

REVEALED COMPARATIVE ADVANTAGE OF SERVICES EXPORTS IN CARIFORUM COUNTRIES

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I. INTRODUCTION

International trade in services has grown significantly over the past two decades. World exports of commercial services totaled US \$3,746.9 billion in 2010 compared to US \$780.4 billion in 1990.¹ Trade in services is critical for economic development. It has been argued that services are important determinants of the competitiveness of goods (Hodge 2002:226). In addition, services are essential for trade facilitation (Mashayekhi et al. 2011:7). Trade in services can also contribute to economic development by providing opportunities for export diversification. This is particularly important for small developing countries that are dependent on a narrow range of exports and need to diversify export earnings to promote economic growth and reduce poverty.

The question of whether countries at lower levels of development have comparative advantages in services is the subject of debate. A common view among policymakers in poorer countries is that they lack comparative advantages in services (Hodges 2002:222; Whalley 2004:1224). This view has been rejected by Hodges (2002:224) who argues that while high income countries are likely to dominate trade in human capital – intensive and physical capital – intensive services, countries at lower levels of development should have comparative advantages in some services, especially labour intensive ones. However, there are few studies of the revealed comparative advantage in services. Langhammer (2004) investigated the revealed comparative advantage in services for the United States of America, Seyoum (2007) examined the revealed comparative advantage of services for sixty developing countries and Chemsriping (2008) did the same for five ASEAN countries but there are no studies of the revealed comparative advantage of the small economies of the Caribbean Forum (CARIFORUM) countries.² Yet, the potential for diversification of exports through expansion of services exports is critical

for CARIFORUM economies given their limited capacity for development of other exports. The objective of this paper is to fill this gap in the literature by investigating whether the CARIFORUM economies have comparative advantages in services that suggest opportunities for export diversification.

Since most of the CARIFORUM countries are tourism economies, the question this paper attempts to answer is: do the CARIFORUM countries have comparative advantage in non-tourism services? The paper is organized as follows: section two presents an overview of CARIFORUM trade. Section three discusses the measurement of revealed comparative advantage for services exports. The data and methodology are outlined in section four. The revealed comparative advantage indices for selected services are presented in section five. Market access issues are examined in section six. Policy implications are discussed in section seven. Finally, conclusions are presented in section eight.

II. OVERVIEW OF CARIFORUM TRADE

Given their limited natural resource endowments and small industrial sectors most of the CARIFORUM countries are dependent on services exports. Services account for more than half of total exports of goods and commercial services in ten of the fifteen CARIFORUM countries (table 1). In the cases of Antigua and Barbuda and Saint Vincent and the Grenadines, services exports exceeded 80 per cent of total exports of goods and commercial services in 2010. However, services exports are dominated by tourism. This is due to the region's natural endowment of beaches and tropical climate. Tourism accounts for more than 60 per cent of total exports of commercial services in all but three of the CARIFORUM countries (table 1). The three countries with relatively small tourism industries are Guyana and Suriname which export natural resources including bauxite and Trinidad and Tobago which exports petroleum and natural gas. The non-tourism services exported by CARIFORUM countries include insurance, business, transport and personal, cultural and recreational. The concentration of services exports in tourism suggests that diversification is essential to reduce vulnerability to external shocks. It is therefore important to determine whether the CARIFORUM countries have comparative advantages in non-tourism tourism services that will allow for export diversification.

Table 1. *CARIFORUM: Selected trade indicators 2010*

Country	Services as per cent of total exports of goods and services	Tourism as per cent of total exports of services	Main exports
Antigua and Barbuda	91	64	Tourism, paints, bedding insurance services
Bahamas	78	87	Tourism, marine products, pharmaceuticals, rum
Barbados	79	67	Tourism, business services, chemicals, sugar, rum
Belize	52	81	Petroleum, tourism, sugar, citrus, marine products
Dominica	81	79	Tourism, soaps, bananas, vegetables, citrus
Dominican Republic	43	84	Tourism, medical instruments, apparel, bananas, cigars
Grenada	85	71	Tourism, fish, nutmegs, bottled water
Guyana	22	32	Sugar, rice, bauxite, gold, timber
Haiti	24	91	Tourism, apparel, cocoa, coffee
Jamaica	66	77	Tourism, alumina, bauxite, sugar
Saint Kitts and Nevis	69	69	Tourism, electronics, beverages, tobacco
Saint Lucia	64	85	Tourism, bananas, apparel, cocoa, vegetables
Saint Vincent and the Grenadines	77	63	Tourism, bananas, arrowroot starch, vegetables
Suriname	9	29	Bauxite, alumina, petroleum, timber, fish , shrimp
Trinidad and Tobago	7	52	Petroleum, natural gas, methanol, chemicals

Source: compiled by author from national statistics

III. REVEALED COMPARATIVE ADVANTAGE OF SERVICES EXPORTS

The Heckscher-Ohlin trade theory posits that comparative advantage is determined by relative factor endowments which give rise to different factor prices across countries (Salvatore 2010:134). Countries with relative abundance of a given factor of production are expected to have a comparative advantage in the production of goods (or services) that use that factor intensively. Balassa (1965) developed an index to measure comparative advantage (the Balassa Index). According to him, the comparative advantage of a country is revealed by its observed trade pattern. Hence the Balassa index addresses revealed comparative advantage. A shortcoming is its failure to take account of the effects of government policies such as subsidies and tariffs on trade patterns (Seyoum 2007:378). Nevertheless, the index is widely used in the analysis of comparative advantage.

The measurement of the revealed comparative advantage of services is adversely affected by the inadequacy of the available data on services trade. Whereas goods are traded across borders, services trade involves four modes of supply. However, the available data on services trade is based on balance of payments statistics which do not include all services trade under all four modes of supply (Langhammer 2004:889). This suggests that revealed comparative advantage indices for services have to be interpreted with caution.

IV. DATA AND METHODOLOGY

Two measures of revealed comparative advantage are used in this paper to determine the revealed comparative advantage of CARIFORUM services exports. The first index, RCA1 is the standard Balassa index which measures comparative advantage with respect to the country's total exports of goods and services. This index reveals comparative advantage in a service industry when total exports of goods and services are taken into account.

The Balassa index is defined as:

$$RCA\ 1 = (X_{ij} / X_{it}) / (X_{wj} / X_{wt})$$

Where:

X_{ij} = country i's exports of service j

X_{it} = country i total exports

X_{wj} = world exports of service j

X_{wt} = total world exports

The second index used is a variation of RCA1 and measures the revealed comparative advantage of a given service with respect to the country's total exports of services. This index RCA 2 excludes exports of goods and is useful for revealing comparative advantage in services in cases where such comparative advantage is likely to be outweighed by the inclusion of goods exports.

RCA 2 is defined as:

$$RCA\ 2 = (X_{ij} / X_{is}) / (X_{wj} / X_{ws})$$

Where:

X_{ij} = country i exports of j

X_{is} = country i total exports of services

X_{wj} = world exports of service j

X_{ws} = total world exports of services

For both RCA1 and RCA 2, $RCA > 1$ implies that the country has a comparative advantage in service industry j.

The data is obtained from the World Trade Organization (WTO) database which is compiled from International Monetary Fund (IMF) Balance of Payments Statistics. The IMF collects the data from member countries. This dataset is utilized because unlike national data it is comparable across countries.

There are four modes of supply for internationally traded services:

Cross border supply (mode 1) – refers to the delivery of services across international borders, for example telephone calls and shipping services.

Consumption abroad (mode 2) – involves the consumer travelling to a foreign country as is the case of tourism.

Commercial presence (mode 3) – refers to the establishment of a company in a foreign country to supply a service to that market.

Presence of natural persons (mode 4) – involves the temporary movement of persons to a foreign country to provide services in that market, for example musicians or business consultants.

The balance of payments data does not include services supplied through direct investment (mode 3) (Maurer and Chavet 2002:236). This means that RCA indices based on balance of payments data will omit comparative advantages for which the mode of supply is commercial presence. This shortcoming does not reduce the reliability of the balance of payments data in the case of CARIFORUM countries as services suppliers in these countries are small firms with limited capacity to supply services by means of direct investment abroad.

The data provided in the WTO database is classified according to the fifth edition of the IMF Balance of Payments Manual. This classification divides commercial services into the following categories: transportation; travel; communication services; construction; insurance services; financial services; computer and information services; royalties and license fees; other business services and personal, cultural and recreational services. Data on some categories of services are not available for some CARIFORUM countries. In addition, some services such as construction services and royalties and license fees are exported in miniscule quantities by CARIFORUM countries. Computer and information services are exported on a small scale by Barbados, The Dominican Republic, Guyana, Jamaica and Saint Lucia. Exports of computer and information services ranged from US \$7 million in Guyana to US \$38 million in Jamaica in 2010. Jamaica with its exports of music and sports services is the only CARIFORUM country reporting exports of personal, cultural and recreational services. In light of the foregoing this paper focuses on the following services for which data is available: travel, transport, insurance, and personal cultural and recreational services. It is important to note that the category 'other business services' covers a wide range of services. These include: merchandising and other trade related services; operational leasing services; miscellaneous business services; professional services and technical services.³

V. RESULTS

Based on the Balassa Index (RCA1), thirteen of the fifteen CARIFORUM countries had revealed comparative advantage in travel services in 2010, the exceptions being Suriname and Trinidad and Tobago (table 2). All of the countries with revealed comparative advantage in travel services in 2010 also had revealed comparative advantage in travel services in 2005 except for Guyana which had revealed comparative disadvantage in 2005 (appendix 1). With respect to non-tourism services five of the fifteen countries have revealed comparative advantage in transportation, nine countries have revealed comparative advantage in insurance services and seven countries have revealed comparative advantage in business services. Jamaica was the only country with revealed comparative advantage in personal, cultural and recreational services.

In the case of the RCA 2 index, all CARIFORUM countries revealed a comparative advantage in travel services in 2010 (appendix 2). As in the case of the Balassa index, the RCA 2 Index indicates that some CARIFORUM countries revealed comparative advantage in non- tourism services in 2010 as follows:

Transportation:	Antigua and Barbuda, Trinidad and Tobago
Insurance:	Antigua and Barbuda, Barbados, Grenada, Guyana, Trinidad and Tobago
Business services:	Suriname
Personal, cultural and recreational services:	Jamaica.

Both the Balassa index and the RCA 2 indicate that while most CARIFORUM countries reveal comparative advantage in tourism, some CARIFORUM countries also reveal comparative advantage in non-tourism services including transportation, insurance, business services and personal, cultural and recreational services. Comparing RCA1 and RCA2 the finding of comparative advantage in travel is consistent for thirteen of the fifteen countries. This suggests that these countries have strong comparative advantage in tourism.

Table 2: *Countries with revealed comparative advantage in selected services- 2010 (Balassa index)*

Travel	Transportation	Insurance	Business services	Personal, cultural and recreational services
Antigua and Barbuda	Antigua and Barbuda	Antigua and Barbuda	Bahamas	Jamaica
Bahamas	Grenada	Barbados	Barbados	
Barbados	Jamaica	Dominica	Dominica	
Dominica	Saint Kitts and Nevis	Grenada	Grenada	
Dominican Republic	Saint Vincent and the Grenadines	Saint Kitts and Nevis	Saint Kitts and Nevis	
Grenada		Saint Lucia	Saint Vincent and the Grenadines	
Guyana		Saint Vincent and the Grenadines	Suriname	
Haiti		Trinidad and Tobago		
Jamaica				
Saint Kitts and Nevis				
Saint Lucia				
Saint Vincent and the Grenadines				

Source: Appendix 1

In the cases of non-tourism services, the services in which countries revealed comparative advantages in both RCA1 and RCA2 (i.e. strong comparative advantage) are as follows:

Transportation:	Antigua and Barbuda
Insurance Services:	Antigua and Barbuda, Barbados, Grenada, Trinidad and Tobago
Business services:	Suriname
Personal, recreational and cultural services:	Jamaica

VI. MARKET ACCESS FOR CARIFORUM SERVICES

The RCA calculations show that there is potential for diversification into non-tourism services. However successful diversification of services exports is dependent on market access. For many developing countries, market access for services is a constraint on the expansion of services exports. This is partly due to the limited liberalization commitments made by high income countries under the General Agreement on Trade in Services (GATS) in mode 4 where developing countries have a comparative advantage (Chanda 2002:304). Other services such as transportation in which some developing countries have comparative advantage also face restricted market access. A recent services trade restrictions database identifies professional services and transportation as the most protected services sectors in both developed and developing countries (Bochert et al. 2012).

In the case of the CARIFORUM countries, enhanced market access for services offered by the European Union (EU) under the CARIFORUM-EU Economic Partnership Agreement (EPA) has the potential to facilitate further development of services exports. The EU has granted market access to more than 90 per cent of its service sectors across all four modes of supply.⁴ These sectors encompass all of the areas in which the CARIFORUM countries have revealed comparative advantage. In mode 1 (cross border supply) and mode 3 (commercial presence), the EU has liberalized all services except: audio-visual services; national maritime cabotage, air transport services and services directly related to the exercise of traffic rights. With respect to mode 2 (consumption abroad), the EU liberalization commitments cover all services except services provided by means of telecommunications (European Commission 2008).

Given the revealed comparative advantage of CARIFORUM countries in business services and personal, cultural and recreational services the EU liberalization commitments in mode 4 (presence of natural persons) provide opportunities for expansion of exports of those services as well as for development of new exports of professional services. Services suppliers in 29 service sub sectors are allowed to enter the EU to provide such services for periods of up to six months. Similarly skilled self-employed service suppliers in eleven service sub sectors can enter the EU for periods of up to six months. The mode 4 liberalization commitments also allow temporary presence of key personnel, graduate trainees and business service sellers in all sectors open to commercial presence (European Commission 2008).

While the CARIFORUM countries have significant access to the EU market, access to the regional market is also important for the development

of services exports. Access to regional markets can allow service firms in CARIFORUM countries to achieve economies of scale, improve competitiveness and strengthen their capacity to compete in global markets. In the case of the CARIFORUM countries, access to the regional market for services is restricted due to limited liberalization of intra-regional trade in services. Multilateral liberalization of trade in services under the General Agreement on Trade in Services (GATS) did not result in any significant liberalization of services trade on the part of CARIFORUM countries. Article XIX of the GATS allows developing countries flexibility for opening fewer services sectors. In keeping with this provision, the CARIFORUM countries committed to a low level of liberalization of services trade. Stephenson (2001:6) estimated that the majority of CARIFORUM countries committed to opening less than ten per cent of services trade.

The limited liberalization of services trade achieved by CARIFORUM countries under the GATS means that liberalization of intra-regional trade in services is essential to promote the growth of regional services firms. Liberalization of intra-regional trade in services is provided for in the Treaty governing the CARICOM Single Market but implementation has been slow. Consequently, free movement of services within the region is impeded by restrictions on movement of persons and differences in the national regulations governing the provision of services. Movement of persons is limited to certain categories of workers and mechanisms for determining the equivalency of professional qualifications have not been established.⁵ In the case of regulations, harmonization is incomplete in important services sectors such as financial services and professional services.

VII. POLICY IMPLICATIONS

Tourism is the service in which most CARIFORUM countries reveal comparative advantage. The comparative advantage in tourism is based on the region's natural endowment of sun, sand and sea. The concentration of CARIFORUM services exports in tourism increases the exposure of CARIFORUM economies to external shocks. Diversification of services exports is therefore essential to reduce economic vulnerability. The RCA calculations suggest that CARIFORUM has comparative advantage in services exports other than tourism. Policies should therefore be implemented to promote the expansion of exports of those non-tourism services in which the region has revealed comparative advantage. In particular, the creation of an integrated regional market for services will

give impetus to the expansion of non-tourism services. The larger regional market will facilitate development of larger services firms. In addition, the exposure of services firms to greater competition will strengthen their capacity to compete in extra-regional markets.

VIII. CONCLUSIONS

While CARIFORUM countries are highly specialized in tourism services, the RCA analysis shows that there is potential for development of other services including transport, insurance, business services and personal, cultural and recreational services. Diversification of services exports is imperative for CARIFORUM economies given the need to increase export earnings, promote economic growth and reduce economic vulnerability. The preferential market access to the EU market available under the CARIFORUM-EU Economic Partnership Agreement offers an incentive for expansion of services exports. Policymakers should therefore consider promoting the expansion of the non-tourism services in which the region has revealed comparative advantage.

Appendix 1: *Balassa Index*

Country	Travel		Transport		Insurance		Other business services		Personal, cultural and recreational services	
	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010
Antigua and Barbuda	10.75	11.62	3.67	5.75	9.9	8.75	1.45	0.88	..	..
Bahamas	13.76	13.6	0.43	0.90	..	..	2.41	1.20	..	..
Barbados	11.32	10.55	0.36	0.28	15.87	6.4	2.10	3.84	..	..
Belize	8.18	8.44	1.41	0.74	..	0.40	1.32	0.64	..	..
Dominica	8.45	12.8	0.73	0.55	5.0	4.28	2.40	1.48	..	..
Dominican Republic	6.60	7.16	0.29	0.80	0.66	0.55	0.09	0.21	..	..
Grenada	9.35	12.07	1.78	1.53	2.63	6.2	4.55	1.26	..	..
Guyana	0.92	1.41	0.26	0.30	3.3	2.2	0.90	0.50	..	..
Haiti	2.7	4.38	..	..	..	..	..	..	..	..
Jamaica	7.61	10.18	2.74	1.83	1.21	0.38	0.06	0.28	3.0	4.50
Saint Kitts and Nevis	11.89	9.55	1.33	1.90	5.2	2.7	2.03	1.89	..	..
Saint Lucia	14.47	10.91	1.03	0.80	4.01	2.9	2.25	0.92	..	..
Saint Vincent and the Grenadines	10.01	9.6	1.30	1.36	3.40	4.18	..	..	..	..
Suriname	0.72	0.55	1.38	0.34	0.28	0.27	7.09	1.01	..	..
Trinidad and Tobago	0.79	0.69	0.46	0.51	4.15	2.20	0.48	0.07	..	..

Source: Authors calculations based on WTO Statistics Database

RCA >1 implies that the country has a comparative advantage in that service industry

Appendix 2: RCA 2 Index

Country	Travel		Transport		Insurance		Other business services		Personal, cultural and recreational services	
	2005	2010	2005	2010	2005	2010	2005	2010	2005	2010
Antigua and Barbuda	2.45	2.52	0.82	1.20	1.09	1.75	0.33	0.19	..	..
Bahamas	3.02	3.45	..	0.22	..	..	0.57	0.31	..	..
Barbados	2.70	2.64	0.08	0.07	1.86	1.45	0.50	0.98	..	..
Belize	2.71	3.2	0.46	0.28	..	0.14	0.44	0.24	..	..
Dominica	2.41	3.14	0.21	0.14	0.74	0.32	0.69	0.37	..	..
Dominican Republic	3.27	3.32	0.15	0.37	0.18	0.24	0.05	1.00	..	..
Grenada	2.22	2.81	0.42	0.35	3.80	1.35	0.33	0.30	..	..
Guyana	0.85	1.27	0.24	0.27	1.47	1.83	0.82	0.45	..	..
Haiti	3.2	3.60	..	..	..	..	..	..	..	..
Jamaica	2.42	3.04	0.87	0.54	0.19	0.10	0.02	0.08	0.94	1.17
St. Kitts and Nevis	2.75	2.71	0.31	0.55	0.56	0.73	0.48	0.55	..	..
St. Lucia	3.17	3.35	0.22	0.24	0.43	0.82	0.08	0.39	..	..
St. Vincent and the Grenadines	2.40	2.48	0.31	0.35	0.38	1.00	0.78	0.85	..	..
Suriname	0.88	1.16	1.68	0.71	0.17	..	1.54	2.19	..	..
Trinidad and Tobago	1.85	1.90	1.07	1.41	4.77	6.17	0.20	0.23	..	..

Source: author's calculations based on WTO Statistics Database

RCA > 1 implies that the country has a comparative advantage in that service industry

NOTES

1. WTO Statistical database.
2. The CARIFORUM group of countries consists of 15 Caribbean countries that entered into an Economic Partnership Agreement with the European Union. They include: Antigua and Barbuda; The Bahamas; Barbados; Belize; Dominica; Dominican Republic; Grenada; Guyana; Haiti; Jamaica; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname and Trinidad and Tobago. All of the CARIFORUM countries except the Dominican Republic are members of the Caribbean Community (CARICOM).
3. This is based on the definition employed by the International Monetary Fund for the compilation of balance of payments statistics.
4. CARIFORUM countries are therefore given access to supply a wide range of services by means of: mode 1 (cross border supply) which covers services such as shipping; mode 2 (consumption abroad); mode 3 (commercial presence) which allows CARIFORUM firms to establish subsidiaries inside the EU to provide services and mode 4 (presence of natural persons) which provides for temporary presence of CARIFORUM nationals for the purpose of supplying services within the EU market. For full details of the EU liberalisation commitments see European Commission (2008:1639-1677)
5. The categories of workers allowed to move freely include: university graduates, artistes, musicians, media workers, sports persons, teachers, holders of associate degrees and artisans.

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