in production sharing, three elements are relevant: 1) the size of the host country's labor force, 2) the wage rate in international units of exchange, and 3) skills prevalent in the labor force.

With respect to the first of these three elements, if the size of the labor force is examined for Caribbean and Central American countries, including Mexico, it becomes evident that the DR does possess a large labor force. (see TABLE 1). Out of the nine comparator developing countries, chosen on the basis of their size (largest) and location within the general North/Central American and Caribbean area, only Mexico, Guatemala and Cuba have higher total populations. Although Cuba currently has no commercial links with the US, changing circumstances could alter that in the future, forcing it to begin to compete with the  $\ensuremath{DR}$ for EPZ type investment. Similarly, although Mexico is not covered by clause 9802.00.8010 of the United States Tariff Schedule (see Section 4 on Market Entry), it's inclusion within the North American Free Trade Agreement (NAFTA) may give it an edge in attracting EPZ type investment. It is interesting to note that Haiti, with a lower number of inhabitants than the DR, nevertheless has a higher proportion of economically active citizens. The outdatedness of the figures for Haiti and the DR, however, makes any conclusions tentative.

The availability of labor has been used as an enticement to attract EPZ-type industries by local authorities from the DR, as well as from other countries of the region, along with low wages. Numerous surveys have concluded that industrial country enterprises tend to outsource their labor-intensive assembly operations to those regions where labor is cheapest. The ensuing competition among developing countries for this type of investment includes such unpalatable measures as the devaluation of the national currency to lower labor costs.

Any industrialization which may occur under these conditions faces the danger of perpetuating a low-skilled labor force engaged in rudimentary production activities. This view has led critics to paint a very bleak picture: The basic training of production workers seldom requires more than a few weeks, or even a few days in the case of the simplest type of operations in the garments industry. ... in several countries, the relatively high proportion of trainees in the EPZ labour force is not due to the inherent complexity of the production process, but rather to the fact that newly hired workers can legally be considered as trainees for periods of up to six months, even though they may be fully trained after a few days or at most a few weeks, and are paid a trainee salary rather than the full salary of a qualified operator.<sup>5</sup>

Advocates of the positive developmental role of EPZs, on the other hand, while recognizing the low technological level and skills requirement of EPZ industries, nevertheless argue that this is not an impediment to economic development. Their view is that the selective deregulation implied in an EPZ policy allows a labor-abundant developing country to attract foreign capital by exploiting its comparative advantage:

The establishment of a free trade-zone which removes these barriers can induce the inflow of capital which raises the productivity of local labor, may generate dynamic linkage effects and gives rise to income tax revenue from the profits of foreign firms, all of which translates into gains in welfare for the host country. At the same time, the owners of capital in the rest of the world gain since their private yields are increased.<sup>6</sup>

This mutually beneficial arrangement, however, is put forth in a static context of fixed resource and factor endowments. The author realizes that this "…approach misses what in the long run may be the most important source of benefits of free economic zones, the dynamic effects," while noting that the latter "…are notoriously difficult to predict or even to identify."

In terms of the locational patterns of EPZ-type production-sharing operations, it appears from the discussion so far that skills do not rank as high on the roster of determinants for this type of activity. It can be seen from TABLE 2 that in relation to *comparator* countries, the Dominican Republic ranks fourth in total number of students enrolled in secondary level education. In this category, the DR is surpassed by

TABLE I
LABOUR AVAILABILITY IN COMPARATOR COUNTRIES (MILLIONS)

	Active	Total	Reference	
	Population	Population	Year	
México	24.06	81.25	1990	
Cuba	3.54	9.72	1981	
Guatemala*	2.90	8.66	1989	
Haití***	2,26	5.12	1983	
Dominican Republic	1.92	5.65	1981	
Honduras**	1.73	4.97	1992	
Costa Rica*	1.09	2.94	1992	
Jamaica**	1.06	2.38	1990	
El Salvador*	0.96	2.37	1991	

Source: ILO Yrbk-'86 &' 93)

Mexico, Cuba and Jamaica (Cuba was included, despite carrying out little or no current trade with the US, because of its potential to do so in the future). The most defficient category for all countries turns out to be that of vocational training, where the lowest ranked Haiti has 59 pupils per 100,000 inhabitants, while the highest ranked Cuba has 2733. Here, the Dominican Republic appears only as the second lowest of the comparator countries. Henceforth, its relative success in expanding its EPZ sector does not appear attributable to any abundance of vocational skills in the labor force.

### 3. Location/Communications

A factor shared by the Caribbean/Central American region, and perhaps to a lesser extent South America, is its proximity to one of the largest industrial country markets of the world. The extent of that proximity to that market is a locational factor for US-exporting EPZ firms and it can be seen in the differences in time it takes to ship goods to the US from the region versus other competing points such as Malaysia, the Phillipines and Indonesia.

The proximity of the Dominican Republic to the United States is often cited as a factor in explaining the high proportion of the former's commerce with the latter. Although a body of water separates the two, efficient air and sea transportion links seem to make amends for this, as well as the existence of telecommunications facilities. This is essential for quick communication between Dominican operations and their head offices which are overwhelmingly located on the North American mainland. Similarly, the Dominican Republic's proximity to Puerto Rico is an important factor since a number of its EPZ enterprises comprise co-production partners with operations located in Puerto Rico.

Advanced telecommunications services are available in most areas in the Dominican Republic, including direct dialing (international), according to the World Bank. Similarly, access to satellite transmission enables the use of facsimile and data transmission machines to the US and elsewhere. There is even one EPZ with a strong sectoral orientation towards data processing and information services. According to an investor's brochure, this "...zone offers state-of-the-art 'smart park' telecommunications facilities through teleport San Isidro, located on the premises." These lines of communication are complemented, as mentioned earlier, by air and sea transport links with the US and other areas of the world.

TABLE 2
SKILLS IN COMPARATOR COUNTRIES
Total Number of Students Enrolled at the Secondary, General and Vocational
Levels Per 100,000 Inhabitants

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Secondary	rear	General	Year	vocational	Year
4546	[1991]	3536	[1991]	1010	[1991]
8496	[1991]	5570	[1991]	2733	[1991]
7220	[1985]	6837	[1985]	330	[1985]
2563	[1985]	3115	[1991]	430	[1980]
2453	[1985]	2850	[1990]	59	[1985]
3686	[1991]	2404	[1991]	1112	[1991]
9307	[1990]	9914	[1985]	376	[1985]
7633	[1991]	6701	[1991]	932	[1991]
	8496 7220 2563 2453 3686 9307	4546 [1991] 8496 [1991] 7220 [1985] 2563 [1985] 2453 [1985] 3686 [1991] 9307 [1990]	4546 [1991] 3536 8496 [1991] 5570 7220 [1985] 6837 2563 [1985] 3115 2453 [1985] 2850 3686 [1991] 2404 9307 [1990] 9914	4546 [1991] 3536 [1991] 8496 [1991] 5570 [1991] 7220 [1985] 6837 [1985] 2563 [1985] 3115 [1991] 2453 [1985] 2850 [1990] 3686 [1991] 2404 [1991] 9307 [1990] 9914 [1985]	4546 [1991] 3536 [1991] 1010 8496 [1991] 5570 [1991] 2733 7220 [1985] 6837 [1985] 330 2563 [1985] 3115 [1991] 430 2453 [1985] 2850 [1990] 59 3686 [1991] 2404 [1991] 1112 9307 [1990] 9914 [1985] 376

(source: UNESCO Statistical Yearbook, 1993)

<sup>\*</sup>household survey / \*\*labour force sample survey / \*\*\*official estimates

These transport links are important not only from the standpoint of the working capital involved, but from the point of view of implementing justin-time capabilities, which are becoming increasingly important. As far as maritime transportation services are concerned, if transit times to the United States are compared with the Dominican Republic and a number of Far Eastern competitor countries, the former's advantage as a site for US-exporting EPZ industries becomes clearly evident in this respect (See TABLE 3). All Far Eastern competitors require more than a week of transport time to ship goods to the US, with countries such as Thailand, Indonesia, the Phillipines, and Malaysia requiring close to a month of transit time. In contrast, transit times from the Dominican Republic to US cities such as New York and Miami do not exceed a week. Also of considerable importance, particularly to the electronics-components EPZ industry<sup>11</sup>, is the air transit time. Flights from the Dominican Republic are frequent to the eastern seaboard of the United States and take from around two hours in the case of Miami, to just over three hours to New York City.

In the case of most Caribbean countries, the United States International Trade Commission acknowledges that: "...their proximity to the United States provides US firms (willing to invest there) with greater control over production and shorter delivery leadtimes than could assembly facilities in the Far East." With the tendency towards regional economic cooperation and block formation occurring throughout the world, the pressure is greater for developing economies adjacent to industrial centers such as Europe, Japan and the United States to link up economically to these.

## 4. Market Entry Point

In combination with the country's geographic location in the Caribbean, the Dominican Republic also serves as a market entry point into the United States. Not all countries in the region possess this attribute, as noted in the case of Cuba. It is thus likely that the role of EPZs in the Dominican Republic has been influenced, by US commercial policy towards the Caribbean region; and in particular, by the Caribbean Basin Economic Recovery Act (CBERA) or Caribbean Basin Initiative (CBI), as it is sometimes known.

The trade component of the CBI or CBERA consists of duty free access to the US market for all designated country exports with the notable exceptions of: textiles and apparel (which are governed by the

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Multi-fibers Agreement, MFA), footwear, handbags, workgloves, leather flat goods and apparel, certain watches and watch parts, canned tuna fish and petroleum products. <sup>13</sup> Qualifying exports must meet a rules of origin requirement of at least 35% value added in one or more beneficiary countries. As such, the CBERA joins two other major duty reduction schemes available to the countries of the region: the Generalized System of Preferences and applicable provisions under the Tariff Schedules of the United States (such as Section 807, now known as Section 9802.00.80 under the new Harmonized Tariff System).

# TABLE 3 MARITIME TRANSMIT TIMES FROM THE FAR EAST AND THE DR TO THE UNITED STATES

(Days frrom country to select US cities)

	New York City	Atlanta	Los Angeles	Miami
Dom. Rep.	4-5.5	17-18	8-9	4-5*
Japan	14-15	17-18	8-9	
Korea	16	19	10	
Hong Kong	21	24	15	
Taiwan	19	22	13	
Thailand	28	31	22	
Singapore	23	26	17	
Indonesia	28	31	22	
Philipinas	26	29	20	
Malaysia	29-31	32-34		
China (Shanghai)	25-26	28-29	19-20	

Sources: Far East-Scanwell Freight, USA; DR- various sources.

Despite its initial exclusion from the CBERA, textiles and apparel exports to the United States received a stimulus in 1986 with the announcement of a "special access" program known as Section 807a, or "Super 807" (now item 9802.00.8010). Under this program, which was limited only to Caribbean and Central American countries (excluding Mexico), clothing exports from the Caribbean to the US market were guaranteed access without regard for bilateral MFA quotas (unlike 807.00

exports), though subject to special bilateral arrangements. However, while these "guaranteed-access levels" (GALs) could be increased upon request (and thus were virtually unlimited), they only applied to clothing assembled from fabric manufactured and cut in the United States.

In the case of the Dominican Republic, the US has historically been the country's most important trading partner. <sup>14</sup> Furthermore, it is noteworthy that the Dominican Republic was singled out as early as 1987 by US government authorities as being a "prime beneficiary" of the US CBI (enacted just three years earlier):

The Dominican Republic has been one of the best performers under the CBI. The Dominican Republic's effort to take advantage of the CBI and otherwise develop new industries has resulted in a 70-percent increase of non-traditional exports from \$84 million dollars in 1983 to \$140 million dollars in 1986. The greatest growth has been in textiles and agribusiness. The development of free-trade zones [EPZs]... has been a great part of this effort. <sup>15</sup>

Since the mid-nineteen eighties, Puerto Rico has also contributed to increased commerce between the Dominican Republic and the United States by virtue of its position within the US customs zone and its promotion of "twin plants" or production-sharing operations throughout the Caribbean and Central America.

In the past, the Dominican Republic's proximity to the US market and Puerto Rico, has been translated into an accelerated growth of DREPZ exports. As is evident from FIGURES 1 and 2, the dynamic evolution of the DREPZ sector throughout the decade of the eighties contrasts sharply with the poor performance of other sectors of the economy, both in terms of gross exports and employment. What is particularly notable is the contrast between declining sugar exports (a key earner of foreign exchange in the past) and increasing EPZ gross exports throughout the period (FIGURE 1). This seems suggestive of a transfer of resources from the sugar sector to the EPZ sector. On the other hand, although not always declining, the non-EPZ manufacturing sector shows little export dynamism throughout in comparison with the EPZ sector.

In terms of employment, despite falling gross exports in the sugar sector, employment appears to have diminished little throughout the eighties (FIGURE 2). This seems to suggest that at least labor was not one of the resources drawn from the sugar sector to fuel the growth of the EPZ sector. This is believable in the face of the prevailing high

unemployment rate registered in the country (recall unemployment figures of between 19% and 29%, quoted earlier). From FIGURE 2, it is evident that the expansion in total national employment in the Dominican Republic, starting with the mid-eighties, is attributable almost exclusively to the expanding EPZ sector.

FIGURE 1
Gross Exports by Sectors

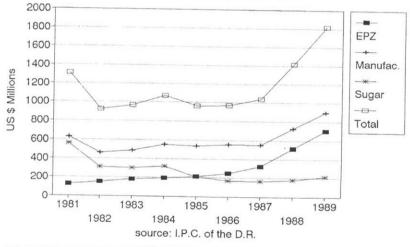
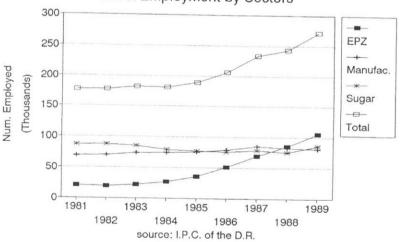


FIGURE 2
Direct Employment by Sectors



### 5. Sectoral Diversification of EPZs in the DR

During the period from 1975 to 1988, total DREPZ exports jumped from US \$ 27.3 million (mn) to US \$ 516.9 mn, reflecting an average annual growth rate of 24.5%. <sup>16</sup> In terms of participation in total exports of goods, EPZ exports jumped from 3% in 1975 to 36.44% in 1988. <sup>17</sup> By 1991, the proportion had reportedly reached 53% of total exports of goods, corresponding to a value of around US \$850 mn. <sup>18</sup> The most important sector of EPZ manufactures remains clothing, the value of which jumped from US \$ 42.3 mn in 1981 to \$ 183.8 mn in 1988, for an increase of 334.8%. <sup>19</sup> This is reflected in the sectoral evolution of DREPZ employment figures, presented in TABLE 4.

It is evident from TABLE 4 that a somewhat paradoxical process of industrial diversification and concentration has occurred simultaneously in the DREPZ sector over the years. Whereas the garment sector's share of total EPZ employment has increased from 62% in 1980 to 71% in 1990, a parallel process of diversification can also be noted with the incorporation of new industrial sectors such as pharmaceuticals, healthcare and medical products, among others. Employment in the electronics sector also reflects the expansion noted previously in export values for surge

TABLE 4
Evolution of Total DREPZ Employment by Industry (percentage share)
(source: The Services Group, Inc.)\*

Sector	1980	1985	1988	1990
Apparel	62.3%	52.7%	64.6%	71.4
Electronics	1.5%	3.9%	7.9%	6.2%
Jeweller	4.1%	7.2%	3.4%	2.4%
Healthcare/Medical%	0.0%	0.0%	2.0%	2.9%
Footwear	2.6%	8.0%	8.1%	6.7%
Tobacco / Cigars	15.1%	6.0%	3.1%	2.5%
Leathergoods/Luggage	7.8%	2.5%	3.3%	2.7%
Pharmaceuticals	0.0%	0.0%	1.3%	0.8%
Agro-Processing	6.5%	1.9%	0.6%	0.3%
Sporting Goods	0.0%	0.0%	0.1%	0.1%
Furniture	0.0%	0.0%	0.2%	0.2%
Other	0.0%	0.0%	0.2%	0.2%
TOTAL	100.0%	100.0%	100.0%	100.0%

<sup>\*</sup> draft final report: Rationalization of Free Zone Policies in the Dominican Republic, June 1991.

cigars, agro-processing, leather goods and luggage.

# 6. Summary

The role of export processing zones such as those which are flourishing in the Dominican Republic apparently conforms to a new international division of labor (NIDL) strategy which joins US enterprises' demand for abundant cheap labor with developing countries' desire to promote employment and earn foreign exchange. In the case of the Dominican Republic, this particular outcome has been favored by the country's proximity to the United States, US commercial policy towards the wider Caribbean and Central American region, and certain characteristics of the DR's labor force. With respect to the US commercial policy, it was shown that offshore garment assembly in the Caribbean for the US market is favored by generous US quotas and that the DR has significantly benefitted from the Caribbean Basin Initiative in general.

As far as labor force characteristics are concerned, it does not seem likely that skills are as important explanatory factors of the DR's success in this area as are other factors such as labor availability. This factor, together with a US commercial policy favoring proximate off-shore assembly, has caused the EPZ sector to expand significantly in the Dominican economy. Although other EPZ "models" do exist in other parts of the world, the model that currently exists in the DR offers only very constrained opportunities for sustainable economic growth. The extreme dependence on one market, coupled with low value added production involving a limited range of goods may provide only a temporary solution to the unemployment and foreign exchange problems of the DR. The future of the DR, as well as the region's EPZ sectors, depends on a diversification of markets and industries and, in particular, on higher value-added types of production.

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### Notes

- $1.\ Joseph\ Grunwald\ and\ Kenneth\ Flamm,\ The\ Global\ Factory:\ Foreign\ Assembly\ in\ International\ Trade,\ p.\ 8.$
- 2. Although this type of foreign investment is not located exclusively in EPZs, the relocation of assembly processes from industrial to developing countries can be considered the *raison-de-etre* of EPZs in general.
- 3. Andrés Dauhajre, hijo, and others Guerrero, Impacto de las Zonas Francas Industriales de Exportación en la República Dominicana, p. 68. (English translation).
- 4. See for example: Charles Kernaghan, Barbara Briggs & Jack McKay, 'Paying to lose our jobs', preliminary report to the National Labor Committee Education Fund in support of Worker and Human Rights in Central America, Washington, D.C., September 1992: p.p. 21, 31, 32.
- 5. See for example: United States International Trade Commission (USITC), The Use and Economic Impact of TSUS Items 806.30 and 807.00, Publication 2053, Washington, D.C.: US Government, 1988.
- 6. United Nations Centre on Transnational Corporations and the International Labour Organization (UNCTC-ILO), Economic and Social Effects of Multinational Enterprises in Export Processing Zones, p. 112.
- 7. Herbert G. Grubel, 'Towards a theory of free economic zones', p. 52.
- 8. Ibid.: p.53.
- 9. See for example: Dales Mathews, 'Export Processing Zones in the Dominican Republic: Their nature and trajectory', D. Phil. dissertation, University of Sussex, 1994.
- 10. World Bank, 'Staff appraisal report: Dominican Republic industrial free zone development project', p. 13.
- 11. Dominican Republic Investment Promotion Council, 'Working to make your business work: free zones in the Dominican Republic', p. 12.
- 12. Dominican Republic Investment Promotion Council, 'Working to make your business work: electronic assembly in the Dominican Republic', Santo Domingo, January 1990: p. 3.
- 13. United States International Trade Commission, Production Sharing: U.S. imports under harmonized tariff schedule subheadings 9802.00.60 and 9802.00.80, 1986-1989, pp. 6-1.
- 14. U.S. House of Representatives, Committee on Ways and Means, 'Report on the Committee delegation mission to the Caribbean basin and recommendations to improve the effectiveness of the Caribbean Basin Initiative', pp. 1-2.
- 15. Dale Mathews, 'Sugar monoculture and the Balance of Payments Current Account of the Dominican Republic', (English translation) p. 19.
- 16. U.S. House of Representatives, May 6, 1987: p. 23.
- 17. Dauhajre, hijo, et. al. 1989: p. 35.
- 18. Ibid.: p. 43.
- 19. Fundación APEC de Crédito Educativo, Inc., Encuesta Nacional de Mano de Obra (ENMO), p. 32.
- 20. Ibid.: p. 39.

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