CARIFORUM-EU ECONOMIC PARTNERSHIP AGREEMENT: THE WELFARE IMPACT AND IMPLICATIONS FOR POLICY IN TRINIDAD AND TOBAGO

ROGER HOSEIN

ABSTRACT

This paper assesses the welfare impact of the proposed Regional Economic Partnership Agreement (REPA) between the European Union (EU) and CARIFORUM economies. The study illustrates the potential advantages and disadvantages of forming a REPA for CARIFORUM. The paper estimates the welfare effects of the REPA using the partial equilibrium framework developed by Greenaway and Milner in 2003. The results show a decline in the welfare loss of the Trinidad and Tobago economy between 1998 and 2005. The paper then outlines a variety of policy suggestions that the Trinidad and Tobago economy can implement to benefit even more from the formation of a REPA.

Keywords: CARIFORUM, European Union, Regional Economic Partnership Agreement, Partial Equilibrium Analysis.

1.0 Introduction

Small states are characterized by a number of attributes that make them different and more vulnerable than other economies. These vulnerabilities arise out of the partial inability of these economies to respond to changes in their environment. This situation may be the direct result of structural rigidities characteristic of the institutional base or the resource endowment of these economies. In addition to internal factors, small states are also vulnerable to external factors, such as their contractual commitments to bilateral, regional and multilateral agreements. One such multilateral arrangement to which Caribbean economies subscribed was the series of Lome conventions. The Lome convention represented the long-standing preferential agreement between the European Union (EU) and over 70 African, Caribbean and Pacific (ACP) states.[1]

Under the respective Lome conventions, the EU offered non-reciprocating preferences to the ACP bloc of economies; however, these preferences were not offered to all developing countries nor were they restricted to only least developed economies. In 1996, the EU started discussions with these economies in order to set the premises of trade beyond the Lome. These negotiations were concluded in 1998, the ambits of which were fully represented in the establishment of the Cotonou Agreement, which came on stream in June 2000. The Cotonou Agreement fully encompassed the pillars of the previous Lome conventions, but amended the revision by including the obligation for trade reciprocity. In addition to this, the Cotonou Agreement provided a framework within which trade would occur: Regional Economic Partnership Agreements. The negotiations on these Regional Economic Partnership Agreements (REPAs) are to be fully implemented by the end of March 2008.

This paper investigates the impact of a proposed REPA between the EU and CARIFORUM (CARICOM and Dominican Republic) on the

[1] Although the first Lome Convention was signed in 1975, trade agreements with the African continent started as early as 1963 with the Yaounde 1 Convention.

welfare of the Trinidad and Tobago (T&T) economy. The rest of this paper proceeds as follows. Section 2 assesses the status of EU-ACP trade and Section 3 discusses the economic benefits of regional integration agreements. Section 4 then reviews some of the relevant theoretical material on the economics of regional integration arrangements involving large and small trading partners, as well as some empirical evidence on the economic impact of Regional Trading Agreements (RTAs) while Section 5 provides an overview of the T&T trade sector. Section 6 then evaluates the welfare effects for the T&T economy of being part of an EPA between the CARIFORUM and the EU. Finally, Section 7 provides some policy directives for the T&T economy, given the empirical results.

2.0 ACP-EU Trading Relations

Each of the Lome conventions had different focal areas. Table 1 below provides a snapshot summary of these conventions.

Table 1: Convention between the EEC/EU and the AASM/ACP

Year	Convention
1963	Yaoundé I: Agreement between the EEC and 18 former francophone African colonies, providing the colonies with commercial advantages and financial aid.
1969	Yaoundé II: Renewal of Yaoundé I, including Kenya, Tanzania and Uganda, introducing preferential trade arrangements for developing countries and access to raw materials for the EEC.
1975	Lome I: Convention included preferential trade agreements on most ACP products, each individual state having the right to decide on its policies, a cooperation system ensuring the security of relations, impartiality, respect for sovereignty, common interests and interdependence existing and the STABEX system for stabilization of agricultural export earnings as well as direct development aid.

Table 1 (Continued)

Year	Convention
1979	Lome II: SYSMIN system providing stabilization aid to mining industries in ACP countries.
1984	Lome III: Attention shifts from industrial development towards food security and self-reliance.
1990	Lome IV: Focus on structural adjustment and crosscutting themes such as the encouragement of democracy, good governance, human rights; fortifying women's' roles; environmental safety; intensified regional cooperation and a greater role of the private sector in response to debt crises and famines.
1995	Lome IVrev: Underlining the importance of human rights, democracy and good governance, as well as regional cooperation. Decentralized cooperation via participatory partnerships was also fostered, with the inclusion of an assortment of civil society actors.
2000	Cotonou: Removal of most tariffs on imports from ACP group with sugar, beef and veal to be covered by proposed REPAs, and a new tariff only banana regime, to be phased in. Shift towards participatory development paradigm.
2001	EBA: Immediate removal of all tariffs on all imports from LDCs except arms, with 3-stage removal of tariff and quotas on sugar, rice and bananas.

Source: Bjornskov and Krivonos (2001), European Commission (2001a; 2001b).

In 1995, the World Trade Organization (WTO) was formed providing a platform for the EU to enter into negotiations for the formation of a new signature agreement with the ACP economies. These negotiations matured into the Cotonou Agreement. The Cotonou Agreement is a development cooperation agreement which encompasses a series of formal arrangements outlining political cooperation and preferential trade agreements between the EU and the ACP group.

The EU proposes to achieve these objectives by using Economic Partnership Agreements with six blocs of the ACP group. The relevant EPA for the Caribbean is called CARIFORUM. CARIFORUM

comprises 15 sovereign nations including Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Lucia, St. Vincent and the Grenadines, St. Kitts and Nevis, Suriname and Trinidad and Tobago. The negotiation process for CARIFORUM began in April 2004, in Jamaica.

3.0 Static and Dynamic Benefits of Regionalism with Reference to REPAs

There are many different levels of economic integration, requiring different amounts of compromises concerning the level of national sovereignty engaged by each country. The literature usually categorizes these differing types of economic integration arrangements into four principal groups; these are the free trade area, the customs union, the common market and the economic union. With the free trade area, intra-regional barriers to trade are removed, but each member state maintains its own commercial policies with extra-regional players. A customs union is essentially a free trade area with a common external tariff imposed on all extra-regional trade partners. The common market builds on the customs union and involves the attachment that there is the free intra-regional movement of factors of production. An economic union takes the customs union one step ahead as it requires that the membership carry out a common block of monetary and fiscal policies.[2]

In terms of the static benefits of RTAs, Viner (1950), in a classic article emphasizing the theory of second best, illustrated that a move to free trade with only a subset of trading nations can lead to member countries diverting their trade from lower cost extra-regional members to higher cost intra-regional members.[3] There are, however, a number of weaknesses in the propositions of Viner. One of the more significant of

[3] The CARICOM Single Market came into being in 2006.

[3] Krugman (1991) has suggested that with the enlargement of the EU an effect of this nature resulted. In particular, Krugman pointed out that with the enlargement of the EU bloc, countries from Southern Europe switched their purchases of grain from lower cost producers outside Europe towards higher cost producers within Europe.

these weaknesses is linked to the distributional effects of an RTA. Some key researchers, including Bhagwati et al. (1998), have emphasized that in order to properly determine the influence of an RTA on a country's welfare, the revenue flows that follow the RTA need to be determined. These researchers have argued that with the abolition of tariffs, there is the loss of revenues by some member states and these can potentially outweigh all the net trade creation gains posted by the RTA and, in so doing, precipitate an overall loss in welfare.

RTAs can also lead to changes in the terms-of-trade. Specifically, if in the presence of an RTA, the tariff is eliminated on intra-regional players but maintained on extra-regional players then member states will consume more from their trading partners than they would from extra-regional states. In this type of environment, member states may substitute away from their home country goods towards the goods from other member states. There would also be a process of substitution away from goods in the extra-regional market. The net effect is not clear-cut, as the demand in the home country may have decreased, but the demand in other member states has improved, and provided that goods are reasonable substitutes for one another, then the demand for goods from third parties would have fallen. Provided that the price of goods from these third parties falls strongly enough, then this will lead to a favourable terms of trade effect for the members of the RTA. This type of "beggar thy neighbour" strategy tends to make RTAs an attractive proposition despite trade diversion. Obviously, this argument is more compelling for small economies to join an RTA relative to large countries, as small countries generally have fewer choices (Viner 1950).

RTAs also allow firms to benefit from economies of scale (Balassa, 1961). Market size as an influencing factor in determining economies of scale obviously hinges on the nature of the industry at hand, as some industries realize economies of scale with low levels of output (Silberston 1972).

Integration also exposes member states to an increased degree of competition. This in turn leads to an improvement in factor productivity (El Agraa 1988). The competition benefits that an integration process

offers is even more beneficial if the trade liberalization episode within the RTA leads to the break up of imperfectly competitive market structures. If an imperfectly competitive market structure is replaced by a greater degree of competition, then such economies would realize both a reduction in prices and an increase in output.

The rest of this section comments on REPAs as a specific form of RTAs, although most of the comments made in this regard are applicable to RTAs in general. Since the REPA will be legally binding as compared to unilateral trade liberalization, it can place the membership of CARIFORUM on a more precise pathway towards liberalization. Even if governments change their perception towards free trade, it could make it more difficult for them to reverse liberalization, that is, the REPAs will provide some amount of "lock in" to CARIFORUM economies to keep them on a pathway of liberalization (Bergsten 1997).

Trade creation will involve the reorganization of production within the REPA, with the possibility that an EU firm may choose to invest in the CARIFORUM sphere because of locational advantages. These firms can produce for export to the EU and non-EU rest of the world. In the literature this type of investment is referred to as investment diversion (Umemoto 2004). Stevens and Lipsey (1992) have observed that the size of these dynamic gains in investment will hinge on the extent of actual free trade between the REPA partners and the ease and cost of transporting goods between member states. If foreign direct investment (FDI) is targeted at the export market it will depend on the cost of producing in CARIFORUM as well as the rules and standards related to other export markets.

When RTAs amongst large trading economies are formed, it can lead to tariff jumping FDI. Specifically, if with an RTA the average level of protection increases, then this in turn may prompt extra-regional firms to invest within the RTA to avoid the tariff.

From a dynamic perspective, the formation of a REPA, on account of some of the beneficial effects mentioned previously, may lead to economic growth. As a consequence, this may enhance the attractiveness

of the REPA membership to investors, both foreign and domestic (Emerson et al. 1989; Baldwin 1989).[4]

It is even possible that with regional integration, firms may seek strategic alliances in an attempt to create a leaner firm to subsist in the more competitive intra-RTA market.

Schiff and Wang (2003), in an empirical study examining the impact of NAFTA on the relationship between RTAs and technological diffusion, found that Mexico's trade with its NAFTA partners had a very large and favourable impact on Mexico's total factor productivity, whilst trade by Mexico with the OECD economies did not. Schiff and Wang attributed this to both a superior R&D trading relationship and also to the benefits from greater contact and better information exchange with its NAFTA partners, especially in the case of those Mexican firms that were subcontracted. Schiff and Wang also simulated the impact of NAFTA on Mexico and found a permanent increase of 5.5% to 7.5% in total factor productivity in Mexico's manufacturing sector.

Apart from the traditional aspects of RTAs discussed previously, several non-traditional areas of gain can be cited. For example, an important way in which an RTA may offer non-traditional benefits to an economy is by allowing the country to follow a set of policies that would improve its welfare, but which, in the absence of an RTA will be time inconsistent (Fernandez 1996). The argument here is that by virtue of being part of an RTA, a government may be confined to operate within certain parameters and this in turn can help improve the credibility of government policy making. In the context of international trade, the time inconsistency problem may exist if a government surprises the macroeconomy when all of its first best policy options are not at its disposal. It is also possible that a small economy may enter an RTA to benefit from an enhancement of its bargaining power.

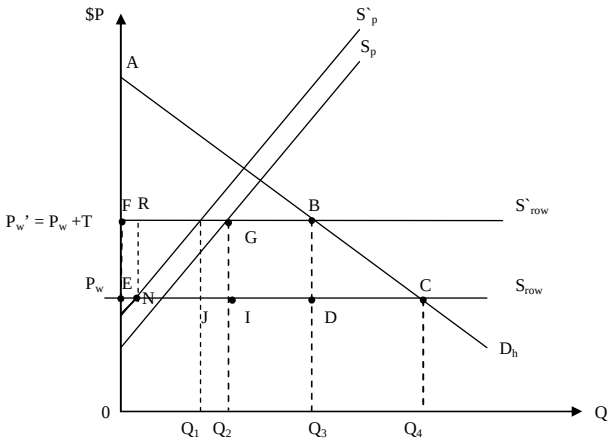
[4] Note that growth itself can also be sparked by FDI. Lewis (1949, 1954) argues that FDI offers small developing Caribbean economies four key advantages; these are: access to technology, access to entrepreneurial technology, access to finance and access to foreign markets.

4.0 Differential Trade Benefits of Small and Large Trading Partners

At the global level, many of the ideas and habits that are required for a firm to benefit from multilateral free trade are experimented with and learned under a regionalism strategy so that the process of moving to a multilateral trading regime is much smoother. In this sense, it is perceived that regionalism may provide the platform from which member states graduate onto multilateralism. One would expect that if a globally efficient economy is part of a regionalism thrust, then this will help to narrow the gap between other demonstration effects that are usually associated with regionalism. This includes the fact that government and other officials learn a significant number of the relevant "tricks of the trade" which are associated with multilateralism when they participate in RTAs.

The rest of this section evaluates the benefit of a RTA for T&T with a large partner (such as the EU) as compared with a small partner such as CARIFORUM.

Figure 1: FTA Between Small Countries



Source: Schiff (1997)

In the Figure 1 above, D_h is the home country's demand curve for imports and S_{row} is the supply curve of the rest of the world[5]. With free trade the consumer surplus (and welfare) of the home country is given by ACE; let us call this W. If the home country now imposes a most favoured nation tariff of magnitude T, then the ROW supply curve shifts to $S`_{row}$ and the partner country's supply curve to $S`_p$. In these circumstances the home country will import Q_3 with Q_1 units originating from the partner country and $Q_3 - Q_1$ units from the ROW. With the MFN tariff, the welfare of the home country is given by ABF + BDEF, where BDEF is tariff revenues. Let us call this new welfare level W^{MFN}. Thus,

$$\Delta W = W - W^{MFN} = ACE - [ABF + BDEF] = -BDC$$

If the home country proceeds to form a free trade area with the (small) partner country then the supply curve of the small partner country will revert to S_p and the home country imports $0Q_3$ of which $0Q_2$ will come from the partner and Q_3-Q_2 will originate from the ROW. Note, because the FTA does not lead to a change in the import price level, then consumer surplus remains ABF but the home country now loses out on the tax revenues it would have collected from the partner country prior to the formation of the FTA.

Assume that the home country instead forms an FTA with the ROW. The HC will now benefit by forming the FTA with the ROW with the representative gains equal to BCD + FRNE. Clearly then, a small country loses by engaging an FTA with a small partner but gains by engaging an FTA with the rest of the world. Simply put, the HC gains by being a small fish in a big pond rather than a big fish in a small pond. This creates a direct economic rationale for T&T pushing for CARIFORUM to form a REPA with the EU.

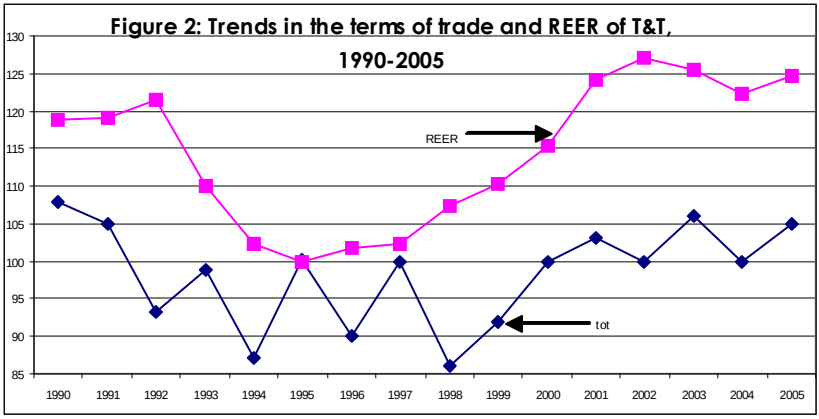
[5] The discussion in this section draws on the work of Schiff (1997), Schiff and Winters (2002).

5.0 Small RTAs and economic performance of member states: Some empirical evidence

Vamvakidis (1998) examined the economic impact of membership in a RTA on the growth performance of its member states. He found no significant relationship between membership in a RTA and the growth performance of the members for all those RTAs with only small economies as partners. Vamvakidis concluded that small RTA's are not likely to spur economic growth amongst its membership. Similarly, Arora and Vamvakidis (2004) investigated the extent to which an economy's growth was influenced by the economies with which it traded. Using panel estimation for over 100 countries for four decades, these authors showed that the growth of trading partners and their relative income levels had a strong impact on the growth of the domestic economy, even after the authors controlled for common global and regional trends. One implication of this study is that developing countries benefited more from trading with developed economies because of the relatively higher income level of the latter.

6.0 Overview of Trinidad and Tobago's trade relationship with the EU

This section commences with a discussion on the trends in the terms of trade and the real effective exchange rate (REER) of the Trinidad and Tobago economy.



Source: Central Bank of Trinidad and Tobago

As Figure 2 above helps to illustrate, the terms of trade of the T&T economy, although dipping between 1990 and 1998, improved considerably thereafter. Since the depreciation of the T&T dollar in 1993, the nominal exchange rate of the T&T economy has remained broadly constant. The practice of maintaining a fairly stable exchange rate by the T&T government is not surprising, given its increased degree of trade openness. A difficulty emerges, however, if in trying to maintain a stable nominal exchange rate, the domestic price level was to increase faster than the price level of its main trading partners as, in such an environment, the real effective exchange rate appreciates. Importantly, an appreciation of the real effective exchange rate reduces the long-run competitiveness of the export segment of the economy. For the T&T economy, the REER line graph in Figure 2 above reflects a considerable appreciation after 1995.

Table 2: T&T's external trade with various economies, US$mn, 1990-2005

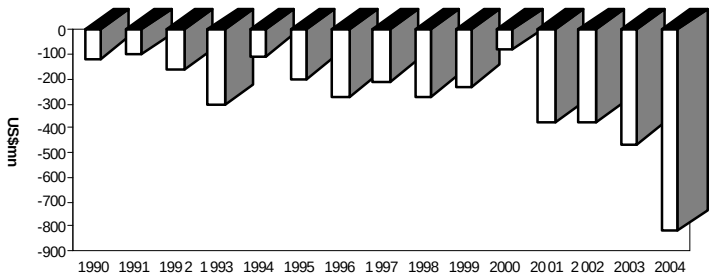
	Total Exports	Exports to EU	Exports to CARICOM	Exports to non EU rest of the World	Total Imports	Imports from the EU	Imports from CARICOM	Imports from the non EU rest of the world
1990	1961.9	110.4	259.8	1591.7	1119.9	225.2	78.5	816.2
1991	1751.3	168.2	220.5	1362.6	1422.6	270.3	79.6	1072.7
1992	1661.9	99.2	257.4	1305.3	1306.4	265.1	89.5	951.8
1993	1526.6	69.8	328.2	1128.6	1207.1	376.3	57.7	773.1
1994	1769.9	166.2	371.7	1232	1203.6	271.4	53.1	879.1
1995	2372.1	212.4	503.3	1656.4	1763.8	410.6	56.5	1296.7
1996	2360	183.3	610.4	1566.3	2022.2	454.7	81.8	1485.7
1997	2468.4	208.7	573.9	1685.8	3006.9	416	96.2	2494.7
1998	2192.6	140.9	656.8	1394.9	2940	413.2	106.5	2420.3
1999	2815.6	184.2	726.7	1904.7	2765.4	415.9	131.9	2217.6
2000	4314.7	255.2	970	3089.5	3342.8	338.3	125.7	2878.8
2001	4062.5	192.2	978	2892.3	3551.8	569.8	120.1	2861.9
2002	3809.4	180.6	767.4	2861.4	3659.5	558.8	91.8	3008.9
2003	5101.1	160.9	1008	3932.2	3920.2	625.1	94.2	3200.9
2004	6382.9	193.2	822.4	5367.3	4896	1010.1	101.4	3784.5
2005	9668.1	202.9	1889.4	9460.2	5724	612.5	111.3	5111.5

Source: Central Bank of Trinidad and Tobago

It is clear from Table 2 that the T&T economy receives the greatest share of its exports and imports from the Non EU Rest of the World (nEUROW).[6] Moreover, the EU has been a more significant source of imports than a destination for exports from the T&T economy. Specifically, as Figure 3 below shows, there has been a persistent deficit in trade between the T&T economy and the EU, and this deficit has been widening over time.

[6] The single largest trading partner of the T&T economy is the USA.

Fig 3: T&T's trade balance with the EU, 1990-2004.



Source: Central Bank of Trinidad and Tobago (various years)

Table 3 below shows the intensity of trade between the T&T economy and some of its various trading partners. Trade intensity indices were first used by Brown (1947). The index, I_{ij}, is defined as:

$I_{ij} = (X_{ij}/X_i) / (M_j/M_w)$

where

X_{ij}: is exports of country i to country j.

X_i: total exports of country i

M_j: imports of country j

M_w: imports of the world.

The theoretical range of the index is between 0 and infinity. A value tending to zero implies that countries i and j have lower bilateral trade than one would expect, given the share of country j in world trade. By extension, a value greater than unity reflects that the countries i and j engage in higher levels of bilateral trade than reflected in the share of j's imports in world imports.[7] Ideally the trade intensity index should be in a time series format, as in such a format it provides the clearest picture of

[7] Ideally, the imports of country i should be subtracted from world imports, as a country cannot import from itself. Although the correction is made in this paper, for a small country like T&T such a change would be of negligible significance.

the evolution of the bilateral intensity of trade between the home country and partner country or trade bloc.

The trade intensity indices clearly show that the T&T economy has higher trade intensities with its CARICOM partners than with non-CARICOM partners (see Table 3). The USA, however, stands out as a non-CARICOM trading partner with which T&T has a high trading intensity. T&T's trade intensity with the UK is not only low but is also declining.

Table 3: Estimates of bilateral trade intensity indices of T&T with various Caricom States, non-CARICOM bloc of economies, the USA and the UK

	Guyana	Jamaica	Barbados	CARICOM	nCARICOM	USA	UK
1990	147.86	51.01	177.80	56.44	0.88	3.73	0.45
1991	181.45	51.34	172.43	62.82	0.89	3.47	0.39
1992	199.26	38.65	256.69	94.41	0.86	3.31	0.30
1993	281.54	78.26	289.53	117.09	0.80	2.83	0.37
1994	220.96	121.02	250.86	121.11	0.81	2.73	0.35
1995	290.48	156.89	227.21	133.11	0.80	2.61	0.44
1996	292.24	155.73	221.83	159.23	0.76	3.09	0.36
1997	325.02	146.22	198.29	136.87	0.78	2.85	0.41
1998	268.43	190.74	294.62	164.48	0.71	2.61	0.35
1999	337.57	206.35	266.54	182.84	0.71	2.24	0.37
2000	356.03	225.62	273.42	196.17	0.69	2.32	0.37
2001	374.50	244.89	280.30	209.50	0.67	2.41	0.36
2002	392.96	264.17	287.18	222.84	0.65	2.59	0.36
2003	411.43	283.44	294.06	236.17	0.63	2.73	0.36
2004	429.89	302.71	300.94	249.50	0.61	2.81	0.36

Source: Computed

Table 4 shows the Revealed Comparative Advantage (RCA) scores for the T&T economy, with the world as a whole and with the EU as a single trading partner. The comparison of the product description

between the two groups indicates the following facts. T&T exports to the EU a range of commodities in which it already has international comparative advantage. The exception to this is the export of the product groups with codes 72, 712 and 693. For these commodities T&T has a comparative advantage with the EU bloc alone. This may be interpreted to mean that should the EPA between CARIFORUM and the ACP materialize, it will not stimulate any significant resource redeployment[8].

Table 4: T&T Revealed Comparative Advantage (RCA) World and EU (1990-1993), & 1998-2001

	World	Share (%)	RCA	RCA		EU	Share (%)	RCA	RCA
Code	Product Description	98-01	90-93	98-01	Code	Product Description	98-01	90-93	98-01
522	Inorganic chem. elements, oxides	9.3	25.1	32.5	512	Alcohols, phenols, phenol-alcohols	22.7	39.73	104.99
512	Alcohols, phenols, phenol-alcohols	5.6	10.2	24	61	Sugar and Honey	7.61	112.46	59.61
334	Petroleum products, refined	33	15.1	15.8	334	Petroleum products refined	36	12.15	20.25
111	Non alcoholic beverages, n.e.s.	1.2	6.1	14.6	522	Inorganic chemical elements, oxides	3.56	43.01	14.12
673	Iron and Steel bars, rods and angles	4.9	11.2	12.7	341	Gas, natural and manufactured	13.74	0.09	10.9

[8] Further, an observation of other RCA scores calculated by Jessen and Vignoles (2003) indicates that the T&T economy has a greater element of comparative advantage within CARICOM. This suggests that T&T engages in commercial activity with CARICOM in which it does not hold international comparative advantage, the consequence of which may be the encouragement of X-inefficiency. In this regard, if a REPA is formed and it encourages resource reallocation, then it would lead to a weeding out of some of those product groups which bear only intra-CARICOM comparative advantage but not REPA-wide comparative advantage. In an economy such as T&T, nearing full employment, such an improvement in the allocation of scarce factors would be welcomed.

Table 4 (Continued)

	World	Share (%)	RCA	RCA		EU	Share (%)	RCA	RCA
671	Pig iron, spiegeleisen, sponge iron	1.7	6.1	11.7	671	Pig iron, **spiegeleisen**, sponge iron,	1.34	2.38	8.73
341	Gas, natural and manufactured	9.5	1.8	7.4	562	Fertilizers, manufactured	0.89	26.93	5.49
562	Fertilizers, manufactured	1.6	10.9	6	793	Ships, boats and floating structures	2.69	0	5.3
335	Residual petroleum products, nes.	1.1	3	5.5	673	Iron and steel bars, rods, angles	2.31	7.1	5.03
61	Sugar and honey	0.9	5.8	5.2	111	Non alcoholic beverages n.e.s	0.54	1.97	4.87
793	Ships, boats and floating	4.8	0.1	4.5	**72**	**Cocoa**	**0.38**	**7.76**	**3.87**
91	Margarine and shortening	0.1	2.5	3.4	112	Alcoholic Beverages	1.95	8.21	3.74
642	Paper and paperboard	1.4	1.5	3.4	335	Residual petroleum products, nes & r	0.3	17.06	3.02
333	Petrol, oils, crude	12	7	3.2	**712**	**Steam and other vapour units, st**	**0.07**	**0**	**2.19**
48	Cereal and flour preparations	1	2.1	3.1	**693**	**Wire products and fencing grills**	**0.11**	**4.66**	**1.38**
554	Soap, cleansing and polishing	0.7	2.4	3		Share of Exports with RCA > 1	= 94.25%		
661	Lime, cement	0.5	3.3	2.9					
62	Sugar confectionery	0.2	1.8	2.8					
46	Meal and flour of wheat	0.1	0.1	2.5					
665	Glassware	0.4	1.9	2.4					
112	Alcoholic beverages	0.9	1.4	1.8					
58	Fruit, preserved and fruit preps.	0.4	0.8	1.7					
98	Edible prod. and preparations	0.3	1	1.3					
635	Wood manufactures	0.3	0.8	1.1					
75	Spices	0	1	1					
73	Chocolate and other food preparations	0.1	1.1	1					

Source: Jessen and Vignoles (2003)

6.0 Measuring the trade and welfare effects of a Regional Economic Partnership Agreement (REPA) for T&T

With the formation of a REPA, both the exports and imports of member states will come under scrutiny. Whilst the exports of members may increase, the following claims are generally true:

1. Improved access to partner country markets reduces the welfare loss of a Preferential Trading Arrangement (PTA),
2. The benefits of market access are larger, the larger the home country's (HC) post- integration exports that are made to the partner country (PC),
3. The benefits of improved market access are higher, the higher the reduction in tariffs carried by the PC.

In this regard, this paper emphasizes the impact of the REPA on imports.

To analyze the impact of a REPA on the trade and government revenues of member states, two different methodologies can be deployed; these are the partial equilibrium and general equilibrium frameworks. The difficulty with deploying general equilibrium models, however, resides with the need for extremely detailed information on the economy, which may not be readily available. In this paper, a partial equilibrium model (developed by Greenaway and Milner (2003)) is utilized, although it is limited in its ability to focus beyond product or factor markets[9].

The literature carries two types of partial equilibrium models that can be deployed to assess the trade and fiscal effects of the implementation of an EPA. The first of these models assumes perfect substitution between the goods produced by multiple sources. The second type of partial equilibrium model is built on the Armington (1969) assumption, which is, that goods can be distinguished by their source of production. The model utilized in this paper falls into this second category, that is, the imperfect substitution case.

[9] One of the distinct advantages of the partial equilibrium model, however, is the facility of being able to discern those aspects of the free trade basket which will be most significantly affected by the formation of a REPA.

In terms of specifics, let us sub-divide the trading players involved as:

HC: Home country,

PC: Partner country,

and two extra regional blocs,

EU: European Union,

nEUROW: non EU Rest of the World.

In this imperfectly competitive scenario it is assumed that goods can be treated as being differentiated and dependent on their source of origin. In this regard, a discussion of the impact of a REPA on the imports of CARIFORUM economies may be assessed as follows.

where

M_1: Initial imports from CARIFORUM,

M_2: Initial imports for non EUROW,

M_3: Initial imports from EU.

From a modelling perspective,

$$\Delta M_3 = \left(\frac{-t}{1-t}\right) e^d_m \; M_3$$

where,

ΔM_3: is the change in imports from the EU,[10]

t: tariff rate,

e^d_m: elasticity of demand for imports,

M_3: The amount of goods imported from the EU prior to the formation of the REPA.

In the case of trade displacement there is an induced diversion of exports from intra-regional to extra-regional sources, the extent of which can be measured by:

$$\Delta M_i = \left(\frac{-t}{1-t}\right) \sigma_{i3} \, M_i \quad (i = 1,2)$$

[10] Although manifesting as trade creation, this is really an increase in consumption.

σ_{13} : displacements of imports from region 1 to 3,
σ_{23} : displacement of imports from region 2 to 3.

In order to ascertain the impact on welfare, Greenaway and Milner (2003) proceeded as follows. In the first instance, it is acknowledged that trade diversion from intra-regional sources to the EU does not lead to any loss of customs revenue. At the same time, any imports that are diverted from the nEUROW towards the EU will lead to a fall in customs revenue. On this basis, we can express:

$$\Delta R = t\,\Delta M_2 - t\,M^o_3$$

where $t\Delta M_2$ is the amount of tariff revenues associated with a change in imports from the nEUROW and tM^0_3 is the initial amount of tariff revenues collected from EU imports in the pre-REPA environment.

In this imperfectly competitive world, the change in welfare associated with extra-regional trade creation and trade diversion can be estimated as:

$$\Delta W = \tfrac{1}{2}\, t\,(\Delta M_3) + \Delta R.$$

This study upgrades the work of Greenaway and Milner (2003) in terms of their estimation of the welfare impact of a REPA on the T&T economy in three significant regards. In the first instance, the Greenaway and Milner study used 1998 as the base year for their estimation. In 1999, however, T&T started to produce Liquefied Natural Gas (LNG) and by 2005 the share of oil refining (the sector of the economy in which LNG is recorded) in T&T had improved to just over 10% of aggregate GDP (in constant prices), as compared to 2.1% in 1998. In 1998, the petroleum sector accounted for 28.6% of aggregate GDP although by 2005 this same sector accounted for 42.3% of total GDP at constant prices. These changes are significant and in this paper estimates of ΔM_i ($i = 1 \ldots 3$) are calculated for 2005, and the associated welfare implications ascertained. Finally in their study, Greenaway and Milner focused on CARICOM and non-CARICOM as the relevant trade blocs. It is the intention of the EU,

as mentioned previously, to deal with CARIFORUM as the regional trade bloc in the Caribbean rather than CARICOM. This study introduces these factors in formulating the welfare estimates of the EPA.

Import demand and substitution elasticities are very difficult to compile and as such are used from the same sources as Greenaway and Milner (2003). Specifically, import demand elasticities were obtained from the research work of Stern et al. (1976) and the import source substitution elasticity was obtained from Hertel and Tsigas (1997).

Table 5 below shows the various trade source substitution and the trade creation effects on account of the formation of a REPA between CARIFORUM and the EU. The discussion commences with the initial results of Greenaway and Milner (2003), which posted the trade creation with the EU at EC$163.8m. Trade source substitution between CARICOM and the EU is EC$69.1m with trade source substitution between the nEUROW and the EU being EC$2,599.5m. The total increase in imports from the EU, using these 1998 trade data estimates, was posted at EC$2,849.2m (the sum of the trade creation with the EU and the two trade source substitutions with the CARICOM and nEUROW respectively).

However, as mentioned, the REPA is to be engaged with CARIFORUM and not CARICOM. Further, crude oil imports to T&T are sourced from a specific bloc of countries from Africa and the Middle East, and there is hardly likely to be any trade source substitution for this commodity away from the nEUROW towards the EU. Table 5 below provides data that reflect these corrections. When the Dominican Republic is included, the figures for 1998 with oil are not very different from the estimates of Greenaway and Milner (2003). When the calculations (including the Dominican Republic and crude oil) are extended up to 2005, the total increase in imports from the EU increases to EC$5,859.6m. This increase occurs mainly because of an increase in trade source substitution from the non-EUROW to the EU of EC$5,506.7m. When oil is excluded, however, the overall increase in imports from the EU is EC$3,911.1m, of which EC$3,622.6m is on

account of trade source substitution between the EU and the non-EUROW.[11]

The small increase in total imports provides some amount of proof that the supply curves of the EU and the nEUROW to the T&T economy are similarly positioned.

Table 5a: Estimates of trade source substitution and trade creation effects with the formation of an EPA between CARIFORUM and the EU, 1991, 1998 and 2005

	Trade creation with the EU	Substitution in CARIFORUM imports	Substitution in nEUROW imports	Total increase in imports from the EU	Increase in extra regional imports	Increase in imports from all sources
Greenaway and Milner (2003) estimates using **1998** data:						
	160.85	69.80	26919.3	2849.2	222.93	160.85

Table 5b: EPA with CARIFORUM including sitc 3

1991	64.8	47.7	974.7	1087.2	112.5	64.8
1998	163.8	71.1	2595.4	2832.3	234.9	163.8
2005	266.8	86.1	5506.7	5859.6	352.9	266.8

Source: Greenaway and Milner (2003) and own computations

Table 5c: EPA with CARIFORUM excluding sitc 3

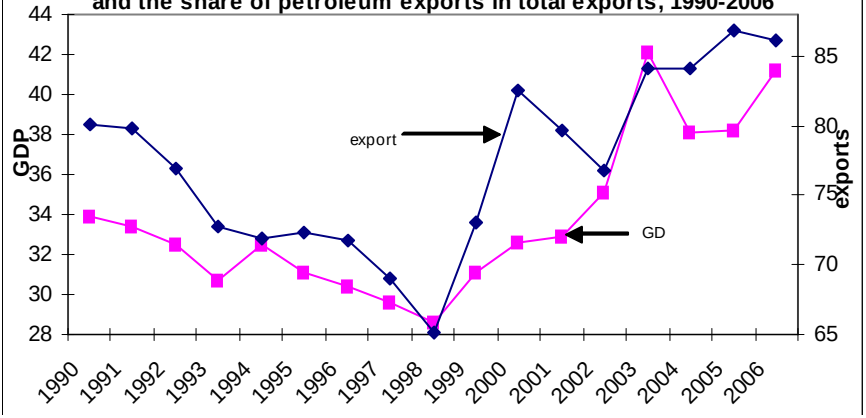
	Trade creation with the EU	Substitution in CARIFORUM imports	Substitution in nEUROW imports	Total increase in imports from the EU	Increase in extra regional imports	Increase in imports from all sources
1991	64.5	45.0	811.5	921.0	109.5	64.5
1998	163.0	51.0	2234.6	2448.6	214.0	163.0
2005	212.4	76.1	3622.6	3911.1	288.5	212.4

Source: Same as Table 5b

[11] For the purpose of comparison the experiment was backtracked to 1991. The increase in imports from all sources that would have accumulated in 1991, presuming a REPA, was EC$64.8mn.

Using 1998 data, Greenaway and Milner (2003) found that T&T would lose EC$390.1m in customs revenue and the associated change in the net welfare was a decline of EC$292.9m. When this calculation is extended to 2005, using CARIFORUM as the projected configuration of the EPA and excluding crude oil, the revenue loss decreases to EC$240m and the net welfare loss falls to EC$197.1m. The reduction in the welfare loss may be attributable to the trade liberalization experiment implemented in the T&T economy in the early 1990's, which helped to maintain an allocation of resources along more optimal Heckscher-Ohlin lines, and as a consequence resulted in a lowering of economic wastage (see Figure 4 below).

Figure 4: Trends in the share of petroleum GDP in total GDP and the share of petroleum exports in total exports, 1990-2006



Source: Central Bank of Trinidad and Tobago Review of the Economy (various years) and own computations

Since trade between the EU and T&T is more Heckscher/Ohlin type trade, it follows that a REPA will not lead to a significant reconfiguring of the pattern of production as it will not create above

marginal changes in intra REPA comparative advantage which are distinct from its global comparative advantage.

7.0 Conclusion

The REPA as it stands offers clear opportunities and challenges for the T&T economy. In terms of opportunities, it will create the potential for a greater inflow of foreign capital via an expansion in the amount of investment creation opportunities that the EPA fosters. It is also likely to provide opportunities for firms to benefit from economies of scale by selling to a much larger regional market. However, the REPAs will also come with a greater presence of the EU in the CARIFORUM economies and to manage this process, the following should be considered.

Recent studies (see Aron (2000), Kaufmann (2004), Rodrik (2004)) have reflected that one of the main factors conditioning an increased level of trade activity translating into economic growth is the institutional quality within an economy.[12] Many of the present impact assessment studies on EPAs presumed that factors of production such as labour and capital could move easily out of declining industries into other segments of the economy. This frictionless movement, however, does not occur in most developing countries because of the absence of appropriate institutions and institutions of the right calibre. Accordingly, these studies show that factors such as better institutional support and flexible business and labour laws greatly impact on a country's institutional capital, which in turn affects the process of allocating and reallocating resources between productive sectors. Generally speaking, the quality of a country's government performance is indicative of the strength of its institutional capital. It is understood that some of the institutional change that is required in developing economies may be deep and far-reaching and would require an enormous amount of resources and policy shifts. Even so, some researchers such as Rodrik (2004) and the World Bank (2005),

[12] Following Burki and Perry (1998), an institution is defined as "Formal and informal rules and their enforcement mechanisms that shape the behavior of individuals and organizations in society".

have argued that even with some limited amount of institutional change, growth can be improved in developing economies.[13]

To ensure a smoother adjustment to an EPA, the T&T government, working with the Regional Negotiating Machinery, should lobby for financial assistance in two key areas of institutional capacity building that can help minimize the transitional burden of adjustment. Specifically, financial assistance can be used to help upgrade facilities at key labour market institutions e.g. the National Training Agency (NTA). Interviews with senior NTA personnel pointed to the need for high performance software to collate and analyse data. There is also the need for the improvement in the research effort at this institution, so that key labour market trends can be identified early on.

Another critical area where EDF funding can be sought is to provide increased managerial support for the loans provided by NEDCO[14]. Funding assistance can be used to expand the scope of the business support responsibilities of the NEDCO, in that resources would be allocated to expand the 'after care' services, which are geared towards ensuring that the entrepreneurs are guided appropriately at every stage of their business development.

With the formation of an EPA, it is also necessary to cater to the financial and credit needs of those business people who may bear the brunt of the adjustment costs. In this regard, the Economic Commission has allocated resources towards the compensation of losses incurred through the process of liberalization in the 10th EDF allocation estimated to be euro 22.7 billion. It should be noted, however, that the disbursements of EDF funds occur with some degree of time lag and as shown in Table 6 below, the amount of the total disbursements generally do not exceed 43% of the allocation for the cycle. This suggests that the disbursement system needs to be overhauled in order to effectively deliver

[13] At the end of 2007, the WTO waiver granted to the EU and ACP trade preferences will be phased out.

[14] The National Entrepreneurship Development Company Limited (NEDCO) is a state-owned Company that was established by the Government in August 2002 to assist any qualifying national in the start-up or expansion of a small and micro enterprise in Trinidad & Tobago.

assistance to the developing economies of the ACP group. It also indicates that ACP economies are not 'learning' the art of sourcing funding from the EDFs and there is perhaps the need for the EU to provide training to ACP economies, including T&T, on the appropriate channels to minimize time lags and optimize access to EDF funds.

Table 6: Funds allocated and spent during each 5-year financing cycle (million euro)

EDF Assistance Package	Funds allocated during the 5-year envelope (nominal value)	Real value of envelope (1975 base year)	Disbursements in the 5 years in which the envelope was allocated	% of total allocation disbursed in the 5 years in which it was allocated (nearest %)
4th EDF (1975-80)	3390	2696	1454.5	43
5th EDF (1980-85)	5227	2586	2041	39
6th EDF (1985-90)	8400	3264	3341.6	40
7th EDF (1990-95)	12000	3514	4417.9	37
8th EDF (1995-2000)	14625	3463	2921.6	20
9th EDF (2000-07)	15200	3131	4239.0	28

Source: Grynberg and Clarke (2006) and Alavi, Gibbon and Mortensen (2007)

In a similar regard, there is the need to upgrade the data-churning processes at the Central Statistical Office of the T&T economy. The CSO, which is the main producer of a plethora of primary sector data, often brings these data into the public forum with a significant time lag. This sometimes creates a bottleneck in the decision-making process. EU funding assistance should be sought to help upgrade the facilities at the CSO so that vital data for the developmental planning process is churned out in a more efficient and timely fashion.

A major deterring factor in terms of penetrating the EU market for non-traditional products is quality. Consequently, the role of the Trinidad and Tobago Bureau of Standards should be expanded, especially given

that the manufacturing firms in T&T generally do not undertake research and development. A similar argument may be made with regards to upgrading the services and the active participation of the Caribbean Industrial Research Institute (CARIRI) in the T&T economy.

Investment in human capital formation stands out as a key option available to policy makers in the T&T economy. Although primary and secondary schooling has its merits, tertiary level education has to be emphasized, as it is the gateway through which best practice scientific, engineering and organizational developments get transmitted to the domestic economy. The T&T government, in this regard, must be commended for focusing their attention on increasing the enrolment of graduates in the age group 15-24 years to 60% by the year 2015. An improvement in the stock of tertiary level education in an economy helps to improve its overall competitiveness and enhance its trading capacity. Critically, development of the tertiary education skills of a nation helps to reduce the dependence on externally secured enterprise. Further, as the World Bank (2005) notes:

> Tertiary education is also important for the construction of the institutional regime through the training of competent and responsible professionals needed to achieve sound macroeconomic and public sector management. Moreover, tertiary institutions often provide the backbone of a country's informational infrastructure, frequently the main repository of information (libraries, etc), computer network host and internet service provision. Tertiary level education is also recognized as critical to capacity building, particularly in countries with a severe shortage of high level skills.

This report therefore argues that EU funds be targeted to facilitate an upgrade of capacity and equipment at The University of the West Indies (UWI) both for the face-to-face mode and the Distance Learning courses.

A critical factor that would condition the growth of the T&T economy into the medium-term period is the pursuit of an external trade

policy of tariff liberalization with third parties. This would have the benefit of minimizing the extent of trade diversion that emerges with the formation of a REPA, much along the lines suggested by the Cooper Massell theorem (1965).

Another important factor that will enhance the developmental efforts of the T&T economy is the enhancement of the trade capacity building process at the Ministry of Trade. EU funding assistance can be used to facilitate this process in a number of regards, including improvement of the coordination and networking between the various trade ministries in the region. It will also involve the training of staff with the appropriate skills so that more informed policy interventions could be made regarding changes in the trade environments.

One of the major issues for the T&T government in the medium term and one that will stifle its growth potential and hamper its business climate (and hence investment potential) is the prevalence and level of criminal activity. In 2006, T&T was ranked sixth in the world, per capita, for homicides. Whilst current levels of foreign direct investment inflows to the T&T economy have not decreased in the recent past, neither has tourist arrival traffic. It is, however, possible that in the medium to longer term period these trends may be reversed. EU funding assistance and technical guidance should be lobbied to assist with restricting the potential adverse influence of criminal activity on output of goods and services from the T&T economy.

An important closing point is that we should not only 'moan and groan' about the distortions that will be created by an EPA. Indeed we should heed the words of the Prime Minister of Barbados, who noted that "old and long standing forms of economic activity have been perpetuated on the presumption that a system of international trade preferences will continue to underwrite their survival and their viability" (Arthur 2001). As the Cotonou Agreement indicates, this is no longer the case and what we should do is organize and pool our various talents and resources so as to be better prepared to deal with the threats and opportunities that the EPA may pose.

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