Workshop on Trade Policy and Trade Indicators

Module 2.6

UNITED NATIONS

ECLAC

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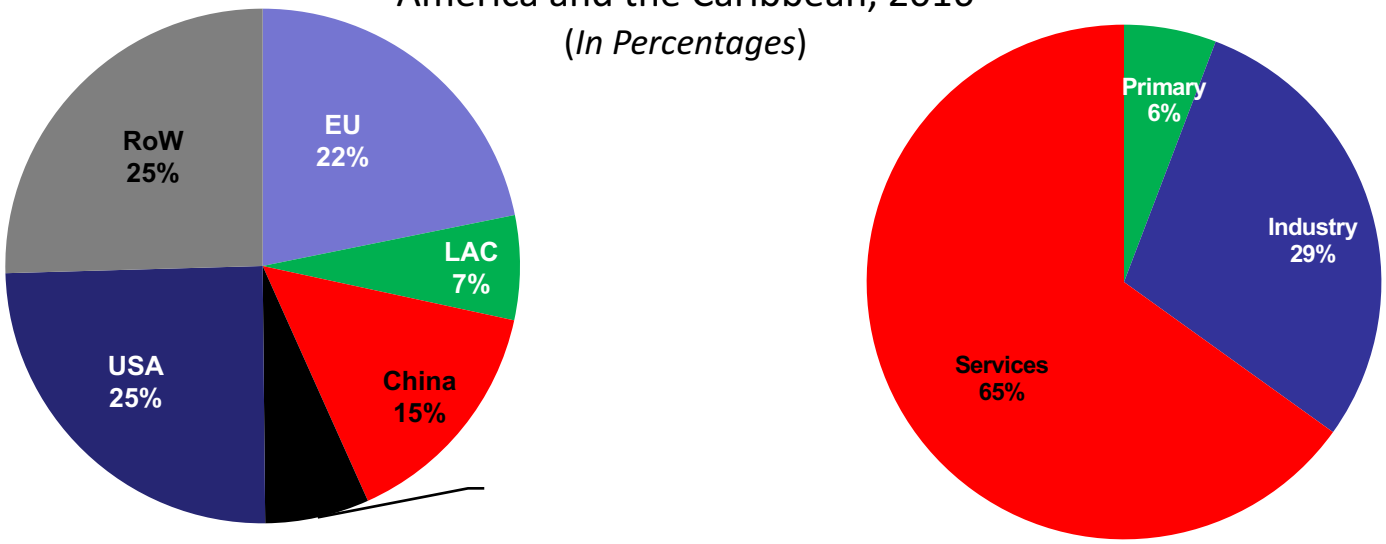
LINK BETWEEN TRADE AND PRODUCTION

- Industrial Added Value;
- Trade and Free Trade Zones for export;
- Maquila and its decomposition;
- Different denominations of *maquiladora* activity;
- Decomposition of trade data by degree of processing;
- Tariffs;
- Non-tariff measures.

Added Value of Production

This is the part of total production that is incorporated in the processing industry of a country. It is equal to the difference between the costs and the obtained income.

Global Value Added and Decomposition of the Sectors in Latin America and the Caribbean, 2016
(*In Percentages*)



Source: ECLAC based on data from IMF and World Bank

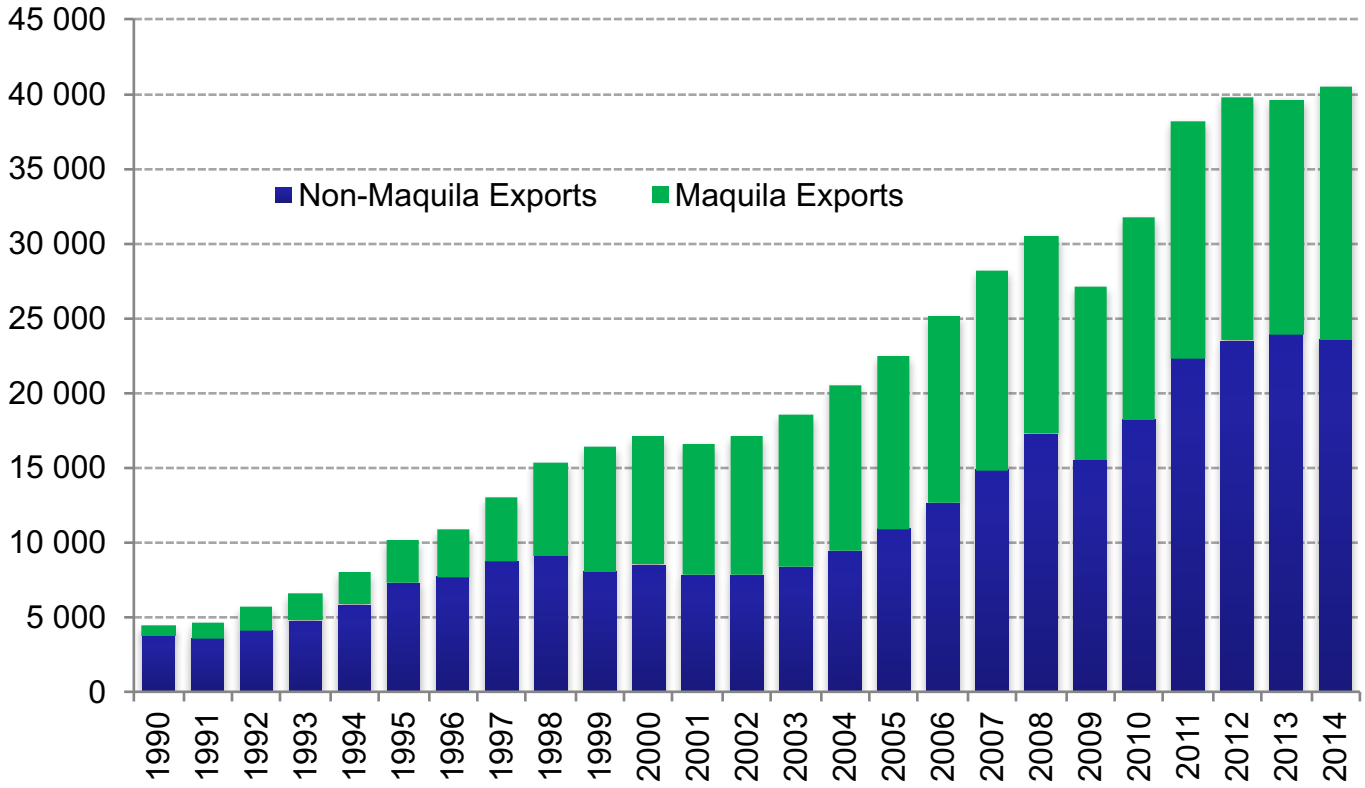
Maquila and Free Trade Zones. Why should we study it?

- It has increased its relative importance in some countries;
- It constitutes an important link to production and value adding;
- It is not only a source of currency and job creation;
- It is important to understand this phenomenon in-depth and analyze it from various perspectives:
  - The details of their intrinsic decomposition,
  - The degree of articulation with the rest of the economy,
  - Its relative weight within the economy, among others.

Impact of *maquiladora* activity in Central America

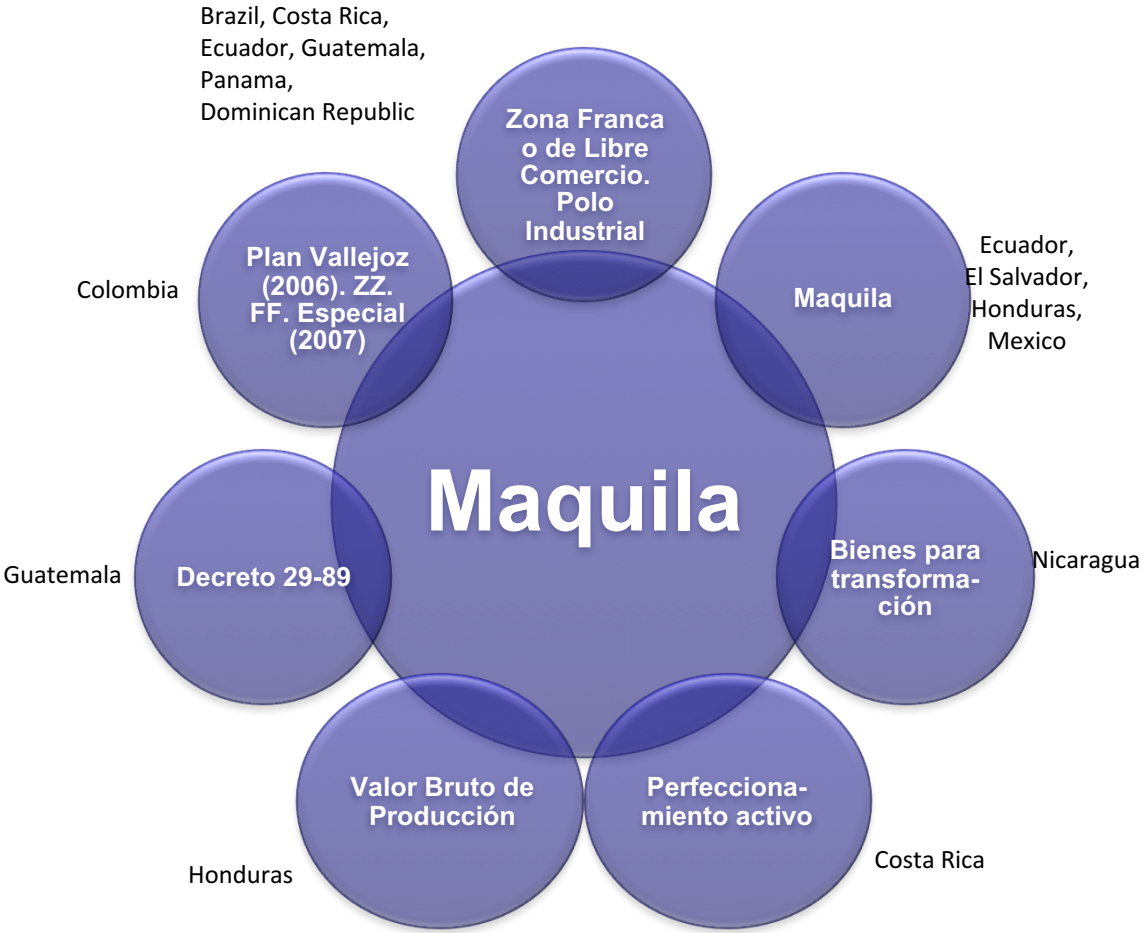
Central America Common Market: Evolution of *maquila* exports, 1990-2014

(Millons of dollar)



Source: ECLAC, International Trade and Integration Division

There are many different denominations in Spanish



Source: ECLAC, International Trade and Integration Division

Maquila Components

From an analytical point of view, the *maquila* activity can be decomposed into the main elements that constitute the total gross value of production *(GVP_{Maq}).* Formally:

$$X_{Maq} = IM_{Maq} + VA_{Maq} \equiv GVP_{Maq}$$

where IM_{Maq} are the imported inputs and VA_{Maq} is the value added of the maquila activity.

Decomposition of Value Added of Maquila

This can be realized in various forms, depending on the available data.

$$VA_{Maq} = Rl + Di + Gs + Pm$$

$$VA_{Maq} = X_{Maq} - IM_{Maq}$$

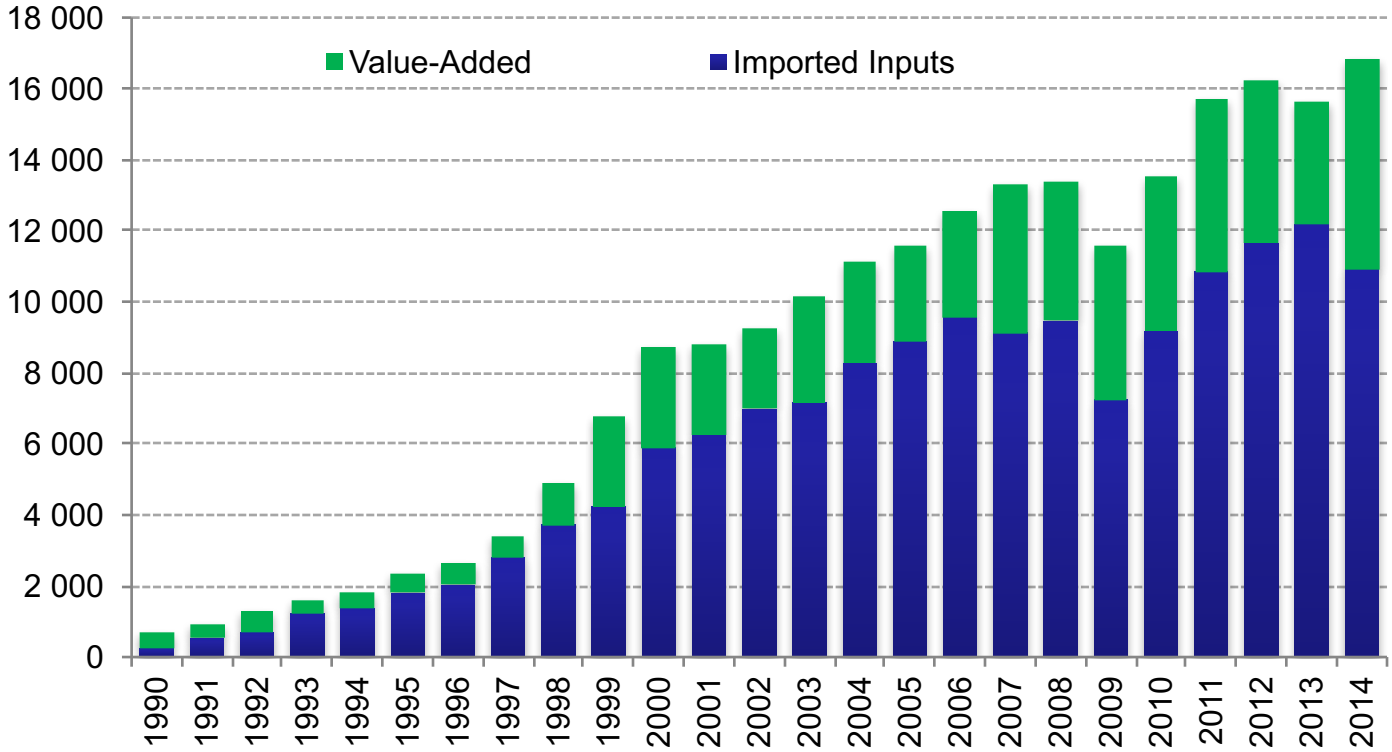
where *Rl* = remunerations of labor, *Di* = domestic inputs, *Gs* = general expenses, and *Pm* = profit margin.

X_{Maq} = maquila exports and IM_{Maq} = imported inputs.

The imported inputs dominate the activity

Central America Common Market: Evolution of *maquila* exports and its decomposition, 1990-2014

(Millons of dollar)



Source: ECLAC, International Trade and Integration Division

Importance of simple relative indicators

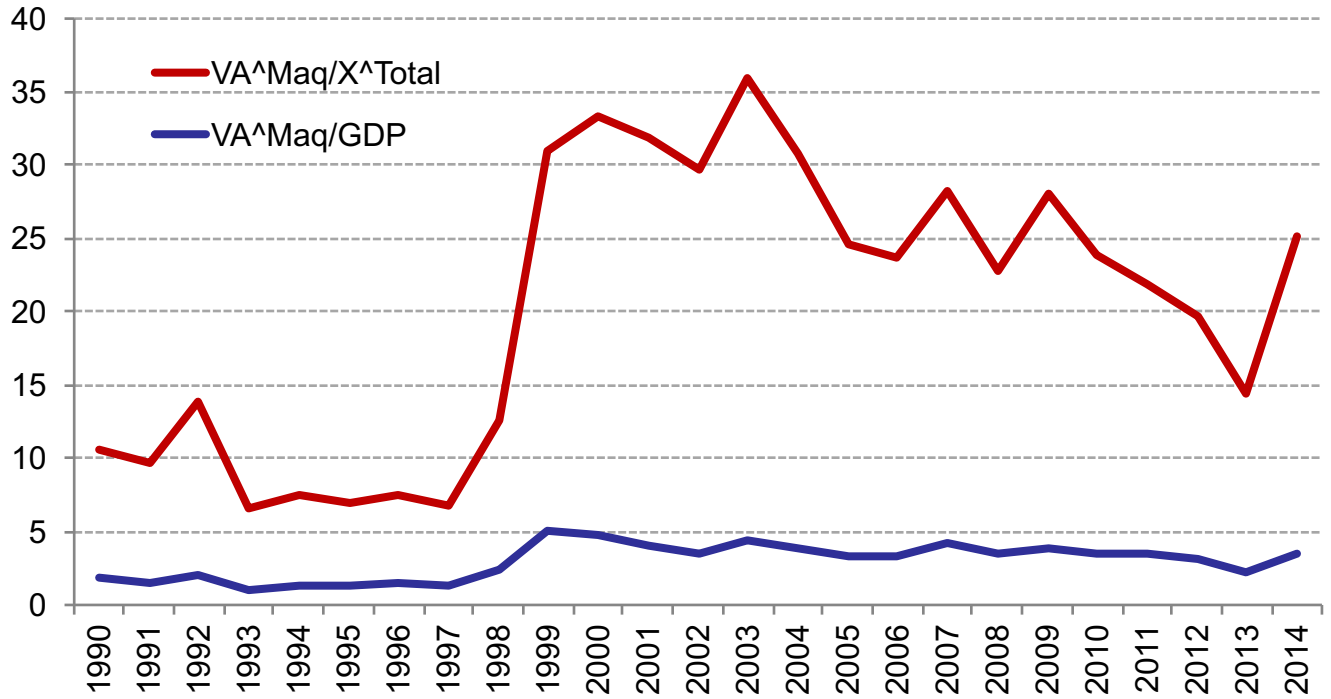
Coefficients	Formulas
Share of maquila exports in total exports	$(X^{Maq}/X) * 100$
Share of maquila value-added in total maquila exports	$(VA^{Maq}/X^{Maq}) * 100$
Share of foreign inputs in gross value of maquila production	$(FI^{Maq}/GVP^{Maq}) * 100$
Share of maquila value-added in total GDP	$(VA^{Maq}/GDP) * 100$
Share of maquila value-added in manufacturing GDP	$\left(VA^{Maq}/GDP^{Manuf}\right) * 100$
Share of domestic inputs in maquila value-added	$(DI/VA^{Maq}) * 100$

Source: ECLAC, International Trade and Integration Division

There's a favorable development in the aggregation of higher value

Central America Common Market: Evolution of the relative indicators, 1990-2014

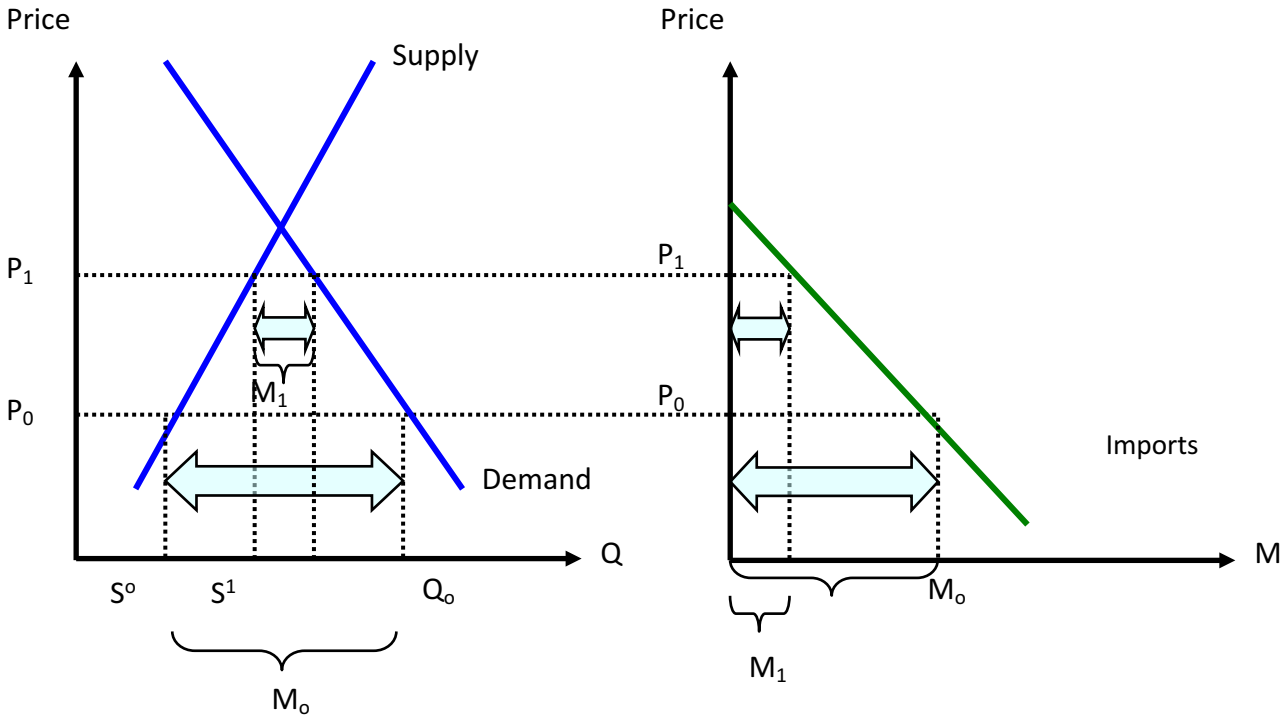
(Percentages of GDP ant total exports)



Source: ECLAC, International Trade and Integration Division

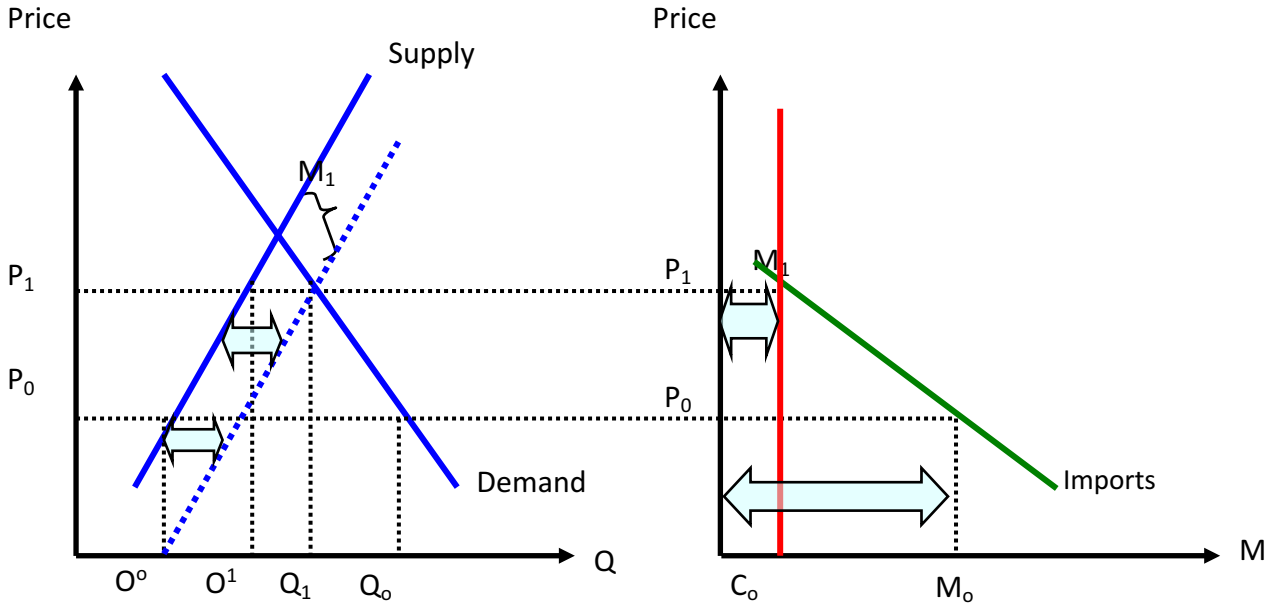
Tariffs and Non-tariff measures

- Effect of a *tariff*
- Tariffs are taxes imposed on imported goods; they will increase the price of the good in the domestic market.



Tariffs and Non-tariff measures

- Effect of a *quota*
- A quota also reduces the level of imports but further generates surplus for those that operate within the quota. In some cases this are the producers themselves.



MFN Tariffs

- The Member States of the World Trade Organization (WTO) are generally not allowed to discriminate between their trade partners. The term “Most Favored Nation” means that each preference that is granted or has been granted to one partner is automatically extended to all remaining partners of that agreement.
- There are exceptions regarding the application of this principle. The most important ones are:
  - Integration Agreements,
  - Preferential Treatment (between industrialized and developing countries),
  - Generalized System of Preferences.

Preferential Tariffs

- Reciprocal: customs unions or free trade zones
  - Ex: CARICOM, European Union

- Unilateral preferential treatment: preferential tariff rates given by wealthy countries to developing ones.
  - Ex: Generalized System of Preferences (GSP)

Bound Tariffs

- The bound tariff is the maximum MFN tariff level for a given commodity line.
- They are legally binding ceilings after reductions have been made as a result of trade negotiations.
- The gap between the bound and applied MFN rates is called the **binding overhang**

Effective Tariff

- This additionally includes the eventual preferences that the products of a certain country face when entering the considered market.
- If appropriate and disaggregated information from customs revenues are available at the level of heading or tariff item, it is possible to calculate the effectively observed tariff by the following formula:

$$ET_t^k = \frac{VR_t^k}{M_t^k} * 100$$

where *VR* is the total amount collected by the customs with respect to product *k*, *M* are the total imports of product *k*, and *t* is the year of collection.

National Tariff Line Level (TLL)

- Countries can define their tariffs at different disaggregation levels. Countries generally base their tariff schedules on the HS system.

Section 02
Vegetable products

11 Products of the milling industry malt; starches; inulin; wheat gluten.

11 01 **Wheat or meslin flour**

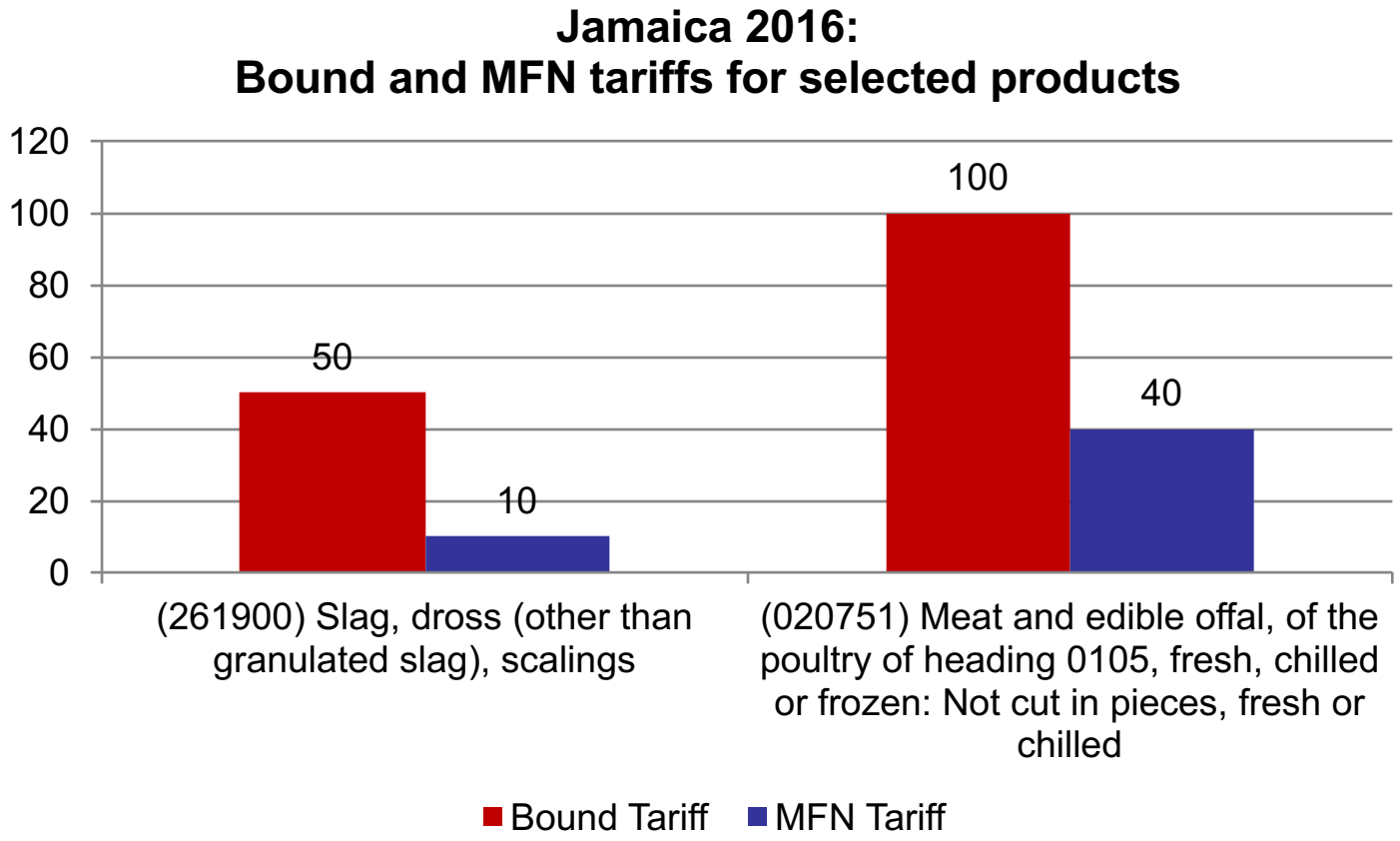
11 01 00 WHEAT OR MESLIN FLOUR.

Commodity Code	Description
11 01 00 00	WHEAT OR MESLIN FLOUR.
11 01 00 10	OF DURUM WHEAT
11 01 00 90	OTHER:

Source: Jamaica Customs Agency

- To calculate the tariff at HS 6 digit level simple averages or trade weighted averages are used

MFN and Bound Tariffs



Source: Authors based on data from WITS

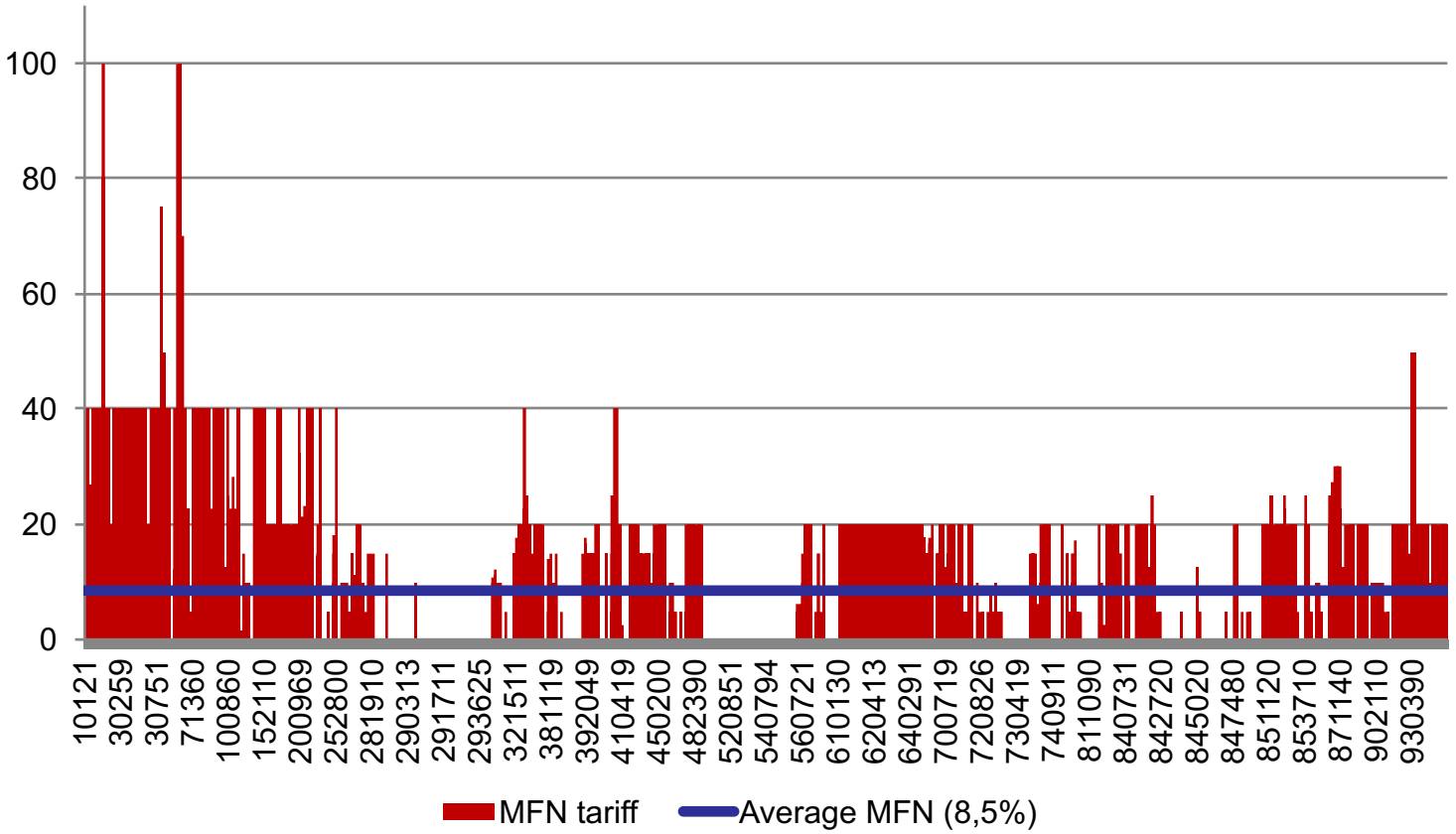
Tariff peaks

- It is not sufficient to look only at the average of the tariffs because at the disaggregated level, the tariffs may vary substantially for each type of aggregated good.

- Therefore, it is appropriate also to analyze in detail what the literature defines as tariff peaks referring to the highest and lowest value for each type of good.

Tariff peaks

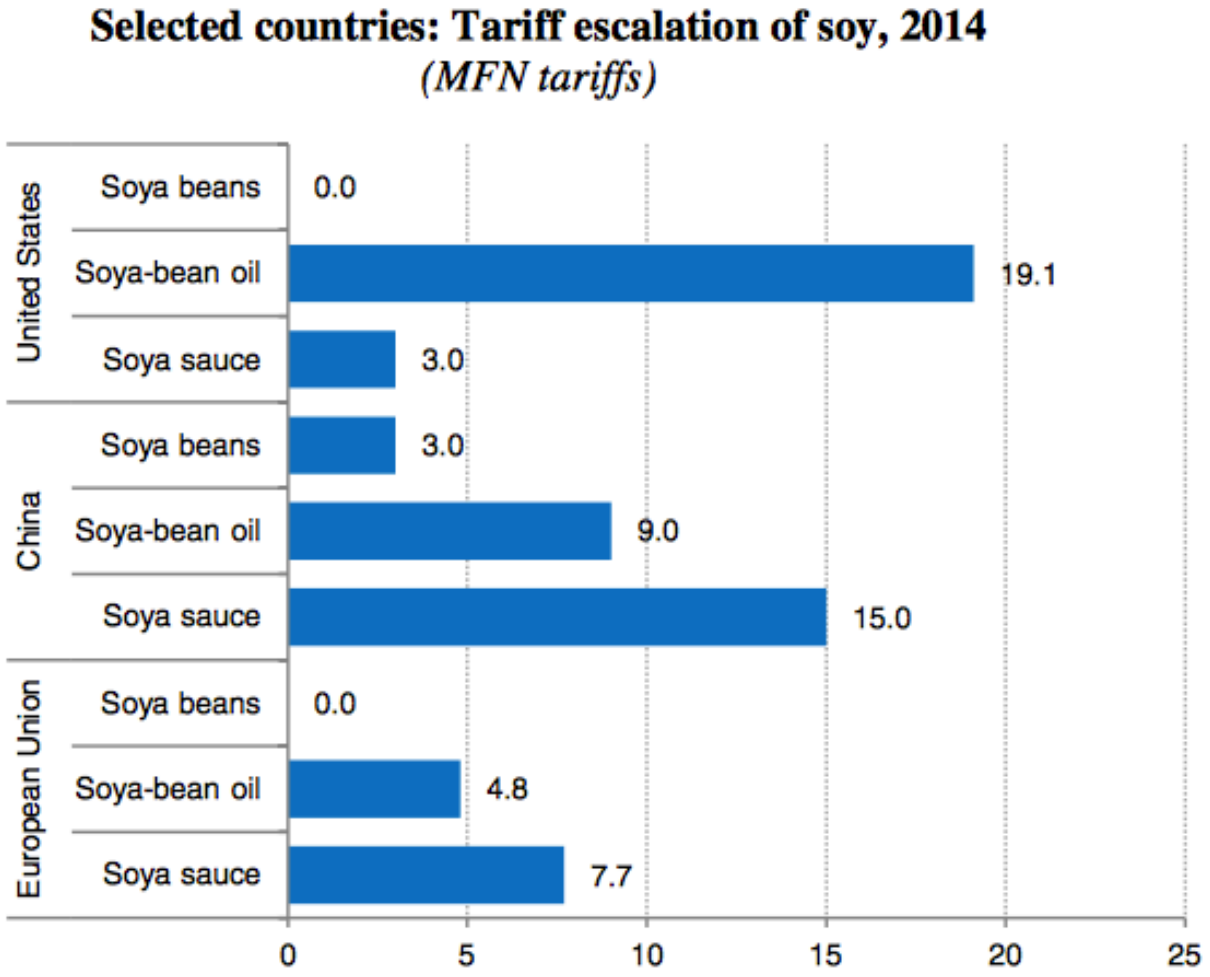
- To calculate the tariff at HS 6 digit level simple averages or trade weighted averages are used



Tariff escalation

- We use this term to describe a country that protects its processing industry by imposing low tariffs on raw materials and high tariffs on products with a higher degree of processing, i.e. intermediate goods and capital goods.

Tariff escalation



Source: Duran, Alvarez and Cracau (2016)

Non-Ad valorem Tariffs

- Next to so-called ad valorem tariffs – that apply a fixed percentage on the import bill – there are also countries that apply non-ad valorem tariffs, i.e. those not directly related to the price of the product. Among the most used are:
  - Specific Tariffs: applied to the weight, volume, or space ($# per Kilo),
  - Compound Tariffs: ad valorem with a specific tariff (#% plus $# per Kilo),
  - Mixed Tariffs: to be chosen from an ad valorem or a specific tariff (#% or $# per kilo, whatever is higher),
  - Technical Tariffs: depends on inputs ($# for each 5miligrams of sugar).

Ad valorem Equivalents (AVEs)

- Ad-Valorem Equivalents of non Ad-Valorem Tariffs
  - UNCTAD and the World Bank have jointly computed ad valorem equivalents (AVEs) of non ad valorem tariffs.

- Ad-Valorem Equivalents of NTMs
  - Gravity framework
  - Ghodsi *et al.* (2017), Kee & Nicita (2016)

Effective Protection versus Nominal Tariff Protection

- The effective tariff is the one that also includes the possible preferences that the products of a certain country have to enter the market under consideration.
- If timely and disaggregated information is available on customs revenues at the tariff item level, it is possible to calculate the tariff actually observed.

Effective Protection versus Nominal Tariff Protection

$$Z = \frac{\left(t_j - \sum_i a_{ij} t_i \right)}{V_j}$$

- where t_j is the tariff of the final good, also denominated as nominal tariff, t_i are the tariffs of the inputs, a_{ij} are the input coefficients of the product, and V_j is the coefficient of the value-added.
- An alternative way to interpret the effective protection is the idea that represents the extent to which the value added of the good measured in domestic prices exceeds the value added in world prices.
- The following formula is used to determine the degree of distance between the effective protection and the nominal protection:

$$1 - \sum a_{ij}$$

Effective Protection versus Nominal Tariff Protection

Rate of effective protection and ressource allocation decisions

Effective rate of protection Z vis a vis effective tariffs t*	Product tariff rate vis a vis average rate of input materials	Resource allocation decision
Z > tk*	If tk* > average rate of input materials	The effective protection rate is positive and the producers maintain the activity.
Z = tk*	If tk* = average rate of input materials	The effective protection rate is equal to the effective tariff. The producers are indifferent.
Z < tk*	If tk* < average rate of input materials	The effective protection rate is negative and the producers remove from the production activity.

Source: Own compilation based on Balassa (1965) and Balassa and Schydlowsky (1968).

Non tariff measures (1)

- Policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both (UNCTAD, 2015)
- Different types of NTMs
- UNCTAD classification

Source: UNCTAD (2015)

Imports	Technical measures	**A** SANITARY AND PHYTOSANITARY MEASURES **B** TECHNICAL BARRIERS TO TRADE **C** PRE-SHIPMENT INSPECTION AND OTHER FORMALITIES
	Non technical measures	**D** CONTINGENT TRADE-PROTECTIVE MEASURES **E** NON-AUTOMATIC LICENSING, QUOTAS, PROHIBITIONS AND QUANTITY-CONTROL MEASURES OTHER THAN FOR SPS OR TBT REASONS **F** PRICE-CONTROL MEASURES, INCLUDING ADDITIONAL TAXES AND CHARGES **G** FINANCE MEASURES **H** MEASURES AFFECTING COMPETITION **I** TRADE-RELATED INVESTMENT MEASURES **J** DISTRIBUTION RESTRICTIONS **K** RESTRICTIONS ON POST-SALES SERVICES **L** SUBSIDIES (EXCLUDING EXPORT SUBSIDIES UNDER P7) **M** GOVERNMENT PROCUREMENT RESTRICTIONS **N** INTELLECTUAL PROPERTY **O** RULES OF ORIGIN
	Exports	**P** EXPORT-RELATED MEASURES

Source: UNCTAD (2015)

Non tariff measures (3)

- A. SANITARY AND PHYTOSANITARY MEASURES
  - A1. Prohibitions/restrictions of imports for SPS reasons
    - *A11 Temporary geographic prohibitions for SPS reasons*
      - Example
    - *A12. Geographical restrictions on eligibility*
      - Example

      :
    - *A15. Registration requirements for importers*
      - Example

Source: UNCTAD (2015)

What is the Codex?

- "The three sisters" under the SPS Agreement are the ones that set the maximum possible requirements
  - World Organization for Animal Health
  - International Plant Protection Convention
  - Codex Alimentarius

Source: UNCTAD (2015)

Non tariff measures (4)

- B. TECHNICAL BARRIERS TO TRADE
  - B1. Prohibitions/restrictions of imports for objectives set out in the TBT agreement
    - *B11 Prohibitions for TBT reasons*
      - Example

  :

  - B3. Labelling, marking and packaging requirements
    - *B31. Labelling requierements*
      - Example

Source: UNCTAD (2015)

Effects of NTMs

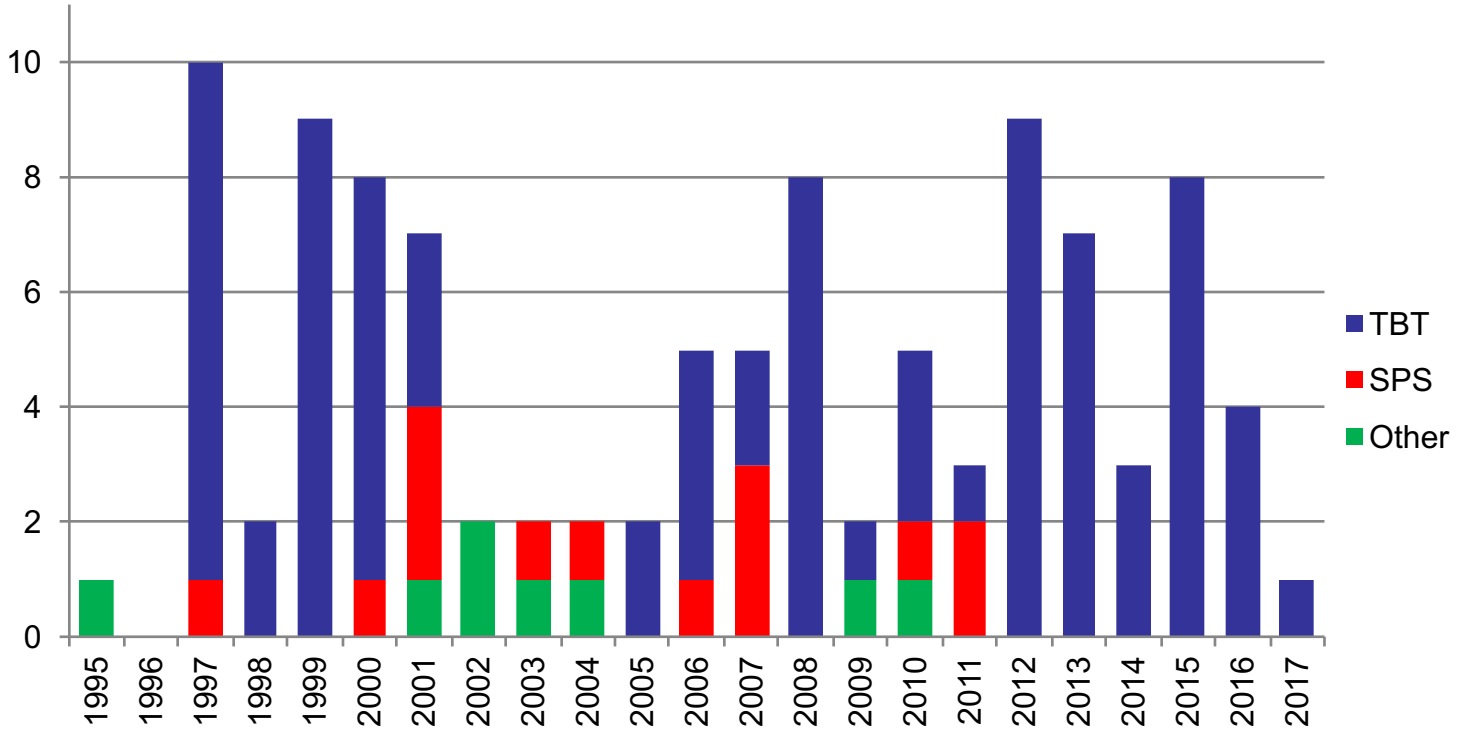
- Effects on trade

- Negative: if NTMs increase fixed or variable costs along the production and supply chain, everything else equal they result in higher prices and potentially in a fall in import demand.

- Positive: the imposition of NTMs (e.g. labeling) can increase consumer trust, decrease transaction costs and promote trade.

Non tariff measures (5)

- Number of new NTMs per year: Jamaica



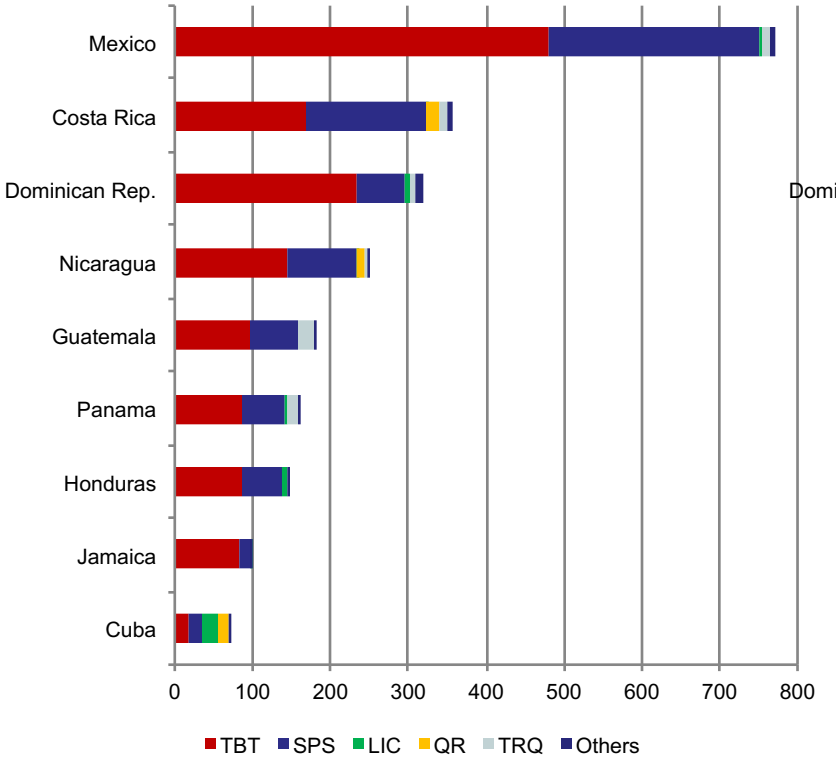
Source: Authors based on data from Integrated Trade Intelligence Portal (I-TIP) from the WTO.
Note: The value of 2017 correspond data up to 10-10-2017.

Non tariff measures (6)

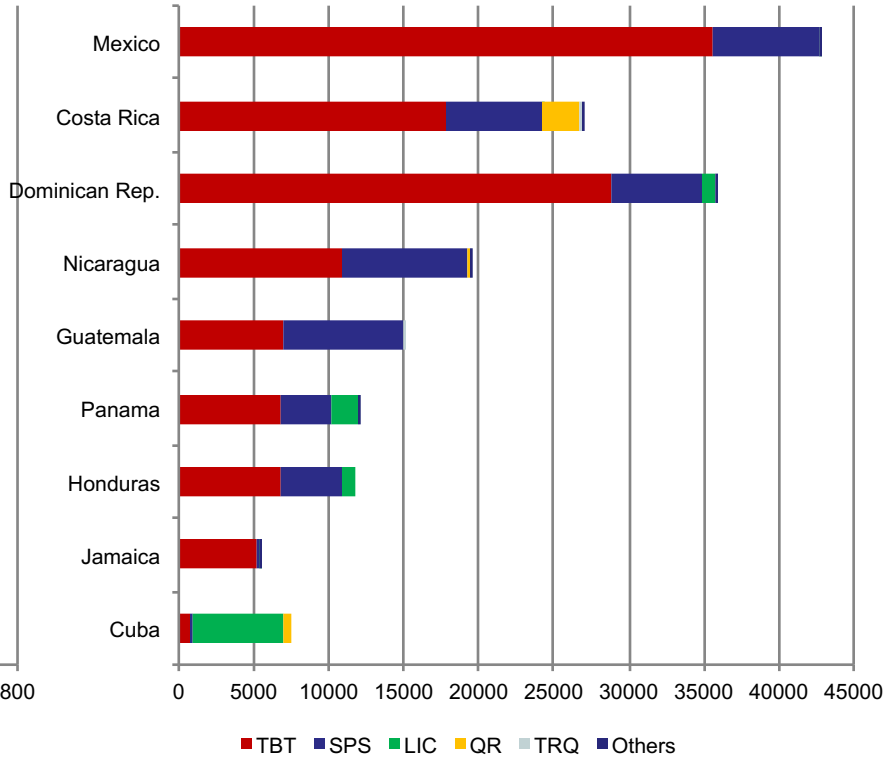
- NTMs imposed by Jamaica and selected partners on all members

NTM in force in 2015

(Number of NTM notifications)



Number of products affected by NTM in 2015



Source: Authors based on data from Ghodsi et al. (2017) and the Integrated Trade Intelligence Portal (I-TIP) from the WTO.

Private voluntary certifications are also becoming an important barrier

http://www.standardsmap.org/identify

References

- Ghodsi, M., J. Grübler, O. Reiter and R. Stehrer (2017), 'The Evolution of Non-Tariff Measures and their Diverse Effects on Trade', wiiw Research Report, No. 419, May.
- Kee, H. L., & Nicita, A. (2016, June). Trade Frauds, Trade Elasticities and Non) Tariff Measures!. In *5th IMF-World Bank-WTO Trade Research Workshop, Washington, DC, November*(Vol. 30).
- UNCTAD (2015), International Classification of non-tariff measures. 2012 Version, New York and Geneva.

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