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Integration and Trade Sector

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Trade in Barbados: Challenges and options to boost growth

Martha Denisse Pierola, Krista Lucenti, Kun Li, Jeremy Harris and Takiyah De Four[1]

Trade plays a role in growth, especially in small economies like Barbados.

Although trade plays a key role in growth regardless of an economy's size (Frankel and Romer, 1999), it is particularly important for small economies as it helps them achieve economies of scale that otherwise would not exist given the size of their domestic market. By accessing larger markets through trade and by being exposed to stronger competition and technological knowledge available in other countries, small economies could increase productivity, support innovation and increase their options for diversification, ultimately boosting growth. Therefore, openness to trade is crucial for their growth.[2]

While Barbados is an open economy, its degree of openness to trade could be higher. Trade (exports plus imports) as a share of GDP has been close to 90 percent on average between 2000 and 2015. Relative to other countries, this level of openness is slightly below expectations for its income level (Figure 1). In fact, considering a group of countries that are similar to Barbados in terms of population, GDP and income level, Barbados is among the economies with the lowest level of openness (Table 1).[3]

Barbados' recent trade performance has been sluggish, with exports highly concentrated in a few markets and in one predominant service sector.

Trade expanded notably during the past decade. However, growth in both exports and imports has slowed down in recent years. Barbados' merchandise exports averaged just under US$500 million per year in recent years, falling slightly to US$483 million in 2017. Despite some volatility, export growth was strong until 2012, plummeted in 2013 and recovered at an annual average rate of 1 percent since 2014. The total value of imports has normally been 3 to 4 times larger than the value of total exports – in recent years, imports have totaled US$ 1.6 billion. However, unlike exports, imports have been declining at an average annual rate of 3 percent since 2012 which has helped improve the trade balance (Figure 2).

Barbadian exports are concentrated in a few markets (United States, Caribbean countries). The share of exports to the U.S. has increased over the past decade, rising from around 15 percent in the 2000s, to around 25 percent in the 2010s. The main product exported to the U.S. is jewelry, followed by rum. The second most important trading partner for Barbados is Trinidad and Tobago. The significant, but volatile, exports to Trinidad and Tobago consist mainly of oil, followed by processed foods and alcohol, and pharmaceuticals. Also significant are exports to Jamaica which consist largely of pharmaceuticals, metal

[1] This note has been prepared under the supervision of Mauricio Mesquita Moreira.

[2] See Lederman and Lesniak (2018) and Alesina, Spolaore and Wacziarg (2005) for a discussion and an analysis on the positive and significant relationship between openness and growth; and Mesquita Moreira and Mendoza (2007) for a discussion on trade openness and integration in the Caribbean countries.

[3] The figure on trade openness for Barbados in Table 1 corresponds to 2015. Even if we considered the average for the 2000-2015 period (90 percent), this would still be far below the trade openness levels observed in countries like Seychelles, Aruba and Maldives. The comparator countries were selected using the following criteria: average population below 500,000; average GDP—PPP constant—below US$10 billion and average GDP per capita—also PPP constant—larger than US$10,000. All these figures are averages for the 2010-2016 period. Total population in Barbados was 284,217 in 2015, their GDP was US$5 billion and GDP per capita was US$16,460 during the same year.

products, processed foods, and alcoholic beverages as well as exports to the United Kingdom, which historically were quite significant, and now consist primarily of alcoholic beverages and tobacco products.

The relatively higher degree of concentration in a few export markets stands out in cross-country comparisons. The analysis of the relationship between export concentration and the stage of development in 264 countries in years 2015 and 2016—the last two years of data available—reveals that, in terms of market diversification, Barbados is consistently and considerably above the level of concentration that would be expected for a country in their stage of development (Figure 3). [4] This highlights the need to focus efforts on greater preference utilization with existing trade partners, e.g. the European Union, and to identify new market access opportunities for Barbados' exports.

Regarding services, tourism dominates Barbadian exports. One of the concerns with this situation is that the sector has lacked dynamism in past years.[5] The travel category which includes tourism is by far Barbados' largest service export activity, averaging around US$1 billion per year in recent years (Table 2). A distant second, but still significant, are exports of "Other Business Services", which generally covers professional and management consulting services, operating leasing services, and technical trade-related services, including brokerage services.[6] It is worth noting that while most of the service export categories have expanded, tourism is the one sector that has been contracting consistently since 2010.

Beyond trade in services, the Barbadian economy is highly concentrated and heavily reliant on the services sector. In 2016, 92 percent of the country's GDP was generated by the services sector, and this share has been increasing consistently since 2000 (Table 3). The opposite can be said of agriculture and manufacturing, whose shares in GDP have been shrinking since 2005 and were 4 percent each in 2016. Within services, tourism alone—hotel and restaurant activity—represented 12 percent of GDP at constant prices. However, this contribution is higher if we consider that other categories such as transport and wholesale and retail trade, that are connected to the tourism sector, combined represented a third of 2016 GDP.

Diversification in small states is desirable. There are options within the tourism industry to support the economy's potential for growth.

Small economies are more prone to high levels of income volatility. While a country's degree of openness is positively associated to this outcome; export concentration has also been shown to increase terms of trade volatility, which in turn has a negative effect on economic growth.[7] Diversification is a highly desirable objective, that mitigates volatility concerns, especially in the case of small states that are more prone to have it.

The relevance of travel services (tourism) as a source of growth for the economy emphasizes the need to explore options for expansion and diversification within this sector. International tourism offers opportunities for export and development of upstream and downstream suppliers in sectors such as

[4] This conclusion is the result of an analysis of the relationship between exports' degree of concentration—measured as the Herfindhal index taking into account the universe of export markets covered—and the stage of development in 264 countries—all countries available in WDI database. The curve representing the shape in this relationship is obtained using a non-parametric technique following Imbs and Wacziarg (2003).

[5] The figures in Table 2 go until 2013, the last year of data available.

[6] Other Business Services includes a broad variety of concepts, and disaggregation is not available in official statistics,

[7] See discussion in Lederman and Lesniak (2017) and Jansen (2004).

agriculture, fishing, food processing, furniture, construction, etc. (see Honeck, 2012 for a comprehensive discussion on the subject). Although the evidence on the impact of tourism on growth and productivity is mixed, studies focusing on Caribbean countries find a positive impact. Thacker, Acevedo and Perrelli (2012) for instance, find not only that tourism significantly contributed to long-term growth, but also has the potential to boost it via its positive impact on productivity. In particular, they find that high-end tourism and tourist arrivals more predominantly, have a positive effect on productivity. Therefore, efforts to expand the sector in its intensive margin—existing types of tourism—and extensive margin—developing new types of tourism could yield significant dividends.

Given Barbados' comparative advantage in tourism—proximity to large markets and a well-established sector— the country has been exploring strengthening its health and wellness services exports.[8] The health and wellness tourism sector, broadly defined, includes products and services made accessible to foreigners and includes conventional healthcare (medical), spa tourism, convalescent addiction treatment, retirement communities, and some alternative health services.[9] Barbados has had significant success with its fertility centre, attracting 85 percent of its clients from overseas, thanks to its highly competent doctors, its price competitiveness and attractive location.[10] It is likely that further growth can be achieved in the wellness industry, which grew 10.6 percent from 2013-2015 to a market value of US$3.72 trillion. Wellness tourism revenues grew 14 percent from US$494.1 billion in 2013 to $563.2 billion in 2015, as travelers made 691 million wellness trips, up more than 15 percent since 2013. This creates significant spillovers into the economy as the international wellness traveler spends 59 percent more per trip than the average inbound tourist,[11] who, in turn, spends more than 11.5 times more than the average cruise passenger.[12] The global spa market alone has the potential to create employment, growing from US$94 billion in 2013 to US$98.6 billion in 2015 and employing more than 2.1 million workers.[13] Local businesses have taken note and are offering services such as acupuncture, reflexology, yoga, reiki, ear candling, and fitness that can be provided by medical practitioners or experts from local health spas.

[8] https://www.imtj.com/news/barbados-promotes-health-and-wellness-tourism/

[9] Caribbean Export Development Agency, 2008. Ten Strategies for success within the Caribbean Single Market and Economy (CSME).

[10] https://www.investbarbados.org/newsmain.php?view=Fertility%20Clinic%20Encourages%20Further%20Medical%20Tourism%20Thrust. The Medical Fertility Centre is the only Joint Commission International (JCI) accredited facility in the Caribbean. Other traditional medical tourism activities will require a standard of care and accreditation to attract patients, and acceptance by the health care insurance in the industrial countries of treatment in the Caribbean beyond emergencies, if they are to expand beyond patients capable of paying out of pocket fees (given the cost differential between Barbados and other lower cost destinations, such as Mexico or India). See also World Bank, 2005. A Time to Choose Caribbean Development in the 21st Century. http://siteresources.worldbank.org/LACEXT/Resources/317250LAC.pdf

[11] Global Wellness Institute Statistics. https://www.globalwellnessinstitute.org/press-room/statistics-and-facts/ In addition, Thailand's Ministry of Tourism and Sports estimated that each non-medical tourist spent a mean of US$ 803 whereas the medical tourists and their companions each spent more than three times this figure in the same year excluding any medical expenditure according to the World Health Organization.

[12] Caribbean Tourism Organization Statistics, 2015.

[13] See Global Wellness Institute.

To support performance in goods trade, improvements in market access and the lowering of trade costs are required to increase export competitiveness.

Tariffs that Barbadian exporters are charged abroad

Barbados has preferential agreements with most of its main trade partners and duty-free access for its exports. Exports to other CARICOM member countries are, in principal, duty free under that agreement, as are most exports to countries of the EU under the CARIFORUM EPA[14]. Exports to the U.S. are only afforded preferential treatment for products covered by the Caribbean Basin Trade Partnership Act (CBTPA). While two-thirds to three-quarters of U.S. imports from Barbados do enter under this program, it is worth noting that nearly all imports that are not covered by CBTPA are products that are not subject to tariffs in the U.S. (Table 4). Additionally, a non-trivial percentage of Barbadian exports receive duty-free treatment in Colombia, Costa Rica, Cuba and Dominican Republic through bilateral agreements of CARICOM, and in Venezuela and Canada through non-reciprocal agreements. Its products are eligible for the Generalized System of Preferences (GSP) schemes of Australia, Canada, Japan, New Zealand, the Russia Federation, Switzerland and the United States.

Despite that, applied tariffs to Barbadian exports are higher relative to other countries. In 2015, the average applied tariff that Barbados exporters faced in the world—calculated over all trade partners world-wide—was 4.23 percent, which ranked 10th among 23 LAC countries (Figure 4).[15] All CARICOM countries except Belize face lower tariffs faced in the world market. The average tariff faced in 2015 was 9.04 percent for exporters of agriculture products, 1.92 percent for exporters of manufacturing products, and 2.2 percent for exporters of minerals and metals. Barbados exporters still face high tariffs in most world markets. The tariff faced is 14.45 percent in Asian countries, 12.72 percent in MERCOSUR countries, 7.99 percent in Mexico, 7.42 percent in Central America countries, 6.19 percent in Chile, and 5.88 percent in ANDEAN countries (Figure 5). This situation points to a lack of effectiveness in the implementation of some of the existing agreements and the importance of exploring greater access in markets beyond those in which there are preferences already in place.

Tariffs that consumers and producers pay at home for imports

In terms of market access at home, Barbados' average applied tariff on imports has slightly decreased since 2001. From 14.55 percent in 2001, it went down to 12.44 percent in 2015 (Figure 6).[16] However, within the Latin American region, Barbados' average imposed tariff was the second highest among 26 LAC countries in 2015 (Figure 7). Agriculture is the sector with the highest average applied rate (35.5 percent), followed by manufacturing (10.87 percent) and minerals and metals (8.22 percent). Within agriculture, fish, edible vegetables, beverages and spirits, meats and tobacco are the goods with the highest tariff levels. Regarding manufacturing, clocks and watches—which Barbadian exporters trade in a non-trivial value—is the HS 2-digit chapter with the highest tariff level. Then, apparel (including textile floor coverings), and vehicles follow. Preferential rates apply for imports from CARICOM countries, the EU, Colombia, Cuba and the Dominican Republic that have preferential agreements with Barbados. For imports from all other regions, the imposed tariff is at the most favored nation (MFN) rate. Given that there is a number of products that fall under exceptions to the CARICOM Common External Tariff and

[14] Most EU tariffs on CARIFORUM imports were phased out fairly quickly, and few products are still subject to tariffs. However, tariff treatment of CARIFORUM exports to the UK post-Brexit it not yet clear.
[15] Appendix A1 has the detail of how the average applied tariff was calculated.
[16] Appendix A2 details how the applied tariff at home was calculated.

tariff peaks applied in agriculture, a unilateral reduction in tariffs on these goods would be advisable from a competitiveness stand point.[17] Regarding tariffs in other products, as active member of CARICOM, any measure that would imply a change in Barbados' tariff schedule would have to be negotiated first within the agreement's framework. In any case, given the ongoing fiscal consolidation process, the implementation of such reductions should be considered only after carefully studying its potential fiscal effects.

The cost of trading for Barbadian exporters

On trade facilitation, "trading across borders" indicators suggest that while Barbados ranks overall 129 of 190 countries, which is in line with other Caribbean countries, the cost and time to import are dramatically higher. In Barbados, it takes an average of 104 days per year (compared to the average of 64.4 days for LAC countries) to import goods. It also costs nearly US$1585 to import a container against US$685 for LAC. The cost in neighbor countries such as Antigua and Barbuda, Saint Vincent and the Grenadines and St. Lucia is half to two-thirds less than in Barbados (Figure 8). These inefficiencies in customs and port clearance processes are increasing the cost of imports (already high due to tariffs) for consumers and the tourism sector alike and reducing the impact of investments made in document compliance initiatives such as the Electronic Single Window for trade. Unlike tariff reforms, trade facilitation interventions aiming at reducing these inefficiencies would lower trade costs and lead to gains free of the fiscal and trade policy concerns mentioned above.

Barbados is less connected than larger regional ports such as The Bahamas and Jamaica; however, despite similar circumstances, other small islands neighbors have increased their global connectivity, e.g. Antigua and Barbuda; Saint Vincent and the Grenadines (Figure 9). UNCTAD's Liner Shipping Connectivity Index captures how well countries are connected to global shipping networks – Barbados scored an average of 5/100 over the past 13 years, highlighting how poorly it is connected. This results in increased port stops where goods must be transshipped from one vessel to another, sometimes 3-4 times before reaching their final destination, incurring port fees and time delays. The combination of goods clearance costs, charges from multiple ports and tariffs on imports escalates the cost for the hospitality sector, rendering it less competitive than its neighbors, and increases the cost of living for the average Barbadian.

Barbados would benefit from promoting innovation and technology within the trade and transport sectors. Implementation of obligations under the Trade Facilitation agreement, particularly those related to automation, coupled with increased usage of Barbados' Electronic Single Window to rationalize documents and processes, would reduce the time related to goods clearance processes. However, the greatest gains will come from adoption of a Port Community System[18] since global indicators show that goods clearance at airports and ports are the main determinant of higher costs of imports. Risk management principles should be applied for inspections, while a Port Community System will optimize, manage and automate administrative and operational port and logistics processes. Smart port initiatives, e.g. Biodiversity, automation, artificial intelligence, will also improve security, increase productivity and efficiency, and collect data which can be used to optimize processes.

[17] See discussion on exceptions to CARICOM's CET and taiff peaks in the WTO Trade Policy Review for Barbados (2014).

[18] A Port Community System is a neutral and open electronic platform enabling intelligent and secure exchange of information between public and private stakeholders.

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Tables

Table 1. Trade openness: Barbados vs. comparator countries

Country	Trade as a share of GDP	Year*
Seychelles	181	2014
Aruba	157	2011
Maldives	155	2016
Palau	125	2016
St. Kitts and Nevis	114	2016
Grenada	108	2016
Dominica	102	2016
Suriname	102	2016
St. Vincent and the Grenadines	91	2016
Antigua and Barbuda	89	2016
St. Lucia	81	2016
Barbados	79	2015
Bermuda	77	2013
Bahamas, The	77	2016

* Last year of data available

Source: World Development Indicators

Table 2. Exports of Services (Millions of US$)

	2000	2005	2010	2011	2012	2013
Royalties	0.3	1.7	3.4	7.8	6.8	33.4
Financial Services	18.0	9.4	19.6	23.9	27.9	29.5
Government Services	21.6	27.5	37.6	36.2	46.3	49.2
Maintenance Services	0.7	-	0.1	5.5	9.2	18.3
Manufacturing Services	-	-	-	-	-	0.1
Other Business Services	104.5	170.8	390.1	164.1	155.1	250.1
Personal, Cultural, Rec. Services	0.3	0.2	0.4	0.4	0.5	0.3
Telecommunications	45.2	51.9	34.3	14.0	17.8	15.3
Transport	24.8	30.9	26.8	47.5	48.9	58.4
Travel	723.0	1,073.0	1,071.0	970.1	928.9	972.8
Total	938.1	1,365.5	1,583.4	1,269.6	1,241.4	1,427.5

Source: IMFBOP

Table 3. GDP decomposition (in percent)

	Agriculture	Manufacturing	Services
2000	6.1	6.8	86.0
2005	4.8	6.0	88.2
2010	4.3	4.7	90.5
2015	3.9	4.0	91.6
2016	3.8	3.8	91.9

Source: Central Bank of Barbados Statistics, GDP at constant prices.

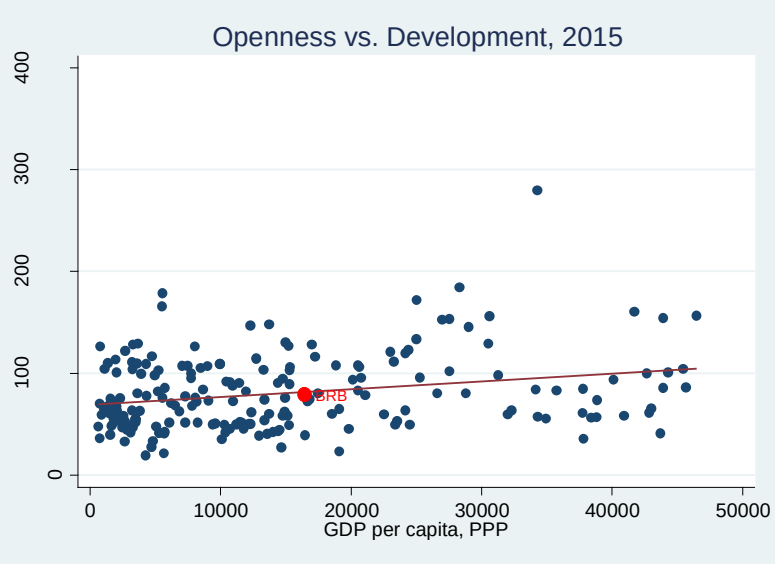
Table 4. U.S. Imports from Barbados by Import Program

	2015	**2016**	**2017**
CBI	75%	69%	73%
MFN Duty Free	24%	30%	27%
MFN Duty Paid	0%	1%	1%

Note: CBI includes imports under the Civil Aviation program.
Source: USITC

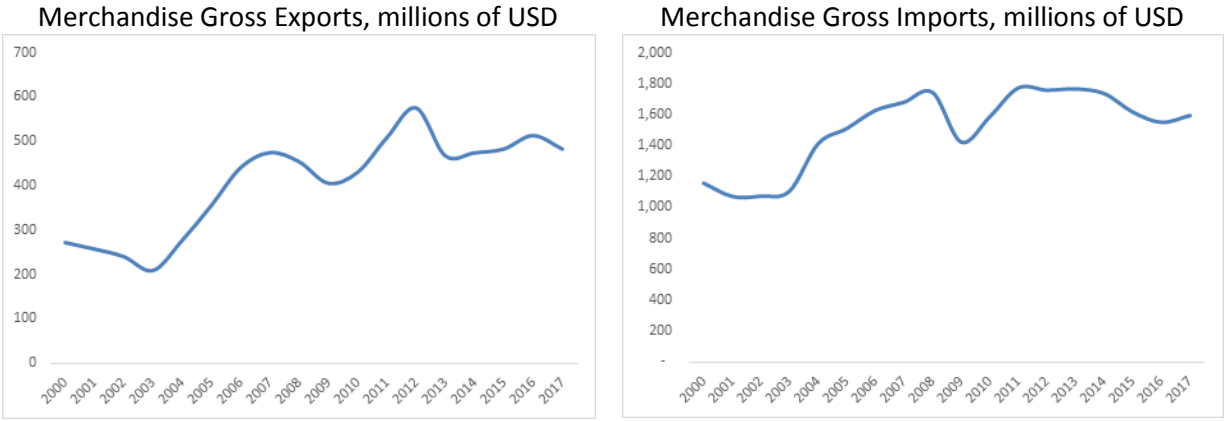
Figures

Figure 1. Openness and the relative importance of goods vs. services trade



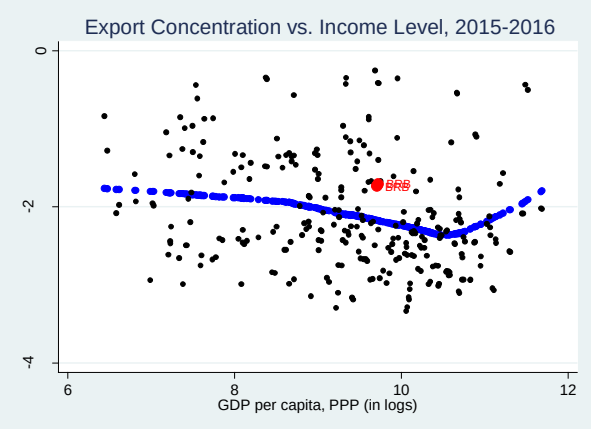
Source: World Development Indicators

Figure 2. Trade performance



Source: INTrade

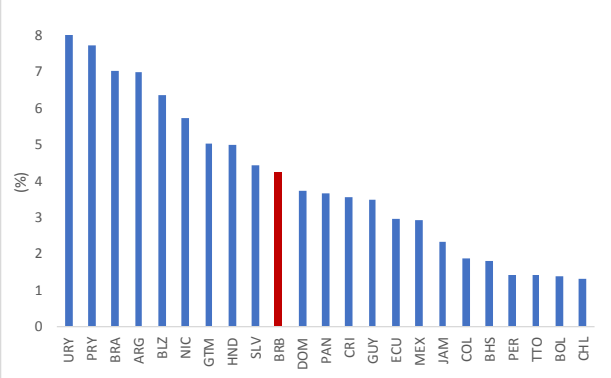
Figure 3. Product vs. Market diversification.



Source: Comtrade and WDI

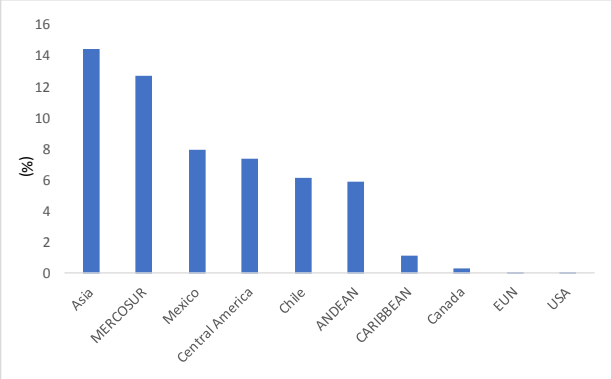
Note: The Herfindhal index in the vertical axis has been calculated considering the universe of markets covered by exporters in Barbados. The blue line represents the fitted curve calculated using a non-parametric technique (Imbs and Wacziarg, 2003). The red dots represent the Herfindahl values for Barbados in 2015 and 2016. The conclusion holds if a linear regression is estimated.

Figure 4. Tariffs imposed on Latin American exporters, 2015



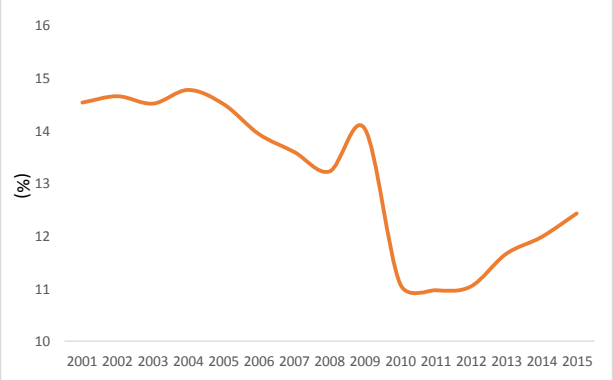
Source: INT calculation based on WITS / TRAINS and COMTRADE data.

Figure 5. Tariffs imposed on Barbadian exports, 2015



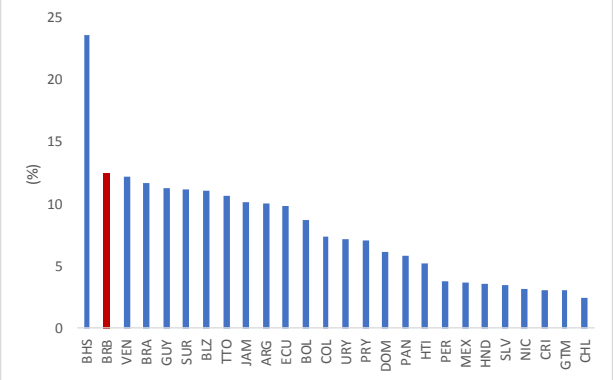
Source: INT calculation based on WITS / TRAINS and COMTRADE data.

Figure 6. Barbadian tariffs on imports, 2001-2015



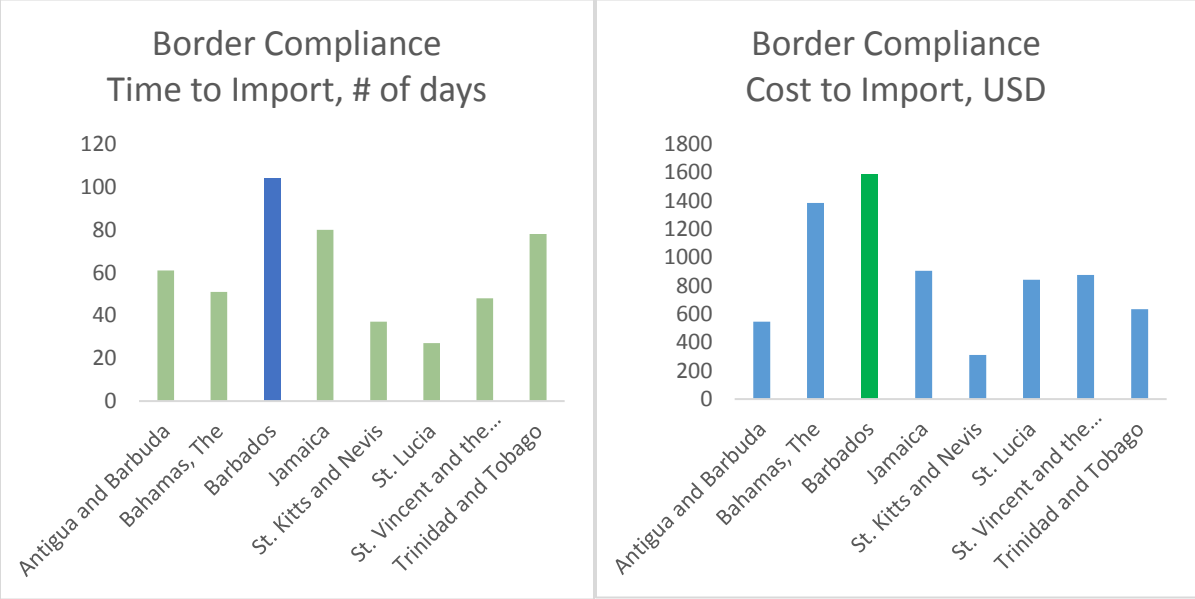
Source: INT calculation based on WITS / TRAINS and COMTRADE data.

Figure 7. Tariffs charged on imports in Latin America, 2015



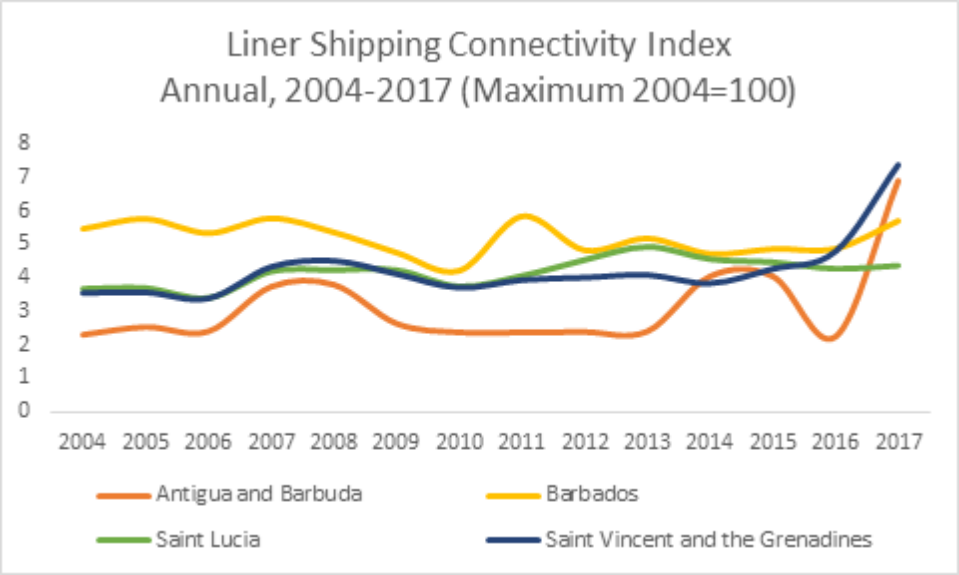
Source: INT calculation based on WITS / TRAINS and COMTRADE data.

Figure 8. Crossing the Barbadian border for imports



Source: Doing Business Report 2018, World Bank

Figure 9. Connectivity



Source: UNCTAD

Appendix

A1. Calculation of the Weighted Average Tariff Faced by Barbadian exporters

The indicator is defined as a weighted average of applied tariffs imposed by each imposing country on each product (HS 6-digit level). It provides an aggregated measure of the tariff that a country faces in the world market.

The indicator is calculated in two stages for each exporting country and year:

Stage 1, for each imposing country, calculate the weighted average of the applied tariffs over all products. The weight is the share of that exporter's exports to the world of each product in the exporter's exports to the world of all the products.

$$t_{tij} = \sum_k t_{tijk} * \frac{E_{tiwk}}{E_{tiw}}$$

Stage 2, calculate the weighted average of the tariffs imposed by each importer (as obtained in stage 1). The weight is the share of each imposing country's total imports from the world (adjusted by the distance between the exporter and the imposing country) in the sum of these distance-adjusted imports of all imposing countries.

$$t_{ti} = \sum_j t_{tij} * \frac{I_{twj}/d_{ij}}{\sum_j (I_{twj}/d_{ij})}$$

Where,

i is the exporting country, j is the importing country and k is the product at HS 6-digit level;

d_{ij} is the distance between country *i* and *j*;

t_{tijk} is the applied tariff (equal to Preferential rate if there is an FTA between *i* and *j*; equal to MFN rate otherwise) country *j* imposed on country *i* for product *k* at year *t*;

E_{tiwk} is country *i*'s exports of product *k* to the whole world at year *t*;

E_{tiw} is country *i*'s total exports to the world at year *t*, i.e. $E_{tiw} = \sum_k E_{tiwk}$;

I_{twj} is country *j*'s total imports from the world at year *t*.

Selecting the exporter's trade shares with the world instead of the bilateral shares with the imposing country as weights is meant to minimize the endogeneity bias that would arise when a high tariff imposed by the importer to a certain product/partner combination suppresses or distorts bilateral trade. Adjusting the trade share with distance takes into account the effect of distance, which is an important determinant in international trade.

A2. Calculation of the Applied Weighted Average Tariff

The indicator is defined as a weighted average of applied tariffs imposed on each exporting country on each product (HS 6-digit level). It provides an aggregated measure of the tariff that a country imposes on imports.

The indicator is calculated for each tariff imposing country and year in two stages:

Stage 1, for each product, calculate the weighted average of the applied tariffs imposed by the importer to all trading partners. The weight is the share of each partner's exports of that product to the world (adjusted by the distance between the exporter and the imposing country) in the sum of these distance-adjusted exports of all partners.

$$t_{tjk} = \sum_i t_{tijk} * \frac{E_{tiwk}/d_{ij}}{\sum_i (E_{tiwk}/d_{ij})}$$

Stage 2, calculate the weighted average of the tariffs on each product (as obtained in stage 1). The weight is the share of each product in total world exports.

$$t_{tj} = \sum_k t_{tjk} * \frac{E_{twwk}}{E_{tww}}$$

Where,

i is the exporting country, j is the importing country (tariff imposing) and k is the product at the HS 6-digit level;

t_{tijk} is the applied tariff (equal to Preferential rate if there is an FTA between *i* and *j*; equal to MFN rate otherwise) country *j* imposes on country *i* for product *k* at year *t*;

d_{ij} is the distance between country *i* and *j*;

E_{tijk} is country *i*'s exports of product k to country *j*;

E_{tiwk} is country *i*'s exports of product *k* to the whole world, i.e. $E_{tiwk} = \sum_j E_{tijk}$;

E_{twwk} is world's exports of product *k* (to the whole world), i.e. $E_{twwk} = \sum_i E_{tiwk}$;

E_{tww} is world's total exports, i.e. $E_{tww} = \sum_k E_{twwk}$.

Selecting the exporters' trade shares with the world instead of the bilateral shares with the imposing country as weights is meant to minimize the endogeneity bias that would arise when a high tariff imposed by the importer on a certain product/partner combination suppresses or distorts bilateral trade. Adjusting the trade share with distance takes into account the effect of distance, which is an important determinant in international trade.