Workshop on Trade Policy and Trade Indicators

Module 3

UNITED NATIONS

ECLAC

Mariano Alvarez
Economic Affairs Officer
Zebulun Kreiter
Economic Affairs Officer
Marcelo Pereira Dolabella
Consultant
Economic Commission for Latin America and the Caribbean

BALANCE OF PAYMENTS

In the BoP, each country registers all transactions with natural or legal persons that are not considered residents. Thereby, various classification criteria, according to the nature of the transaction, are applied:

- 6th Edition of Balance of Payments Manual – IMF (2009)
- Manual on Statistics of International trade in Services (2010)
- Benchmark Definition of Foreign Direct Investment - OECD (2008

Principles and Basic Definitions (1)

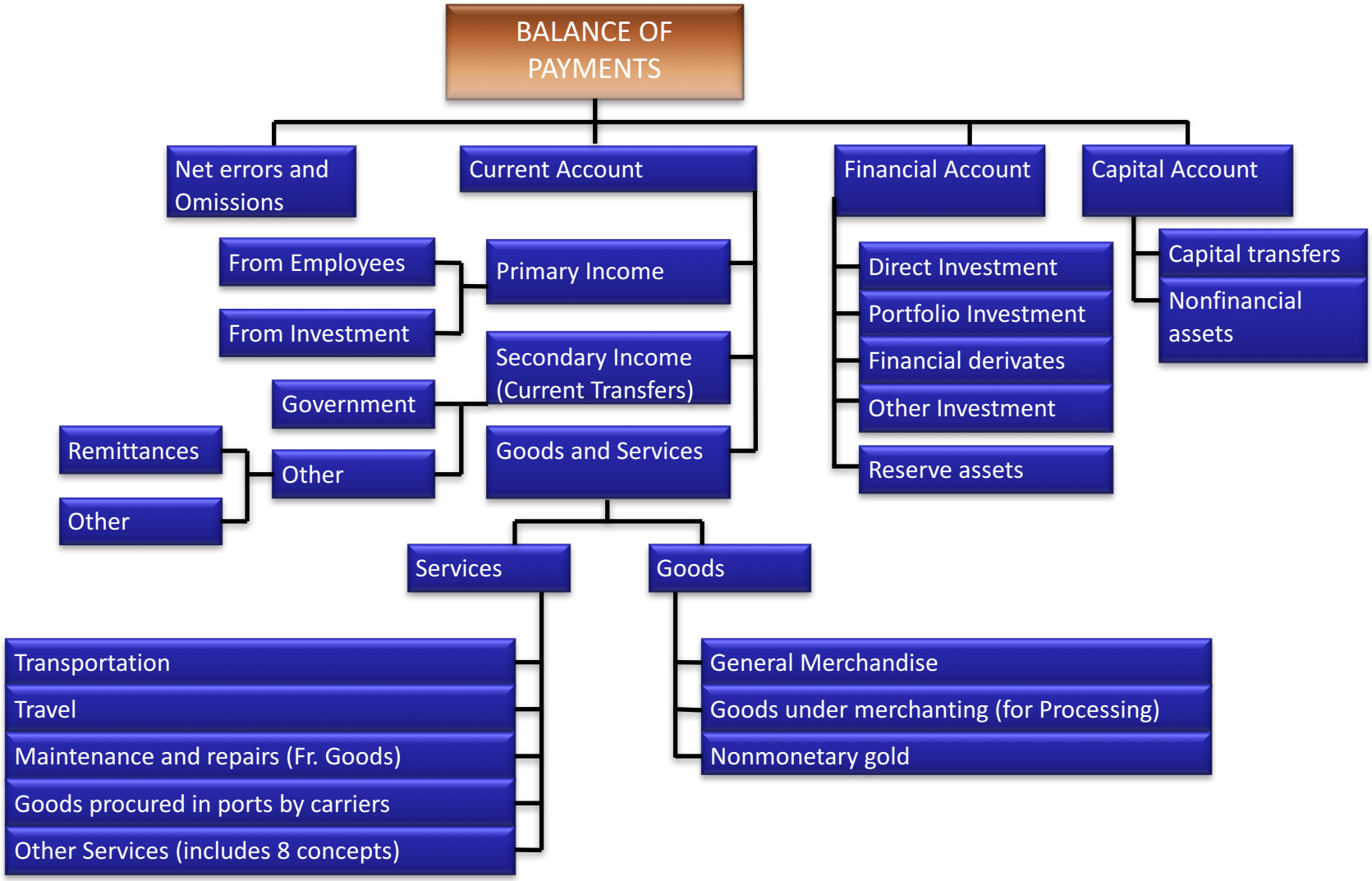
- Residence: an institutional unit will be considered a resident, if its center of economic interest is located within the economic territory of the country.
- Institutional Units: An economic entity that is capable, in its own right, of owning assets, incurring liabilities, and engaging in economic activities and in transactions with other entities.
  - Family units and physical persons,
  - Legal and social entities (firms),
  - Non-profit institutions,
  - Central government.

Principles and Basic Definitions (2)

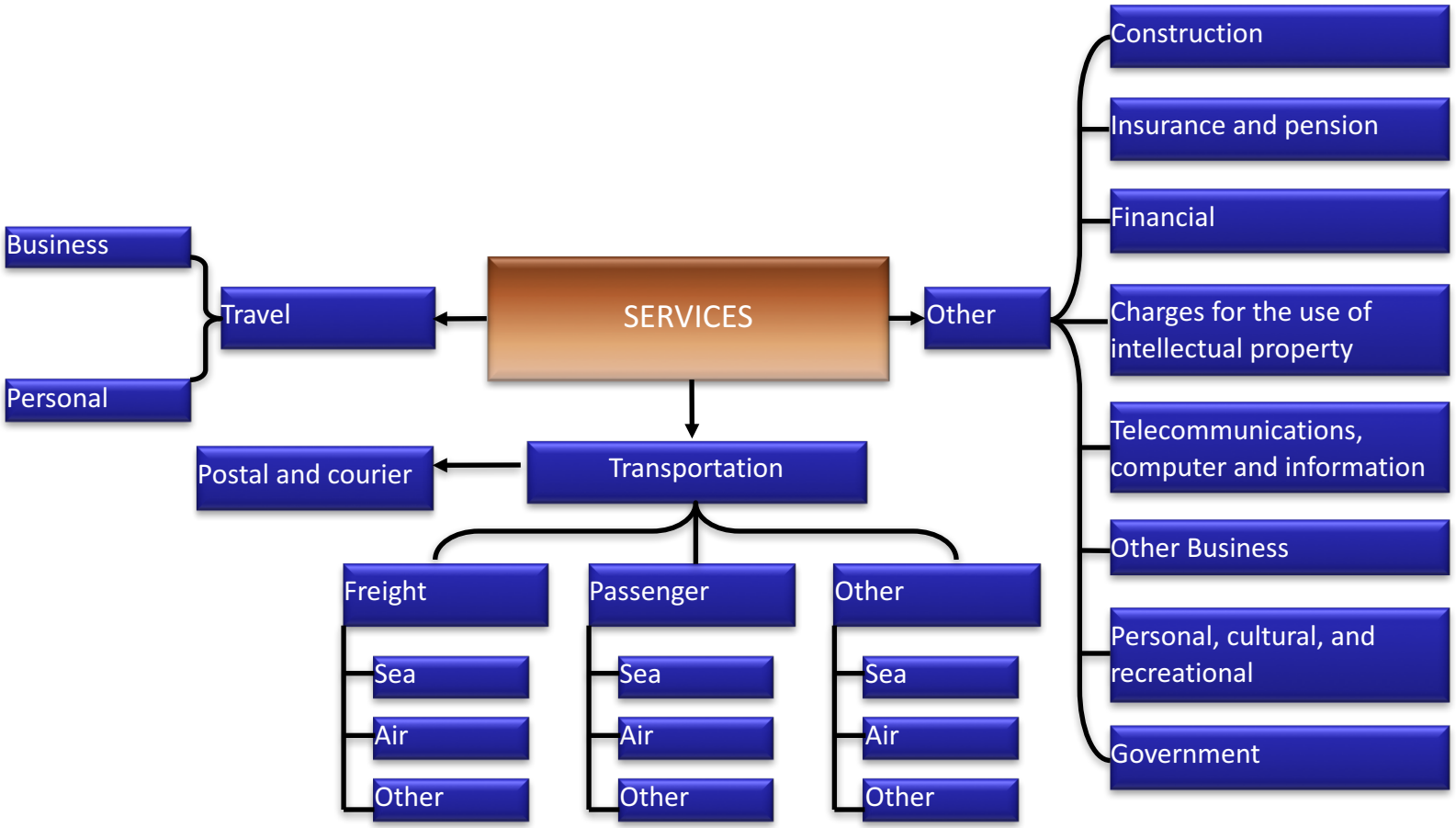
- Economic territory: geographical territory under administration of a government, [within which persons, goods and capital move freely]. This also includes islands, continental platforms and enclave territories. [Currency and economic unions are considered economic territories]
- Center of economic interest: place in which economic activities and transactions are realized at a significant scale and intentions exist to continue these activities indefinitely or with a limited but substantial period of time.

- Exceptions and the 1 year rule

Simplified Structure (6th MBP)



Services Balance (6th MBP)



The Data Sources

The statistical data of the Balance of Payments are provided by different national and international sources. Once collected, they are harmonized with the National Account (SNA).

The major drawback is found in the Services Account. Here, the General Agreement on Trade and Services (GATS) refers to four so-called “modes” of international services inputs, where each one includes its own challenges at the time of collection of statistics.

The Four Modes of GATS

1. Cross-border trade: from a resident of one economic territory towards a resident of another one, without a movement of persons; e.g. call centers.
2. Consumption abroad: the consumption of a non-resident to the economic territory where the service is provided; e.g. travels.
3. Commercial presence: when a supplier establishes a presence in an economic territory where it is a non-resident, to provide a service; e.g. branches.
4. Presence of natural persons: when the supplier travels in person to an economic territory where it is a non-resident to provide a service; e.g. technicians.

Problems related to data collection

Mode	Relevant sources	Weaknesses
Cross-border trade	Statistics of the Balance of Payments (other categories different from travel)	The Balance of Payments statistics do not distinguish between modes 1, 3, and 4.
Consumption abroad	Statistics of the Balance of Payments (mainly travel)	Travel also includes goods and is not divided into different consumption categories.
Commercial presence	Production, Foreign Direct Investment, Foreign Affiliate Trade Statistics (FATS)	Production statistics do not distinguish between national and foreign firms. Foreign Direct Investment statistics do not deliver sales data; moreover its definition does not coincide with that of the commercial presence. FATS statistics only exist in the United States, and the basic concepts are only recently being defined at the international level.
Presence of natural persons (self-employed)	Statistics of the Balance of Payments (other categories different from travel and transport)	The Balance of Payments statistics do not distinguish between modes 1, 3, and 4.
Presence of natural persons (employed)	Employment statistics from FATS	The information is not available yet.

Source: Authors based on Chang et al. (1999)

Current Account (1)

- Summarizes the description of the commercial movement of goods and services, the transactions with productive factor services, and the current transfers of an economy. It is calculated from the sum of the net balances of each component:

$$BCA = (G\&S_c - G\&S_d) + (I_c - I_d) + (CT_c - CT_d)$$

where:

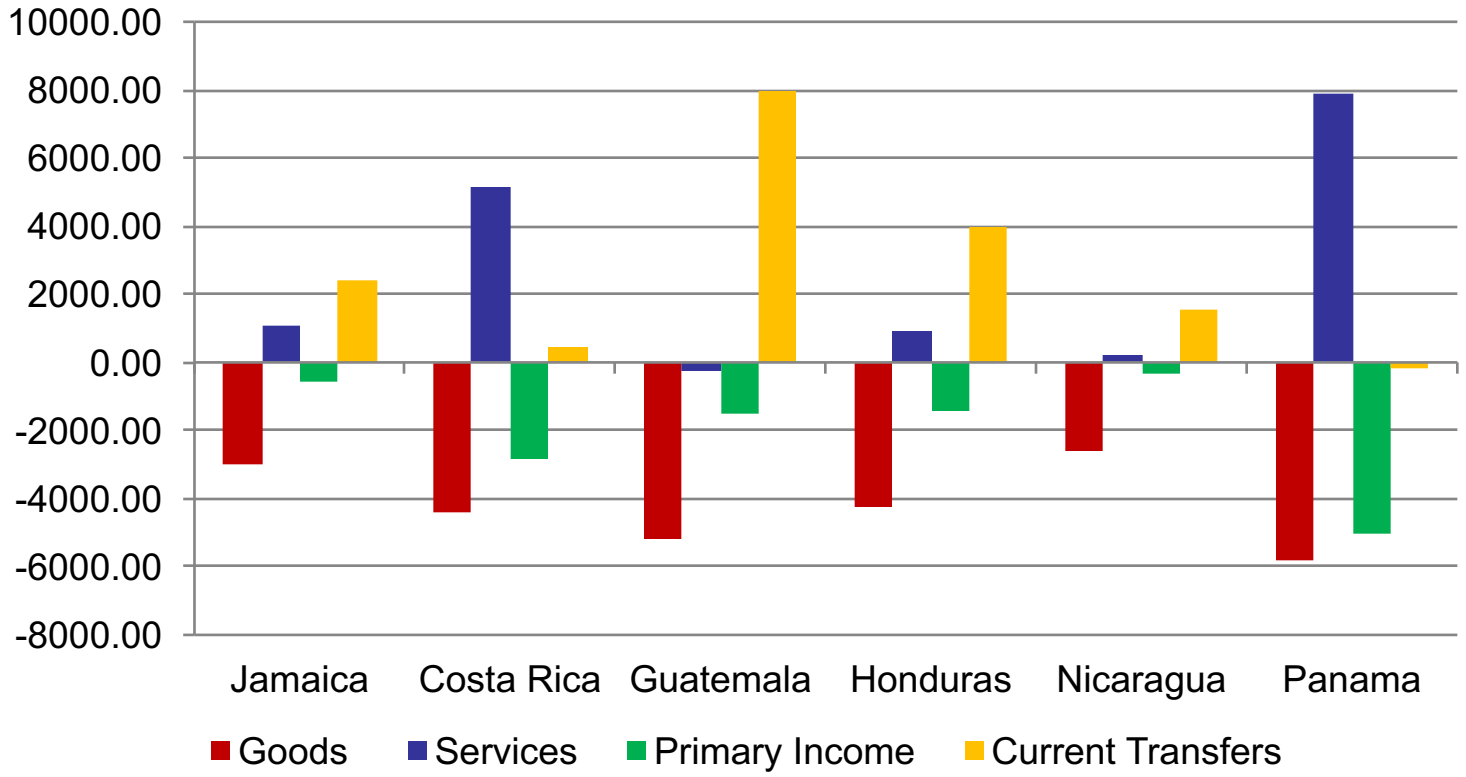
c/d = Credits/Debits
G&S = Goods and Services Account
I = Income (primary income)
CT = Current Transfers (secondary income)

Current Account (2)

Jamaica and Central American partners

Balances of the Components of the Current Account, 2016

(in million $USD)



Source: Authors based on IMF data

Current Account (3)

Jamaica and selected partners

Balances of the Components of the Current Account, 2016

(in million $USD)

	Jamaica	Dominican Rep.	Bahamas	Haiti
Goods	-2987.02	-7623.20	-2149.64	-2188.32
Services	1061.74	4960.60	1228.13	-390.62
Primary Income	-594.99	-3363.60	-421.28	43.22
Current Transfers	2389.39	5048.60	236.50	2092.31
Current Account	-130.87	-977.60	-1106.29	-443.41

Source: Authors based on IMF data

Current Account (4)

- This simple analysis aims on identifying the share of each creditor and debtor component of the Current Account. It gives the relative participation of each of the components:

$$cred_i = \overbrace{\begin{Bmatrix} \left(G_c / (G_c + S_c + I_c + CT_c)\right) * 100 \\ \left(S_c / (G_c + S_c + I_c + CT_c)\right) * 100 \\ \left(R_c / (G_c + S_c + I_c + CT_c)\right) * 100 \\ \left(TC_c / (G_c + S_c + I_c + CT_c)\right) * 100 \end{Bmatrix}}^{Composition\ of\ credits\ of\ the\ Current\ Account}$$

$$deb_i = \overbrace{\begin{Bmatrix} \left(G_d / (G_d + S_d + I_d + CT_d)\right) * 100 \\ \left(S_d / (G_d + S_d + I_d + CT_d)\right) * 100 \\ \left(R_d / (G_d + S_d + I_d + CT_d)\right) * 100 \\ \left(TC_c / (G_d + S_d + I_d + CT_d)\right) * 100 \end{Bmatrix}}^{Composition\ of\ debits\ of\ the\ Current\ Account}$$

where:

	c/d	= Credits/Debits
	G&S	= Goods and Services Account
	I	= Income
	CT	= Current Transfers

Current Account (5)

Jamaica and selected partners

Analysis of the Components of the Current Account, 2016

(in million $USD)

Credits	Jamaica	Mexico	Suriname	Guyana	Trinidad and Tobago
Goods	16.3%	86.2%	80.5%	59.1%	82.4%
Services	43.8%	5.7%	9.3%	7.2%	10.3%
Primary Income	4.2%	1.9%	1.2%	2.9%	5.3%
Current Transfers	35.8%	6.3%	9.0%	30.8%	2.0%
Debits	**Jamaica**	**Mexico**	**Suriname**	**Guyana**	**Trinidad and Tobago**
Goods	55.9%	84.7%	63.3%	69.4%	75.0%
Services	28.8%	7.3%	26.5%	19.9%	17.6%
Primary Income	12.1%	7.8%	7.0%	1.5%	6.3%
Current Transfers	3.2%	0.2%	3.2%	9.1%	1.2%

Source: Authors based on IMF data

Relative Position of the Current Account

- This is a measure of the magnitude of the current surplus or deficit in the GDP. In periods, where the economic cycle is expansive – and especially for net-exporting countries – this indicator tends to be positive.

$$RPCA_{it} = \left(BCA_{it} / GDP_{it} \right) * 100$$

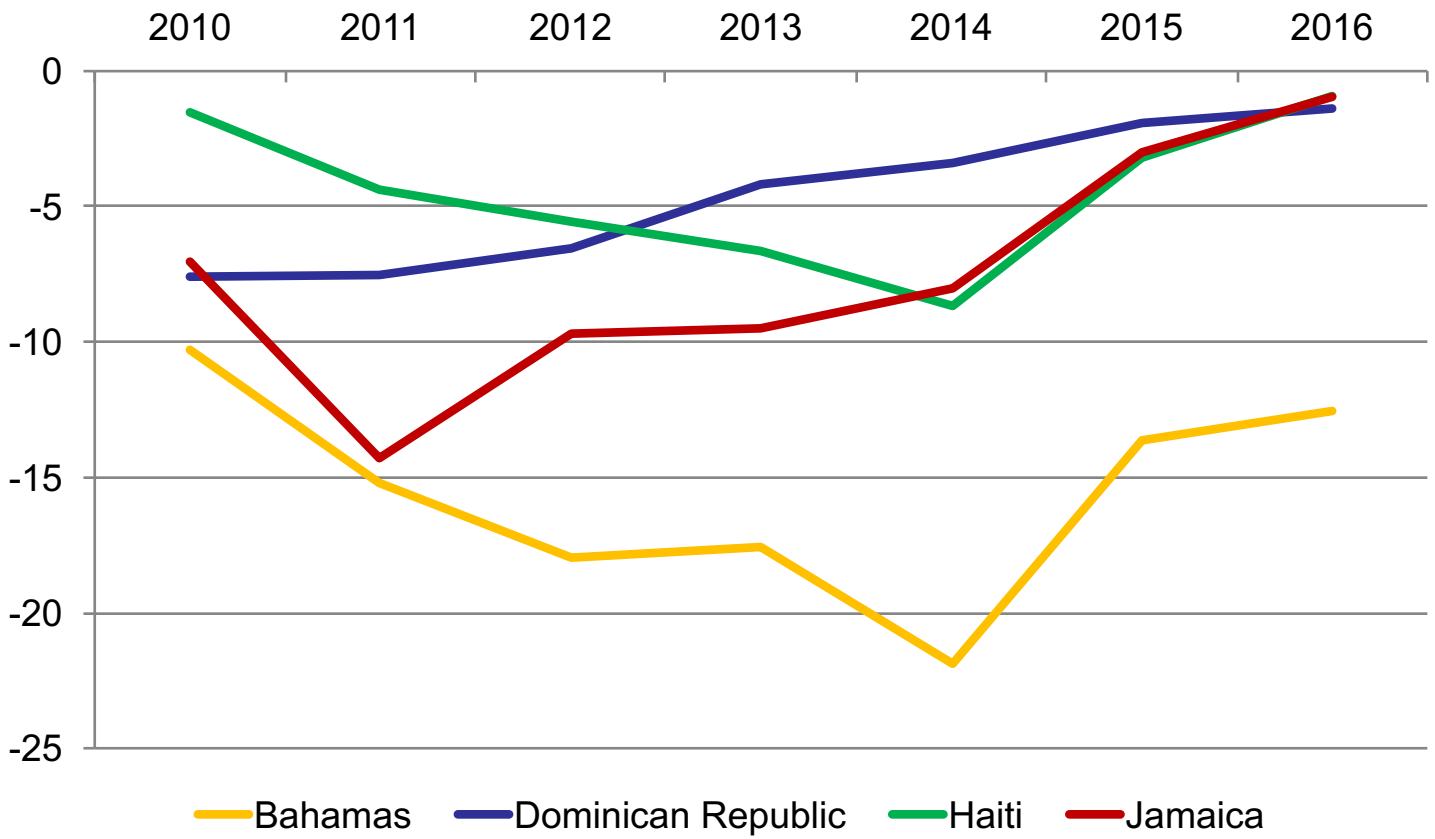
where:

BCA_{it}	= Balance of the Current Account of country *i* in the year *t*
GDP_{it}	= Gross Domestic Product (in Current Prices) of country *i* in the year *t*

Analysis: Relative Position of the Current Account

Jamaica and selected partners

Development of the Balance of the Current Account, 2010-2016 *(in percentage of GDP)*



Source: Authors based on UNCTAD data

Purchasing Power of Exports and Effect of the Exchange Rate Ratio

- The first measure indicates the volume of imported products that could be financed with the country's exports. The second indicator complements the first one, and reports the loss or gain (in million $US) that the country's exports experience due to the Terms of Trade.

$$PPX_{it} = \overline{Xg\&s_{it}} * TT_{it}$$

$$EER = \left(\overline{Xg\ \&\ s} * \frac{UVIX}{UVIM} \right) - \overline{Xg\ \&\ s} \equiv PPX_{it} - \overline{Xg\ \&\ s}$$

where:

Xg&s = Exports of Goods and Services in constant prices
it = Country *i* in year *t*
TT = Terms of Trade
UVIX = Unit Value Index of exports
UVIM= Unit Value Index of imports

Analysis: Effect of Exchange Rate

Jamaica, Trinidad and Tobago, the Bahamas and Barbados: Effect of the Exchange Rate, 2007 and 2015
(in million $US and index numbers, 2007=100)

2007	X Current	UVIX	UVIM	X Constant	TT	PPX	EER
Jamaica	5,095	100	100	5,095	100	5,095	0
Trinidad and Tobago	14,252	100	100	14,252	100	14,252	0
Bahamas	3,888	100	100	3,888	100	3,888	0
Barbados	2,044	100	100	2,044	100	2,044	0

2015	X Current	UVIX	UVIM	X Constants	TT	PPX	EER
Jamaica	4,251	149	174	4,186	86	3,587	-599
Trinidad and Tobago	11,854	244	175	19,784	139	27,574	7,790
Bahamas	3,419	150	186	3,812	81	3,072	-740
Barbados	1,636	201	167	1,615	120	1,944	330

Source: ECLAC based on data from UNCTADSTAT and WDI

Coverage of the Exports

- Measures the degree to which the exports of goods and services cover the amount of total imports of a country in a given year. A value greater than 100 indicates that the exports cover all of the imports of the country. In the opposite case, a trade deficit exists that needs to be financed.

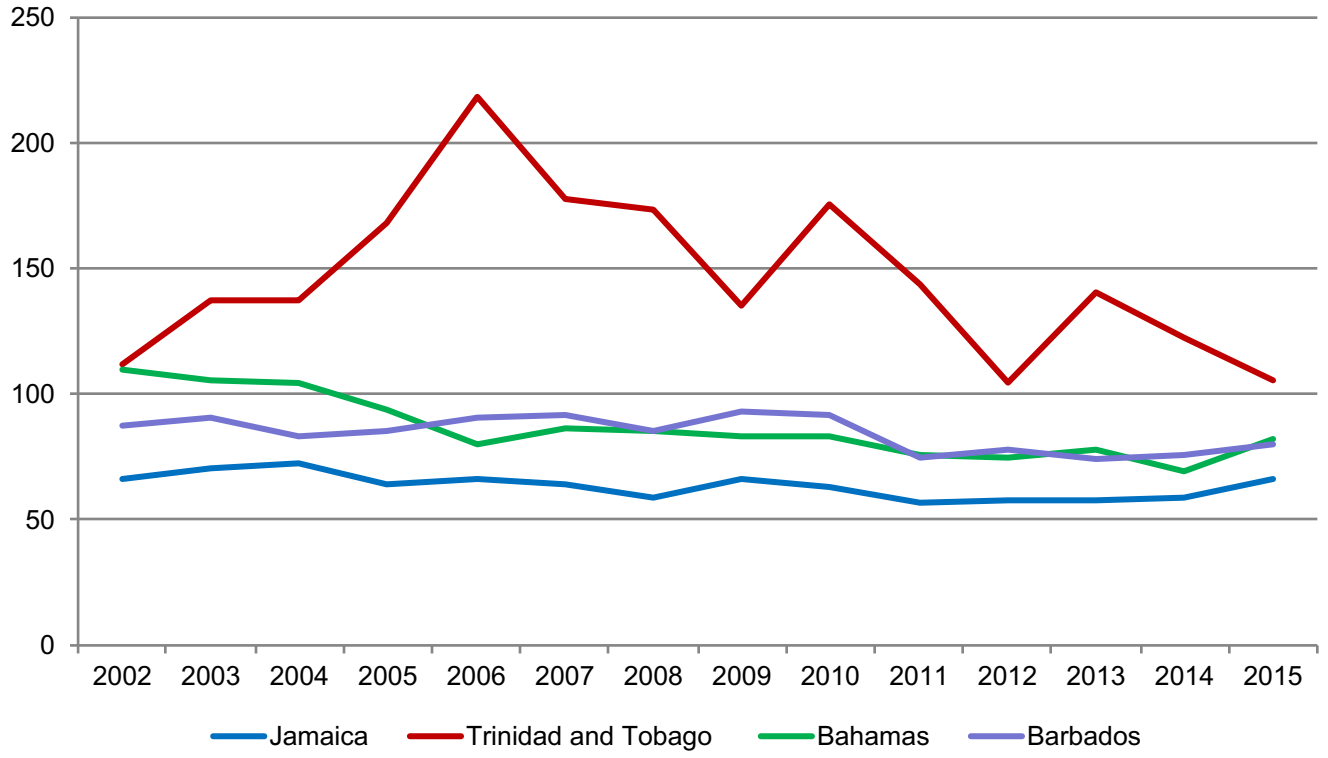
$$CXg\ \&\ s_{it} = \frac{Xg\ \&\ s_{it}}{Mg\ \&\ s_{it}} * 100$$

where:

it = Country *i* in year *t*
Xg&s = Exports of goods and services
Mg&s = Imports of goods and services

Analysis: Coverage of the Exports

Jamaica, Trinidad and Tobago, the Bahamas and Barbados: Development of the Coverage of Exports, 2002-2015



Source: WDI

Openness Derived from the Current Account and the GDP

- These are indicators that allow for the observation of the degree of internationalization of a particular economy. They can be calculated with respect to exports as well as imports and in net terms.

Exports of goods and services	$\frac{Xg\ \&\ s_{it}}{GDP_{it}} * 100$
Imports of goods and services	$\frac{Mg\ \&\ s_{it}}{GDP_{it}} * 100$
Total trade of goods and services	$\frac{Xg\ \&\ s + Mg\ \&\ s_{it}}{GDP_{it}} * 100$
Trade of goods and services (2nd measure)	$\frac{(Xg\ \&\ s + Mg\ \&\ s_{it})/2}{GDP_{it}} * 100$

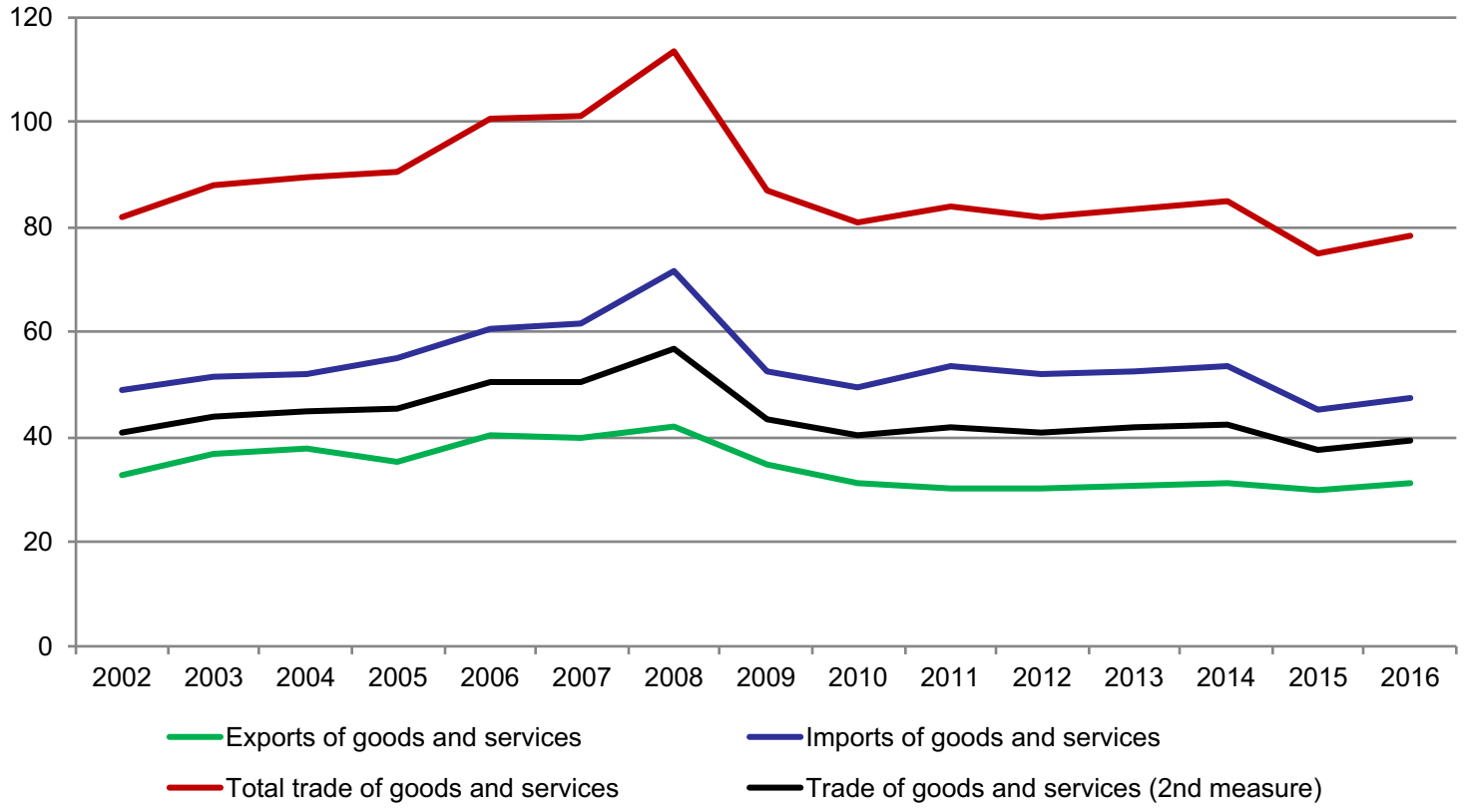
where:

it = Country *i* in year *t*
Xg&s = Exports of goods and services
Mg&s = Imports of goods and services
GDP = Current Gross Domestic Product

Openness Derived from the Current Account and the GDP

Jamaica: Different Measures of Openness, 2002-2016

(in % of GDP)



Source: CEPALSTAT

Coverage of the Services in the Goods and Services Account

This can be performed in two levels. The first are the service exports relative to the total exports of goods and services. Second, the imports of services can be calculated relative to the total exports of goods and services.

$$Coef\ Xs_{it} = \left(Xs_{it} / Xg\&s_{it} \right) * 100 \qquad Coef\ Ms_{it} = \left(Ms_{it} / Xg\ \&\ s_{it} \right) * 100$$

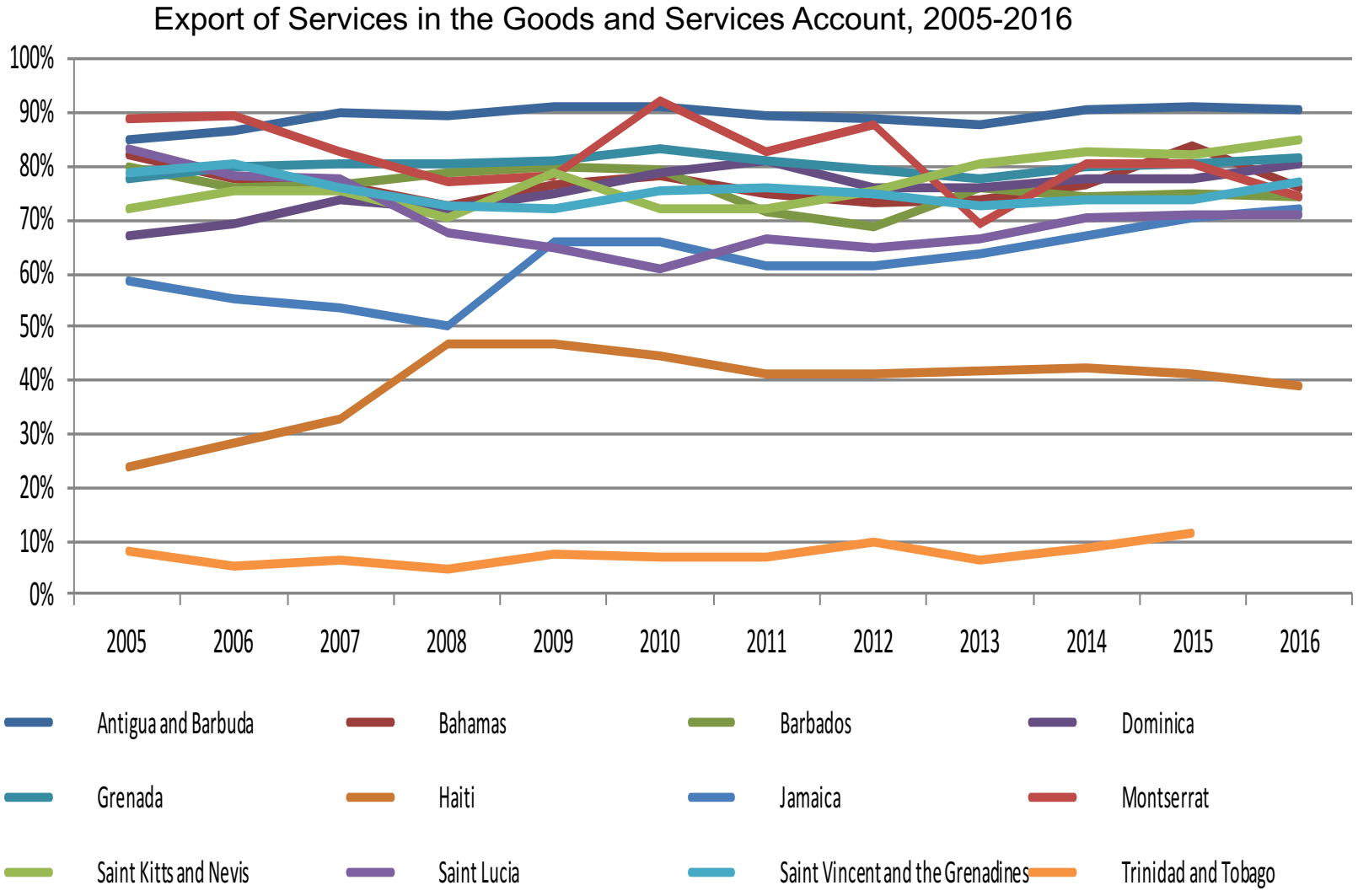
where:

it = Country *i* in year *t*

Xg&s = Exports of goods and services

Xs/Ms = Exports/Imports of Services

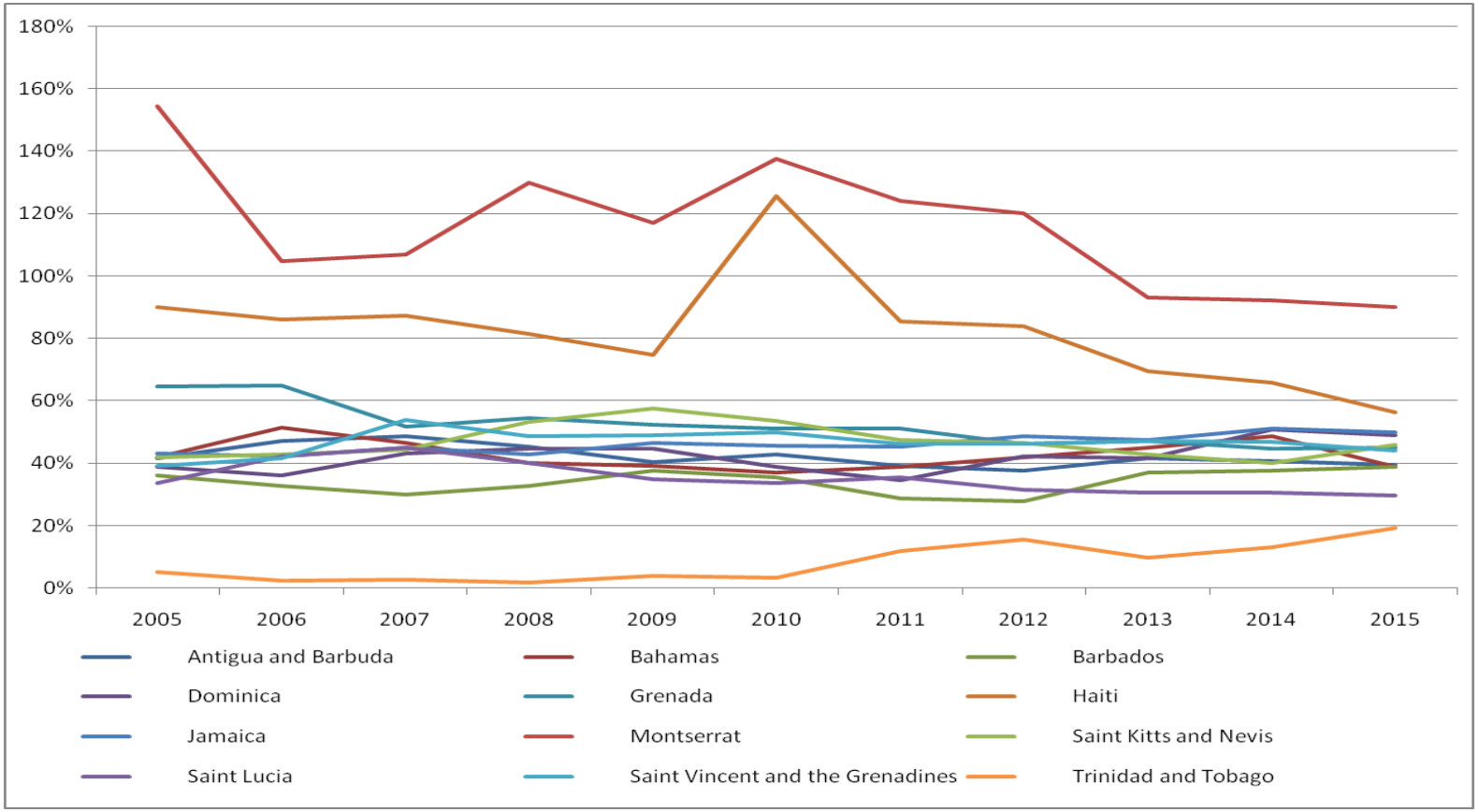
Analysis: Coverage of the Services in the Account



Source: UNCTADSTAT

Analysis: Coverage of the Services in the Account

Import of Services in the Goods and Services Account, 2005-2016



Source: UNCTADSTAT

Participation of Services in the World

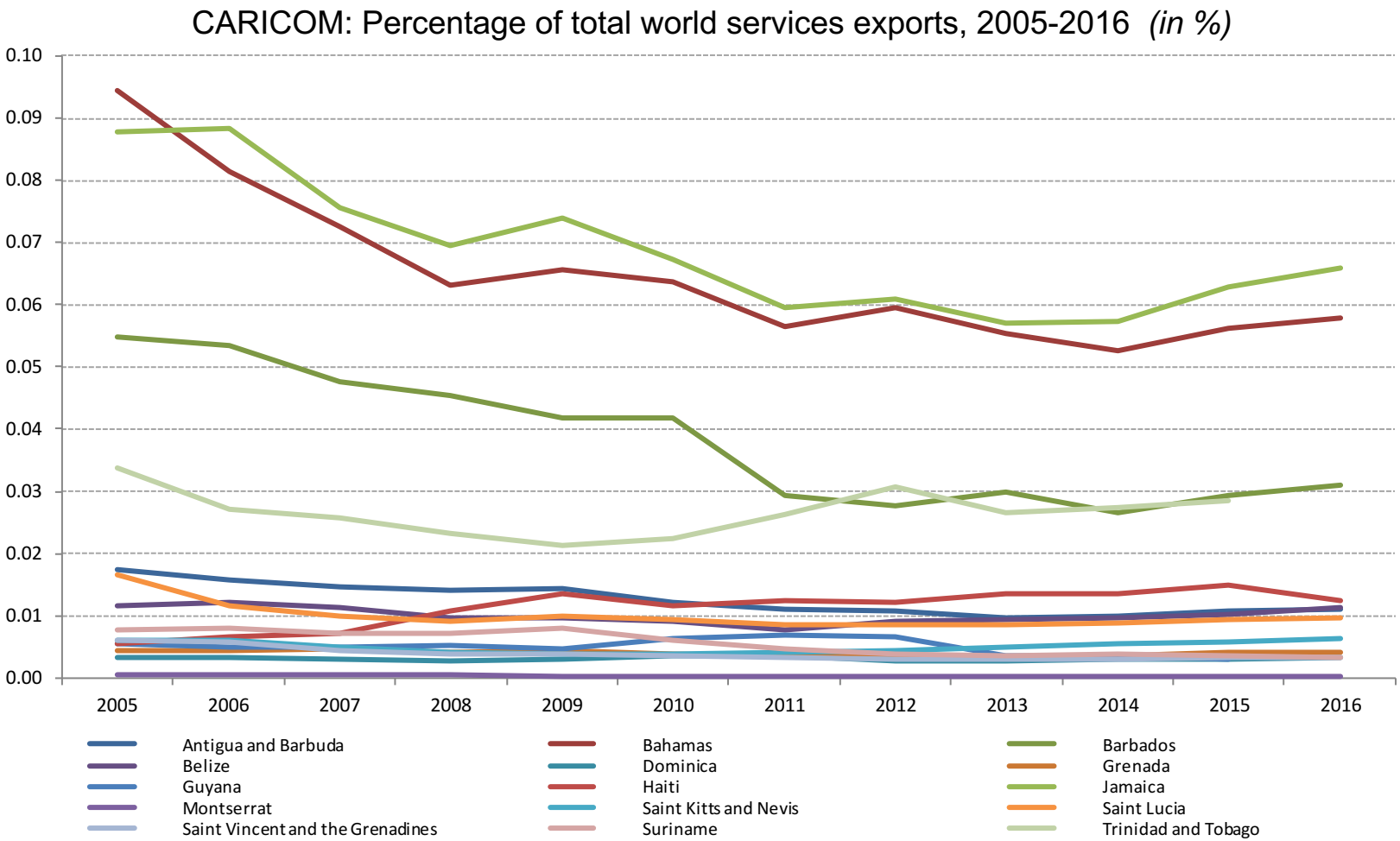
Measures the participation of services exported by a certain country in the total global imports. It can be calculated for a specific sector or for the total set of services:

$$pxs_{it}^{s} = \frac{XS_{it}^{s}}{MS_{wt}^{s}} * 100 \qquad pxs_{it} = \sum_{s=1}^{n} \frac{XS_{it}^{s}}{MS_{wt}^{s}} * 100$$

where:

it = Country *i* in period *t*
s = specific service sector
wt = the world in period *t*
XS/MS = Exports/Imports of services

Analysis: Participation of the Services in the World



Source: ECLAC based on data from UNCTADSTAT

Participation of the Services and Competitiveness

With the former indicators, one can easily infer the development of gains or suffered losses over time experienced by the service market; which in turn is its competitiveness:

$$\Delta pxs_i^s = pxs_{i(t+1)}^s - pxs_{it}^s$$

where:

it	= Country *i* in period *t*
s	= Specific sector of services
Δ	= Variation
t+1	= The following year with respect to *t*

Analysis: Competitiveness of the Services in the World

Selected Countries of the Caribbean: Competitiveness of the Services in the World, 2011-2015 vs. 2006-2010

	Jamaica	Barbados	Bahamas	Dominican Republic
Transportation	-0.028	0.001	0.004	0.002
Travel	-0.034	-0.052	-0.043	-0.018
Other Services	-0.002	-0.011	-0.006	0.009

Source: ECLAC based on data from UNCTADSTAT

Contribution of Migrants

Reflects the participation of the foreign currency sent by residents that live abroad (through capital transfers or remittances) in the national economy. It can be calculated as well over the GDP as well as over the Available Income (understood as domestic consumption).

$$CMGDP_{it} = \left(\left(RM_{it} + TM_{it} \right) \Big/ GDP_{it} \right) * 100$$

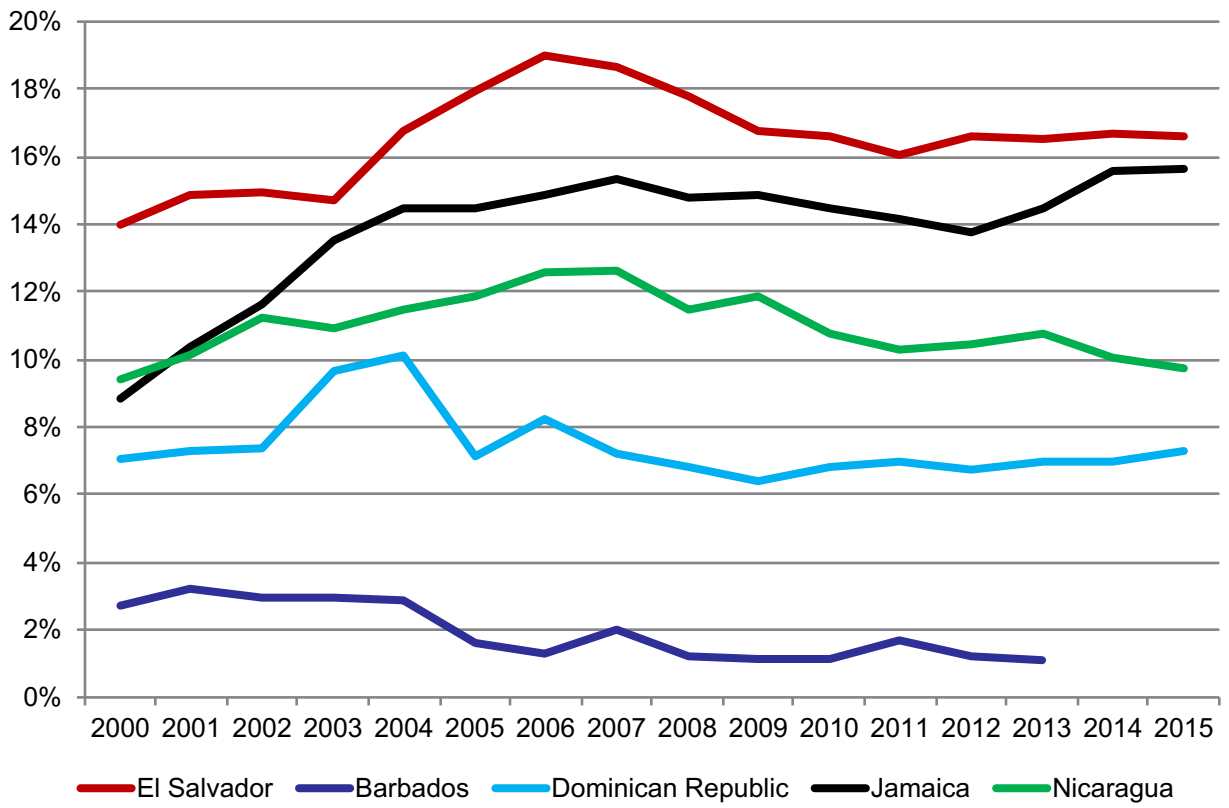
$$CMGDP_{it} = \left(\frac{RM_{it}}{\underbrace{GDP_{it} - NFI_{it}}_{AI}} \right) * 100$$

where:

- *it* = Country *i* in period *t*
- *K* = Capital
- RM = Remittances
- TM = Transfers of migrants
- GDP = Current Gross Domestic Product
- NFI = Net Factor Income
- AI = Available Income

Analysis: Contribution of Migrants

Selected Countries: Contribution of Migrants to GDP, 2000-2015 *(% of GDP)*



Source: IMF

Exercises

- How has the global competitiveness of Jamaican service categories changed between 2005 and 2016?
  - Find the service categories with the most positive and negative change between the two periods.
- What was the contribution of emigrants to Jamaica's economy in 2016?
- What was the loss or gain (in millions of US$) that Jamaica's exports experienced in 2016 due to the Terms of Trade?

UNITED NATIONS

ECLAC

www.eclac.org