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CARICOM AGRICULTURE TRADE PERFORMANCE RELATIVE TO CANADA – EX POST AND EX ANTE

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ABSTRACT: Preferential agreements are often signed to improve relations of signatories through improved trade of products, services and the movement of citizens. These are accomplished through the removal of trade barriers, such as tariffs, through the facilitation of consultancy services and improvement in policy to encourage Foreign Direct Investment. Further, with the recent signing of the EU/ CARIFORUM Economic Partnership Agreement, the Region's policy makers are now questioning the benefits of trade agreements and are looking at areas where greater focus should be placed. It has been approximately 26 years since the CARIBCAN agreement has been signed. Given the promised benefits of preferential agreements, there should have been better performance in many product sectors which would allow for greater economic growth in the signatory countries. This paper analyzed the economic impact of the CARIBCAN Agreement between Canada and selected CARICOM member states. The industries of Meats, Grains, Fruits and Vegetables were analyzed to assess the agreement's impact on trade. The study used four trade indicators: (i) Revealed Comparative Advantage; (ii) Regional Orientation; (iii) Trade Intensity; and (iv) Trade Complementarity for the analysis. The results include the performance trends during the period 2001 to 2010, showing changes to trade and identified gains and losses to partners. Recommendations of the study can be used to inform future trade agreement negotiations and provide amendments to those currently engaged to ensure greater benefits. The study found:

- (i) CARICOM Comparative advantage increased for HS 0306 Crustaceans for the period 2001/10.
- (ii) Regional bias was found to be the highest in the trade of HS0302 Fish, fresh or chilled, to Canada.
- (iii) Trade Intensity from CARICOM to Canada was highest in the product groups of HS 0714 Manioc, arrowroots and salems (yams) and HS 2208 Spirits liquors.
- (iv) Potential for the export of HS 0302 Fish, fresh or chilled, and HS 0306 Crustaceans remained high during the years 2001/10, indicating that CARICOM did not take advantage of this market's demand.

Keywords: Intra-industry Trade, Vertical Intra-industry Trade, Horizontal Intra-industry Trade, Trade Negotiation, Preferential Agreements, CARIBCAN, CARICOM

INTRODUCTION

The CARIBCAN (CARICOM-CANADA) agreement is a unilateral extension by Canada of preferential duty-free access to the Canadian market. The agreement was introduced by the Government of Canada during the 1985 Commonwealth Heads of Government Conference in Nassau Bahamas, to grant Caribbean Countries trade development assistance. Beneficiaries to this agreement include Anguilla, Antigua-Barbuda, Bahamas, Barbados, Belize, Bermuda, the British Virgin Islands, the Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts

and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and the Turks and Caicos Islands.

The major objectives of the CARIBCAN agreement include:

- To enhance Commonwealth Caribbean trade and export earnings
- Improve the trade and economic development prospects of the region
- Promote new investment opportunities; and
- Encourage enhanced economic integration and co-operation

Canada employs a series of import and export controls to manage its supply and demand situation. Import controls are in place for fish, refined sugar, sugar-containing products and peanut butter. In addition, there are management regimes to regulate the supply and prices farmers receive for their poultry, turkey, eggs, and milk products. Further, Tariff Rate Quotas (TRQ's) are in place for dairy, chicken, turkey, and egg industries, as well as pork, margarine and cut roses and a range of vegetables (OTN 2010). Additionally, entry into the Canadian market with fishery products faces very low or zero tariffs; however, there is a high SPS regime for fish, high taxes and controls for tobacco, and the Government directly controls the importation and sales of alcoholic beverages.

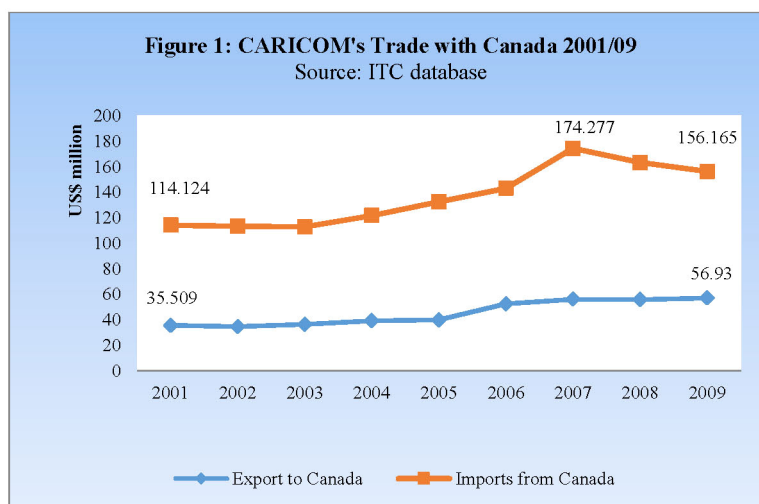
The Rules of Origin (RoO) is another measure which can be used to limit imports into Canada. Under the agreement to qualify for the duty free treatment accorded to Commonwealth Caribbean countries, at least 60% of the ex-factory price of the goods as packed for shipment to Canada must originate in one or more beneficiary countries or Canada. The 60% qualifying content may be cumulated from various CARIBCAN beneficiary countries or Canada. The structure of most CARICOM states restricts the production of competitive products given the high costs of raw materials and therefore limits the market presence of CARICOM products in Canada. In addition to RoO, tariffs are imposed by Canada along with products standards to prevent or limit the movement of harmful products.

Within the agricultural products category, the highest tariffs are placed against imports of Dairy products (23.7%), Live animals and products thereof (52.7%), Beverages and spirits (8.3%) and Fruits and vegetables (4.8%). The country employs these highly protective regimes, justified on the basis of rural integrity, food security and protection of the health of its populace. Thus, in addition to tariffs, dairy and poultry products are protected through TRQs, SPS and supply management schemes. Where entry is tariff free, as is the case of fish and some processed meats, SPS regulations and ISO standards are applied. The effect of the tariff quotas is the same as the quotas because the over-access tariff rates are very high.

Given the stipulations put in place by Canada, entry into the market can be seen as somewhat difficult, but with a trade agreement signed between Canada and CARICOM, was there any benefit to trade? This paper seeks to quantify the result of the CARICAN agreement through analyzing trade between both partners from 2001 to 2010.

BACKGROUND

The exports of agricultural products from CARICOM to Canada increased from US\$35 million in 2001 to US\$57 million by 2009 (Figure 1). However, agricultural imports in 2001 were valued at US\$114 million which showed a steady increase until 2007 (US\$174 million), after which it experienced a slight decrease, ending at US\$156 million in 2009 (Figure 1). This revealed an unequal movement in trade between CARICOM and Canada, and also indicated an imbalance in the flow of trade revenue. Although, during the years 2001 to 2010, CARICOM gained a 58% increase in trade value compared to Canada's 36%. The dollar value of Canada's exports to the region was found to be 100% greater than CARICOM's exports to Canada.



These initial findings could suggest that there was little growth in the export of agricultural products to Canada from CARICOM. This could have been the result of the highly protective regimes of Canada, such as SPS and ISO standards which prevent trade of these agricultural products.

METHODOLOGY

For this study trade data was acquired using the International Trade Commission (ITC) database for the period 2001-2010 for one product of the focus groups. Using four trade indices this data was analyzed to access the impact of the agreements with CARICOM and its trade partners: Costa Rica and the Dominican Republic.

Selection of focus groups

For this study agricultural products were separated according to the harmonization system codes (Foreign Trade 2012), which are (i) animal and animal products, (ii) vegetable and vegetable products, and (iii) food stuff. The harmonization (hs) groups were disaggregated to the 4 digit level and the main exported groups in 2001 from CARICOM to Canada were identified. This disaggregation would reduce the possibility of smoothing and therefore allow for an increase in the accuracy of the results. This was done by ranking the value of goods exported, since this represented the economic return to trade and thus possibly the benefit of FTAs. Following this selection method, four trade indices were used for the analysis, which are as follows:

Revealed Comparative Advantage (RCA)

The ***Revealed Comparative Advantage (RCA)*** provides the analysis of one country's exports share in relation to that of the world, and therefore can be used to identify positive or negative changes in export profile. Countries with high RCA are considered to be competitive and export to countries with lower RCAs. Further, countries which experience similar RCA are unlikely to have high bilateral trade intensities unless intra industry trade is involved (Chandran, 2012).

The RCA would provide an indication of how CARICOM's competitiveness in the respective markets changed over time as the result of the FTA. Did the FTA improve comparative advantage given the measures which were agreed on in the aim to improve trade? This index would also allow policy makers to identify which agreement yields the highest benefit, which would guide future trade negotiations.

It is denoted by the formula:

$$RCA_{ij} = (x_{ij}/X_{it}) / (x_{wj}/X_w)$$

Where: x_{ij} = values of country i's exports of product j; x_{wj} = world exports of product j; X_{it} = the country's total exports; X_w = world total exports

A value greater than unity will suggest a revealed comparative advantage, whereas a value less than unity shows a Revealed Comparative Disadvantage.

Regional Orientation Index (ROI)

To identify the concentration of the CARICOM's exports to the markets of Canada the ***Regional Orientation Index (ROI)*** was used. It is used to identify if any bias exists between countries which would indicate greater benefits if those countries were to enter into a FTA. This index tells us whether a country's exports of a product are more oriented toward a particular region than to other destinations (Plummer et al., 2012). Denoted by the formula below it represents the ration of one country's exports to a country of interest to that of that country's exports to the world.

If regional bias increased this would support the creation of future FTA since imports would be redirected to economies where CARICOM producers would benefit given the cost of entry into those markets. This index would also allow the comparison with the RCA, in such a way to identify if exports to a region did indicate some bias. This would be due to the increase in trade competitiveness with an increase presence in one particular market, illustrating gains in trade due to FTA measures.

The formula for the regional orientation index is:

$$ROI_{ij} = (x_{cgr}/X_{cr}) / (x_{cg-r}/X_{c-r})$$

Where: x_{cgr} = exports of good g by country c to region r; X_{cr} = total exports of country c to region r; x_{cg-r} = exports of good g by country c to countries outside region r; X_{c-r} = total exports of good g to countries outside region r

If the index has a value greater than 1, this implies that the country has a regional bias in exports of the product. Conversely, if the index is less than 1, then the country has no regional bias.

Trade Intensity Index (TI)

The ***Trade Intensity Index (TI)*** was used to measure the level of trade between CARICOM and the respective FTA partners. It is used to determine if the value of trade between two countries is larger or smaller than expected based on their importance in world trade. It simply measures the share of trade between a region and a trade partner as a ratio of the region's total trade share in world trade.

The installments of FTAs are primarily designed to increase trade through the reduction of trade restricting measures with the partner markets. In most cases one partner tends to benefit more, therefore, this indicator would show if exports increased at opposed to non FTA partners, but would also allow further research to be conducted into the reasons for any reduction in trade. Identified areas of the export structure would then be addressed with the aim to increase TI given the presence of such FTAs.

The index is found using the following formula:

$$T_{ij} = (x_{ij}/X_{it}) / (x_{wj}/X_{wt})$$

Where: x_{ij} = the values of country i's exports; x_{wj} = world exports to country j; X_{it} = a country i's total exports; X_{wt} = total world exports.

A value greater than unity indicates larger trade flows than might be expected, which is trade intensity. It has also been found that higher values are more favorable to an FTA.

Trade Complementarity Index

To identify what occurred with the potential for trade, i.e. if potential increased or decreased during the study period. The ***Trade Complementarity Index*** is designed to measure compatibility of trade profiles. It summarizes certain aspects of the sectoral trade pattern. This index measures the degree to which the export pattern of one country matches the import pattern of a region.

This index is initially used in identifying potential FTA partners but would also assist in assessing if the formation of FTAs increases the potential for trade or vice versa. In addition, using this index compared with the TI would provide an indication if the FTA created would provide net trade. If there is low trade intensity but high complementarity net trade would be possible since there is potential to trade. This analysis would allow the investigation of such trade arrangements to address the reasons why CARICOM is not maximizing the utility of the FTA.

The formula for the complementarity index is:

$$C_{cgr} = 1 - ((|(M_{rg}/M_r) - (X_{cg}/X_c)|)/2) \times 100$$

Where: M_{rg} = imports of good g by region r; M_r = total imports of region r; X_{cg} = exports of good g by country c; X_c = total exports by country c

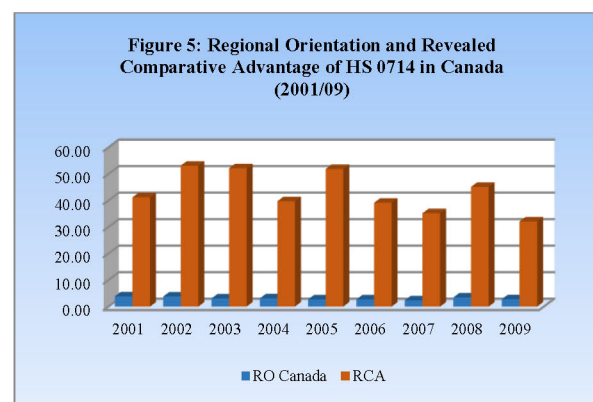
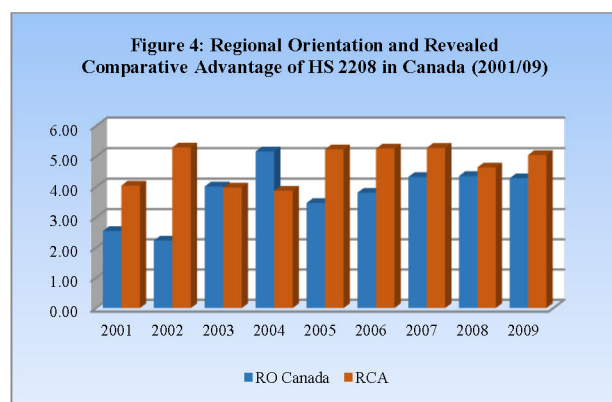
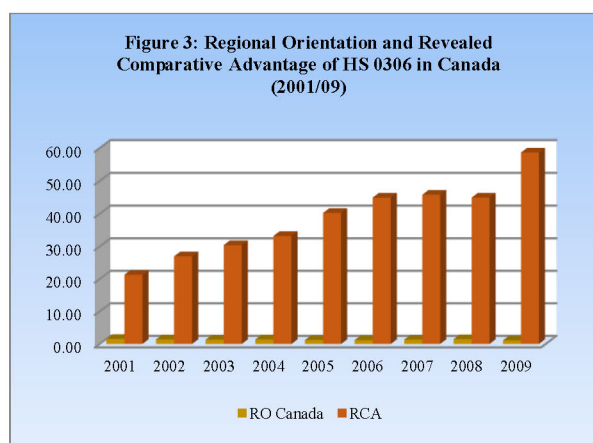
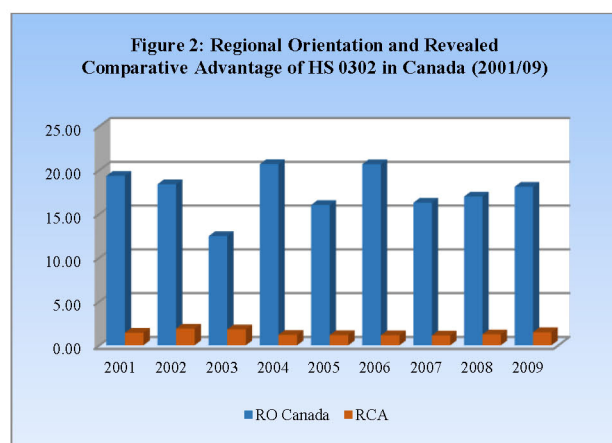
The index takes a value between 0 and 100, with 0 indicating no overlap and 100 indicating a perfect match in the import–export pattern, i.e. potential for trade.

RESULTS AND ANALYSIS

CARICOM and Canada: Revealed Comparative Advantage and Regional Orientation

Further examination was done to help explain if there exist any other driving forces for the low trade intensities and the reduced performance. The result show:

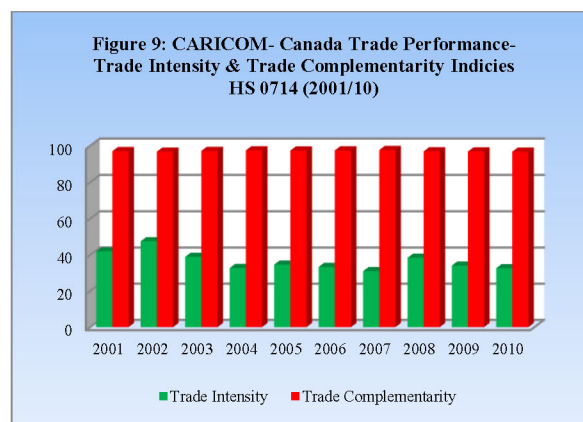
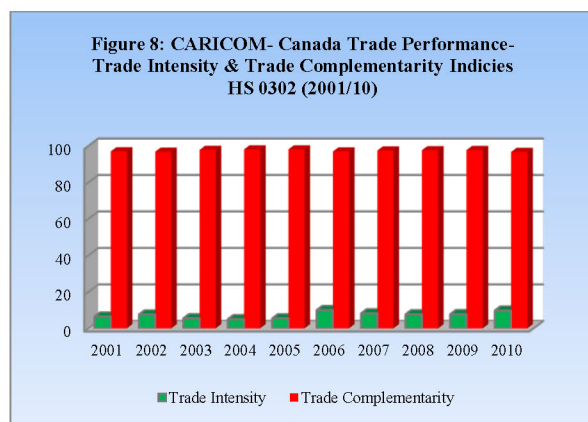
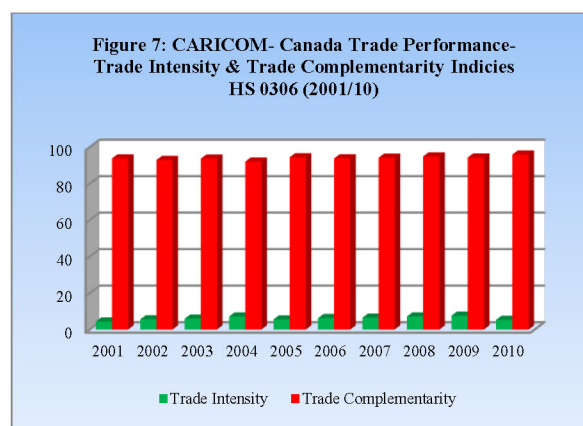
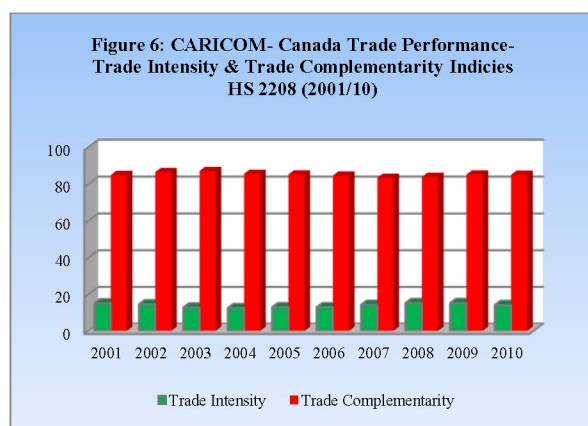
- (i) There were no major changes shown except for an increase in RCA of HS 0306 Crustaceans, but regional bias did not increase during the period (Figure 3).
- (ii) Regional bias was found to be the highest in the trade of HS 0302 Fish, fresh or chilled, with Canada but were low in HS 0306 Crustaceans and HS 0714 Manioc, arrowroots and salems (yams) (Figures 2 – 5).



CARICOM and Canada: Trade Intensity and Trade Complementarity Indices

The study examined the major trading commodity between CARICOM and Canada. The results show:

- (i) Trade Intensity index was high for HS 0714 Manioc, arrowroots and salems (yams), and HS 2208 Spirits, liquors, but lower in the relationships for HS 0306 Crustaceans and HS 0302 Fish, fresh, whole (Figure 6-9).
- (ii) The trade performance displayed less of decline as the years' progressed which may have been due better developed freight transportation, longer trading / business relationships, traditional business and a better understood business culture – the two recent agreements and differences in language and cultures may have frustrated the process.
- (iii) The commensurate high complementarity indices also suggest that there is potential for trade creation and high inter-industry trade. It is well known, however, that there exists a large number of NTB's that substantially limits trade in the Canadian market.



CONCLUSION: Picking up the Pace

This section presents a synthesis of the major findings: the CARICOM-Canada (CARIBCAN) agreement was assessed and provided recommendations for the Way Forward to agricultural stakeholders as to how the industry should be positioned within the larger agreement or how such positioning could be improved through future negotiations of those and other agreements.

1. Conduct further examination of the entry requirements for HS 0306 Crustaceans into the Canadian market, given the increase in CARICOM's Revealed Comparative Advantage but low Intensity index, even though the data shows good potential for trade.
2. Review the factors that are limiting trade to the Canadian market and develop strategies for greater entry and for growth into the market. The demographics of the Canadian market will always translate to high demand for tropical commodities, but capturing and retaining market share will be a critical success factor.
3. Special attention should be placed on developing the commodity groups which displayed high trade Complementarity and Regional Orientation -- HS 0302 Fish, fresh, whole, and HS 2208 Spirits, liquors. Policies and technical cooperation for enhancing quality assurance along the supply chain and upgrades of manufacturing operations and product certification will be important.
4. Focus the negotiation on greater penetration into the Canadian beverage market, given the bias towards Canada in the exports of HS 2208 Spirits, liquors.

It is apparent that negotiation of trade agreements is only part of the formula for success in business expansion. Further, given global competition has been accelerating in intensity with the emergence of new "tigers", and given the relative lack of long-term experience and existence of few strategic alliances amongst CARICOM businesses in the Canadian market, it is recommended that the work be done closer with the trade facilitation units of the Region to foster, nurture and push businesses to capture greater market share. Other countries, e.g. those in Latin America and Asia, are now moving from "galloping" to "trotting" and CARICOM will surely need to catch up in this regard.

Table 1: Summary of Trade Performance of Agriculture with Canada

HS Classification	Revealed Comparative Advantage	Regional Orientation	Trade Pattern	Trade Intensity	Trade Complementarity	Export Potential (TI & TC)
	RCA >1 Advantage	RO>1 Bias for that market	Increasing RCA and ROI means more concentration in that market	TI range 0 – 100 Better close to 100	TC range 0 – 100 Better close to 100	High TC low TI show potential for more trade
'0302 – Fish fresh	1.44 to 1.50	19.35 to 18.11	Increase advantage but decline in market	6.40 to 9.7	97.1 to 97.8	Good potential
'0306 – Crustaceans	21.31 to 58.72	1.55 to 1.11	Increase advantage but decline in market	4.34 to 5.25	93.7 to 94.2	Good potential
'0714 – Vegetables	42.24 to 32.18	3.88 to 2.79	Declines	41.93 to 32.64	97.1 to 96.9	Good trade already taking place
2208 – Alcoholic Beverages	2.55 to 4.29	0.46 to 0.54	Increase advantage but no regional bias	15.04 to 14.1	84.9 to 88.5	Good potential

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