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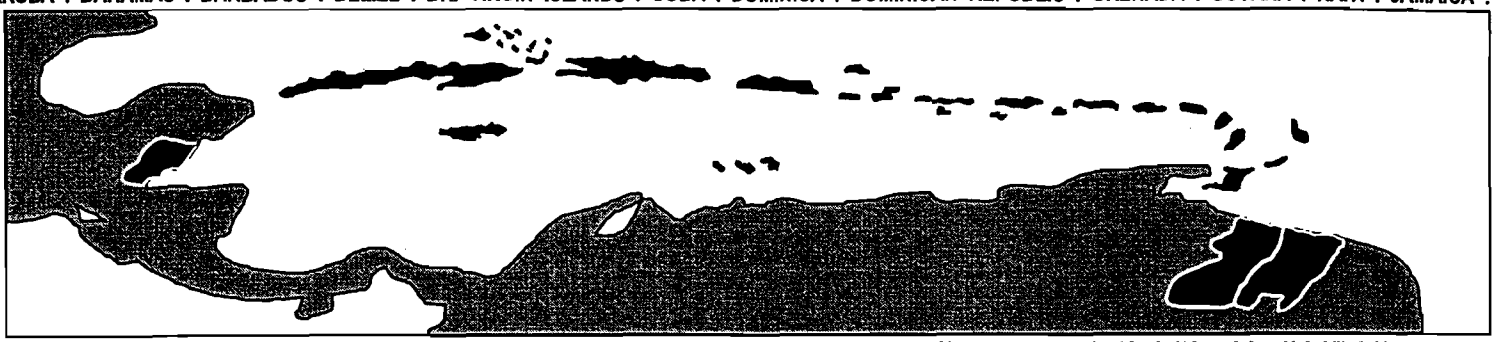

MONTSERRAT . NETHERLANDS ANTILLES

PUERTO RICO . SAINT KITTS & NEVIS . SAINT LUCIA . SAINT VINCENT & THE GRENADINES . SURINAME . TRINIDAD & TOBAGO . U.S. VIRGIN ISLANDS .

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ANALYSIS OF TRADE FLOWS BETWEEN PUERTO RICO AND CARICOM AND PROSPECTS FOR INTEGRATION

UNITED NATIONS
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Subregional Headquarters for the Caribbean

CARIBBEAN DEVELOPMENT AND COOPERATION COMMITTEE

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ANALYSIS OF TRADE FLOWS BETWEEN PUERTO RICO AND CARICOM AND PROSPECTS FOR INTEGRATION

INTRODUCTION

Puerto Rico and Caribbean Community (CARICOM) Caribbean countries share important common characteristics. They are open economies and while their trade specialization patterns are heterogenous, historical, institutional and geographical factors have shaped export and import linkages that are closely tied to those of the United States and Western Europe.

CARICOM Caribbean economies and Puerto Rico also adopted, early on, a common approach to development, that of 'industrialisation by invitation'. Its main elements included fiscal incentives, the attraction of foreign direct investment flows and, in the case of CARICOM Caribbean economies, an import policy encapsulated in the common external tariff.

Finally both confronted the process of increasing internationalization of trade flows and investment, a changing external environment and a widening process of economic liberalization with a positive response. It consisted in deepening and strengthening their respective regional ties.

CARICOM economies revised the Chaguaramas Treaty and laid the foundations for the formation of the single market and economy (CSME, 1991). As part of its overall policy orientation, Puerto Rico, has sought to deepen its relations with the greater Caribbean region. A first step in this direction is an analysis of the trade flows with CARICOM Caribbean economies. This document provides such analysis. It is divided into three sections.

The first section provides a brief comparison between Puerto Rico and CARICOM Caribbean economies in terms of size, output, development models and trade specialization patterns. The second section analyses trade flows between Puerto Rico and CARICOM. This section provides an aggregate and country-by-country trade analysis with Puerto Rico including exports and imports. Some of the variables considered include market share, relative unit values and specialization. The analysis also uses the constant share analysis methodology to determine the importance of demand (global demand) and that of market dynamics for given products (structural demand effect).The analysis is complemented by a typology of Puerto Rican export products to the Caribbean.

The third section centers on the perspectives for further commercial integration between CARICOM economies and Puerto Rico. Following a computation of indices of trade compatibility on a country-by-country basis, the document analyses four aspects that are fundamental determinants of any integration process. These are the Commonwealth status of Puerto Rico; the size of the market and the composition of output; the trading regime and the degree of competitiveness of the economies involved. Competitiveness is ascertained using selective indicators such as operating costs, transport costs and the real exchange rate. The final reflections are found in the conclusion.

1. THE REGIONAL AND HISTORICAL FRAMEWORK

The Commonwealth of Puerto Rico covers an area of 9,104 square kilometers with a population of 3.8 million inhabitants and occupies a central position among the islands of the West Indies in the northern Caribbean. Its GDP per capita is almost three times the Caribbean average and only surpassed by that of the British Virgin Islands. Manufacturing and services (and within services, finance, insurance and real estate services) are the main sectors of economic activity (contributing each 42% and 52% to GDP).[1]

For their part, Caribbean economies constitute a structurally heterogeneous subgrouping reflecting nonetheless a growing divide between resource and service-based economies.[2] Primary sector activities contribute 10% to GDP on average underscoring the significance of agriculture and mining for Guyana, Belize and Trinidad. In spite of its tendency to stagnate in the last decade, manufacturing's share is similar to that of agriculture mirroring its importance for Belize, Jamaica and, to a lesser extent, St. Kitts and Nevis, and Guyana. The services sector is, by far, the largest contributor to the creation of value added at the aggregate level and clearly concentrated towards tourist oriented activities *(See Table 1 below and Table 32 in Section 3).*

The differences in size and economic structure should not hide the historical fact that both adopted a common development strategy at early stages of their development. This strategy was termed "Industrialzation by Invitation" and was made prominent by the Caribbean Nobel Prize Laureat Arthur Lewis (1950).

Originally, Lewis saw the need for industrialization as a response to the existence of surplus labor in agriculture. [3] Due to the small size of the Caribbean markets, Lewis thought that industrialization could generate the demand necessary to absorb surplus labor if manufacturing output was oriented to both the domestic and export market and if Caribbean countries formed a Customs Union. The strategy for industrialization was termed 'industrialization by invitation'

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[1] Finance, insurance and real estate contributed 16% to GDP in 2001 and 2002.

[2] CARICOM members include four territories that belong to the United Kingdom. These are Montserrat, Anguilla, the British Virgin Islands and the Turks and Caicos Islands. The last two are asociate members. The other members are Antigua and Barbuda, the Bahamas (the Bahamas is a member of CARICOM but not a member of the common market), Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St, Vincent and the Grenadines, Suriname and Trinidad and Tobago. The analysis in this paper includes the countries according to data availability.

[3] Surplus labor was measured by the "low proportion of women gainfully employed and the growth of unproductive jobs (p.828)." Lewis thought that industrialisation provided the means to absorb the excess labour and improve the agricultural sector. As he put it (p. 832):

> There is no choice to be made between industry and agriculture. The islands need as large an agriculture as possible, and, if they could even get more people into agriculture, without reducing output per head, then so much the better. But, even, when they are employing in agriculture the maximum number that agriculture will absorb at a reasonable standard of living, there still will be a large surplus of labour, and even the greatest expansion of industry which is conceivable within the next twenty years will not create a labour shortage in agriculture. It is not the case that agriculture cannot continue to develop if industry is developed. Exactly the opposite is true: agriculture cannot be put on to a basis where it will yield a reasonable standard of living unless new jobs are created off the land.

because as pointed by Lewis: " ...what should rather be done is to try to persuade existing suppliers, with established distribution channels in Latin America, to open factories in the islands to supply their trade" (Ibid., p. 862). The main incentive to attract foreign capital to the Caribbean was lower labor costs. Lewis sought to supplement this by a policy of fiscal incentives.

The protectionist side to this development model came at a later stage. In fact, Lewis, rather than arguing in favor of protection from imports stated the case for export subsidies. As he put it (Ibid, p. 886): "Most of the industries will have to export, and if they are to do this, they must be able to compete on the world market; and if they can compete there, they will not need protection in the domestic market."

In practice, industrialization by invitation was based on three pillars: fiscal incentives, foreign direct investment (FDI) promotion and attraction, and an import policy oriented to develop targetted industries. Both benefited largely from flows of foreign capital. Fiscal incentives were also a key component setting the basis for the development of industries and firms in both Puerto Rico and CARICOM Caribbean economies. Imports policy was a prerogative of CARICOM countries since Puerto Rico cannot have an independent tariff policy.

The Agreement for the Harmonization of Fiscal Incentives, which was implemented in 1973 constituted the main vehicle for granting fiscal concessions to CARICOM.[4] The regional approach to tax incentives was eventually superseded by national tax legislation, dating in some cases also to the beginning of the 1970s and including tax breaks and holidays for productive inputs, commodity export related activities and tourism.

In the case of Puerto Rico, the most important tax incentive act was provided by the tax reform act of 1975 which created Section 936 of the Internal Revenue Code providing a tax credit "equal to the full amount of the United States corporate income tax liability on income generated by production, trade or investment activities of an active business in a United States possession". This incentive "sheltered a large proportion of corporate income taxes generated by profits of production facilities located in Puerto Rico. The intent was to promote development of the Puerto Rico economy and the reduced costs also encouraged production of materials for export."[5]

[4] Its goals were to: (I) promote investment, (ii) reduce the competition, (iii) rationalize the granting of subsidies and (iv) promote regional convergence, See, Wolrd Bank (1991).

[5] See, The Urban Institute. Targetting Export Markets for Puerto Rico. 1997.

Table 1
Main economic indicators
Puerto Rico and CARICOM Caribbean economies

						Composition of GDP							
	Pop.	Geographical Area	GDP growth	GDP/per capita	FDI/per capita	Agriculture	Mining	Manufact.	Services	Inflation	Fiscal deficit	External debt	Current account
Puerto Rico	3,828.0	9,104.0	2.8	11,218.0	....	0.7	.....	41.6	54.0	3.9	9.7	7.5	-10.3
Anguilla	13	0.1	3.8	7,833.6	2,076	2.9	1.0	1.3	92.3	3.6	-0.7	8.2	-24.5
Antigua and Barbuda	68.0	0.4	3.4	7,754.6	277.0	4.0	2.0	3.0	88.9	3.3	-1.85	60.6	-7.55
Bahamas	303.0	14.0	1.8		....	...	...	...	...	-0.9	...	9	...
Barbados	269.0	0.4	0.9	9,638.8	53.0	6.0	0.8	8.5	77.6	2.9	-2	19.7	0.45
Belize	235.0	23.0	4.9	3,425.3	52.0	22.7	0.7	16.2	57.3	3.0	-4.1	54.8	-3.45
Dominica	71.0	0.8	2.4	3,124.4	332.0	18.2	0.8	7.2	76.5	-2.9	-4.45	36.8	-17.5
Grenada	94.0	0.3	3.5	3,247.2	359.0	8.2	0.5	8.8	81.8	2.8	-3.05	31.5	-17.5
Guyana	865.0	216.0	4.7	685.5	73.0	28.8	11.6	10.6	40.6	33.3	-9.6	169.3	-16.5
Haiti	8,205.0	28.0	-0.9	429.0	1.0	27.0	0.1	7.6	69.0	25.8	-3.1	33.5	-1.4
Jamaica	2,561.0	11.0	0.7	2,780.7	111.0	7.3	9.1	15.5	78.5	38.8	-4.85	57.1	-4
St. Kitts and Nevis	41.0	0.3	4.1	6,410.3	908.0	4.5	0.5	12.2	71.1	2.5	-4.7	50	-18.5
St. Lucia	150.0	0.6	1.4	3,476.8	209.0	7.7	0.5	5.9	85.9	4.1	-0.5	19.4	-9.5
St. Vincent and the Grenadines	116.0	0.4	3.0	2,539.5	467.0	12.0	0.3	5.8	72.93	3.8	-1.65	47.3	-20.5
Suriname	418.0	164.0	1.0	2,160.0	1.0	11.0	17.7	10.6	52.9	163.5	....	...	.....
Trinidad and Tobago	1,291.0	0.4	2.7	6,862.5	467.0	3.0	25.0	10.0	65.0	7.7	-0.6	21.1	0.35
Average	1,049.1	30.7	2.5	4,312.0	254.6	11.1	2.5	8.6	74.8	19.4	-3.2	45.0	-11.6
Standard Deviation	2,093.2	63.8	1.6	2,750.5	248.2	8.1	3.7	4.5	14.1	40.4	2.4	39.9	8.3

Note: Population, geographical area, GDP per capita, FDI per capita, the composition of GDP and the external debt correspond to the year 2001. GDP growth, inflation, fiscal deficit and the current account are averages for 1990-2001. The fiscal deficit, the current account and the external debt are expressed as percentages of GDP. In the case of Puerto Rico growth is measured by the GNP rate of growth.
Source: ECLAC based on official data

Table 2
Degree of trade openness and export performance

	Openness	Openness	Average	Export performance	
	1990	2001	1990-2001	1990-1995	1995-2001
Puerto Rico	61.8	55.5	48.5	8.8	9.4
Anguilla	59.7	77.3	77.0	11.7	61.9
Antigua and Barbuda	53.5	49.0	51.9	....	9.2
Barbados	41.2	41.9	40.7	2.4	2.9
Belize	41.4	57.2	45.9	10.9	3.5
Dominica	60.8	43.9	50.7	3.0	1.2
Grenada	51.2	49.6	48.9	-2.3	17.6
Guyana	87.9	82.9	89.9	12.3	3.5
Jamaica	48.3	48.6	50.3	7.0	3.7
St. Kitts and Nevis	59.0	39.5	51.8	0.9	22.2
St. Lucia	65.9	39.3	54.2	3.6	95.4
St. Vincent & the Grenadines	65.7	47.2	54.9	-2.7	0.0
Suriname	67.9	.....	86.5	....	8.7
Trinidad and Tobago	37.8	41.2	42.8	.....	10.0
Average	57.0	51.5	57.4	4.7	18.4
Standard Deviation	13.7	14.3	16.2	5.6	28.3

Note: '...' indicates not available.
Source: ECLAC on the basis of official data.
The degree of openness was measured by the average propensity to import. The average propensity to imports equals value imports divided by a measure of national income. Export performance is defined as the rate of change of exports divided by the ratio of imports to national income. This follows the methodology of Davidson (1992), Godley (1983) and Anyadike-Danes (1996).

The industrialization by invitation approach to development has progressively receded and countries have adopted a more outward oriented economic policy while at the same time maintaining some fundamental features of the original model. Some of the larger CARICOM Caribbean economies (Barbados Guyana, Jamaica, and Trinidad and Tobago) undertook stabilization policies in the 1990s with the simultaneous aim of restoring macroeconomic equilibrium and adopting more market-oriented trade policies. Other economies have also begun to rethink their tax incentive system. In the case of Puerto Rico the phasing out of the tax credit provided by Section 936 starting in 1996 has led to substitutes which aim to be compatible with international trading practices.

Partly as a result of their economic policy legacy regimes, history and geographical location, Puerto Rico and CARICOM Caribbean economies are highly open economies in terms of the composition of aggregate demand.[6] In spite of the fact that the degree of openness of some Caribbean countries has decreased during the past decade, their ratio of imports to the total amount of domestic expenditure on final goods and services still oscillates between 43% and 90%. Puerto Rico's degree of openness is above the average for 1990 (62%) and 2001 (56%) *(See Tables 2 and 3 above).*

[6] Using long-run econometric techniques (i.e., cointegration techniques, the import elasticity of income was found to be 0.79 is the case of Puerto Rico).

Table 3 Puerto Rico Direction of trade: Exports as a percentage of the total by partner country, 2001	
United States	77.65
United Kingdom	3.13
Germany	2.14
Holland	1.86
Japan	1.46
Dominican Republic	1.36
Italy	1.36
Belgium	1.22
France	1.11
Switzerland	1.06
Ireland	0.59
Singapore	0.50
Mexico	0.49
South Korea	0.44
Brazil	0.20
Argentina	0.16
Panama	0.14
Colombia	0.08
Honduras	0.07
Costa Rica	0.06
Venezuela	0.05
El Salvador	0.05
Ecuador	0.05
Guatemala	0.01
Uruguay	0.01
Chile	0.01
Source: Puerto Rico Planning Board (2002) Note: export shares were computed following the origin of movement criterion.	

In a similar vein, Puerto Rico and CARICOM Caribbean countries also share a similar pattern of trade orientation. Puerto Rican trade is mainly oriented, for obvious reasons, towards the United States which accounts for 77% of all of its exports on an origin of movement criterion.[7] The second trading partner is Europe followed by Asia (13% and 3%, respectively). South America represents a mere 0.6% of total exports and Central America an insignificant 0.33%. On a country basis, the major country destinations of exports are the United Kingdom, Germany, Holland, Japan, the Dominican Republic and Italy (1.9%, 1.5%, 1.4% and 1.4%, respectively) *(See Table 3 above).*

In addition, trade in the Caribbean is highly concentrated towards North America and Western Europe. Between 1985 and 2000, more than 45% of Caribbean countries' imports on average originated in the United States and 17% in Western Europe *(See Table 45 in the Annex).*

[7] Using the criterion of port of final shipment, the United States represents 88% of all Puerto Rican exports.

Likewise, during the same period, Caribbean merchandise exports to both destinations represented more than 60% of the total. [8]

Both markets grant special and differential treatment provisions through three main preferential trading arrangements, the System of Generalized Preferences, the Lomé Convention (subsequently replaced by the Cotonou agreement in 2000) and the Caribbean Basin Initiative respectively.[9] Caribbean exports comprise traditional products (for the most part agricultural products) and final goods produced in enclave zones. [10]

[8] Estimations are based on ECLAC data.

[9] The Generalized System of Preferences (GSP) was adopted in 1974 and grants trade preferences to manufactured and semi-manufactured goods and to some agricultural products. Textiles are excluded for the GSP. There are 16 different GSP schemes granted by 28 developed countries. The Caribbean Basin Initiative (1983) granted preferential access to the United States market for Central American and Caribbean economies to promote their growth and development. Excluded products included textile and apparel, footwear, leather products, canned tuna, petroleum and derivatives. The CBI was expanded in 2000 through the Caribbean Economic Recovery Expansion Act (CBEREA) to included textiles, tuna and footwear. The Lomé Convention granted duty-free access to products from African, Caribbean and Pacific States. Following the fourth Lomé convention, which granted duty free to all CARICOM exports and provided special regimes for bananas, rum, sugar and beef. Its successor, the Cotonou agreement, establishes trade relations upon the progressive dismantling of trade barriers and preferences seeking in this way to integrate the beneficiary countries into the World Economy.

[10] For Caribbean economies' exports that enter under preferential arrangements i.e. the Caribbean Basin Initiative (CBI) in the case of the United States and the Lomé-Cotonou agreements for Europe, represent a significant part of the total. Available data for 11 Caribbean countries show that on average the share of CBI exports stood at 28% in 2000 with significant national disparities. Notwithstanding these differences most countries have increased their share of CBI exports (see Table 2 below). With respect to Caribbean exports to Europe, the data shows that under the Lomé Convention or Cotonou Agreement, export products represent more than 75% of the total to Western Europe in 1999

On average for 1989-2000, in the case of St. Lucia, Trinidad and Tobago, Guyana, and Antigua and Barbuda the share of CBI exports represents less than 15% of the total. By contrast for the same period, CBI exports for Barbados and St. Kitts and Nevis represent 39% and 49% respectively, of the total.

Caribbean exports to the United States falling under the Generalized System of Preferences (GSP) were not taken into consideration since these represent a small percentage of the total. On average for 1989-2000, GSP exports represented for Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago, 6.8%, 2.9%, 10.4%, 6.2%, 6.9%, 4.2%, 2.5%, 1.5%, 0.4%, 1.6%, 5.9% and 1.0% of the total. Moreover in all cases, GSP preferences have steadily decreased from 1989 to 1999. On average GSP exports represented 5.1% of the total in 1989 and 1.4% in 2000.

Table 4
Trade intensity index
Puerto Rico and the Caribbean, 2001

	United States	United Kingdom
Puerto Rico	4.00	0.61
Anguilla	1.51	0.40
Antigua and Barbuda	0.91	1.37
Barbados	0.92	3.13
Belize	2.72	4.77
Dominica	0.21	4.09
Grenada	2.00	0.22
Guyana	1.17	1.95
Jamaica	1.68	2.50
St. Kitts and Nevis	3.65	4.62
St. Lucia	0.70	10.45
St. Vincent and the Grenadines	0.16	7.23
Trinidad and Tobago	2.02	0.27
Average	1.47	3.42
Standard Deviation	1.02	3.08

Source: ECLAC on the basis of official data.
Note: the trade intensity index is computed following the methodology of Anderson and Norheim (1993). See also, Grimwade (1996). The trade intensity index is equal to the ratio of the share of a country's exports going to its partner country divided by the partner's country share in world imports. The trade intensity ratio is used generally to measure the degree of regional integration of two trade partners. In this document the index is used in a broader perspective.

The computation of the trade intensity index deepens the understanding of the pattern of export orientation. A value greater than unity between the home country, say Antigua and Barbuda, and a trade partner, say the United Kingdom, indicates the existence of a bias to trade with that country. While Puerto Rico has a clear trade bias towards the United States the trade bias for most Caribbean countries is actually towards the United Kingdom. The most blatant exeception is that of Trinidad and Tobago. The propensity to trade with the United Kingdom is on average twice that of the United States. In the case of Puerto Rico, the propensity to trade with the United States is four times as great as the propensity to trade with the United Kingdom *(See Table 4 above).*

Finally it is to be noted that Puerto Rico and CARICOM Caribbean economies have important differences in the composition of their exports. Between 1985 and 1999, Caribbean countries have maintained or increased the share of natural resource based exports. In the case of the United States it has increased from 19% to 27%. In the case of Europe it has remained above 50%. Resource based manufacturing exports have declined (66% to 44% in the case of the United States and 25% to 23% in the case of Europe). Finally, manufacturing exports that are not based on natural resources have increased but due to the increasing importance of the apparel industry in the case of the United States, which is at the lower end of the value added chain.

In the case of Europe, the increase responds mainly to the external sales of ships and boats *(See Table 5 below).*

Table 5
United States and European market share and import structure for Caribbean countries 1985-1999

	1985	1990	1995	1999
The European market				
European import market share				
1. Natural resource exports	16.01	13.64	13.1	11.14
2. Natural resource based manufacturing exports	33.89	25.97	23.57	20.7
3. Manufacturing exports not based on natural resources	46.67	56.99	59.14	63.77
Low technology	20.26	23.39	24.49	24.65
Medium technology	26.41	33.60	34.65	39.12
4. Other exports	1.76	1.94	2.58	2.88
Caribbean export structure to Europe				
1. Natural resource exports	55.68	61.61	59.81	56.23
2. Natural resource based manufacturing exports	25.43	11.12	14.87	2305
3. Manufacturing exports not based on natural resources	13.02	25.82	24.9	19.15
Low technology	10.82	8.36	11.75	11.30
Medium technology	2.20	17.46	13.15	7.85
4. Other exports	1.49	1.47	0.32	1.03
The United States market				
United States import market share				
1. Natural resource exports	9.1	7.91	7.03	6.23
2. Natural resource based manufacturing exports	31.32	28.42	26.06	25.08
3. Manufacturing exports not based on natural resources	54.88	59.35	62.52	63.64
Low technology	13.23	15.61	15.91	16.62
Medium technology	41.65	43.74	46.61	47.06
4. Other exports	3.35	3.28	3.46	4.06
Caribbean export structure to the United States				
1. Natural resource exports	19.21	25.25	25.45	26.46
2. Natural resource based manufacturing exports	66.11	55.23	41.1	44.18
3. Manufacturing exports not based on natural resources	11.25	14.80	22.93	17.54
Low technology	4.77	12.90	20.47	14.95
Medium technology	6.48	1.91	2.46	2.59
4. Other exports	1.97	3.20	8.94	9.44

Source: On the basis of USTR data, MAGIC (2001), CAN (2001) and IMF financial statistics (Several issues).
Note: This classification of exports follows the methodology of Mortimore and Peres (2000). Exports based on natural resources include basic products. Natural resource based manufacturing exports include wood, metal, oil, cement, glass products. Manufacturing exports not based on natural resources of low technology include apparel and garments and other products such as jewellery. Manufacturing export not based on natural resources of medium technology include machinery and equipment, automobile parts, pharmaceutical products. Other products include non-classified products.

Figure 1
Distribution of Puerto Rico's exports by type of commodity, 2002 (Fiscal Year Basis)

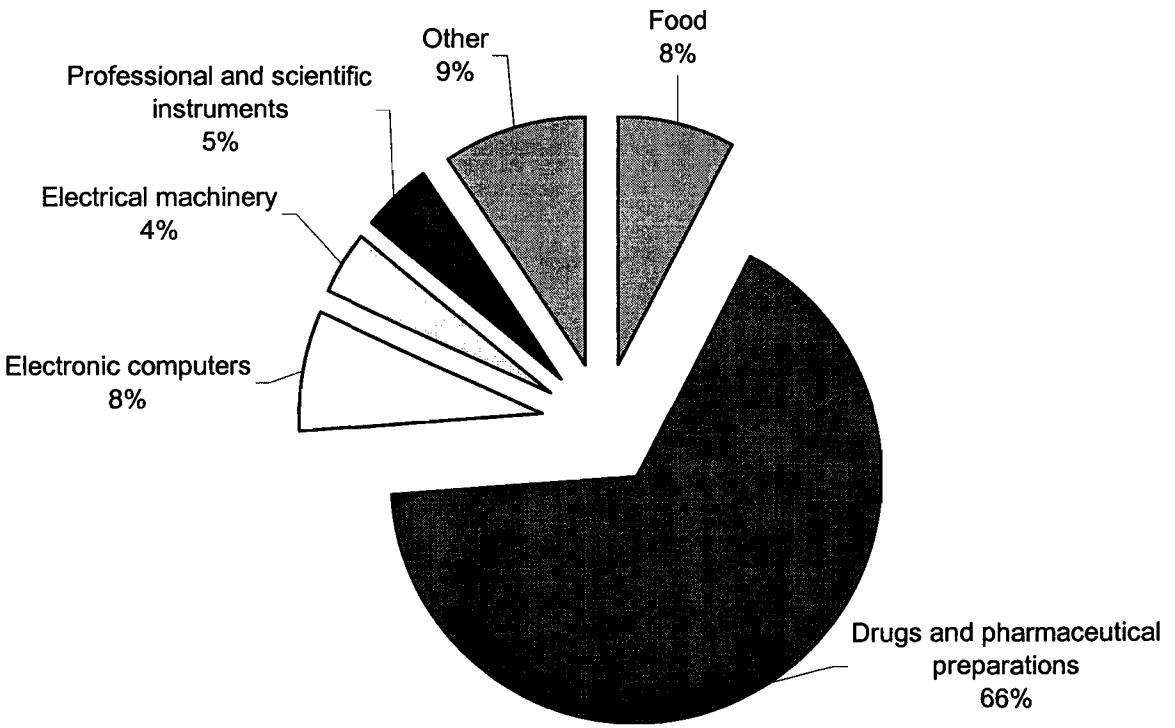
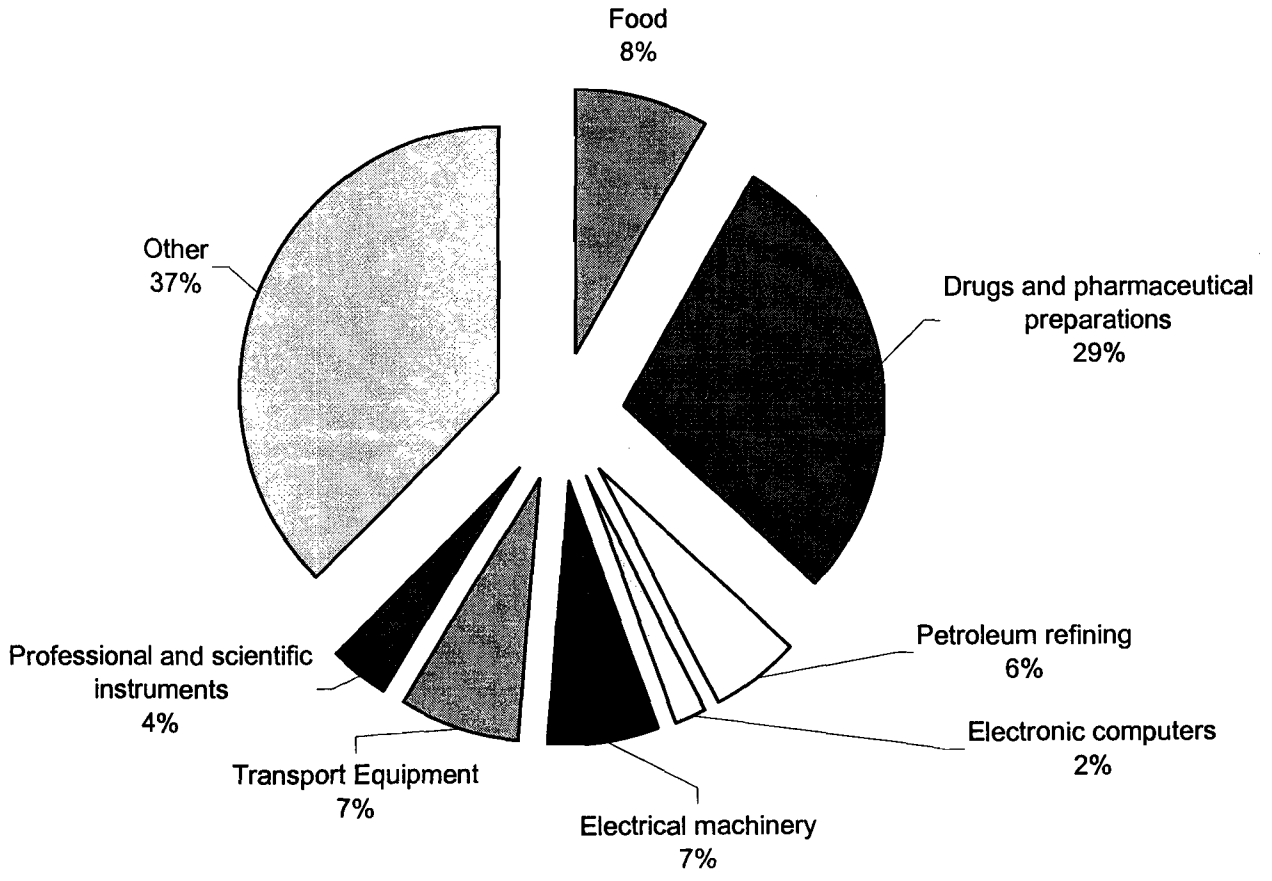


Figure 2
Distribution of Puerto Rico's imports by type of commodity, 2002 (Fiscal YearBasis)



On the contrary, Puerto Rico's exports are concentrated in pharmaceutical products, computer equipment and electrical machinery respresenting in 2002 70%, 9% and 2% of the total. Computer equipment and pharmaceutical products are considered manufactures with high skill and technology intensity while electrical machinery is viewed as a manufacture with medium skill and technology intensity. In the past two decades these products have combined a rapid growth rate (the average annual growth rate of computer exports was 12% while those of pharmaceutical products and machinery were 12% and 16%) with a high share of world exports (see Figure 1, above).

Excluding fuels which represent 5% of its total imports, Puerto Rico's import structure is also biased towards high and medium technology products. The main imports product are chemicals followed by computer and electronic products, transportation equipment and machinery (43%, 7% , 8% and 4%) (See Figure 2 above)..

Since the middle of the 1980s the trade relationship and interrelation between Puerto Rico and the Caribbean was centered in the Caribbean Basin and shaped by production sharing agreements. Dynamic exports towards the greater Caribbean region were mainly labour intensive and resource-based manufacturing with some medium skill and technological intensity (i.e., textiles and also electronical components).[11] These production sharing agreements, facilitated in turn by tax credits, provided a stimulus to firms to locate final production facilities in Puerto Rico while obtaining inputs and raw materials from other countries. The main beneficiaries in the Caribbean were the Dominican Republic, Jamaica, Trinidad and Tobago and Barbados.

As explained above tax credits were granted under the tax reform act of 1976. The tax reform act contained section 936 of the Internal Revenue Code. The 10-year phase out of section 936 tax break starting in 1996 jointly with other factors such as higher labor costs competition from low cost producing countries, the entry into force of the North American Free Trade Agreement (NAFTA), and the progressive reduction in United States tariffs and quotas has weakened the labor intensive manufacturing industry Puerto Rico and its ramifications with other Caribbean nations, notwithstanding, the adoption of other tax concession measures.

However, as is shown in the following section, commercial ties between Puerto Rico and Caribbean nations, in particular CARICOM Caribbean economies, have remained strong in manufactures with high and medium skill and technology intensity, and in fuel products. [12] A recent econometric estimate of a gravity model for Puerto Rico's exports based on an origin of movement criterion yielded a positive and significant coefficient for a variable capturing Caribbean Basin Initiative countries which could indicate that the trade network created during

[11] See, Castaner and Ruiz (1997.

[12] Trinidad and Tobago is a main provider of natural gas to Puerto Rico. Other trade linkages can include the recent acquisition of Caribban Bottlers of Trinidad & Tobago by Coca Cola Puerto Rico Bottlers.In the same way the Puerto Rican company Goya has strong production and commercial ties with the Dominican Republic. The raw materials and inputs for some of Goya's main export products to the CARICOM Caribbean economies are produced in the Dominican Republic and manufactured in Puerto Rico prior to their shipping to third countries.

the 1980s in the Caribbean is still an important factor to consider when analysing the export potential of Puerto Rico's economy.[13]

2. AN ANALYSIS OF TRADE FLOWS BETWEEN PUERTO RICO AND CARICOM COUNTRIES

2.1. An introduction to the available trade data

The Commonwealth of Puerto Rico and 30 states of the Union have comercial relations with CARICOM Caribbean countries. According to customs data it is the sixth district of entry into the United States in terms of its importance in its share of export and imports to and from the Caribbean. Its share of Caribbean imports has increased while that of its Caribbean exports has declined. Between 1993 and 2002, Puerto Rico's share of United States Caribbean imports increased from 4% to 7.4%. During the same period its share of exports declined from 5% to 2.5% *(See Table 6 below).*

Table 6
Ranking of imports and exports from and to the Caribbean by Customs District

1989		1993		1995		2002	
District	**Share**	**District**	**Share**	**District**	**Share**	**District**	**Share**
Imports							
Miami, FL	19	Miami,FL	26	Miami, FL	27	Houston, TX	22
New Orleans, LA	16	Houston, TX	17	Houston. TX	17	Miami, FL	15
Houston,TX	15	New Orleans, LA	13	New Orleans, LA	13	New Orleans, LA	13
San Juan, PR	14	New York, NY	10	Tampa, FL	12	Boston, MA	9
New York,NY	11	Tampa, FL	9	New York,NY	6	Tampa, FL	9
Tampa,FL	5	Charlotte, NC	5	San Juan, PR	5	San Juan, PR	7
Norfolk,VA	4	San Juan, PR	4	Charlotte, NC	5	New Yrok, NY	7
Boston, MA	3	Norfolk, VA	3	Norfolk, VA	4	Baltimore, MD	3
Exports							
Miami, FL	48	Miami, FL	52	Miami, FL	53	Miami, FL	47
New Orleans, LA	15	New Orleans, LA	12	New Orleans, LA	15	New Orleans, LA	16
Houston, TX	7	Houston, TX	9	Houston, TX	10	Houston, TX	10
San Juan, PR	7	San Juan, PR	5	Tampa, FL	4	Tampa, FL	4
New York, NY	5	Tampa, FL	4	San Juan, PR	3	New York, NY	4
Savannah,GA	2	Mobile, AL	2	Mobile, AL	2	San Juan, PR	2
Mobile, AL	2	Savannah, GA		New York, NY	2	Savannah, GA	2

[13] See, Stewart, 2003. The effect of CBI economies is captured by a dummy variable. The author also states that the significance of the variable could be a "spurious result" (p.12).

The customs data shown in Table 6 are not necessarily the most accurate way to record exports and imports as they only record data based on customs districts and port. These date may underestimate exports since exports that originate in Puerto Rico may actually clear customs in another state, say Miami, and be recorded as an export of that state. As an example at the aggregate level registered exports equal 5,363 million while exports based on an origin of movement criterion are equal to 9,896.[14] That is, the first method underestimates the value of exports by $4,533 million. At the individual country level the error becomes greater as the distance between Puerto Rico and a partner country increases. As an example, in the case of Great Britain, registered exports are equal to $731,000. On an origin of movement criterion, exports to the United Kingdom amount to $1.5 billion.

While origin of movement is generally taken to be the more accurate method to compute exports it is far from being a flawless method. As Coughlin and Pollard indicate (2001, p.26):

> "The MISER export data are regarded as the best available data source for state exports; however, these data have some well known weaknesses. One potential important problem is that the identified export state may not be the state of manufacture, but rather the state of a broker (or wholesaler or the state where a number of shipments were consolidated. "

In the case of Caribbean countries the differences between both methods are minor and in some cases negligible. Table 7 below shows the ratio of origin of movement to registered exports for CARICOM Caribbean countries and it is in general close to 1.

Table 7
Ratio of origin of movement to registered exports
Puerto Rican exports to the Caribbean 2001-2002

Anguilla	0.891164
Antigua and Barbuda	0.852352
Bahamas	1.198598
Barbados	1.081119
Belize	1.006262
Dominica	0.83762
Grenada	0.993379
Guyana	1.129516
Haiti	1.060233
Jamaica	1.179382
St. Kitts and Nevis	0.819209
St. Lucia	1.000042
St. Vincent and the Grenadines	0.994347

[14] Registered exports includes goods produced in Puerto Rico and exported from Puerto Rico and goods that were not produced in Puerto Rico and were exported from Puerto Rico. The computations could have also used direct exports which are goods produced in Puerto Rico and exported from Puerto Rico. The difference is equal to 4,829 million US$. See, Selected Statistics on Puerto Rico's External Trade 2002. Puerto Rico Planning Board (January 2003).

Trade flows are computed and are presented on an origin of movement basis when the required data is available.[15] Origin of movement data is provided by the Massachussets Institute of Social and Economic Research (MISER) using the SIC classification and up to six digits of the harmonized code system. Customs district data is provided by the United States Trade Representative using SIC and SITC trade data classification and also up to 10 digits of the harmonized code system.[16]

From the perspective of CARICOM, trade data is available for most of its country members from 1995 to 2001 in SITC format and up to eight digits of the harmonized code. This trade data is systemitized in the Caribbean trade data base developed by the Economic Commission for Latin America and the Caribbean (ECLAC) Subregional Headquarters for the Caribbean (Port-of-Spain, Trinidad and Tobago).

2.2. Aggregate trade flows between Puerto Rico and CARICOM Caribbean economies

CARICOM is not a significant market for Puerto Rico. On average, for 1993-2002 Puerto Rico's imports to CARICOM countries represented 2% of its total imports and 4% of its exports. In addition, since the beginning of the 1990s, Puerto Rico's trade with CARICOM economies has exhibited a definite downward trend. CARICOM's market share of Puerto Rican imports which stood at 7% between 1989 and 1992 experienced a marked decline to 1.7% in 1993 and has fluctuated since within a 1.3%-3% range.

In the same vein, Puerto Rican exports to CARICOM countries have shown a steady decline during the 1990s. The share of Puerto Rican exports to CARICOM was 11% in 1989, decreasing progressively to 7% in 1992, 5% in 1996, and 2% in 1998, staying at that level thereafter. The evolution of both ratios is shown in Figure 3 above.

A similar picture emerges when trade flows between Puerto Rico and CARICOM Caribbean economies are viewed for the latter's perspective. Puerto Rico's export share represents 2% of total exports *(see table below)* and in fact is below 0.5% for most countries. The notable exceptions are Anguilla and Trinidad and Tobago. On the import side Puerto Rican imports never reach with the exception of two years (1996 and 1998) 1% of the total. *(See Tables. 8 and 9 below).* Puerto Rican imports have some degree of significance only for Anguilla, Dominica, St. Kitts and Nevis (9%, 2% and 4% of the total, respectively).

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[15] The MISER data does not provide imports based on origin of movement by state. An alternative to computing exports on an origin of movement or port of final shipment is to use the exporter location criterion but is subject to the same caveats as those pointed for the origin of movement. Using exporter location, New York appears as one of the largest exporters of agricultural products (See, MISER State Export Data Explanation provided in the MISER website).

[16] In the trade data presented in the export and import tables below the document used customs data and when available MISER data. When denoted the data was taken from ECLAC's Caribbean Trade Data Base.

Table 8
Puerto Rico's export share by country
1995-2001

	1995	1996	1997	1998	1999	2000	2001
Anguilla	...	1.96	...	3.08	0.89	4.24	3.69
Antigua and Barbuda	...	...	...	...	0.40	...	...
Barbados	0.16	0.12	0.13	0.15	0.13	0.12	0.15
Belize	1.42	0.35	1.40	1.34	1.92	0.62	0.34
British Virgin Islands	...	...	...	...	...	...	...
Dominica	3.33	2.43	1.55	1.72	1.28	1.73	1.34
Grenada	0.18	0.24	0.10	0.04	0.07	0.06	0.03
Guyana	...	...	0.06	0.21	0.05	0.22	0.20
Jamaica	0.22	0.22	0.09	0.21	0.12	0.07	0.04
St. Lucia	1.53	0.05	0.02	0.03	0.02	0.00	0.18
St. Kitts and Nevis	...	...	...	0.21	0.14	0.16	0.01
St. Vincent and the Grenadines	0.00	0.07	0.00	0.01	0.00	0.03	0.00
Trinidad and Tobago	3.34	4.76	3.90	2.45	1.87	3.22	2.91
Total	2.13	2.75	2.22	1.48	1.24	2.18	2.01

Note: ... denotes not available.
Source: ECLAC. Caribbean Trade database.

Table 9
Puerto Rico's import share by country
1995-2001

	1995	1996	1997	1998	1999	2000	2001
Anguilla	...	10.65	...	6.43	6.39	7.45	8.88
Antigua and Barbuda	...	...	...	...	2.07	...	...
Barbados	1.40	3.30	2.29	1.23	1.12	0.81	1.19
Belize	0.08	0.28	0.24	0.29	0.66	0.26	0.23
British Virgin Islands	...	32.93	21.96	24.38	...	...	...
Dominica	3.48	3.44	3.18	2.52	2.64	2.63	2.16
Grenada	0.45	0.36	0.57	0.54	0.56	0.55	0.59
Guyana	...	...	0.18	0.07	0.21	0.22	0.37
Jamaica	0.25	0.36	0.25	0.41	0.54	0.66	0.59
St. Lucia	0.78	0.85	0.68	0.70	0.88	0.92	0.85
St. Kitts and Nevis	...	...	...	9.04	6.49	4.54	4.11
St. Vincent and the Grenadines	0.80	0.66	0.73	0.60	0.58	0.77	0.80
Trinidad and Tobago	0.63	0.57	0.34	0.40	0.39	0.36	0.38
Total	0.62	1.67	0.97	1.12	0.78	0.70	0.69

Note: ...= denotes not available.
Source: ECLAC. Caribbean Trade database.

Figure 3
Puerto Rico's share of US exports and imports to and from the Caribbean
1993 - 2002

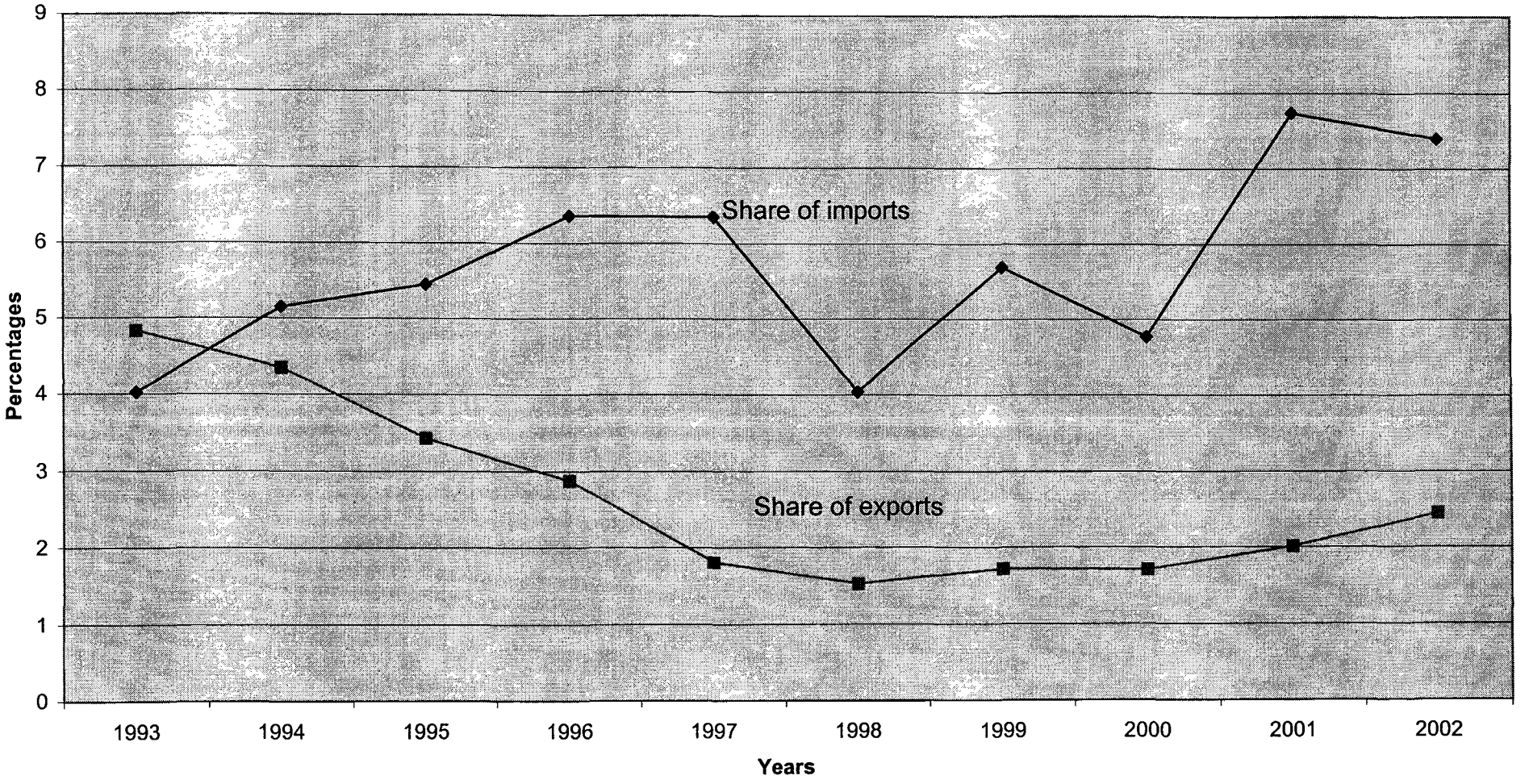
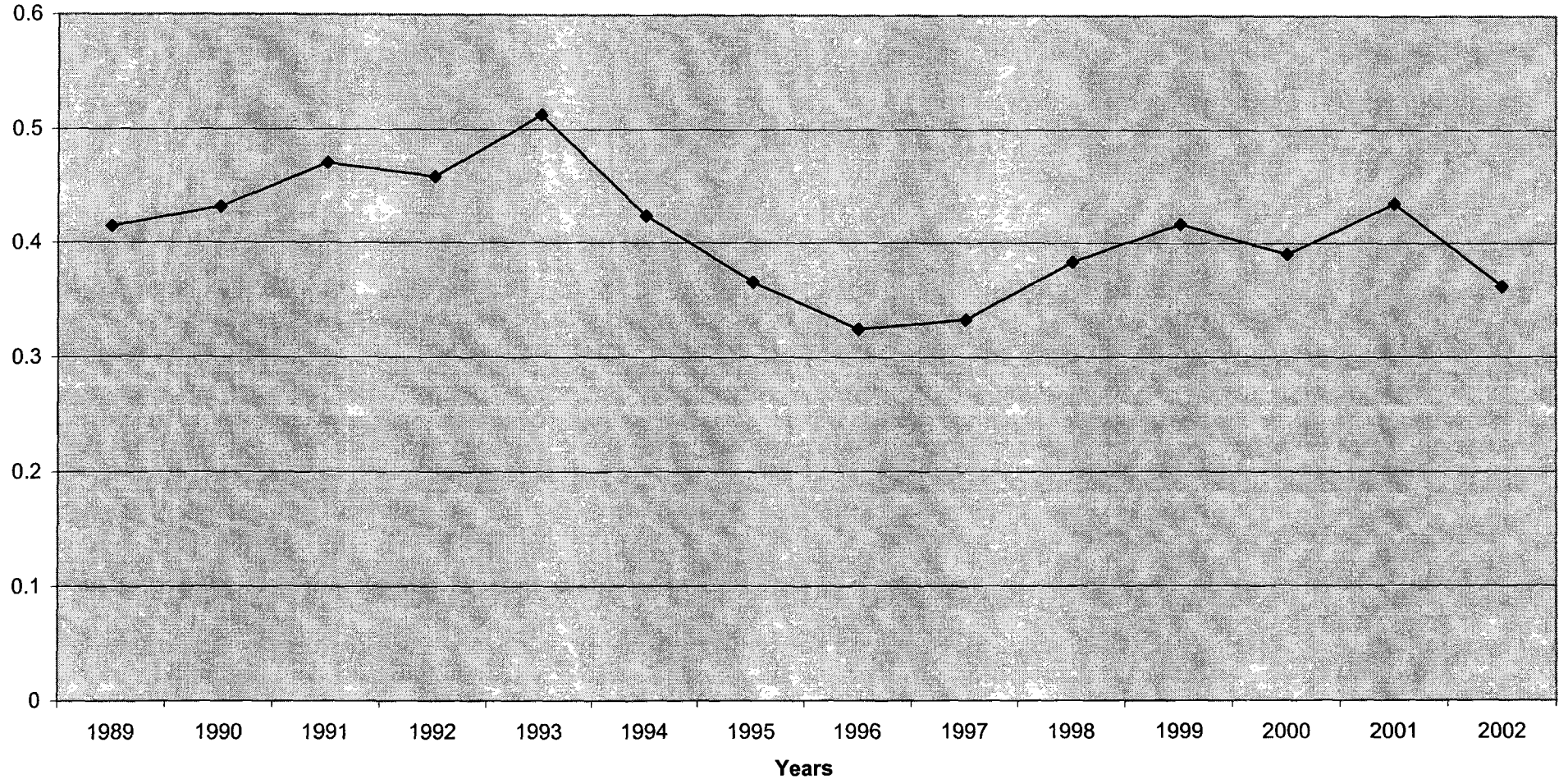


Figure 4
Coverage ratio for Puerto Rico's trade with Caribbean Countries
1989-2002



The evolution of the trade balance has been increasingly unfavorable to Puerto Rico. At the aggregate level the trade outturn which was in surplus for Puerto Rico in 1989 turned to a deficit by 1993. The deficit increased from. 129 to 187 million between 1989 and 2002. In the last decade imports and exports have grown by 8% and –2% on average. Reflecting this performance the trade coverage ratio has shown a steady decrease *(See Figure 4 above).* At the country level Puerto Rico has in fact a surplus with most Caribbean economies except for three of its major trading partners, St. Kitts and Nevis, Saint Vincent and the Grenadines and Trinidad and Tobago. Trinidad and Tobago is without doubt the greatest contributor to the trade deficit *(See Table 44 in the Annex)*

Table 10
Trade between Puerto Rico and CARICOM countries
Import and export market share for main trading partners
1989 - 2002

Imports					
1989		**2002**		**Average 1989-2002**	
Country	**Market share**	**Country**	**Market share**	**Country**	**Market share**
Bahamas	74	Trinidad and Tobago	82	Trinidad and Tobago	57
Haití	11	Bahamas	6	Bahamas	30
Trinidad and Tobago	11	St. Kitts and Nevis	6	St. Kitts and Nevis	6
St. Kitts and Nevis	3	St. Vincent and the Grenadines	4	Haití	2
Barbados	1	Jamaica	1	Jamaica	2
Total	99	Total	99	Total	97
Exports					
1989		**2002**		**Average 1989-2002**	
Country	**Market share**	**Country**	**Market share**	**Country**	**Market share**
Trin idad and Tobago	25	Bahamas	21	Trinidad and Tobago	23
Haiti	23	Trinidad and Tobago	16	Jamaica	15
Jamaica	18	Jamaica	16	Barbados	14
Barbados	7	Barbados	15	Haiti	10
St. Kitts and Nevis	6	British Virgin Islands	8	British Virgin Islands	8
Dominica	5	Haiti	7	Bahamas	8
Antigua and Barbuda	5	St. Lucia	5	St. Lucia	8
British Virgin Islands	4	St. Kitts and Nevis	3	St. Kitts and Nevis	5
Total		Total		Total	

At the beginning of the 1990s the main CARICOM importers into Puerto Rico were in order of importance: Bahamas (74%), Haití (11%), Trinidad and Tobago(11%), St. Kitts and Nevis (3%), Barbados and Jamaica (1% for each). At the end of the decade Trinidad and Tobago, Bahamas, St. Kitts and Nevis and Jamaica maintained their standing. Haiti's market share droped by almost 10 percentage points to reach 0.3% in 2002. Finally, Barbados' market share also declined but by a lower percentage (1% and 0.1% in 1989 and 2002 respectively). *(See Table 11 below).*

In terms of country destinations, Puerto Rican exports are more diversified than its imports.[17] The main CARICOM Caribbean export markets were, in 1989, Trinidad and Tobago (25%), Haiti (23%), Jamaica (18%), Barbados (7%) and St. Kitts and Nevis (6%). In 2002, the main export destimations included the Bahamas (21%), Trinidad and Tobago (16%), Jamaica (16%) and Barbados (15%). *(See Table 11 below).*

The composition of trade flows by commodity shows that three groups of products (corresponding to mineral fuels, organic chemicals, and electrical machinery) accounted for 91% and 76% of all Puerto Rican imports from the Caribbean in 1989 and 1995. Between 1995 and 2002, the import composition has become increasingly concentrated in mineral fuels. In 2002, it represented 83% of total imports followed by machinery and fish and crustaceans (6% and 4% respectively). *(See Table 12 below)*

Table 11
Puerto Rico
Main import products from CARICOM Caribbean economies 1989 - 1995
Ranked in descending order by market share sorted by the year 1995

	1989	1990	1991	1992	1993	1994	1995
Mineral fuels	8.81	9.18	7.97	6.30	46.53	46.10	45.41
Organic chemicals	73.01	75.40	81.20	87.06	18.62	4.27	23.28
Electrical machinery	8.79	6.44	3.07	0.38	3.73	7.41	7.73
Wood and articles of wood	0.00	0.00	0.02	0.00	0.05	1.51	3.02
Iron and steel	0.91	1.72	0.70	1.17	5.15	4.43	3.02
Paper and paper board, articles of paper	0.00	0.00	0.02	0.17	3.83	2.77	2.56
Fish, crustaceans and molluscs	0.52	0.22	0.37	0.31	2.50	2.06	2.48
Preparations of vegetables, fruits and nuts	0.02	0.00	0.04	0.02	0.10	0.12	1.27
Soap	0.20	0.18	0.27	0.53	2.34	2.00	1.21
Preparations of cereal	0.05	0.17	0.34	0.39	1.55	1.16	0.94
Essential oils and resinoids	0.00	0.00	0.01	0.16	1.04	0.66	0.92
Residues and waste from the food industries	0.97	0.21	0.15	0.27	3.05	2.76	0.90
Oils seeds and oleaginous fruits	0.00	0.00	0.13	0.00	0.00	0.91	0.82
Plastics and articles	0.18	0.14	0.42	0.02	0.23	0.59	0.56
Total	93.46	93.66	94.71	96.78	88.72	76.75	94.12

[17] The clearest and most evident first hand example is the data provided by Promoexports using the SIC classification.

Table 12
Puerto Rico
Main import products from CARICOM Caribbean economies 1996 – 2002
Ranked in descending order by market share sorted by the year 2002

	1996	1997	1998	1999	2000	2001	2002
Mineral fuels	61.40	56.62	57.03	76.25	78.58	81.76	82.69
Electrical machinery	6.47	7.96	12.46	8.23	8.08	5.21	6.21
Fish, crustaceans and molluscs	2.81	0.91	3.45	0.85	0.39	6.19	3.77
Preparations of meat of fish or of crustaceans	0.00	0.26	0.69	0.35	0.00	0.00	1.85
Paper and paperboard	2.59	3.21	4.74	2.91	2.22	0.93	0.92
Soap	0.93	1.17	1.95	1.22	1.18	0.81	0.68
Organic chemicals	13.63	19.61	1.00	2.50	3.38	1.00	0.49
Totals	87.83	89.74	81.32	92.31	93.83	95.9	96.61

The composition of Puerto Rican exports to the Caribbean is more diversified in terms of the number of products traded, but at the same time exhibits a similar trend as that of imports towards the concentration in terms of the weight of import products as a percentage of the total. The greater degree of diversification is illustrated by the fact that at the chapter level, 16 chapters account for more than 71% of all exports between 1989 and 1995. In 2002, a third of all exports are concentrated in chapter 27 and the degree of trade concentration increased as eight chapters account for more of 71 of Puerto Rican imports from the Caribbean.

Table 13
Main export products of Puerto Rico to the Caribbean
1989 -1995

	1989	1990	1991	1992	1993	1994	1995
Plastics and articles	5.75	7.23	9.29	10.34	7.69	7.05	8.96
Wood and articles of wood	3.11	1.44	1.63	1.22	2.62	6.14	7.54
Nuclear reactor, boilers, machinery	7.07	8.36	10.78	13.37	10.00	11.35	7.08
Electrical machinery	9.27	9.83	5.69	6.22	6.25	8.05	6.73
Mineral fuels	18.10	21.38	11.57	9.79	7.78	5.20	5.68
Products of the milling industry	0.68	0.57	0.90	0.74	0.91	3.19	4.94
Preparations of cereal	0.42	0.84	1.75	0.84	1.15	5.17	4.88
Miscellaneous edible preparations	2.51	1.09	2.67	2.48	2.98	4.89	4.32
Vehicles	2.84	2.33	4.20	2.30	4.04	3.33	4.01
Paper and paperboard	3.57	4.93	7.05	6.93	6.43	4.49	3.90
Optical, photographic	3.74	1.16	1.59	3.80	3.30	4.64	3.77
Essential oils and resinoids	0.97	1.25	1.41	1.40	1.16	1.67	3.56
Manufactured articles	1.52	3.39	1.96	2.72	1.27	1.01	3.09
Aluminium and articles	0.67	1.17	1.27	1.49	2.07	3.13	2.27
Meat and edible meat	1.21	2.40	2.29	3.19	1.54	1.26	1.73
Articles of iron and steel	1.62	0.98	1.76	1.07	2.02	1.70	1.62
Miscellaneous chemical products	1.12	1.45	2.60	1.83	2.20	1.65	1.59
Pharmaceutical products	1.40	1.22	1.62	2.01	1.62	2.02	1.54
Animal or vegetable fat	0.33	0.38	0.34	0.15	0.24	2.18	1.50
Textiles and apparel	2.94	3.34	3.29	0.95	0.45	0.34	1.41
Pulp of wood	0.33	0.56	0.55	0.46	0.84	1.42	1.37
Preparations of vegetables	0.81	0.80	0.75	0.76	0.48	0.53	1.10
Articles of stone	0.96	0.44	0.73	0.52	0.72	1.12	1.08
Beverages, spirits and vinegar	0.45	0.60	0.83	0.81	0.76	0.67	1.04
Total	71.39	77.14	76.52	75.39	68.52	82.2	84.71

Table 14
Main Export products to the Caribbean

	1996	1997	1998	1999	2000	2001	2002
Mineral fuels	6.92	10.61	4.41	6.59	12.33	10.03	23.24
Pharmaceutical products	1.35	2.28	5.78	9.47	8.11	11.90	15.71
Plastics and articles	5.13	6.55	10.35	10.46	10.75	10.38	7.25
Electrical machinery and equipment	4.43	4.23	5.61	6.33	10.31	7.70	7.25
Optical photographic	2.47	3.67	1.96	1.35	3.07	3.21	5.16
Essential oils and resinoids	8.95	8.98	6.26	6.18	6.37	6.62	5.16
Miscellaneous edible preparations	3.42	3.99	6.14	8.31	6.64	7.98	4.76
Nuclear reactors, boilers and machinery	7.68	6.37	10.46	5.16	5.44	5.96	3.86
Ores, slag and ash	0.11	0.00	0.00	0.00	0.00	0.00	2.77
Preparations of cereal	2.43	3.64	0.82	1.52	1.69	2.79	2.03
Miscellaneous chemical products	11.03	5.61	2.93	2.35	1.85	1.98	1.96
Aluminium and articles	1.24	1.22	2.01	3.89	2.91	3.49	1.79
Tools, implements	0.13	0.28	0.02	0.55	0.85	1.60	1.56
Vehicles	5.20	4.19	4.07	3.93	4.38	2.68	1.33
Sugars and sugar confectionery	2.20	2.39	1.41	2.08	1.97	1.26	1.29
Salt, sulphur	2.01	2.37	2.27	0.88	0.01	0.03	1.27
Paper and paperboard	3.66	1.83	1.82	2.35	2.02	2.02	1.23
Lac, gums, resins	3.10	1.79	0.98	0.98	0.77	1.65	1.16
Total	71.46	70	67.3	72.38	79.47	81.28	88.78

The evolution towards concentration and in fact specialization of the trade flows between Puerto Rico and the Caribbean is also prevalent at the most disaggregated level available. Using disagggregated data at the 10-digit level of the harmonized code, a coefficient of trade concentration was computed. The results are shown in Table 15 below. The trade concentration index shows a clear difference in the degree of concentration in imports and exports and an increase in the concentration of imports from 1993 to 2002.

Table 15
Trade concentration indices
1989 - 2002

	Imports	Exports
1989	0.54	0.01
1993	0.15	0.02
1995	0.20	0.01
1998	0.25	0.02
2002	0.29	0.04

Note: Trade concentration was measured by computing a modified Herfindahl-Hirschmann Index for products. The computations were carried out at the ten digit level of the harmonised system code. The index is defined as $(\Sigma(x_{ij}/x_{ti})^2\text{-}1/n)/(1\text{-}1/n)$, where x_{ij}/x_{ti} equals the export share of commodity i to country (or subregional grouping) j and n is the number of products exported. A lower value of index implies a higher degree of diversification.

2.3 An analysis of trade flows by major CARICOM trade partner

2.3.1 Puerto Rico imports from CARICOM Caribbean economies

As mentioned in section 2.2 above the import pattern of Puerto Rico from CARICOM countries is highly concentrated at the country and the product level. As shown in Table 10, 94% of all imports originate in Trinidad and Tobago, the Bahamas and St. Kitts and Nevis.

Trinidad and Tobago, whose market share in 1989 was 11% of Puerto Rican imports from Caribbean countries, became the main import partner from this region in 1993. Between 1992 to 1993, Trinidad and Tobago's market share among Caribbean countries increased from 9% to 82%. The Bahamas progressively lost market share during the past decade (74% and 6% of Puerto Rican imports from CARICOM economies between 1989 and 2002). For its part St. Kitts and Nevis steadily increased its share, albeit at a moderate pace.

Puerto Rico's imports from all three countries are currently concentrated in one or two commodities both at the most aggregated and disaggregated level, revealing a highly specialized trade relationship. In the case of Trinidad and Tobago, as expected, fuel and oil products account for 94% of Puerto Rico's imports from this country. At the most disaggregated level (the 10-digit level using the Harmonized System Code) the product No. 6-type fuel oil under 25 degrees represents 56% of Puerto Rican imports. The remainder is mainly accounted by propane liquid (32% of the total). *(See Table 16 below).*

A similar pattern is followed by the Bahamas and St. Kitts and Nevis. The Bahamas specializes in the selling of pharmaceutical products (92% of all imports) and St. Kitts and Nevis exports electrical switches (95% of all imports). In the case of St. Kitts and Nevis, electrical switches refer basically to one product (switches with a limit of 1 000 volts, product number 8536509055) representing in value terms 97% of the total in 2002. *(See Tables 17 and 18 below).*

An examination of historical data revals however, that the composition of imports was more diversified in the past decades. During the 1990s, Trinidad and Tobago exported not only oil and fuel and related products, but also other manufactured products such as paper products and also food products. Paper products represented 6% of the total in 1993 and 1998. Iron and steel products accounted for 8%, 8% and 5% of the total 1989, 1993 and 1998.

In the same vein St. Kitts and Nevis was also a provider of apparel and textile products. These accounted for close to half of St. Kitts and Nevis' exports to Puerto Rico in 1993 and in 1994 following the entry into force of NAFTA the import share dropped to 0.6%. This may have responded to a process of trade diversion as actual tariff rates remained at 7% for St. Kitts and Nevis but dropped from 5.3% to 2.8% and 0.3% for Mexican imported products between 1993 and 1999.

Table: 16
Main Puerto Rican import shares from Trinidad and Tobago
Selected years

Product	1989	1993	1998	2002
Mineral fuels	76.27	73.57	73.45	93.77
Iron and steel	7.62	8.15	4.82	0.41
Paper and paperboard	0.00	5.83	5.89	0.98
Preparations of cereal	0.44	2.41	0.61	0.24
Oil seeds	0.00	0.00	0.00	0.00
Organic chemicals	1.13	1.75	1.27	0.60
Plastics and articles	0.06	0.36	3.02	0.05
Residues and wastes from the food industry	7.46	4.38	0.00	0.00
Fish, crustaceans and molluscs	3.95	0.20	2.17	1.02
Essential oils and resinoids	0.00	0.10	0.08	0.17
Inorganic chemicals	0.49	0.42	0.27	0.05
Sugars and sugar confectionery	0.00	0.00	4.65	0.04
Soap	0.00	1.60	1.02	0.65

Table: 17
Main Puerto Rican import shares from St. Kitts and Nevis
Selected years

Product	1989	1993	1998	2002
Electrical machinery	53.5	50.9	98.8	95.2
Special classification provisions	4.9	2.4	1.2	1.4
Knitted or crocheted fabrics	15.0	38.1	0.0	0.0
Articles of apparel and clothing	26.5	7.3	0.0	0.0

Table 18
Main Puerto Rican import shares from The Bahamas
Selected years

Product	1989	1993	1998	2002
Mineral fuels	98.7	94.7	12.1	92.2
Salt, sulphur	0.0	0.0	0.0	5.5

The type of products imported by Puerto Rico are not necessarily value-added creating for the supplier or the importing country. In the case of the exporter, goods such as electrical

switches are produced in free trade zones and add little value to the GDP of the country that manufactures them.[18]

In the case of the importer, the products that enter into the production circuit through Puerto Rico are not necessarily bound to be consumed or used as an input in that geographical location. In fact some of these products are re-exported to other parts of the United States or to other foreign countries. Using data provided by the United States Department of Commerce and the Junta de Planificacion in Puerto Rico, and assuming that in the case of electrical switches, these are re-exported during the same year they are imported from St. Kitts and Nevis, net imports from St. Kitts and Nevis of electrical switches was equal to US$15 million representing 96% of global imports of that product. 84% of that total was re-exported to the United States. As this example illustrates, some imports are in fact transhipment exports that have a low production and income impact on the economy.

Tables 19 to 21 below show a sample of selected indicators used to gauge the performance of CARICOM products in Puerto Rican imports. These indicators include the market share, the revealed comparative advantage index, relative unit values, volume shares, a market dynamics indicator, competitiveness movements through time, and standardised structural and share effects.

The market share represents the share of a particular product at any desired level of disaggregation. For didactic purposes the market share is presented at the most aggregated level. Computations were also undertaken at the highest disaggregation level (10-digit level) and are referred to in the text when necessary. The revealed comparative advantage index reflects the number of times a product is exchanged bilaterally relative to the number of times it is traded multilaterally. Relative unit values refer to the ratio of unit values for a specific product for a given partner relative to all other trading partners. Relative unit values reflect price competitiveness. The volume share is akin to the relative unit value concept but focuses on quantity rather than price.

Market dynamics are proxied by whether a product increases or decreases its share in a given market. In the former case, the demand for the product in the said market is dynamic. In the latter case it is referred to as stagnant demand for the product. Competitiveness movements refer to the change over time of a product in a market with respect to the market share for that product and the share of the product in that market. An increasing country share (say the Caribbean) in a product whose relative importance in the imports of the reference country or trade partner (say Puerto Rico) is growing is referred to as a Rising Star (SR). An increasing (declining) country share (say the Caribbean) in a product whose relative importance in the imports of the reference country or trade partner (say Puerto Rico) is growing (is shrinking) is referred to as a Rising Star (RS) (Retreat (R)). A declining country share (say the Caribbean) in a dynamic (stagnant) product (a product that is increasing (decreasing) its importance in the imports of Puerto Rico) is referred to as a Missed Opportunity (MO) (Declining Star (DS)).

[18] Preliminary calculations were undertaken for the Dominican Republic and Jamaica on the value added by free trade zone products using input-output matrices for both countries. The results showed that free trade zones activities yielded a value added of 2.5% at the most.

Finally standardised structural and share effects are derived from the Constant Shares Analysis Methodology which decomposes an increase in imports in a global demand effect, a structural effect and a share effect. The structural and share effects are standardised by dividing both by the global demand effect.

Table 19
Trinidad and Tobago
Selected Trade Indicators
1989 – 2003

	Fish	Mineral fuels	Iron and steel	Paper and paperboard
Market Share				
1989	0.5	1.6	2.4	0.0
1993	0.05	3.3	5.3	3.6
2002	3.9	16.7	0.9	2.4
Revealed comparative advantage				
1989	0.6	2.1	3.1	0.0
1993	0.0	2.8	4.4	3.0
2002	2.3	9.8	0.5	1.4
Relative unit values	0.95	1.03 1.02	1.09	1.05
Value Share	3.1	33 86	37	69
Volume share	3.2	.34 87	34	66
Market dynamics				
1989	6.3	36.0	2.5	1.74
1993	4.5	26.6	1.8	1.96
2002	0.5	9.6	0.77	0.50
Competitiveness movements in time				
1989 – 2002	R	DS	MO	RS
1993 – 2002	DS	DS	R	O
Standarized structural demand effect				
1989 – 2002	8.93	1.27	3.34	...
1993 – 2002	7.19	0.60	2.45	0.63
Standarized share effect				
1989 – 2002	5.86	0.36	-0.01	...
1993 – 2002	0.10	0.37	-0.09	-0.04

Note: Relative unit values, volume shares and value shares were computed with the exception of the products included in mineral fuels for the main digit product of the corresponding chapter for 2002. Fish refers to the product Albacores/long-finned tunas ex fillet frozen. In the case of mineral fuels, two ten digit products were considered (2710190530, No6 Type fuel oil under 25 degrees and 2711110000, Natural Gas Liquified). For iron and steel, the poduct included was bar/rod hot rolled (721393090). Finally in the case of paper and paperboards, the good included in the analysis was product 481840200 (sanitary napkins).

Table 20
St. Kitts and Nevis
Selected Trade Indicators

	Electrical machinery	Special provisions	Knitted fabrics	Apparel and textiles
Market Share				
1989	2.12	1.21	12.2	10.5
1993	0.82	0.27	3.75	1.20
2002	4.64	0.23	0.0	0.0
Revealed comparative advantage				
1989	10.7	6.1	61.9	5.3
1993	6.5	2.0	28.0	9.0
2002	34.7	1.7	0.0	0.0
Relative unit values	0.98	....	....	....
Volume share	98	....	....	....
Value share	99	....	....	....
Market dynamics				
1989	5.0	0.8	0.2	0.5
1993	7.9	1.2	1.4	0.8
2002	2.7	0.8	1.2	0.8
Competitiveness movements in time				
1989 – 2002	MO	...	...	...
1993 – 2002	DS	...	...	...
Standarized structural demand effect				
1989 – 2002	0.14	...	...	...
1993 – 2002	0.33	...	...	...
Standarized share effect				
1989 – 2002	0.011			
1993 – 2002	0.02	...	...	...
		...	...	...

Note: Relative unit values, volume shares and value shares were computed only for the main ten digit product for electrical machinery for 2002 (8536509055, switches with a limit of 1000 volts).

As shown in the table above Trinidad and Tobago and St. Kitts and Nevis increased their market share in their main export products. That is the change in the export composition and the market share have moved in the same direction. Trinidad and Tobago increased its market share in fuel and oil products from 2% to 17% between 1989 and 2002. St. Kitts and Nevis also saw a positive change in the market share for electrical equipment from 2% to 5%.

Partly as a consequence of their increase in market share, Trinidad and Tobago and St. Kitts and Nevis have a significant revealed comparative advantage in their major export products

to Puerto Rico. In 2002, Puerto Rico traded fuel and oil products with Trinidad, 10 times more, than with other trading partners on average. Similarly, it traded electrical machinery, 35 times more with St Kitts and Nevis than with other countries.

However, these gains have ocurred in markets for which the demand for these products has remained stagnant. Between 1989 and 2002, the share of oil and fuel products in relation to all other commosities imported by Puerto Rico has declined from 36% to 10%. For the same period in the case of St. Kitts and Nevis, the market share for electrical switched also decreased from 5% to 3%.

Table 21
The Bahamas
Selected Trade Indicators

	Mineral fuels	**Organic chemicals**
Market Share		
1989	0.16	45.3
1993	0.0	3.2
2002	0.0	0.2
Revealed comparative advantage		
1989	0.03	8.4
1993	0.0	9.2
2002	0.0	1.7
Relative unit values	1.0 1.0	0.98
Volume share	6.0 9.0	100
Value share	6.4 11.0	98
Market dynamics		
1989	36	11.7
1993	27	10.4
2002	9.6	55.3
Competitiveness movements in time		
1989 – 2002	R	R
1993 – 2002	R	MO
Standarized structural demand effect		
1989 – 2002	0.43	-1.47
1993 – 2002	...	-1.79
Standarized share effect		
1989 – 2002	0.005	-1.08
1993 – 2002	...	-0.09

Note: The relative unit values, the volume and value shares were computed for mineral fuel products 271011158 (unleaded gasoline), 2710190550 (fuel oils under 25 degrees).

2.3.2. Puerto Rican exports to CARICOM Caribbean economies

As mentioned earlier and similarly to the classification by product and country of destination, the degree of diversification of exports is greater than that of imports. At the 10-digit level Puerto Rico registers more than 450 categories of import products and more than 2000 export categories. When analysed at the country level, the export composition veiwed from different perspectives does not display an identifiable common denominator. As a result the following analysis is undertaken on a country-by-country basis.

The bulk of exports of Puerto Rico to Barbados is found in chapters 27, 33, 39, 38, 13, 17, 90 and 95 accounting for 76% of the subtotal. Between 1989 and 2002, there has been a marked change in the composition of Puerto Rican exports. Products such as 48 and 72, which accounted for almost half of the total in 1989, progressively lost importance to reach insignificant levels by the end of the decade. Other products, such as 27 and 33, have increased their share of exports to Barbados by more than 10 percentage points since the beginning of the decade.

This change does not seem to respond to a rationale underlying Puerto Rico's market dynamics since most exports products to Barbados in 1989 and 2002 have lost market share in Puerto Rico's total export products to foreign countries. In 1989, products 48 and 72 represented 1.4% and 0.5% of all Puerto Rican exports to foreign countries. In 2002, both shares had descended to 0.5% and 0.05%. At the same time products 27, 33, 39, and 38 have also lost importance in Puerto Rico's total exports. As an example product 27 which accounted for over 14% of Puerto Rico's total exports in 1989 decreased its share to 2% in 2002 *(See Table 22 below).*

Table 22
Main Puerto Rican export products to Barbados by export shares
Selected years - Ranked according to 2002

Product	1989	1993	1998	2002
Mineral fuels	5.12	4.0	4.50	16.82
Essential oils	2.74	5.2	21.54	14.36
Plastics and articles	6.63	4.6	11.24	9.94
Miscellaneous chemical products	0.13	2.06	8.61	8.90
Lac, gums, resins	0.00	1.85	6.84	8.64
Sugars and sugar confectionery	0.00	1.44	6.47	8.29
Optical, photographic	1.62	3.22	2.40	5.11
Electrical machinery	4.88	14.72	3.18	3.81
Organic chemicals	0.46	0.02	1.26	3.34
Nuclear reactors and boilers	5.50	14.19	1.87	3.21
Preparations of cereals	1.58	1.15	2.98	3.07
Pharmaceutical products	2.25	2.01	3.72	2.89
Miscellaneous edible preparations	4.88	2.61	2.11	1.75
Total	36	57	76	90

This pattern is reproduced at the most disaggregated level available. As Table 23 below shows two products belonging to chapters 33 and 27 (mixture of odiferous substances and heavy fuel oils) account for more than 20% of the total. The disagregation procedure also highlights the importance of food products and in particular vegetable saps and sugar and sugar syrups which have maintained their standing from 1996 to 2002.

Table 23
Puerto Rican exports to Barbados (export shares) 1989 - 2002

	1996	1997	1998	1999	2000	2001	2002
Mixture of odoriferous substance & mixture (include alcoholic solution) w/ basis of one/more of these substance, of a kind used food/drink industries	23.57	29.06	17.31	18.59	14.64	12.34	11.31
Heavy fuel oils under 25 degrees api having saybolt un vis at 37.8 d cent of more than 125 seconds	0.00	0.00	0.00	0.00	0.00	0.00	11.22
Vegetable saps and extracts, nesoi	12.17	8.44	7.83	7.73	6.39	8.79	7.77
Sugars and sugar syrups, including chemically pure maltose in solid form, artificial honey, whether or not mixed with natural honey, caramel, nesoi	7.87	9.77	6.52	7.73	5.37	3.43	7.42
Carboxs, bottles, flasks & similar articles of plast	0.54	3.85	13.86	9.43	8.53	7.25	7.14
Chemical products and preparations of the chemical or allied industries, not elsewhere specified or included	0.00	0.00	0.00	0.00	0.00	0.00	6.38
Automotive, diesel or marine engine (except turbine) lubricating oils	0.00	0.00	0.00	0.00	0.00	0.00	3.42
Other instruments and appliances used in medical, surgical, dental or veterinary sciences, nesoi	0.11	0.13	0.28	0.27	0.25	1.42	3.28
Medicaments primarily affecting the eyes, ears or respiratory system	0.81	0.57	1.22	1.93	0.59	1.68	2.96
Medicaments put up in measured doses or in forms or packings for retail sale, nesoi	0.00	0.00	0.00	0.00	0.00	0.00	2.39
Other medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of two or more constituents which have been mixed together etc	0.00	0.00	0.27	0.32	0.70	0.83	1.80
Corn chips and similar crisp savory snack foods	0.00	0.00	0.00	0.00	0.84	1.69	1.73
Citric acid	0.00	0.00	0.37	0.73	0.53	2.61	1.61
Primary cells and primary batteries, manganese dioxide	0.00	0.05	0.85	1.16	1.88	1.32	1.38
Cleaning preparations	0.45	2.01	1.89	3.23	2.20	1.38	1.33
Poultry feeds, prepared	0.00	0.28	0.00	0.30	3.08	2.03	1.12
Buckets & pails,of plastic	1.07	0.28	0.45	1.53	1.73	1.06	1.07
Parts for razors exc blades	0.00	0.00	0.00	0.37	0.57	0.82	1.05
Shipments valued $20,000 and under, not identified by kind	0.00	0.00	0.43	2.07	4.73	0.89	1.01
Parts and accessories for automatic data processing machines and units	0.04	0.05	0.18	0.10	0.00	0.36	1.00

Table 24
Puerto Rican exports to Trinidad and Tobago (export shares)
(Percentage of the total)
1989 – 2002

	1989	1993	1998	2002
Pharmaceutical products	2.01	2.99	5.2	22.24
Plastics and articles Rubber and articles	10.82	16.93	24.09	18.12
Electrical machinery and equipment	6.33	4.06	5.7	11.34
Aluminium and articles	1.75	5.43	8.59	10.85
Essential oils and resinoids	0.89	1.08	3.65	5.02
Machinery and mechanical appliances	11.33	13.76	23.34	4.93
Optical, photographic	11.47	1.59	1.22	3.68
Residues and waste from the food industries	1.58	2.19	5.2	3.17
Miscellaneous edible preparations	2.34	2.44	0.05	2.12
Paper and paperboard	5.62	5.33	0.33	1.79
Total	67.04	76.02	77.37	83.26

Table 25
Puerto Rican exports to Trinidad and Tobago (export shares)
(Percentage of the total)
1996 – 2002

	1996	1997	1998	1999	2000	2001	2002
Carbox, bottles, flasks	3.95	12.11	20.56	16.22	20.01	15.83	16.80
Aluminium cans	2.02	5.54	5.45	13.02	7.27	7.11	7.00
Primary cells and batteries	0.00	2.22	5.06	5.14	6.02	4.26	6.51
Other medicaments	0.00	0.00	0.06	0.35	0.88	4.57	4.96
Medicaments affecting eyes	0.04	0.00	2.00	1.78	2.73	2.36	4.08
3004909190.00	0.00	0.00	0.00	0.00	0.00	0.00	3.22
Poultry feeds prepared	4.06	7.06	5.21	4.46	4.70	4.54	3.17
Parts for razor blades	0.11	0.00	0.00	1.66	1.98	2.82	2.93
Personal deodorants	0.00	0.00	0.00	1.43	1.88	3.04	2.70
Instruments and appliances for general surgery	0.15	1.52	0.34	0.23	0.05	0.93	2.25
Medicaments	0.00	0.00	0.32	0.59	0.79	1.27	1.77
3004909115.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46
Mult. Vitamins combined with minerals	0.06	0.00	0.02	0.71	1.03	1.20	1.42
Other articles of iron and steel	0.00	0.00	0.00	0.00	0.02	0.23	1.42
Radio phones	0.00	0.00	0.00	0.00	0.00	0.00	1.31
Other aluminium containers	0.00	0.39	0.21	0.92	0.91	1.39	1.31

In the case of Trinidad and Tobago, Puerto Rico exports mainly pharmaceutical products, plastic articles, electrical machinery and equipment, aluminium articles and to a lesser extent, essential oil and resinoids and machinery and mechanical appliances. *(See Table 24 above)*

A closer inspection at the 10-digit level shows that aluminium and plastic (rubber) articles followed by electrical machinery and equipment and then pharmaceutical products are the most important export products in 2002. *(See Table 25 above)*

The evolution of Puerto Rican exports to the Bahamas is characterized by three features. The first is the lack of continuity in the export specialization pattern and the great changes in the contribution of these products to total external sales. This is shown in Table 26 which includes Puerto Rican exports to the Bahamas between 1989 and 2002. In 1989, natural or cultured pearl was the main export product representing 13% of the total. In 1991, beverages was the most important export product (31% of the total). The following year the lead was taken by pharmaceutical products (43% of the total). In 1995, machinery and mechanical appliances became the number one products (20% of the total). From 2000 to 2002, mineral fuels and oils have represented more than half of the total value exported by Puerto Rico at the most aggregated and disaggregated level available

Table 26
Puerto Rican exports to the Bahamas (export shares)
(Percentage of the total)
1989 – 1996

	1989	1990	1991	1992	1993	1994	1995
Nuclear reactors, boilers	0.80	0.01	0.00	48.05	0.00	6.54	20.19
Preparations of cereals	0.00	0.00	0.00	0.00	2.12	15.47	16.86
Miscellaneous edible preparations	0.00	0.00	0.00	0.00	0.00	0.00	16.25
Essential oils and resinoids	0.00	0.73	0.00	0.00	8.78	30.00	15.45
Pharmaceutical products	0.00	0.21	0.24	43.01	16.57	11.46	9.08
Beverages, spirits and vinegar	0.00	1.36	30.68	0.00	0.00	0.00	6.16
Optical, photographic	0.00	0.00	0.00	0.00	0.00	0.00	5.74
Paper and paperboard	0.00	0.00	0.00	0.00	0.00	0.00	2.75
Apparel and textiles	0.00	0.00	0.00	8.93	0.00	0.00	2.44
Plastics and articles	2.75	0.00	0.00	0.00	0.00	9.06	1.59
Natural or cultured pearls	13.41	0.00	0.00	0.00	0.00	0.00	1.38

Table 27
Puerto Rican exports to the Bahamas (export shares)
(Percentage of the total)
1996 – 2002

	1996	1997	1998	1999	2000	2001	2002
Mineral fuels	0.00	0.00	1.29	0.00	65.76	34.25	67.34
Ores, slag and ash	0.00	0.00	0.00	0.00	0.00	0.00	13.00
Pharmaceutical products	4.88	5.19	11.20	10.11	12.47	28.49	11.76
Miscellaneous edible preparations	0.00	0.00	2.02	7.92	7.06	2.67	1.70
Preparations of cereals	2.53	3.58	0.05	1.05	1.05	7.65	1.47
Essential oils and resinoids	6.82	1.61	3.91	2.17	1.27	6.92	1.19
Electrical machinery	1.24	3.52	0.00	1.31	0.00	5.23	1.14

Table 28
Puerto Rican exports to the Bahamas (export shares at the 10-digit level)
(Percentage of the total)
1996 – 2002

	1996	1997	1998	1999	2000	2001	2002
Heavy fuel oils	0.00	0.00	0.00	0.00	0.00	0.00	59.65
Ashes and residues of leaded gasoline	0.00	0.00	0.00	0.00	0.00	0.00	13.00
Medicaments	0.00	0.00	0.00	0.00	0.00	0.00	6.81
Automotive diesel or marine engine	0.00	0.00	0.00	0.00	0.00	0.00	5.66
Preparations for the manufacture of beverages	0.00	0.00	2.02	7.03	6.59	2.08	1.60
Other medicaments	0.00	0.12	0.00	0.35	1.17	6.11	1.54
Medicaments containing antigens	0.00	0.00	3.42	3.17	1.87	4.08	1.27
Lubricating oils	0.00	0.00	0.00	0.00	0.00	0.00	1.23
Primary cells and batteries	0.00	0.00	0.00	0.00	0.00	4.99	1.07

Contrary to the cases of Trinidad and Tobago and the Bahamas, Puerto Rico's exports to Jamaica have, over time, become the most diversified to any Caribbean country. In 1989, chapter 27, fuel and oil products, represented 75% of all exports to Jamaica. In 2002, pharmaceutical products were the most important product, but their share stood at 29% of the total. At the 10-digit level, in 2002, no product share exceeded 8%. This result simply highlights that Jamaica, relative to Barbados or the Bahamas, has a different economic structure and is relatively highly diversified (*see Tables 29 and 30 below* and the sectoral composition of output of Jamaica presented in Table 33, Section 3).

Table 29
Puerto Rican exports to Jamaica (export shares)
(Percentage of the total)
1996 – 2002

	1996	1997	1998	1999	2000	2001	2002
Pharmaceutical products	3.61	11.37	15.21	17.93	16.70	25.74	29.10
Mineral fuels	36.63	8.48	4.90	2.51	10.42	9.84	9.59
Essential oils	0.65	1.83	2.62	3.96	10.74	7.68	8.52
Plastics and articles	6.17	7.42	11.21	14.94	18.59	12.57	8.43
Miscellaneous edible preparations	0.00	8.21	15.89	18.46	12.52	10.71	7.97
Salt and sulfur	0.00	0.00	0.00	0.00	0.00	0.00	7.80
Electrical machinery	11.99	11.16	5.12	5.46	4.33	6.73	5.25
Tanning or dyeing extracts	4.43	4.51	2.86	3.06	3.77	2.59	3.31
Tools implements cutlery	0.00	1.01	0.00	0.41	1.41	2.20	3.24
Nuclear reactors	12.49	1.18	10.08	1.03	0.64	0.71	3.05
Special provisions	0.06	0.50	2.39	3.68	1.56	2.83	2.44
Preparations of cereals	8.61	9.63	0.24	4.02	1.55	2.37	2.03
Paper and paperboard	1.32	2.39	7.17	7.23	5.08	3.56	1.89
Optical photographic	0.54	1.77	1.16	1.32	4.24	1.86	1.88
Soap	1.92	4.17	2.02	1.91	1.13	1.45	1.43
Miscellaneous chemical products	1.37	2.77	1.80	1.88	2.00	2.04	1.12

Table 30
Puerto Rican exports to Jamaica (export shares)
(Percentage of the total)
1996 – 2002 (Ranked in descending order by 2002)

	1996	1997	1998	1999	2000	2001	2002
Cement clinkers	0.00	0.00	0.00	0.00	0.00	0.00	7.80
Preparations for the manufacture of beverages	0.00	5.64	11.31	15.65	10.75	10.47	7.61
Carbox bottles	0.00	2.20	10.55	13.32	16.07	10.59	6.76
Automotive, diesel or marine engines	0.00	0.00	0.00	0.00	0.00	0.00	6.38
Other preparations	0.00	0.49	1.98	2.93	7.93	5.32	6.34
Other medicaments	0.05	0.00	0.15	0.67	0.66	6.05	6.32
Medicaments primarily affecting the eyes	0.07	0.09	1.09	3.55	1.15	6.93	5.61
Medicaments put up in measured doses	0.00	0.00	0.00	0.00	0.00	0.00	5.16
Parts for razors	0.00	0.00	0.00	0.39	1.37	2.15	3.24
Primary cells and batteries	0.00	4.42	3.92	3.41	3.86	5.48	3.22
Medicaments containing antigens	0.00	0.00	1.23	1.46	1.49	2.26	2.89
Blow-molding machines	0.00	0.00	0.00	0.00	0.00	0.00	2.60
Shipments under 20,000 US no identified	0.00	0.00	1.32	2.88	1.56	2.70	2.44
Multiple vitamins	0.88	2.06	1.49	0.60	1.54	1.06	2.04
Lubricating oils	0.00	0.00	0.00	0.00	0.00	0.00	1.97
Personal deodorants	0.19	0.35	0.04	0.31	1.53	1.58	1.63
Paints	4.43	4.06	1.95	2.27	2.84	1.38	1.53
Analgesics	0.00	0.00	0.00	0.00	0.00	0.00	1.45
Paints	0.00	0.00	0.87	0.79	0.93	1.01	1.41
Rolls, sheets	0.00	0.00	0.00	0.00	0.00	1.62	1.26
Medicaments affecting the digestive system	0.00	0.00	0.00	0.00	0.00	0.00	1.24
Cleaning preparations	1.55	4.17	2.02	1.91	1.13	1.34	1.21
Preparations for infant use	3.37	5.08	0.22	3.16	0.43	0.52	1.10
Antineoplastic medicaments	0.00	0.00	0.00	0.00	0.00	0.00	1.05
Total	10.54	28.56	38.14	53.3	53.24	60.46	81.21

By aggregating all products, a typology of Puerto Rican export products to the Caribbean was obtained. Export products to the Caribbean were classified according to a fourfold classification which combines the change in a partner's export share of a product or group of products with the change in the total export share of that product. The combination of an increasing (declining) trade partner's share in a home country's given product or set of products with an increasing (declining) export share of that product is referred to as a New Recognised Need (Old Satisfied Need). It is a new need because the export share in that commodity is

increasing and it is referred to as being recognized because the partner's share in that product increases. In a similar fashion, the combination of an increasing (declining) partner country export share of a product with a declining (increasing) share of that product is referred to as a Old Unsatisfied Need (New Unrecognised Need).[19]

The exercise was undertaken for more than 1,000 products (at the four digit of the Harmonized System Code) for two periods 1989-1995 and 1996-2002. The results are summarized in Figures 5 and 6. In both periods there is a predominance of the Satisfied Old Need category representing 51% and 56% of the products highlighting 'intuitively' a situation of stagnant trade flows between Puerto Rico and the Caribbean. This diagnostic is reinforced by the decline of the category New Recognised Need from 23% to 17% in both periods.

[19] This classification is the same as that used for imports (Rising Stars, Declining Stars, Missed Opportunities, Retreats) but viewed from the side of exports.

Figure 5
Typology of Puerto Rican exports to the Caribbean
1989 - 1995

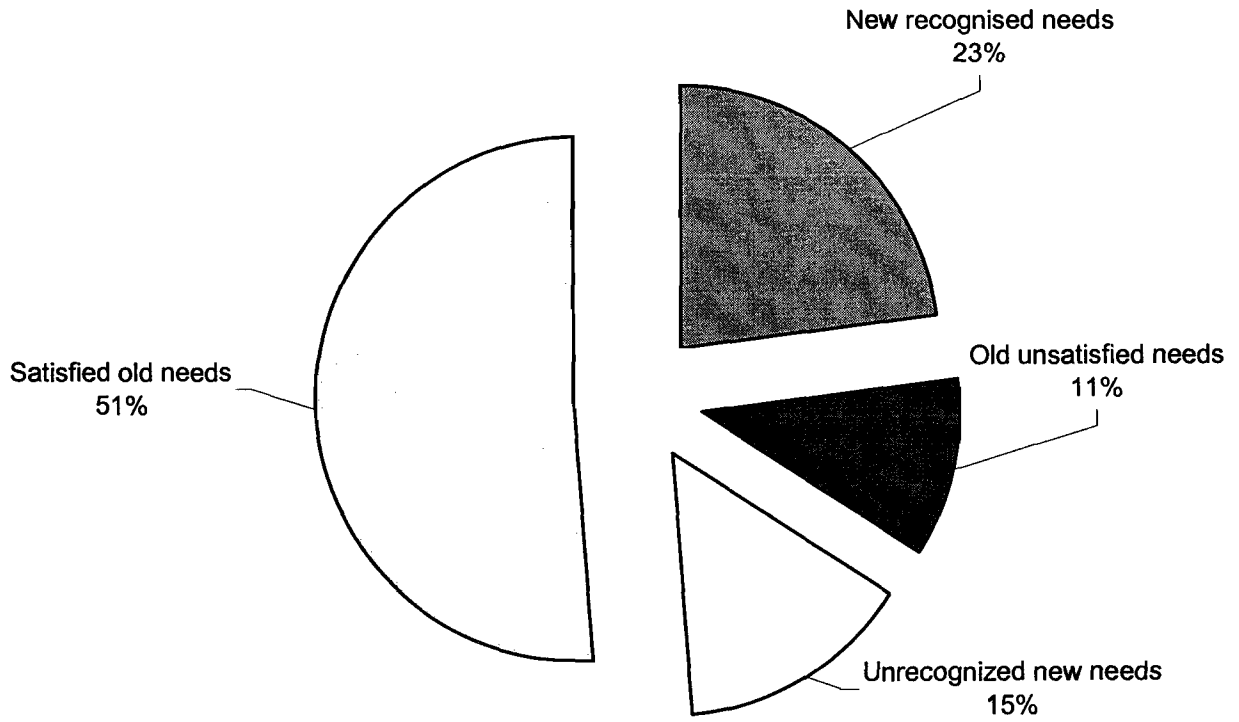
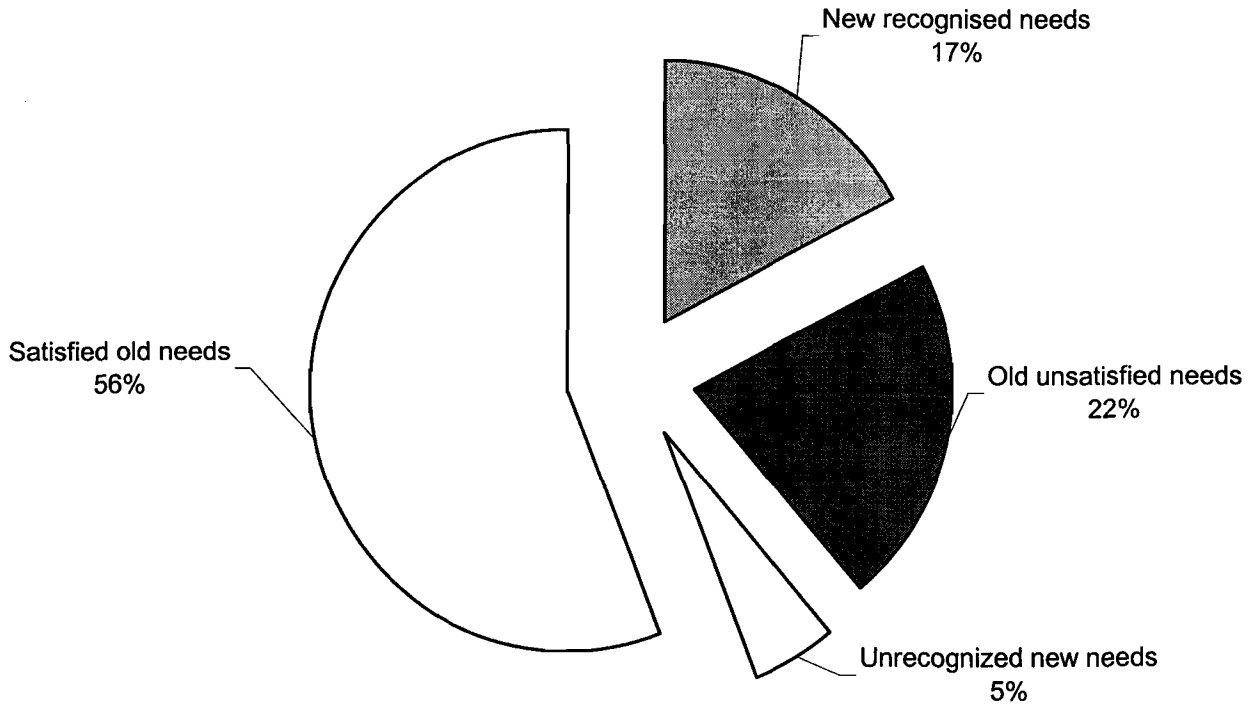


Figure 6
Typology of Puerto Rican exports to the Caribbean
1995 - 2002



3. PERSPECTIVES FOR FURTHER COMMERCIAL INTEGRATION BETWEEN PUERTO RICO AND THE CARIBBEAN

As emphasized and extensively analyzed in the previous sections, the current trade relationship between Puerto Rico is (perhaps with the exception of Jamaica) limited in scope and its importance has declined over time from the perspective of both Puerto Rico and CARICOM Caribbean countries. This diagnostic is reinforced by the computation of a trade compatibility index between Puerto Rico and CARICOM Caribbean countries between 1996 and 2001 *(See Table 31 below)*

Table 31
Puerto Rico and CARICOM Caribbean economies
Indices of trade compatibility by country
1996 - 2001

Country	1996	1997	1998	1999	2000	2001	Average
Anguilla	0.23	....	0.22	0.24	0.20	0.21	0.22
Antigua and Barbuda	....	....	....	0.35	....	....	0.35
Bahamas	....	....	....	....	....	....	....
Barbados	0.19	0.21	0.19	0.19	0.19	0.16	0.19
Belize	0.09	0.07	0.07	0.04	0.04	0.05	0.06
Dominica	0.20	0.18	0.19	0.19	0.18	0.17	0.19
Grenada	0.22	0.16	0.26	0.21	0.21	0.16	0.20
Guyana	....	0.12	0.11	0.11	0.11	0.10	0.11
Haiti	....	....	....	....	....	....	....
Jamaica	0.23	0.19	0.22	0.21	0.23	0.27	0.23
St. Kitts and Nevis	....		0.17	0.16	0.15	0.12	0.15
St. Lucia	0.19	0.19	0.17	0.20	0.16	0.26	0.20
St. Vincent and the Grenadines	0.31	0.29	0.30	0.28	0.24	0.22	0.27
Trinidad and Tobago	0.37	0.38	0.38	0.31	0.34	0.29	0.35

Note: ... denotes not available.
Source: On the basis of ECLAC's Caribbean Trade data Base using the SITC for both Puerto Rico and Caribbean economies.
The trade compatibility index is equal to 1- $(\sum m_{ij}-x_{ik})/2$, where m_{ij} is share of good i in total imports of the home country (i.e., country j). and x_{ik} is the share of good I in total exports of country k (the partner country). mij-xik is calculated in absolute value. See, Michaely and Papageorgiou (1997).

The index compares the import structure of a 'home country' with that of a partner's export structure. It can take two extreme values 0 and 1. A value of 0 indicates that there is no compatibility in trade and that the partner country does not export any commodity or group of commodities that the home country imports. At the other extreme, a value of 1 indicates that there is full trade compatibility between two trade partners and that the composition of the partner country exports coincides with that of the home country's imports.

For most countries the trade compatibility indices are below 0.25 highlighting a weak potential for trade between Puerto Rico and the Caribbean. Nonetheless, it should be taken into account that previous exercises performed for the cases of Barbados, Belize and Trinidad and Tobago with all trade partners yielded indices of 0.20, 0.05 and 0.21 indicating perhaps that CARICOM Caribbean countries have a simple and very specialized trade composition.

The optimal framework for commercial integration between Puerto Rico and the Caribbean in the twenty-first century is yet to be defined, shaped and fully articulated although, as mentioned in the first section, there are recent examples that attest to the creation of commercial ties and trade potential between both trade partners. Moreover, the linkages created during the 1970s and 1980s still seem to shape the trade pattern of Puerto Rico with its Caribbean trade partners although changing and adapting to a new set of circumstances, events and trends.

The commercial integration regime that will ensue will be shaped by several factors among which the most important are the implications of the Commonwealth status of Puerto Rico, size considerations and economic structure, investor's confidence and expectations, the trading regimes and the profile of competitiveness of both the Caribbean CARICOM economies and Puerto Rico[20].

3.1. The Commonwealth status of Puerto Rico

In its status as Commonwealth, Puerto Rico does not possess tariff autonomy or independence to determine its trade policy orientation or its commercial regime. In this sense, it cannot negotiate a trade agreement or tariff reduction proposal independently of the United States with any other country. Puerto Rico can bring to the attention of the United States representative what it considers to be important or significant issues when the possibilities for a change in the trade regime or structure arise (as in, for example, a free regional agreement such as the Free Trade Area of the Americas - FTAA). Despite the fact that Puerto Rico does not have an autonomous import policy and cannot implement export tax or tariff incentives it can promote its exports through other means. In short, while the 'associate' status deprives Puerto Rico of an import policy it does not close the doors to an export policy.

The export policy of Puerto Rico, being currently promoted as a positive response to the increasing internationalization of trade and financial flows and as a way to promote growth without incurring high fiscal costs, envisages the increasing involvement of local business in exporting activities, the creation of local exporting clusters, trade and reverse trade missions to bring potential customers to Puerto Rico, the creation of foreign trade offices, and the creation of institutional ties between the government and the private sector. The recently created Export Council attests to these export promotion efforts. As in the cases of other countries of the Caribbean Basin, Mexico and Costa Rica, export promoting efforts are progressively being

[20] Alberto de la Cruz, President of Coca Cola Bottlers explained the variables that affect trade and investment decisions in the following way: "We chose Trinidad because of its population (1.3 million), high income levels...well trained work force, lower production costs because the country is energy efficient because of oil and natural gas and the added advantages of a nation that has more exports than imports and relatively low currency risk". The Caribbean Investor (4/02/2003).

transferred and centralized by an export promotion office, Promoexport. In the cases of Mexico and Costa Rica, the creation of an export promotion office was crucial to the development of external sales and to the diversification of these countries' export base.

3.2. Economic size, structure and market potential

A key factor that determines trade and investment is the size of the market. CARICOM Caribbean economies have with a few exceptions, notably Trinidad and Tobago, a small market which limits export expansion and the potential for diversification *(See Section 1, Table 1)*. The typical structural features of small open economies include a limited export base, a direction of trade that is highly concentrated towards the major developed country markets due to preferential market access for its major export products. These economies are also vulnerable to external shocks making their income prone to volatility. As well, their national savings fall short of their financing needs for investment and spending. Finally, they possess limited institutional capacity, due partly to inadequate human and physical infrastructure.

However, in the same way that the importance of small size should not be underestimated as a limiting factor to the expansion and diversification of trade and investment flows, the composition of output and production can, to some extent, offset this constraint. In fact while size determines the scale of trade flows, the composition of output will inevitably determine the product orientation of trade.

CARICOM Caribbean economies possess an important characteristic for the creation of comparative advantage in relation to other regions, that of economic diversity or structural heterogeneity within a narrow geographical area. The structure of CARICOM Caribbean economies oscillates within two opposing poles, resource-based and service-based economies. Resource-based economies include Belize, Dominica, Guyana, Trinidad and Tobago and Suriname. Service-based economies comprise the Bahamas, Barbados, and some of the smaller economies such as Saint Lucia and Saint Vincent and the Grenadines. Other economies, such as St. Kitts and Nevis, are making the transition to being a full service-based economy with the restructuring of its sugar industry. For its part Jamaica remains partly a service-based economy and partly a resource-based economy.

As with any other pattern of productive specialization, resource-service-based economies have advantages and disadvantages. Resource-based economies tend to command a lower level of FDI in relation to GDP and population relative to service-based economies. However, over time the flow of FDI does not exhibit the discontinuity that characterizes service-based economies due to a longer process of production involving natural resources *(see Table 34 below)*. The climate of certainty in resource-based economies is reinforced by two additional important facts. First, as natural resources are seen as part of the heritage of any nation, resource exploitation is generally closely overseen by government authorities. Second, natural resource-based economies can create a non-tradable sector which tends to act as a buffer stock in foul weather times.

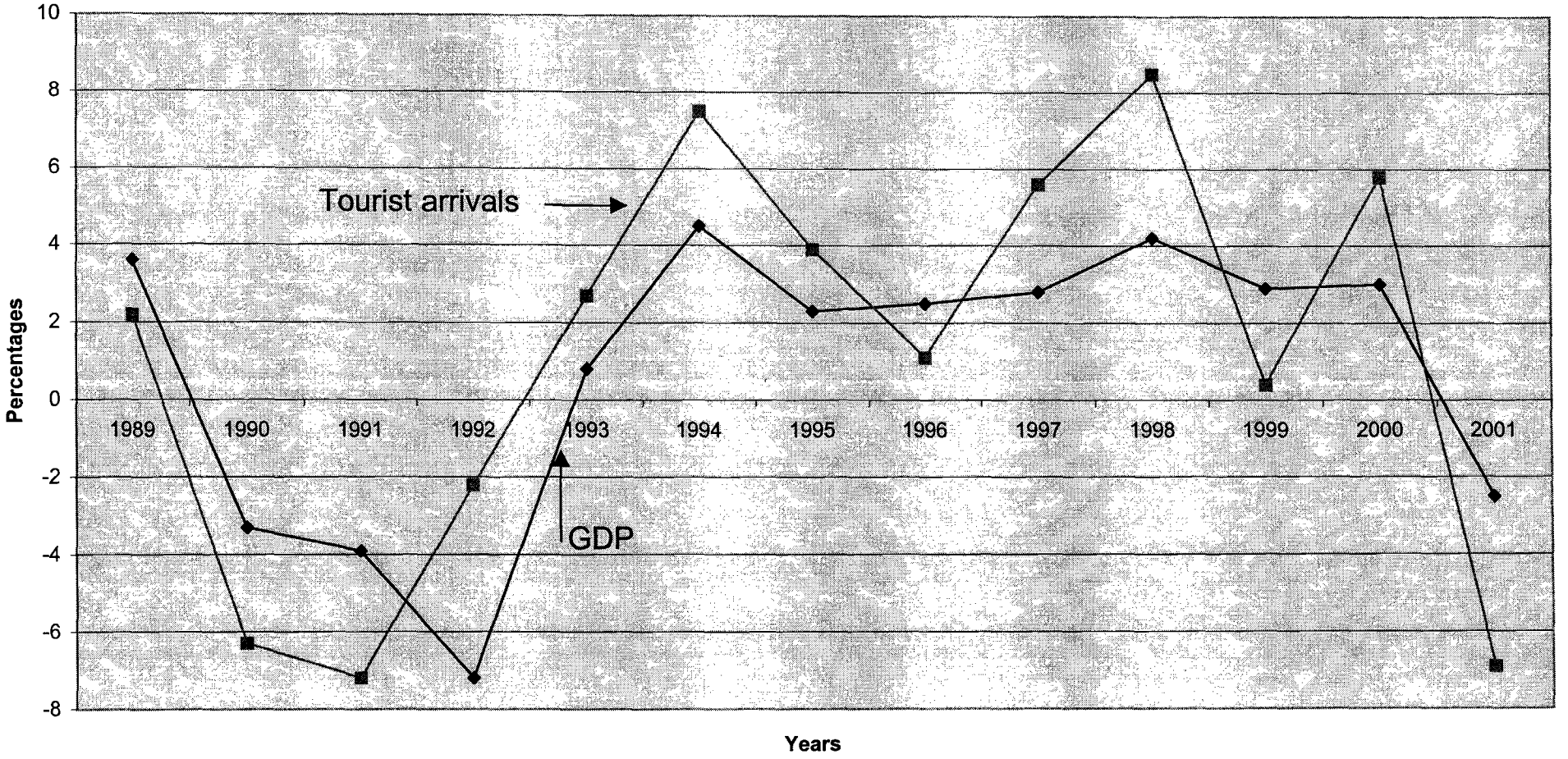
Table 32
Decomposition of the services sector by country (in percentage of the total of the services sector
2000-2001

	Electricity and water	Wholesale and retail trade	Hotels	Transport	Communications	Banks	Real estate	Government services
Anguilla	3.3	8.4	**32.2**	5.6	14.3	**17.5**	3.7	15.0
Antigua and Barbuda	4.6	11.3	**15.0**	13.5	12.0	**12.7**	12.0	18.8
Barbados	6.3	30.9	**23.0**	13.0	26.8			
Belize		39.4		27.1		**10.0**	10.7	12.8
Dominica	5.8	17.2	**3.3**	12.7	15.1	**17.5**	4.7	23.7
Grenada	6.7	14.5	**9.6**	17.2	17.1	**12.8**	5.2	16.9
Guyana		21.3		25.2	0.0	**14.6**	4.7	34.3
Jamaica	6.4	24.1	**13.4**	20.6	0.0	**17.4**	10.6	7.4
St. Kitts and Nevis	2.5	21.6	**7.2**	10.8	13.9	**18.4**	3.8	21.8
St. Lucia	6.2	15.8	**16.4**	13.4	11.4	**13.1**	8.8	15.0
St. Vincent and the Grenadines	7.8	21.0	**3.1**	17.3	14.6	**12.2**	3.3	20.7
Suriname	11.2		**18.4**	15.6		**16.1**		38.7
Trinidad and Tobago	2.9	27.0	**0.2**	24.5		**17.2**	21.0	7.2
Average	5.8	21.0	**12.9**	16.7	12.5	**15.0**	8.0	19.4
Puerto Rico		28.5		15.4		**36.5**		19.6

Source: Planning Board of Puerto Rico and ECLAC (2002)

Trinidad and Tobago has traditionally benefited from the large amounts of foreign investment and resources that have been geared to the development and exploitation of its oil reserves. In the past five years, it has taken advantage of its market position and natural gas reserves to change the composition of its hydrocarbons sector. The production and utilization of natural gas has replaced that of crude oil. As a result of the growth and development of the natural resource industry, Trinidad and Tobago has become a leading producer and exporter of methanol and ammonia. Guyana has attracted FDI in timber production, as well as gold and diamond extraction. Although these activities have become significant foreign exchange earners, their value added content remains relatively low. In the case of Guyana, sugar and rice have benefited from measures designed to improve the organization of production, infrastructure and access to better technology. In particular, sugar cane production increased its contribution to Guyana's GDP from 9% to 17% between 1990 and 2000.

Figure 7
Barbados
Rate of growth of GDP and of tourist arrivals
1989-2001



Service-based economies can exhibit a higher degree of vulnerability than resource-based economies partly due to the strong linkages of that to areas of economic activity. In this regard Figure 6 above shows the close correspondence between Barbados' GDP growth and the rate of growth in the number of tourist arrivals. At the same time because the service sector tends to predominate (at the aggregate level and with the exclusion of some countries during the 1990s the service sector increased its contribution to output from 39.1% to 46.6%) and is mainly oriented towards tourism activities, there is scope for complementarity between that specific service and other service areas in which Puerto Rico has a solid base (financial services, environmental services, construction and transportation). Among these, financial services could prove to be, in light of the desire to form a regional capital market, a key area of collaboration between CARICOM Caribbean economies and Puerto Rico.

Finally it is to be noted that the declining trend in apparel manufacturing output (manufactures represented 12.7% and 11.6% of sectorally weighted output in 1990 and 2000), epitomised in the case of Jamaica, indicates that the trade relations between Puerto Rico and the Caribbean will not return to a type of production sharing textile production predominant in the 1980s.

Table 33
Weighted sectoral share of output 1990 and 2000
(Percentages)

	Agriculture		Mining		Manufacturing		Tourism		Financial services		Other services	
	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000
Antigua and Barbuda	4.2	4.9	2.0	2.2	3.4	2.8	14.4	14.4	7.2	11.2	18.9	25.1
Barbados	7.3	6.1	0.8	0.9	10.0	9.3	13.9	15.0	0.0	0.0	7.8	8.3
Belize	18.4	21.0	0.7	0.8	17.2	17.2	19.2	19.8	5.1	5.2	25.2	24.8
Dominica	25.0	18.2	0.8	0.8	7.1	7.2	2.1	2.4	11.3	13.2	16.2	20.9
Grenada	13.4	10.1	0.4	0.6	6.6	9.9	5.8	11.8	7.8	12.9	20.1	30.5
Guyana	23.6	35.4	9.5	10.9	11.1	11.7			6.0	5.7	8.7	8.5
Jamaica	6.2	7.1	8.7	9.1	21.1	15.8	9.4	16.9	9.2	14.9	.....	.....
Saint Kitts and Nevis	6.5	3.8	0.4	0.5	12.9	14.3	7.6	9.0	8.0	19.3	15.0	17.6
Saint Lucia	14.6	7.7	0.4	0.5	8.2	5.9	9.6	13.3	7.3	10.6	16.8	20.0
Saint Vincent and the Grenadines	21.1	12.0	0.3	0.3	8.5	5.8	2.2	2.5	7.6	9.6	20.5	25.2
Suriname	9.3	11.1	9.1	17.8	13.0	10.6	12.1	10.6	17.8	9.3	5.4	8.9
Trinidad and Tobago	1.9	1.8	57.7	56.5	4.5	6.0	5.7	7.3	5.0	4.7	5.9	6.2
Weighted average a/	17.2	18.6	39.4	36.8	12.7	11.6	39.1[a]	47.2[a] /	.....	.....	.....	.....
Weighted average for agriculture (excluding Guyana)	13.5	9.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Source: Selected Statistical Indicators of Caribbean Countries (LC/car/G.666). Vol.XIV 2001. ECLAC
Note: "Other services" includes communications and transport.
a/ The weighted average was estimated for agriculture, manufacturing and the service sector as a whole.

Table 34
Foreign Direct Investment over GDP (in percentages)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Anguilla	19.7	11.3	25.6	10.1	15.0	23.7	42.1	23.8	29.8	36.3	36.4	24.9
Antigua and Barbuda	15.5	13.3	4.6	3.3	5.0	6.4	3.6	4.0	4.4	5.6	5.0	7.8
Barbados	1.2	2.0	1.7	0.1	2.3	-0.3	1.2	1.4	0.7	2.2	6.0	3.6
Belize					3.3	3.1	1.8	1.3	7.5	7.2	2.5	5.0
Dominica	7.7	8.4	10.7	6.6	10.5	24.7	7.6	10.3	3.0	8.0	4.7	6.4
Grenada	5.8	6.3	9.0	8.1	7.3	7.2	6.6	10.6	13.9	11.0	8.8	8.6
Guyana	4.1	8.0	36.9	13.6	8.8	8.6	8.4	7.0	6.7	6.7	9.5	7.9
Jamaica		1.4	9.8	7.3	10.2	5.5	8.1	-0.1	2.0	-0.1	6.0	12.1
Montserrat	14.3	14.4	7.9	7.8	11.3	5.0	-0.7	6.3	6.8	23.4	9.9	10.2
St. Kitts and Nevis	6.0	4.9	2.5	6.9	6.9	8.9	14.3	7.2	11.1	19.0	29.2	24.1
St. Lucia	10.8	1.8	0.9	6.9	6.3	5.9	3.2	8.3	13.3	12.4	7.1	7.7
St. Vincent and the Grenadines	3.9	4.2	6.4	13.2	19.4	11.6	15.3	31.5	28.0	16.9	8.4	10.2
Trinidad and Tobago	2.2	2.5	3.1	8.8	10.5	5.5	6.2	17.2	11.6	5.5	8.1	6.2
Average all	8.3	6.5	9.9	7.7	9.0	8.9	9.1	9.9	10.7	11.9	10.9	10.4
Standard deviation	6.0	4.6	10.7	3.7	4.7	7.4	11.0	9.2	9.1	9.9	10.0	6.7
Average OECS	10.5	8.1	8.5	7.9	10.2	11.7	11.5	12.7	13.8	16.6	13.7	12.5
Average Larger	1.9	3.5	3.6	7.4	8.0	4.8	6.0	6.4	5.2	3.6	7.4	7.5
Average RBE with Guyana	2.1	3.5	13.3	7.5	7.6	5.7	5.5	8.5	8.6	6.5	6.7	6.4
Average RBE without Guyana in 1992	2.1	5.4	1.0	7.5	7.6	5.7	5.5	8.5	8.6	6.5	6.7	6.4
Average SBE	8.4	6.0	5.4	4.4	5.8	6.2	8.0	6.4	8.3	12.4	11.7	9.8

Note: SBE = service based economies. RBE= resource based economies.
Source: ECLAC on the basis of official data.

3.3 The trading regimes

As with other developing economies, during the past two decades, the trading regime of CARICOM Caribbean countries underwent a significant process of liberalization.

In the 1980s the CARICOM Common External Tariff (CET) together with a host of other non-tariff barriers was highly protective. It was highly dispersed with 16 tariff rates ranging from 0 to 70% but with most of the tariff positions (around 96%) at or below 45%. Generally, manufacturing attracted the highest average tariffs of 21% in the more developed countries (MDCs)[21] and 15% in the less developed countries (LDCs)[22]. Within the manufacturing sector consumer goods received the highest tariff protection of 29% in the MDCs and 21% in the Organisation of Eastern Caribbean States (OECS). Agriculture was the next highest protected sector attracting an average tariff of 21% in the MDCs and 15% in the LDCs. Although this tariff structure did not seem overly high, it does not give the complete picture of CARICOM's protective system in the 1980s.

In addition to the tariffs, CARICOM countries applied an array of measures to imports including stamp duties, customs surcharges and consumption charges which were usually higher than those applied to domestically produced goods. When these charges are taken into account, the level of protection in CARICOM countries increases considerably. For example the unweighted average nominal protection for manufactured products reaches 50% in Trinidad and Tobago, 43% in Barbados and 41% in Jamaica and the average nominal protection for consumer goods reaches 58% in Jamaica, 56% in Barbados, 52% in Trinidad and Tobago and 50% in Grenada[23].

It was also typical of the trade regime in the CARICOM countries to include a wide range of exemptions that generally included industrial inputs, machinery and equipment and materials for industrial inputs. It was also the norm to exempt from all duty imports for the many public sector enterprises, which existed in the countries. The CARICOM trade regime includes rules of origin based on the standard principles of products being wholly produced in the subregion or having undergone substantial transformation in the subregion to qualify for duty free treatment. The substantial transformation criterion requires the use of specified regional inputs or in certain cases specified processes.

The CARICOM trade regime did not include provision for the harmonization of quantitative restrictions that were commonly implemented at the level of the member countries. These restrictions which generally included licensing requirements, quotas and negative lists increased the protection of local production by removing in certain cases altogether any competing imports.

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[21] The CARICOM MDCs are Barbados, Guyana, Jamaica, Suriname and Trinidad and Tobago.

[22] The CARICOM LDCs consist of Belize and the following countries comprising the OECS - Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines.

[23] See World Bank Report – "The Caribbean Common Market: Trade Policies and Regional Integration in the 1990s" - 25 December 1990.

At the end of the 1980s CARICOM member States decided to advance in their integration efforts beyond the common market and towards a more comprehensive integration framework, namely the creation of the Single Market and Economy. In 1991 CARICOM members agreed on the main areas of emphasis in the creation of the Single Market and Economy. These included the completion of the arrangements for the free internal movements of goods, mechanisms for the free movements of services, capital and labor, and the greater harmonization of laws and regulations affecting commerce. [24] In the 1990s CARICOM also decided to include Suriname (1995) among its members and substantially revised its trade regime.[25] The tariff structure was significantly simplified and the various rates reduced. In 1991, CARICOM established the level and the structure for the common external tariff. The phased reduction for the CET (Common External Tariff) was agreed upon in 1992. The CET was to be effective from January 1993 with an initial tariff range of 0-45% per cent. The level of the CET was designed to undergo a four-phased reduction to be completed in five years at the end of which the tariff ceiling would be lowered to 20% *(see Box 1)* except for agricultural products which will continue to attract a tariff of 40%. The implementation of the CET included a broad range of tariff exemptions which are contained in four lists (A, B, C, D) *(See Box 2, below).* There have been slippages in the implementation of the agreed phases of tariff reforms. However, the fourth and last phase was implemented by the majority of countries by the end of the decade.

[24] See, WTO (2000) Caribbean Community and Common Market. Biennial Report on the Operation of the Agreement. WT/REG92/R/B/1. G/L/359.

[25] As it now stands, CARICOM comprises 14 states and territories (13 are independent states and Monserrat an Overseas Territory of the United Kingdom). With the exception of Bahamas, all states are full members of the Common Market. Bahamas is an associate member of the common market. The Caribbean Heads of Government have accepted Haiti's application to become the fifteenth member. Two overseas territories, the British Virgin Islands and the Turks and Caicos Islands, are associate Members cof the Caribbean Community. A similar membership status is being negotiated by Anguilla.

Table 35
Phase reduction, implementation and structure of the CET

Phase	Period of Application	Implementation period	Rate structure	Status (2003)
Phase I	January 1993 to December 1994	January 1993 to June 1993	0-5% to 30/30%	
Phase II	January 1995 to December 1996	January 1995 to June 1995	0-5% to 25/30%	
Phase III	January 1997 to December 1997	January 1997 to June 1997	0-5% to 20/25%	Montserrat; St. Kitts and Nevis: Antigua and Barbuda
Phase IV	January 1998 onwards	January 1998 to June 1998 (2003)	0-5% to 20%	Barbados; Belize; Dominica; Grenada; Guyana; Jamaica; St. Lucia; St. Vincent and the Grenadines; Suriname; Trinidad and Tobago.

Description of the list of exceptions

List	Description
A	Non-competing import goods. Goods whose production may account for less than 75% of regional consumption. Protection at the national level is allowed.
B	Exempts certain goods from the implementation of the CET that are sensitive to the cost of living in the OECS territories and Belize.
C	Includes goods to which minimum rates apply, including alcoholic beverages, tobacco products, petroleum products, jewelry, watches and clocks.
D	Allows the suspension of the CET for specific products: petroleum products (in Belize), rice (Antigua, Dominica, and Jamaica), medicines (OECS and Belize). The list also includes a list of conditional duty exemptions which are include among others industrial and agricultural inputs for defined industrial, agricultural, mining and services activities.

WTO (2001); CARICOM Secretariat (2001).

CARICOM countries still have a number of additional charges in place, which apply to imports including stamp duties, customs surcharges, consumption taxes, valued added taxes.[26] Although there are few quotas remaining in the trade regimes of the countries, licensing requirements for specified products and price controls are still widespread. In addition, as mentioned above duty exemptions are still being used with the stated objective of promoting the priority sectors of the economy. More important there are still obstacles to the removal of licensing requirements for CARICOM goods and unauthorized application of trade measures and practices.[27]

More recently, starting in 1997, CARICOM prepared a number of protocols to revise the Treaty of Chaguaramas, its basic agreement. Some of these protocols, when implemented, will greatly increase the openness of the countries to trade and investment from other member countries of the Community. One of them, Protocol II and the most advanced in terms of implementation, will allow CARICOM nationals to establish business enterprises, provide services and move capital without restrictions within the subregion. The further integration of factor markets which is likely to come out of the implementation of this protocol will be conducive to a better allocation of resources in the subregion and enhance the capacity of the countries to absorb and deal with external shocks more effectively. Other protocols, which will significantly affect trade and investment in the subregion, include Protocol III on community industrial policy, Protocol V on agricultural policy, Protocol IV on trade policy, Protocol VIII on dispute settlement and Protocol IX on competition policy. These protocols, when implemented, will greatly enhance the trade policy within the community and may impact positively on the community's external policies.

Nine economies have implemented phase IV of the common external tariff (Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago and Suriname), since most of their tariffs fall within the limits of 5% and 25%. Higher rates of up to 40% are applied to imported agricultural goods produced locally, in accordance with the special treatment provided for the sector in the common external tariff. This last level is notoriously lower than the consolidated maximum for the agricultural sector in the World Trade Organization (WTO), which is 100%.

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[26] For further details see, ECLAC (1999) Trade Policy in CARICOM: overview of the main trade policy measures. LC/CAR/G.591 and ECLAC (1999) Tax Performance and Reform in the Organisation of Eastern Caribbean States. LC/CAR/G.561.

[27] Belize maintains an import duty on rum; Grenada an environmental tax on bottled water; Guyana has an environmental tax on imported beverages in non-returnable containers; Dominica applies an import duty on cigarettes. St Vincent and the Grenadines requires import licenses on malt, stout, toilet paper and garbage bags. See, Establishment of the CARICOM single market and economy: key elements. CARICOM Secretariat, 2000.

Table 36
Countries of the Caribbean Community (CARICOM) and Puerto Rico
tariffs and associated measures that affect imports
(By percentage)

Tariffs	Barbados	Guyana	Jamaica (1998)	Trinidad & Tobago (1998)	Puerto Rico
Structure	Phased	Phased	Phased	Phased	Phased
No. of ad valorem tariffs (2002)	HS[b] to 6 digits 1996	HS[b] to six digits 1996	HS[b] to six digits 1996	HS[b] to six digits 1996	HS[b] to 10 digits 11949
Average tariff (1999)	16.5 (2002)	10.6	10.9	9.1	1.6
Maximum tariff (2002)	25-40 applies the CET[c]	25-40 applies the CET[c]	50 applies the CET[c]	25-40 applies the CET[c]	
Minimum tariff (1999)	5	5	0	5	0
Agricultural tariff (HS: 1-24)[b]					
Applied	30	40	40	40	87 5.5
Manufacturing tariff (HS: 25-97) [b]					
Applied	16.4	25	25	20-30	158.6 16.5
Special regimes			Duty free zones	For export industries and duty free zones	Export processing zones
Tariff concessions	CARICOM and CARICOM -Colombia Agreements	CARICOM and CARICOM-Colombia Agreements	CARICOM and CARICOM-Colombia Agreements	CARICOM and CARICOM-Colombia Agreements	Same as those of the United States and tax incentives 1998 and 2002

Source:
ACS (2003); USITC (2003) and EIU (2003)
ECLAC, International Trade and Development Finance Division, based on: World Trade Organisation (WTO), *Jamaica ,Trinidad and Tobago, 1999*; OECS Countries 2001 and Barbados 2002; WTO/GATT series. Examination of trade policies, Geneva; ACS Secretariat, *Study on Obstacles to Trade by the Association of Caribbean States* (ACS), third edition (ACS/99/Trade), Port of Spain, October 1999; and Finger J. Michael, Francis Ng and Isidro Soloaga, "Trade Policies in the Caribbean Countries: A Look at the Positive Agenda", Washington, D.C., June 1998, unpublished.
[a] OECS: Organization of Eastern Caribbean States.
[b] HS: Harmonised system for the designation and codification of goods.
[c] CET: common external tariff.
[d] The others apply higher tariffs than the CET, through surcharges of up to 16% and charges for customs services of up to 5%.

Table 36 (continued)
Countries of the Caribbean Community (CARICOM)
tariffs and asociated measures that affect imports

Tariffs	Antigua and Barbuda (2001)	Dominica (2001)	Grenada (2001)	St. Lucia (2001)	St. Kitts and Nevis (2001)	St. Vincent and the Grenadines (2001)
Structure	Phased	Phased	Phased	Phased	Phased	Phased
No. of ad valorem tariffs	4077	6333	6334	6368		6237
Average tariff	14.5	13.1	11.2	10.1		14.9
Maximum tariff	70	200	40	70		40
Minimum tariff	0	0	0	0		0
Consolidated (% of lines)	100	> 100	100	98		100
Agricultural tariff (IICS) [b]	19.6	22.8	21.0	20.6		24.6
Consolidated	100	100	100	100		100
Applied	19.6	22.9	21.0	20.6		24.6
Manufacturing tariff (IICS) [b]	14.5	12.5	10.5	9.4		10.1
Consolidated	50	50	50	50		50
Applied	14.5	12.5	10.5	9.4		10.1
Special regimes	Temporary concessions regime Free Trade Zone			Free Trade Zones		Free Trade Zones
Tariff concessions	CARICOM and CARICOM-Colombia Agreements Law on tax incentives (1974) Law on Hotel Aid Law for companies (1982)	CARICOM and CARICOM-Colombia Agreements Law on Hotels (1991) Law on tax incentives (1973)	CARICOM and CARICOM-Colombia Agreements Selective incentive schemes Law on tax incentives (1974) Law on Hotel Aid (1954)	CARICOM and CARICOM-Colombia Agreements Selective incentive schemes Law on tax incentives (1974) Law on Incentives for Hotels (1996)	CARICOM and CARICOM-Colombia Agreements Selective incentive schemes Law on tax incentives (1974) Law on Incentives for Hotels (1996)	CARICOM and CARICOM-Colombia Agreements Selective incentive schemes Law on tax incentives (1982, 1987) Law on Hotel Aid (1988)

Note: In the case of Antigua and Barbuda, tariffs for various products were consolidated to a rate exceeding that of 100%. These include beer, some alcoholic beverages, margarine and bananas. In Dominica, several tariff lines for agricultural products were consolidated to 150%. The products for which Dominica did not consolidate its tariffs are goods produced domestically. In the case of St. Lucia, two tariff lines to four digits were not consolidated. For several agricultural products, the tariff exceeds 100%. With respect to manufactured products, there are 200 exceptions to the consolidated tariff. For these products, the tariff bracket ranges from 73%-220%. In St. Vincent, there are exceptions to the consolidated tariff with a tariff bracket from 107%-250%. For manufactured products, there are more than two hundred tariff lines for which tariff rates exceed 50%.

Source:

ACS (2003)

ECLAC, International Trade and Development Finance Division, based on: World Trade Organisation (WTO), *Jamaica ,Trinidad and Tobago, 1999*; St. Kitts and Nevis 2001 and Barbados 2002*;* WTO/GATT series. Examination of trade policies, Geneva; ACS Secretariat, *Study on Obstacles to Trade by the Association of Caribbean States* (ACS), third edition (ACS/99/Trade), Port of Spain, October 1999; and Finger J. Michael, Francis Ng and Isidro Soloaga, "Trade Policies in the Caribbean Countries: A Look at the Positive Agenda", Washington, D.C., June 1998, unpublished.

[a] OECS: Organization of Eastern Caribbean States.

[b] IICS: International industrial classification system.

Table 37
Countries of the Caribbean Community (CARICOM) and Puerto Rico
Non-tariff measures that affect imports

Type of measures	Barbados	Guyana	Jamaica	Trinidad and Tobago	Puerto Rico
PRICE CONTROL					
Minimum prices	Price bands: dairy, sugar, cornmeal, rice, edible oil	Not reported	Not reported	Only sugar (domestic market)	NO
Variable duties	Import charges resulting from the introduction of tariffs must be removed	Not reported	Not reported	There are charges on 15 agricultural items produced locally (75% on refined sugar)	NO
Antidumping measures and countervailing duties	The WTO has not been notified of the measures adopted through resolutions on antidumping rights or countervailing duties.	Has no regime	Is adapting the existing regime to the WTO[b]. Never applied	Law of 1995. Applied only once (*cheddar* cheese from New Zealand)	Against violation of trade agreements or unjustifiable trade practices. 1998. Omnibus Trade Act
Safeguards	Barbados has not enacted any legislation on safeguards.	Not reported	There is no law. Never applied	Not applied	Due to unfair trading practices
Quantitative control measures	...	...	Not applied	Not applied	Tariff quotas
Automatic licenses		24 categories of products, from any			No licenses but there are labeling

		origin (agricultural and phytosanitary limitations)			requirements and compliance with food and drug administration
Non automatic licenses	From CARICOM: 24 (agricultural products). From other countries: 25 (agricultural products and vehicles)	For petroleum and agricultural products	Licenses (39) for dairy, vehicles and chemicals	From CARICOM: 26 (agricultural). Also for products on CARICOM's negative list	No
Import quotas	Apples, rice, sugar, canned fruits, rice, peanuts, chewing gum, all to protect local production	No	No	Only for livestock	Annual quotas for dairy products, animal feed, beers, wine, textiles and apparel, cotton, peanuts, sugar, syrups, molasses and cheese.
Banned imports	Citrus, green bananas, copra, corn, apparently for phytosanitary reasons	Only those for safety reasons (not significant)	Sugar (with license)	Not significant	Safety, moral, and political reasons (Cuban imports)
Import contingencies	See: import quotas	See: import quotas	See: import quotas	See: import quotas	

Source:
USITC(2003) and EIU (2003)
ACS (2003)
ECLAC, International Trade and Development Finance Division based on the ACS Secretariat, *Study on Obstacles to Trade by the Association of Caribbean States* (ACS), third edition (ACS/99/Trade), Port of Spain, October 1999; and Michael Finger, Francis Ng and Isidro Soloaga, "Trade Policies in the Caribbean Countries: A Look at the Positive Agenda", Washington, D.C., June 1998, unpublished. World Trade Organisation (WTO), *Jamaica, 1999; Trinidad and Tobago, 1999*, Barbados 2002 and OECS Member Countries, 2001, WTO/GATT series, Examination of trade policies, Geneva.
[a] OECS: Organisation of Eastern Caribbean States.

Table 37(continued)
Countries of the Caribbean Community (CARICOM) and Puerto Rico:
Non-tariff measures that affect imports

Type of measures	Antigua and Barbuda	Dominica	Grenada	St. Lucia	St. Kitts and Nevis	St. Vincent and the Grenadines
PRICE CONTROL						
Minimum prices	Price controls are applied to a set of products in accordance with the 1967 Price Control Order.	Applied to 43 products including construction materials, food, petroleum by-products and cement.	Price controls are applied to a series of products including food, pharmaceuticals and clothing	Not reported		There are price controls for a hundred products including food, pharmaceuticals , motor vehicles and petroleum
Variable duties	Not reported	Not reported	Not reported	Not reported	Not reported	Not reported
Antidumping measures and countervailing duties	There is no regime for antidumping or countervailing duties.	There is legislation. Not applied.	There is legislation. Not applied.	There is legislation. Not applied since St. Lucia is a member of the WTO (1995).		There is legislation. Was applied in 1999.

Safeguards	There is no safeguards regime.	There is no legislation.	There is no legislation. Such measures can be applied under Article 29 of the CARICOM Treaty.	There is no legislation, but such measures have been applied under Article 29 of the CARICOM Treaty in the case of one product.		There is no legislation. Such measures can be applied under Article 29 of the CARICOM Treaty.
Quantitative control measures	There is quantitative control on several agricultural imports.	Applied on the basis of Article 56 of CARICOM and on health, safety and environmental considerations.	Import controls are applied to a series of agricultural products. Some controls are applied on the basis of Article 56 of CARICOM. Controls have also been established for health, safety and environmental reasons.	Applied on the basis of Article 56 of CARICOM and on health, safety and environmental considerations.		Quantitative restrictions are applied on the basis of Article 56 of CARICOM, to products originating from non-OECS member countries with the exception of Belize.
Automatic licenses	There are license requirements for a variety of products. Some of these require a license when the product is imported from a non-OECS country.	There are three groups of goods subject to licenses: goods imported from non-CARICOM member countries; goods imported from non-OECS	Automatic licenses are applied to products for which there is no quantitative restriction.	Licenses are required for a number of products: those originating from non-CARICOM member countries; goods coming from OECS and		Import licenses are required for a series of products originating from non-CARICOM member countries.

		member countries, with the exception of Belize; and finally, goods subject to price controls also require licenses.		CARICOM member countries, as well as products originating from CARICOM member countries and non-OECS members.		
Non automatic licenses	Applied under Article 56 of CARICOM.	Not applied since 2001.	Applied to several products subject to quantitative restrictions and originating from non-CARICOM member countries and from the more developed CARICOM countries.	Applied among others, to products coming from CARICOM countries and which are subject to import restrictions.		Applied to several products originating from non-OECS member countries, with the exception of Belize, and depend on the availability of import quotas
Import quotas	Applied outside of CARICOM, to selected products depending on demand conditions and production.	Not applied	Applied depending on demand conditions and production.	Applied in some cases depending on demand conditions and production.		Safeguards are applied under the type of import quotas in the case of two products.
Banned imports	Prohibitions are applied to several products for health, safety and environmental reasons.	Prohibitions are applied to several products for health, safety and environmental reasons.	Prohibitions are applied to several products for health, safety and environmental reasons. Prohibitions are	Prohibitions are applied to several products for health, safety and environmental reasons.		The importation of several products is prohibited for health, safety and environmental reasons. Also

			also applied to the import of several species of fish.			prohibited is the importation of jet skis and aquatic bicycles.
Import contingencies						

Source: ACS (2003)

ECLAC, International Trade and Development Finance Division based on the ACS Secretariat, *Study on Obstacles to Trade by the Association of Caribbean States* (ACS), third edition (ACS/99/Trade), Port of Spain, October 1999; and Michael Finger, Francis Ng and Isidro Soloaga, "Trade Policies in the Caribbean Countries: A Look at the Positive Agenda", Washington, D.C., June 1998, unpublished. World Trade Organisation (WTO), *Jamaica, 1999; Trinidad and Tobago, 1999*, Barbados 2002 and OECS Member Countries, 2001, WTO/GATT series, Examination of trade policies, Geneva.

[a] OECS: Organisation of Eastern Caribbean States.

As in the case of CARICOM Caribbean economies, Puerto Rico has special regimes for imports namely export processing zones which provide the following benefits: relief from inverted tariffs, duty exemptions on re-exports, deferral of federal customs duties, deferral of Puerto Rico's excise tax, exemption to the payment of municipal licence taxes on exports outside the United States and exemption to duties payable on damage, scraped or obsolete merchandise.[28]

Puerto Rico has also provided fiscal incentives as a way to promote exports. As explained earlier, section 936 of the 1976 tax code established federal tax credits for company revenues in Puerto Rico. At the same time it exempted United States firms that reinvested their earnings in Puerto Rico from the payment of federal taxes on the income resulting from their financial investment. In 1996, The United States Congress repealed this tax break and allowed for a 10-year phase out. The authorities have proposed an amendment to Section 956 of the federal tax code which would allow controlled foreign corporations (CFC) to repatriate 90% of their profits to related or parent operations in the United States tax free.

More recently the authorities passed the Tax Incentives Act of 1998 providing an exemption from Puerto Rican taxes for approved firms.[29] As well there are tax incentives for employment. An important change in the structure of the tax incentive system is that it "has shifted from large tax exemptions to low tax rates".[30] In 2001, the authorities approved the Export Law (August 2001) in an effort to "promote the distribution of products through existing channels such as multinationals retailers and joint venture agreements."[31] This law raises the tax credit from 10% to 25% when buying products which are manufactured in Puerto Rico.[32]

Contrary to CARICOM its average tariff rate is much lower, most of the imported products enter duty free and have few non-tariff barriers. The effective duty rate obtained as a percentage of the customs value declined from 3.3% to 1.6% between 1992 and 2001. At the same time the percentage value of merchandise that enters duty free increased from 30% to 67% in the same period.[33] Puerto Rico does however impose an excise tax of 6% on all national and imported products. Puerto Rico has few import restrictions and these, which include annual quotas, restrictions resulting from dumping and export subsidies and unfair import practices, are determined at the federal level. Non tariff barriers refer mainly to labelling requirements, federal agricultural regulations, and other standard regulations. It is to be noted also that since 1988, the office of the United States trade representative has the authority to establish whether a trade practice is an obtacle to trade and to indentify unfair trading practices that can harm the export interests of the United States.

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[28] Puerto Rico has four tax free trade zones with period of exemptions ranging from 10 to 25 years.
[29] The lwa levies a 7% flat corporate tax.
[30] See, Commerce in Puerto Rico. EIU. 2003.
[31] Promoexport and the internationalization of Puerto Rico's Producers. Promoexport. Memo. 2003.
[32] See, Ley Num 110. (2001) in Nuevas Leyes para Promover el Desarrollo Economico de Puerto Rico. San Juan, Puerto Rico (2002).
[33] See, Stewart, 2003, Table 4.

3.4 Selected competitiveness indicators

To complement the above analysis this section presents an overview of the competitiveness of Puerto Rico and CARICOM Caribbean economies. The following analysis considered the exchange rate, operating costs, and transport cost indicators.

3.4.1 Operating costs

Operating costs include not only overhead costs (i.e., costs not related to the production of a specific good, such as electricity and water) but also the price of fuel, vehicle rental, leasing and rental of a warehouse, taxes, wages and interest rates.[34] They refer to the most immediate costs and constitute an important part of total costs. Their level influences, along with other factors such as financial costs, the decision to invest in a particular country or geographical location. As such they also reflect the potential for economic integration or readiness to participate in a free trade agreement. As shown in Table 38 below Puerto Rico has in general a better competitiveness profile that the average Caribbean or, for that matter, Central American country.

[34] The financial system is an important determinant of a country's degree of competitiveness and growth since it serves as an intermediary between surplus and deficits units. High interest rates and banking spreads may not only distort the main function of the financial system as an intermediary but may also distort and undermine the saving potential of an economy and result in a misallocation of funds to risky short term investment projects.

Table 38
Operating Costs 2000-2002

Concept		Costs (Selected Countries)									
		BB	BEL	GRE	JA	GY	TT	St.L	CR	ELS	Puerto Rico
Electricity	Average household rate	15.28	19.0	19.26	13.59	6.13	2.76	14.96	5.11	8.19	12.31
	Commercial rate	16.17	16.0	20.37	12.13	9.33	3.04	14.96	8.07	10.70	
	Industrial rate	16.04	16.04	16.30	10.63	8.20	2.33	14.96	6.67	11.10	10.9
Fuel	Premium	2.99	2.67	2.03	2.28	1.47	1.49	2.34	2.41	2.03	1.7
	Diesel	2.34	1.87	1.54	1.81	1.35	0.78	2.34	1.65	1.13	1.6
Vehicle rental		---	85	152	---	---	96.3	75	51	32	35
Telephone	Cost of installation	---	145	---	---	---	---	---	53.69	---	
	Cost per unit	---	1	---	---	---	---	---	---	---	
	Monthly rental	---	10	---	---	---	---	---	6.18	12.11	
Water	Average rate	---	4.50	---	---	---	---	---	15.28	4.04	6.5
Tariff range		Ph. IV	Ph. IV	Ph. IV	Ph. IV	Ph. IV	Ph. IV	Ph. IV	0-15	0-15	14-0.02
Sales or VAT Tax Rate		---	8%	---	---	---	---	---	13%	13%	6
Minimum daily wage		---	10.0	---	---	---	---	---	7.95	4.80	5.2
Real interest rate (lending)		7.7	17.7	10.3	19.8	8.9	13.2	4.8	14.3	14.9	
Real rate of interest (deposit)		2.6	9.4	5.0	7.1	1.5	4.9	3.7	3.9	10.2	
Spread of nominal interest rates		5.1	8.2	5.3	13.5	8.0	8.5	1.3	11.4	4.7	

Note: BB= Barbados; BEL= Belice; GE= Grenada; JA= Jamaica; GY= Guyana; TT= Trinidad; St.L= Saint Lucia; CR= Costa Rica; ELS= El Salvador; GUA= Guatemala; HO = Honduras; AVG= Average. Ph. IV indicates completion of the implementation of Phase IV of the reduction of the Common External Tariff. In phase IV the tariff rate structure ranges from 0%-5% to a maximum of 20% with the exception of primary agricultural products, which maintain a 40% tariff rate. Fuel prices are expressed in United States dollars per gallon and electricity rates in US cents per kWh. Vehicle rental rate is the one-day rental rate for a sedan expressed in dollars. Taxes are included in the rental rate. Telephone and waters (between 10 and 15 cubic meters) are also expressed in dollars.
Source: Beltrade; OLADE; SIECA, CARICOM Secretariat.

3.4.2 Transport costs

A characteristic feature of small economies and States are high transport costs. These result from the distance between the countries in question and the main export markets as well as to their main suppliers of inputs. Additional factors that explain the high transport costs are constrained cargo capacity, which is reflected in small cargo units. High transports costs increase overall export costs, which, other things being equal, result in lower export volumes.

A suggested way to measure transport cost is to compute the ratio of freight and insurance that appears on the debit side of the balance of payments for each of the countries considered divided by the value of import merchandise. In this case, the freight and insurance components were approximated by the ratio of the difference between c.i.f. and f.o.b. merchandise imports to c.i.f. merchandise imports.[35] In consonance with the previous analysis Puerto Rico has lower than Caribbean average transport costs.

Table 39
Transport Costs for selected countries.
Percentages
1990-1999

Country	1980	1985	1990	1995	1999
Bahamas	27.5	53.7	2.9	6.9	------
Barbados	7.8	7.4	10.8	10.3	10.8
Belize	n.a.	11.2	10.8	10.3	11.8
Grenada	2.8	5.3	0.0	3.2	n.a.
St. Lucia	12.9	9.1	11.9	12.0	n.a.
St. Vincent and the Grenadines	9.1	10.0	11.5	12.1	n.a.
St. Kitts and Nevis	n.a.	n.a.	n.a.	n.a.	n.a.
Jamaica	11.4	9.2	12.7	7.2	3.4
Guyana	6.0	6.3	n.a.	n.a.	n.a.
Trinidad and Tobago	12.0	11.2	14.5	n.a.	n.a.
Costa Rica	10.7	8.9	9.7	5.7	7.0.
El Salvador	9.0	6.9	n.a.	n.a.	n.a.
Puerto Rico			5.2	5.1	4.4 3.9b/

Source: BADEPAG and IMF Financial Statistics Yearbook (2000), Puerto Rico Planning Board (2002).
For Barbados, Jamaica, and Costa Rica the last year for which data is available is 1998.
b/2001

[35] See Stewart (2003) for a critique of this methodology.

Table 40
Real effective exchange rates for Caribbean countries
1980 - 2000

	Antigua and Barbuda	Dominica	Grenada	St. Kitts and Nevis	St. Lucia	St. Vincent and the Grenadines	Barbados	Belize	Guyana	Jamaica	Trinidad and Tobago
1980	104.2	90.9	91.7	109.8	101.7	101	65.9	96.9	192.3	76.4	170.3
1981	109.1	98.2	106.1	113.4	111.69	106.8	69.3	105.5	208.0	73.9	180.6
1982	110.6	101.5	112.6	116.4	114.5	110.6	69.4	111.7	235.6	70.9	191.8
1983	111.6	108	118.7	117.7	116.3	114.6	58.3	117.7	276.3	69.8	199.1
1984	115.5	116.9	126.6	120	121.8	116.4	57.4	122.3	281.9	114.1	211.7
1985	114	120.2	126.7	119.5	120.3	115.3	56.8	129.8	291.2	127.2	215.2
1986	106.4	111.5	118	115.4	113.1	113.4	67.7	116.1	276.2	105.9	141.7
1987	102.1	107.2	106.1	108.3	110.9	108.2	86.6	107.7	142.2	102.1	122.3
1988	101.6	100.8	103.1	101.3	103.9	101.6	93.4	106.4	179.2	98.1	110.4
1989	102.6	105	107.7	103.6	105.8	102.5	80.8	104.9	141.6	94.3	102.5
1990	100	100	100	100	100	100	100.0	100.0	100.0	100.0	100.0
1991	101.8	101.7	99.2	99.6	102.2	102.2	95.2	100.1	86.2	118.7	100.9
1992	100.4	102.6	98.3	98.3	102.9	100.7	111.1	98.8	95.5	120.6	101.7
1993	106.6	105.6	103.8	101.1	106.9	107.7	89.6	106.6	104.6	111.9	85.7
1994	106.8	101.8	103.7	99.9	106.3	104.8	94.3	102.3	104.4	109.0	75.0
1995	103.5	95.9	100.2	97.7	105.1	99.7	96.7	92.4	104.6	100.3	72.7
1996	105.1	97.2	101.4	98.4	105.6	103.9	90.4	97.3	113.0	84.6	74.1
1997	109	102.6	104.2	107	108.1	107.6	93.3	100.3	119.0	74.1	74.4
1998	111.2	107.6	105.3	109.9	111.1	111.4	89.5	100.0	119.8	68.5	78.0
1999	113.6	106.6	105.8	112.7	116.7	110.9	82.0	97.6	108.6	70.0	80.1
2000	.....	.....	.....	.....	.....	.....	70.7	99.0	114.4	75.4	83.9

Source: IMF financial statistics and on the basis of official data.

3.4.3 Real exchange rates

For CARICOM Caribbean countries the behavior of real exchange rates has been characterized by a tendency to appreciate. Table 40 shows the real effective exchange rate for Caribbean countries. The real effective exchange rate equals the nominal geometric weighted average of a country's exchange rate with its main trading partners corrected for price movements. An increase in the real effective exchange rate signals an appreciation while a decline signifies a depreciation. With the exception of Guyana and Trinidad and Tobago, all countries included in Table 40 have registered an appreciation in their currency with respect to their main trading partners. Barbados, followed by Dominica, Grenada and Saint Lucia have recorded the largest appreciation in the past two decades (24%, 17%, 15% and 15%). The appreciation of the exchange rate is an obstacle to improving export performance and ultimately strengthen integration ties with Puerto Rico.

CONCLUSIONS

The trade flows between Puerto Rico and CARICOM Caribbean economies are not significant. They also tend to be concentrated in their direction and in their composition.

In particular there is a marked concentration in the composition of Puerto Rico's imports from Caribbean countries in relation to its exports. Puerto Rico also has a balance of trade deficit with Caribbean countries that is explained mainly by the imports of petroleum products.

The typology of Puerto Rican export products and the constancy of its components over time reveal little change in the overall dynamics of trade with CARICOM Caribbean countries. Products that contributed in the 1980s and the early 1990s to enrich the trade patterns of both economies (such as textiles and food products) have slowly receded or simply ceased to be part of their trade. In terms of firms, the most important ones are those of foreign capital, since local enterprises contribute little to exports.

On the import side Trinidad and Tobago is the major trading partner followed by St. Kitts and Nevis. From the point of view of Puerto Rico's exports, the major trading partners are Trinidad and Tobago, the Bahamas, Jamaica and Barbados. The composition of products is weighted towards petroleum products, pharmaceuticals and electrical machinery. Jamaica and, to a lesser extent, Barbados are exceptions to this rule at least from the export side. In the case of Jamaica, the relative 'trade diversity' responds partly to the structure of its economy combining the features of resource-based economies with those of a service-based economy.

The small size of CARICOM Caribbean economies and their trading regime which imposes higher tariffs to imported goods relative to those of Puerto Rico combined with the latter's lack of autonomy have constrained, to some extent, the development of trade. However, the diversity of these economies and their structural transformation into resource and service-based economies point to the possibility of developing a trading relationship in dynamic and value added sectors that could spur, if not aggregate, the development of these economies' small and medium sized firms.

In fact when viewed from this perspective, the trade flows between Trinidad and Tobago and Puerto Rico provide an example of this trade orientation. In terms of commodities the authorities and the private sector have expressed interest in continuing to develop trade based on food products which for the most part do not have tariff barriers and in which Puerto Rico, through one of its main providers, is well established in the international market. Construction materials is another product that has attracted interest and could constitute a focus of export efforts.

Besides resource-based economies, Puerto Rico needs to explore, in an effort combining the public and the private sectors, the possibilities of developing trade in services. Puerto Rico has a solid human capital in diverse areas such as design, environment, transport and finance. In fact, trading in these areas would complement the development and expansion of tourism based activities in the Caribbean, the regional efforts at creating a capital market and would perhaps constitute an alternative to off-shore banking.

The potential for trade exists in a series of productive activities. It needs to be materialised through existing mechanism for institutional coordination and policy actions. Some of these would be to design and provide an enhanced and wide information system for exporters including not only data and trade indicators (some of which have been used in this paper) but also detailed steps "on how to export." In the same vein the efforts at developing further a centralised export institution such as the existing Promo export in Puerto Rico are fundamental as the experience of countries such as Chile, Costa Rica and Mexico illustrate. A centralised and strong promotion agency not only creates export awareness but has also played a crucial role in outlining, guiding and implementing a coherent stakeholders' policy. In promoting a trade policy it is important to link domestic firms to the export promotion efforts. Finally, part of the difficulty of policy implementing is to create the mechanisms to avoid excessive gains and losses when there are important changes in the orientation of economic policy.

Table 41
Puerto Rico
Economic indicators
Decade averages
1950-2000

	GNP Growth %	Inflation %	Mean family income Constant prices in USD	Net income from tourism Mill. Of USD	Employ -ment Ooo''	Productivity In USD	Population 000	SalesWorld Constant prices	Purchase World Constant prices	GNP-GDP Gap	USA GDP growth
1950-1960	5.5	2.8	2076.7	8.1	562.6	1841.9	2224.4	509.5	667.5	-5.0	3.7
1960-1970	7.1	3.5	3180.3	49.6	598.8	3343.3	2471.4	1045.3	1562.7	4.4	4.7
1970-1980	5.3	6.3	5060.5	127.4	710.2	5177.9	2855.1	1922.6	3247.1	16.8	3.2
1980-1990	2.1	4.8	5080.1	259.4	792.9	6484.6	3289.9	3152.6	4901.4	36.1	3.0
1990-2000	2.8	3.1	6468.7	502.4	1052.5	7549.6	3618.9	4850.3	8375.4	47.8	3.1
2001	1.7	5.3	7810.0	663.1	1158.0	8991.0	3834.0	6474.9	11596.8	53.6	4.1

Source: Office of the Governor. Planning Board and NIPA accounts.
The base year for national accounts in Puerto Rico is 1954.

Table 42
Puerto Rico: Import Share by Country. Ranked by 2002
1989 - 2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Average
Trinidad and Tobago	10.52	8.58	8.18	9.18	67.36	80.07	57.09	73.02	68.51	77.65	82.53	86.36	86.41	82.10	56.97
St. Kitts and Nevis	2.71	2.40	1.64	1.23	0.75	7.53	7.43	6.37	7.77	12.18	8.25	8.10	5.13	6.40	5.56
Bahamas	73.85	78.34	83.13	87.19	19.71	4.02	22.64	13.21	18.69	0.16	4.38	2.80	0.85	6.00	29.64
St. Vincent and the Grenadines	0.05	0.04	0.04	0.04	1.03	0.11	0.00	0.00	0.00	0.00	0.01	0.01	5.57	3.80	0.77
Jamaica	0.81	0.66	0.38	0.94	4.89	3.60	5.26	2.85	1.93	5.14	1.70	0.51	0.70	0.54	2.14
Haiti	10.56	9.16	5.77	0.55	2.29	0.40	0.73	0.26	0.42	0.50	0.43	0.45	0.22	0.30	2.29
Belize	0.00	0.00	0.01	0.00	0.05	0.13	1.99	2.25	1.16	2.13	1.82	0.60	0.41	0.30	0.77
Guyana	0.03	0.00	0.15	0.07	0.37	0.88	2.88	0.42	0.18	0.99	0.20	0.54	0.38	0.23	0.52
Dominica	0.19	0.16	0.26	0.26	1.28	1.70	0.92	0.75	0.91	0.97	0.39	0.50	0.19	0.14	0.61
Barbados	1.26	0.51	0.30	0.03	0.26	0.14	0.19	0.63	0.35	0.10	0.22	0.10	0.10	0.12	0.31
British Virgin Islands	0.00	0.03	0.01	0.02	0.12	0.84	0.61	0.12	0.02	0.09	0.04	0.02	0.01	0.02	0.14
St. Lucia	0.00	0.03	0.00	0.01	0.02	0.02	0.20	0.02	0.03	0.01	0.02	0.00	0.01	0.02	0.03
Grenada	0.00	0.00	0.12	0.42	1.67	0.06	0.04	0.10	0.01	0.01	0.01	0.01	0.00	0.01	0.17
Antigua and Barbuda	0.01	0.10	0.02	0.05	0.20	0.51	0.01	0.01	0.01	0.06	0.01	0.00	0.02	0.01	0.07
Anguilla	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Suriname	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 43
Puerto Rico: Export Share by Country. Ranked by 2002
1989 - 2002

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Average
Bahamas	0.08	9.16	0.61	0.03	0.54	0.20	1.50	1.69	3.69	7.43	8.18	7.12	4.81	21.29	4.74
Trinidad and Tobago	24.49	22.73	28.27	31.88	27.44	28.02	25.99	22.33	14.17	20.52	21.01	17.56	20.46	15.86	22.91
Jamaica	17.55	18.21	15.82	21.77	22.79	2.55	4.30	5.32	7.68	15.40	18.61	18.81	18.97	15.53	14.52
Barbados	6.72	6.67	10.11	11.95	11.64	13.93	15.32	25.37	21.20	12.52	12.61	11.91	18.80	14.85	13.83
British Virgin Islands	4.35	4.15	4.82	4.08	4.72	6.50	6.27	8.41	11.31	11.14	12.12	15.81	11.34	8.41	8.10
Haiti	23.11	17.24	13.68	1.24	1.73	12.35	12.94	9.09	12.05	9.14	8.33	7.42	4.94	7.21	10.03
St. Lucia	2.81	2.63	4.11	3.91	8.30	8.42	7.66	5.23	3.80	2.77	3.27	3.78	3.93	4.74	4.67
St. Kitts and Nevis	6.11	5.49	4.98	5.27	4.72	7.70	5.39	4.79	4.65	2.05	3.11	3.44	3.65	3.36	4.62
Anguilla	1.15	1.57	1.05	1.00	1.17	1.27	1.44	1.59	3.05	3.12	2.61	2.66	2.14	1.73	1.83
Dominica	5.43	2.76	5.10	5.52	5.00	3.85	3.51	1.58	4.39	6.08	1.62	5.88	2.53	1.71	3.93
Antigua and Barbuda	4.84	4.55	5.81	6.97	6.21	8.11	9.64	9.74	8.75	3.48	4.65	2.88	3.19	1.61	5.75
Grenada	1.60	2.55	2.62	2.49	2.30	3.07	1.89	0.33	0.55	0.80	0.60	0.43	1.74	1.26	1.59
Suriname	0.28	0.32	0.16	0.75	1.11	1.03	1.45	2.42	3.01	3.17	1.64	0.68	0.88	0.72	1.26
Belize	0.15	0.13	0.32	0.43	0.48	0.54	0.23	0.33	0.40	0.66	0.51	0.55	0.68	0.64	0.43
Guyana	0.01	0.02	0.02	0.10	0.31	0.26	0.55	0.15	0.54	1.05	0.49	0.45	0.61	0.60	0.37
St. Vincent and the Grenadines	1.34	1.82	2.50	2.61	1.54	2.19	1.93	1.62	0.77	0.66	0.65	0.61	1.31	0.47	1.43

Table 44
Export minus imports

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Anguilla	2,685.0	3,824.5	2,228.4	1,680.9	1,873.7	1,789.3	2,077.3	1,975.8	2,659.1	2,251.4	2,050.6	2,401.4	2,143.1	2,077.9
Antigua and Barbuda	11,330.7	10,659.6	12,226.3	11,610.0	9,738.1	10,771.6	13,922.5	12,090.9	7,603.7	2,439.4	3,621.6	2,596.3	3,152.3	1,910.6
Bahamas	-271,838.7	-296,450.5	-313,180.4	-341,877.4	-17,652.9	-5,044.6	-31,720.7	-23,688.1	-29,550.2	5,168.6	-1,500.7	860.7	2,072.2	6,459.9
Barbados	11,152.4	14,130.5	20,263.8	20,083.6	18,358.2	19,460.1	21,876.0	30,294.6	17,880.9	8,909.3	9,492.2	10,567.2	18,596.8	17,409.6
Belize	343.0	323.0	658.2	723.1	718.9	597.1	-2,639.0	-3,980.4	-1,686.4	-1,881.2	-2,890.7	-692.6	-636.5	-175.5
British Virgin Islands	10,209.0	9,978.9	10,155.1	6,796.1	7,420.4	8,059.8	8,152.5	10,213.4	9,824.2	7,925.2	9,443.1	14,250.2	11,394.1	10,019.8
Dominica	12,070.4	6,045.1	9,824.1	8,306.3	6,783.7	3,192.0	3,713.4	488.2	2,241.8	3,309.4	575.7	4,321.6	1,938.6	1,597.7
Grenada	3,750.2	6,200.8	5,089.9	2,575.0	2,098.9	4,252.8	2,680.3	216.4	466.0	566.4	455.7	375.5	1,756.9	1,476.0
Guyana	-82.2	50.8	-552.8	-125.9	147.5	-784.4	-3,524.5	-621.6	152.2	-334.9	28.5	-670.4	-615.5	-27.9
Haiti	15,430.9	4,676.4	7,137.4	-55.0	615.3	16,884.4	17,627.9	10,795.7	9,772.8	6,034.9	5,751.9	5,802.4	4,257.6	7,678.1
Jamaica	38,281.6	41,571.5	32,021.7	33,089.7	31,821.5	-1,171.4	-1,659.7	1,051.3	3,322.4	5,421.9	11,527.9	15,972.0	16,831.2	16,911.8
St. Kitts and Nevis	4,367.6	3,601.2	4,328.6	4,068.5	6,848.2	903.0	-3,332.1	-6,478.9	-9,564.1	-11,966.1	-12,469.1	-12,990.9	-13,010.8	-16,297.6
St. Lucia	6,594.4	6,283.5	8,691.6	6,561.4	13,237.6	11,848.0	10,768.5	6,467.2	3,262.5	1,990.5	2,534.7	3,416.7	3,931.3	5,632.9
St. Vincent & the Gren.	2,949.6	4,243.1	5,147.4	4,250.3	1,485.9	2,940.6	2,790.2	2,016.9	669.5	475.1	483.6	528.6	-16,806.3	-11,520.7
Suriname	648.1	778.4	346.9	1,274.4	1,771.5	1,454.4	2,096.0	3,007.7	2,624.0	2,285.5	1,288.9	612.3	887.7	868.9
Trinidad and Tobago	18,839.4	20,367.1	28,862.9	17,885.4	-19,447.7	-66,347.4	-47,869.1	-114,772.9	-107,719.7	-70,951.6	-132,706.4	-155,873.6	-260,593.3	-241,818.1
Totals	-133,268.6	-163,716.0	-166,751.1	-223,153.8	65,818.8	8,805.3	-5,040.4	-70,923.6	-88,041.2	-38,356.2	-102,312.5	-108,522.5	-224,700.6	-197,796.5

Table 45
Direction of trade. CARICOM. Imports by origin
1985-2000

Regional Block	1985	1990	1995	2000
	CARICOM			
NAFTA	47.4	48.1	50.1	45.2
Western Europe	18.8	17.4	16.6	13.1
CARICOM	7.7	7.9	9.1	11.0
Andean Community	5.9	6.7	6.2	10.6
Mercosur	2.3	3.9	2.4	2.4
CACM	1.1	0.7	0.8	1.2

Source: Competitive Analysis of Nations (2002)

Table 46
Caribbean countries exports under the Caribbean Basin Initiative as a percentage of the total exported to the United States 1989 – 2000

Country	1989	1992	1995	1997	2000	Average
Antigua and Barbuda	19	6.1	54.6	10.6	0.2	14.5
Barbados	29.2	71.0	33.9	59.3	27.6	39.1
Belize	33.5	40.5	32.6	45.7	38.1	32.6
Dominica	12.2	30.2	41.8	27.4	5.3	33.3
Grenada	28.0	15.4	14.9	60.9	61.1	33.4
Guyana	4.6	1.1	15.2	23.3	12.0	10.7
Jamaica	17.8	15.2	28.3	29.3	40.5	26.1
St. Kitts and Nevis	36.3	47.7	27.9	82.5	75.0	48.9
St. Lucia	1.3	2.7	4.7	2.9	14.8	6.2
St. Vincent and the Grenadines	51.4	3.6	32.4	54.7	22.0	35.5
Trinidad and Tobago	2.4	2.3	7.1	14.1	12.5	7.3

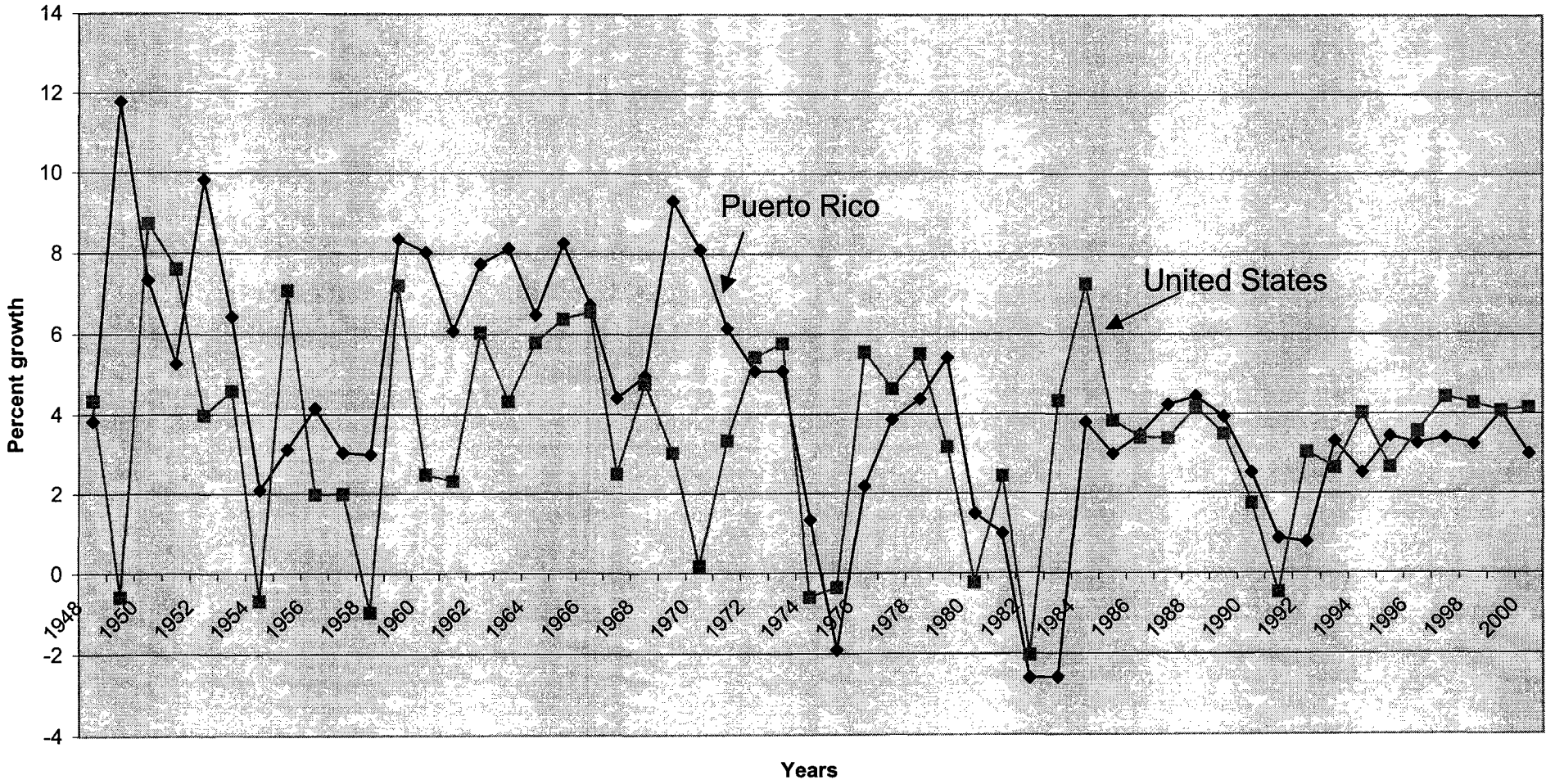
Note: ... denotes not available at the time of these estimated were computed.
Source: Based on United States Trade Representative data for 1989 to 2000.

Table 47
Puerto Rico
Tourist Registrations by Caribbean countries
2001-2002

	Registrations		Market Share		Caribbean Market Share	
	2002	2001	2002	2001	2002	2001
Anguilla	1068	737	7.2	5	11.6	10.0
Antigua and Barbuda	1185	886	7.9	6	12.8	12.1
Bahamas	114	139	0.8	0.9	1.2	1.9
Barbados	1463	1191	9.8	8.1	15.8	16.2
British Virgin Islands	1728	1767	12.5	11.1	18.7	24.1
Dominica	347	275	2.3	1.9	3.8	3.7
Grenada	75	83	0.5	0.6	0.8	1.1
Haiti	47	47	0.3	0.3	0.5	0.6
Jamaica	1764	1209	11.8	8.2	19.1	16.5
St. Kitts and Nevis	1007	631	6.7	4.3	10.9	8.6
St. Lucia	171	212	1.1	1.4	1.9	2.9
St. Vincent and the Grenadines	14	110	0.9	0.7	0.2	1.5
Trinidad and Tobago	252	57	2.1	1.7	2.7	0.8
Total	9235	7344			100.0	100

Source: Puerto Rico Tourism Company

Figure 8
Output growth in the United States and Puerto Rico
1948-2000



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