

1. Summary of yesterday
2. Small questions to share

**DITC/TAB: Denise Penello Rial**

Bandar Seri Begawan , 10-11 February 2020

Kuala Lumpur , 13-14 February 2020



# NTMs training in ASEAN Countries

## NTM statistical analysis

### Statistics on NTM

1. Understand how to compute and understand indicators
2. See results. Stylized facts in NTM use patterns
3. Interpret. What they say

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# TRAINS

The global database on Non-Tariff Measures

- UNCTAD TRAINS via [trains.unctad.org](https://trains.unctad.org)
  - For policy makers and negotiators
  - **Browsing all available data**

1. Research Stata file
  2. **Excel summary indicators**
- For researchers
  - **Statistically 'clean' data**

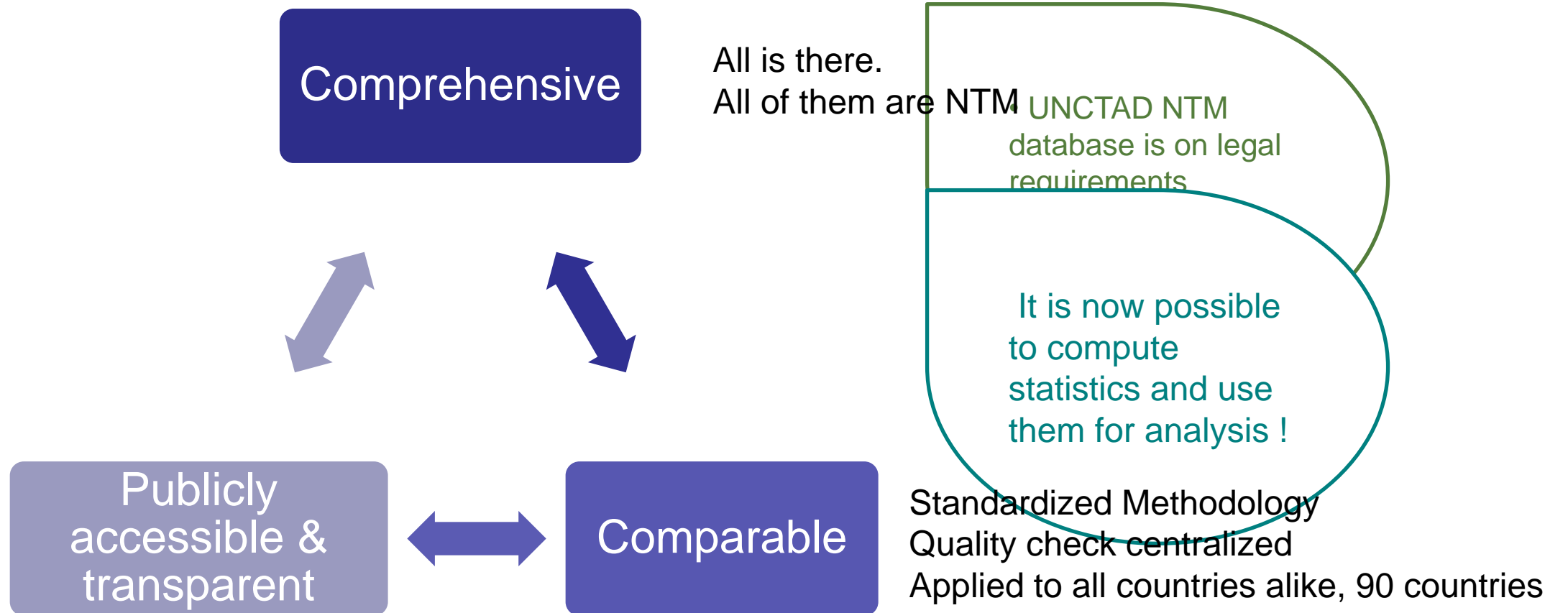
 Get the data



- World Bank WITS [wits.worldbank.org](https://wits.worldbank.org)
  - For researchers
  - **Statistically 'clean' data**

Same data  
Different  
presentation for  
different users

# - one database - one stop shop



### New Database of ASEAN Non-Tariff Measures

14 April 2016

#### ABOUT UNCTAD

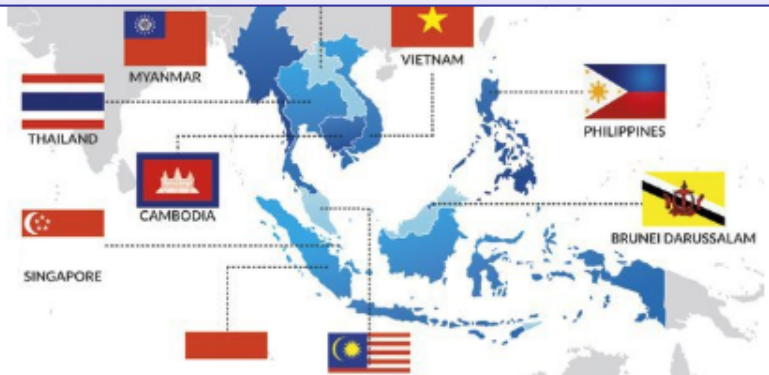
Following a joint project to collect, validate, and store data on non-tariff measures (NTMs), UNCTAD and the Economic Research Institute for ASEAN and East Asia have launch a Website that provides information on NTMs for the ten ASEAN countries.

- Office of the Secretary-General
- Membership
- Quadrennial Conferences

Quote

“In spite of their growing importance in regulating trade, the exact impact of NTMs on trade flows is not very well understood.

There is an urgent need to develop a better understanding and transparency of existing NTMs.”



# TRAINS UNCTAD portal

<http://trains.unctad.org/Forms/Analysis.aspx>

**TRAINS**  
The global database on Non-Tariff Measures

Through  
  
Developed by WTO  
Adapted for TRAINS data by  
UNCTAD

Home TABLES by PRODUCTS TABLES by MEASURE TABLES by MEMBERS DETAILED QUERY **ANALYSIS** About

### NTMs TRAINS researcher file

You can download here the NTMs TRAINS researcher file for use in Stata (version 12) containing all non-tariff measures aggregated at the HS 6-digit level by researchers and data analysts. You will also find a file with the names and country codes to expand the data to a fully bilateral structure. The data can easily be used for descriptive statistics as well as for quantitative analysis by merging the file for instance with trade and other datasets.

The data collection follows a standardized and globally coherent approach described in the [UNCTAD Guidelines to Collect Data on Non-Tariff Measures](#). However, the different regulatory practices in each country complicate cross-country comparisons. The user guide provides more information. Furthermore, the highest quality control standards are applied but collecting and classifying NTMs is a very complex exercise so that errors can occur.

**Get the data**

Please refer to the database as "UNCTAD (2017), TRAINS NTMs: The Global Database on Non-Tariff Measures".

UNCTAD is the focal point within the United Nations system for the integrated treatment of trade and development. UNCTAD's Programme on NTMs aims to enhance the transparency on NTMs and to provide support to policy makers.

Key areas of the website  
UNCTAD NTM Programme  
UNCTAD Trade Analysis  
Branch  
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## Two files, Disaggregated data or summary indicators statistics

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STATA. "ntm\_hs6\_2016 v.12.dta"

- Disaggregated information for every :
  - Reporter + HS6 + Partner + NTM code
- 15 variables in all, including start date

Excel file.  
UNCATD\_TRAINS\_NTMS\_indicators.xlsm

- This one has **NTM indicators already computed.** FI, CR, PS
  - for country
  - for country and sector (15 groups)
  - for country and chapter ,
    - including aggregation for Technical/NonTechnical separately as well
  - (plus Full Count in all of the above)



# UNCATD\_TRAINS\_NTMS\_indicators.xlsm

UNCATD\_TRAINS\_NTMS\_indicators [Protected View] - Excel Denise Penello Rial

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View. [Enable Editing](#)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1																		
2			<b>Frequency Index</b>	<b>Coverage Ratio</b>	<b>Prevalence Score</b>	<b>Full Count</b>												
3	Import	AFG	0.185676977	0.274739236	0.59907937	0.615677416												
4		ARE	0.5181517	0.717566788	3.293753147	3.554971457												
5		ARG	0.935623705	0.942400157	3.849431515	4.780256748												
6		ATG	0.26402697	0.486929893	0.531036556	0.531123042												
7		AUS	0.62483114	0.769984305	3.665994167	4.472532272												
8		BEN	0.304843962	0.64275378	1.648971677	1.81923151												
9		BFA	0.197599843	0.558086097	0.535081565	0.614134252												
10		BHR	0.450804204	0.587320983	3.344964743	4.627479553												
11		BHS	0.224589035	0.4123514	0.724668324	0.781172395												
12		BOL	0.279736429	0.4425309	1.331897259	1.59422195												
13		BRA	0.755817652	0.864984035	6.324755669	7.932682037												
14		BRB	0.164965332	0.431438953	0.429940283	0.433214575												
15		BRN	0.196075439	0.368693233	1.140252829	1.274936318												
16		CAN	0.999233782	0.999497473	4.338653088	5.234014988												
17		CHE	0.514924526	0.514558315	4.924651623	5.786121845												
18		CHL	0.620069265	0.677515388	1.282234788	1.627161503												
19		CHN	0.90364337	0.944094896	6.993517876	11.60372639												
20		CIV	0.135265112	0.217724562	0.157470748	0.157817975												
21		CMR	0.114781484	0.474221468	0.295593768	0.311885893												
22		COL	0.554563701	0.714669645	2.660742998	3.455701828												
23		CPV	0.166136265	0.462919563	1.820789099	2.008051872												
24		CRI	0.007541495	0.016900117	0.030621661	0.034392409												
25		CUB	0.20321539	0.35794279	0.639706969	0.696717739												
26		DMA	0.288432002	0.473655313	0.439556777	0.521460533												

reporter reporter\_sector reporter ...



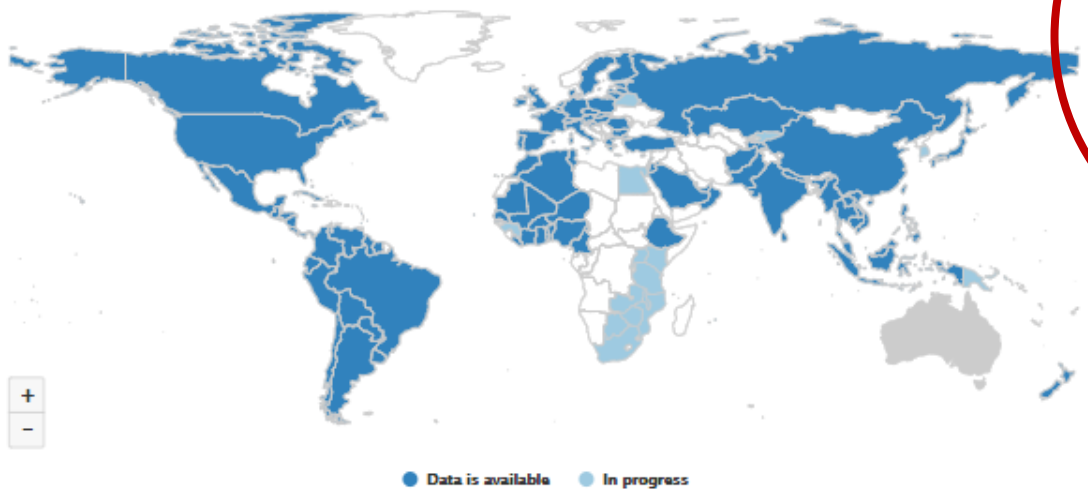
# Welcome to the NTM Hub



Non-tariff measures (NTMs) are policy measures other than tariffs that can potentially have an economic effect on international trade in goods. They are increasingly shaping trade, influencing who trades what and how much. For exporters, importers and policymakers, NTMs represent a major challenge. Though many NTMs aim primarily at protecting public health or the environment, they also substantially affect trade through information, compliance and procedural costs.

Understanding the uses and implications of NTMs is essential for the formulation of effective development strategies to meet the Sustainable Development Goals. The NTM Hub serves as a gateway to that end, providing information on classification, data, research and analysis and policy support. Increasing transparency and understanding of NTMs can build capacity of policymakers, trade negotiators and researchers to strike the delicate balance between the reduction of trade costs and the preservation of public objectives.

## Data on non-tariff measures



NTM usage by country

Australia

**Australia**

- Frequency Index 62%
- Coverage Ratio 77%
- Prevalence Score 3.7

By Sector By Measure



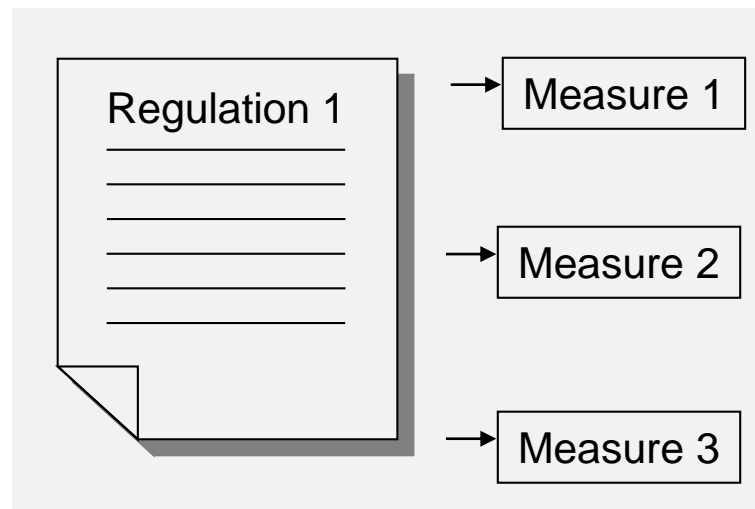
[unctad.org/ntm](https://unctad.org/ntm)

# Data collection starts from reading the regulation ... to extract the measures

---

Source → Document / Regulation → Measure/s

- Affected Products
- Affected countries
- Objectives / Purpose (where appropriate)



# Data collection starts from reading the regulation ... to extract the measures

---

Source ➡ Document / Regulation ➡ Measure/s

- ➡ Affected Products
- ➡ Affected countries
- ➡ Objectives / Purpose (where appropriate)

One measure is :

- ✓ **'unilateral'** when it affects all countries in the world (similar to MNF)
- ✓ **'bilateral'** when it affects one or a few (but not all) countries at a time

One measure is :

- ✓ **'horizontal'** when it affects ALL products simultaneously



# Examples of horizontals

## Philippines

**NTM code:** C9

**Description:** 3 In compliance with Department of Finance DO 33-2014 and Bureau of Internal Revenue Memorandum Order 10-2014, all importers and Customs brokers shall first apply for accreditation with the BIR for the issuance of their respective Importer or Broker Clearance Certificate (ICC or BCC). Upon securing these, importers and Customs brokers shall file an application for accreditation with the BOC-Account Management Office. 5 All importers and Customs brokers are required to apply for registration under the BOC Client Profile Registration System (CPRS)

**Source:** Bureau of Customs - Revised guidelines for registration of importers and Customs brokers with the BOC pursuant to DOF Department Order 33-2014

**Legal text:** Revised guidelines for registration of importers and Customs brokers with the BOC pursuant to DOF Department Order 33-2014

## Vietnam

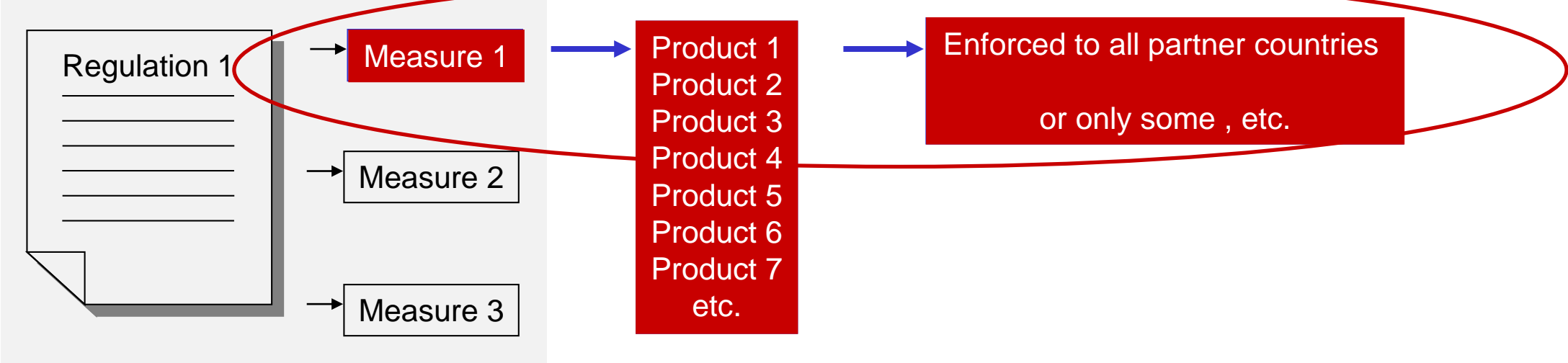
**NTM code:** H9

**Description:** This measure sets out procedures and documents for registering rights to import (by trader with no presence in Vietnam)

**Source:** Luat Viet Nam - Circular on guiding the registration of trading rights for foreign traders with no commercial presence in Vietnam

**Legal text:** Regulation which instruct registration of trading rights for foreign traders with no commercial presence in Vietnam

# Data collection starts from reading the regulation ... to register the enforced NTM



This is sometimes called 'a measure'

It is the number visible in the summary page in TRAINS



Measures: Sanitary and Phytosanitary [SPS] [A], Technical Barriers to Trade [TBT] [B], Pre-shipment inspection [INSP] [C], Contingent trade protective measures [CTPM] [D], Quantity control measures [QC] [E], Price control measures [PC] [F], Other measures [OTH] [G,H,I,J,K,L,M,N,O], Export-related measures [EXP] [P] Reset to defaults

Country(ies) imposing: Any

Partner(s) affected: Any [Include the category "All partners"]

Date(s): 26/08/2019 [in force]

Product(s): Any Modify

Search result

Your query covers 773 measures and  
Your selection resulted in 114 measures

Export to excel Return to summary

Measures:

Country imposing	Partner affected	Category	Measure description	Also domestic	Product description	HS	Source	National legal basis	In force Withdrawn
Viet Nam	All Members	SPS A852	This measure requires keeping track of processing history of fishery products	Yes	Fishery products	<a href="#">030191</a> <a href="#">030192</a> <a href="#">030193</a> ...	Luat Viet Nam - Circular of Ministry of Agriculture and Rural Development on tracing and recalling of fishery products being unqualified for food...	<a href="#">Circular of Ministry of Agriculture and Rural Development on Regulations for tracing and recalling of fishery products being unqualified for food... other link</a>	07/03/2011
Viet Nam	All Members	SPS A82	<a href="#">Requirement on testing of products in cases of: - Upon the request of production and business units, and other related agencies - state management of food safet...</a>	Yes	Foodstuffs	<a href="#">02</a> <a href="#">030191</a> <a href="#">030192</a> ...	Luat Viet Nam - Law on Food Safety	<a href="#">Law on Food Safety</a>	01/07/2011
Viet Nam	All Members	SPS A851	Requirement on origin of products for unsafe products when requested by relevant authorities	Yes	Foodstuffs	<a href="#">02</a> <a href="#">030191</a> <a href="#">030192</a> ...	Luat Viet Nam - Law on Food Safety	<a href="#">Law on Food Safety</a>	01/07/2011
Viet Nam	All Members	SPS A22	Prohibition of using beta-agonist in livestock and poultry raising	Yes	Animal feeds and animal medicines	<a href="#">210220</a> <a href="#">2309</a> <a href="#">3001</a>	Luat Viet Nam - Circular regulating the inspection, supervision and penalties for the use of beta-agonist	<a href="#">Circular regulating the examination, supervision and violation treatment of beta-agonist prohibition in</a>	22/12/2012

Search result

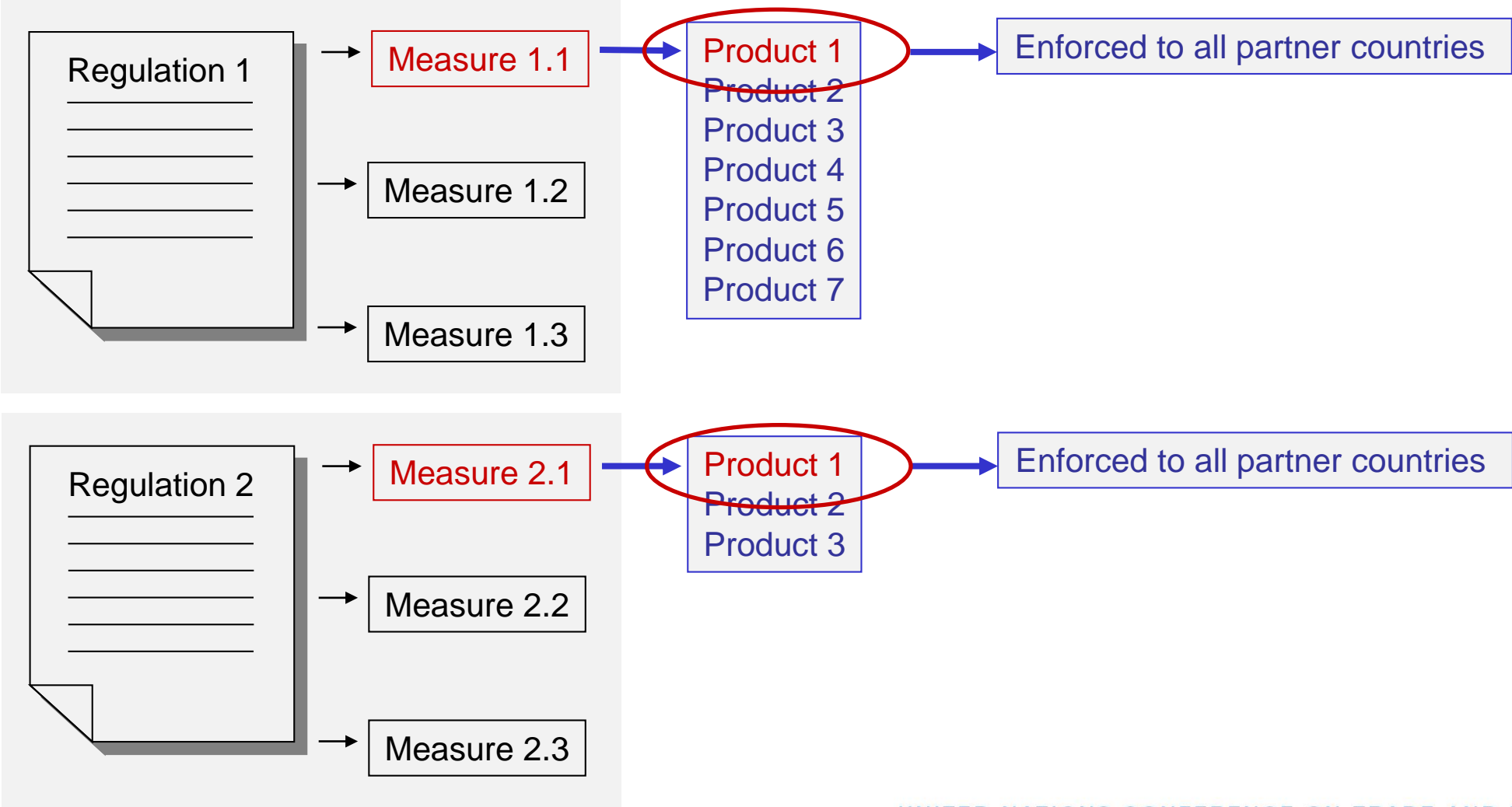
Numbers cannot be compared

HS Code	Product description	TBT	SPS	INSP	CTPM	QC	PC	EXP	OTH
	<b>Total</b>	<b><u>25659</u></b>	<b><u>29723</u></b>	<b><u>1809</u></b>	<b><u>338</u></b>	<b><u>6454</u></b>	<b><u>1452</u></b>	<b><u>7795</u></b>	<b><u>320</u></b>
▶ Sec. I	Live animals and products	<u>1866</u>	<u>6745</u>	<u>333</u>	<u>5</u>	<u>537</u>	<u>317</u>	<u>2143</u>	<u>78</u>
▶ Sec. II	Vegetable products	<u>2265</u>	<u>8722</u>	<u>837</u>	<u>3</u>	<u>567</u>	<u>490</u>	<u>2260</u>	<u>100</u>
▶ Sec. III	Animal and vegetable fats, oils and	<u>1058</u>	<u>2294</u>	<u>137</u>	<u>3</u>	<u>264</u>	<u>199</u>	<u>896</u>	<u>56</u>
▶ Sec. IV	Prepared foodstuff; beverages, sp	<u>3928</u>	<u>5819</u>	<u>291</u>	<u>4</u>	<u>552</u>	<u>407</u>	<u>1696</u>	<u>109</u>
▶ Sec. IX	Wood, cork and articles; basketware	<u>648</u>	<u>687</u>	<u>118</u>	<u>3</u>	<u>202</u>	<u>151</u>	<u>688</u>	<u>54</u>
▶ Sec. V	Mineral products	<u>2251</u>	<u>906</u>	<u>179</u>	<u>3</u>	<u>544</u>	<u>306</u>	<u>1018</u>	<u>92</u>
▶ Sec. VI	Products of the chemical and allied industries	<u>6812</u>	<u>2404</u>	<u>332</u>	<u>3</u>	<u>1796</u>	<u>507</u>	<u>2591</u>	<u>138</u>
▶ Sec. VII	Resins, plastics and articles; rubber and articles	<u>2222</u>	<u>446</u>	<u>135</u>	<u>3</u>	<u>449</u>	<u>200</u>	<u>668</u>	<u>69</u>
▶ Sec. VIII	Hides, skins and articles; saddlery and travel goods	<u>434</u>	<u>423</u>	<u>87</u>	<u>3</u>	<u>212</u>	<u>143</u>	<u>549</u>	<u>49</u>
▶ Sec. X	Paper, paperboard and articles	<u>596</u>	<u>260</u>	<u>85</u>	<u>3</u>	<u>274</u>	<u>137</u>	<u>368</u>	<u>60</u>
▶ Sec. XI	Textiles and articles	<u>1069</u>	<u>633</u>	<u>144</u>	<u>4</u>	<u>401</u>	<u>160</u>	<u>740</u>	<u>64</u>
▶ Sec. XII	Footwear, headgear; feathers, artif. flowers, fans	<u>459</u>	<u>255</u>	<u>56</u>	<u>3</u>	<u>150</u>	<u>117</u>	<u>414</u>	<u>49</u>
▶ Sec. XIII	Articles of stone, plaster; ceramic prod.; glass	<u>1222</u>	<u>186</u>	<u>94</u>	<u>3</u>	<u>281</u>	<u>140</u>	<u>459</u>	<u>57</u>
▶ Sec. XIV	Pearls, precious stones and metals; coin	<u>566</u>	<u>101</u>	<u>97</u>	<u>3</u>	<u>287</u>	<u>159</u>	<u>702</u>	<u>63</u>
▶ Sec. XIX	Arms and ammunition	<u>329</u>	<u>77</u>	<u>63</u>	<u>3</u>	<u>340</u>	<u>143</u>	<u>528</u>	<u>52</u>
▶ Sec. XV	Base metals and articles	<u>2196</u>	<u>285</u>	<u>124</u>	<u>9</u>	<u>413</u>	<u>173</u>	<u>744</u>	<u>66</u>
▶ Sec. XVI	Machinery and electrical equipment	<u>4668</u>	<u>118</u>	<u>151</u>	<u>3</u>	<u>682</u>	<u>249</u>	<u>616</u>	<u>82</u>
▶ Sec. XVII	Vehicles, aircraft and vessels	<u>1923</u>	<u>55</u>	<u>114</u>	<u>3</u>	<u>430</u>	<u>210</u>	<u>469</u>	<u>57</u>

Number of NTM requirements in regulation

Nbr of 'Measures'

# Data collection starts from reading the regulation ... Analysis starts from the products



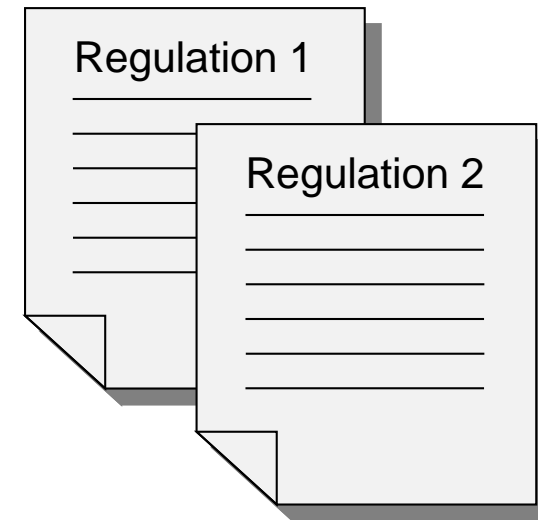


# Analysis starts from the products

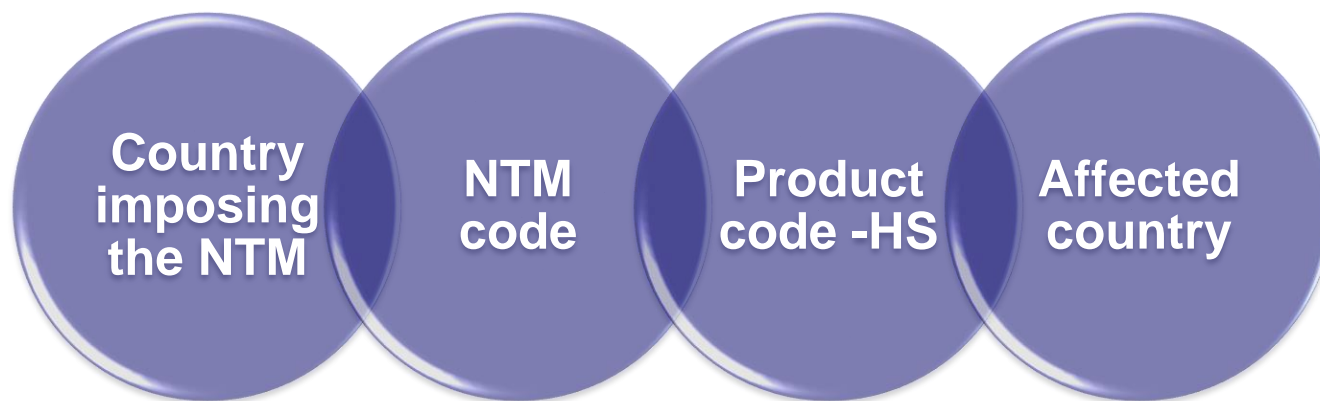
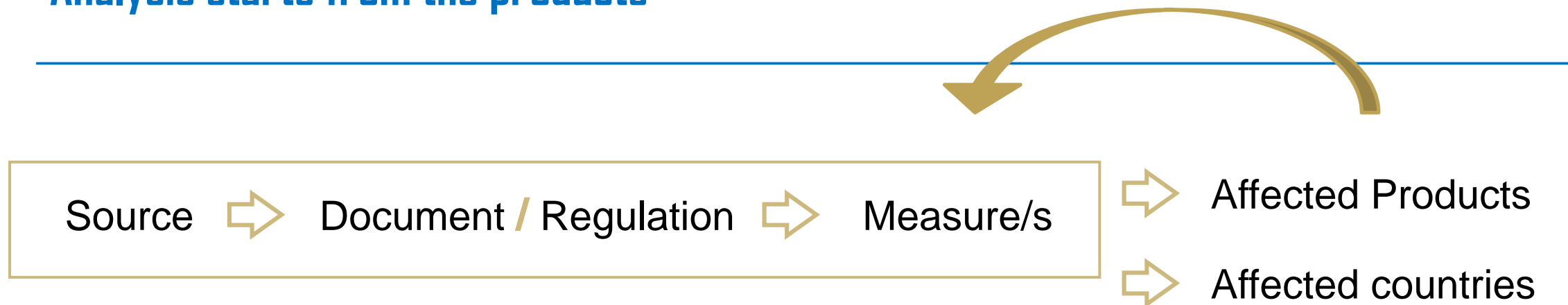
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Product 1 is affected by 2 measures



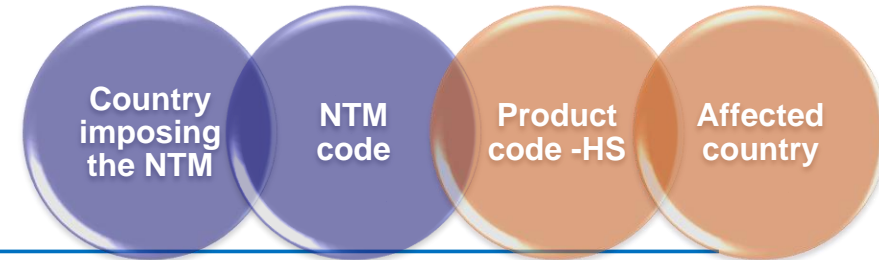
## Analysis starts from the products



- ✓ The statistical **unit of analysis** is always the combination of each single value, across the 4 dimensions



## Indicators for Descriptive Statistics. Incidence measures

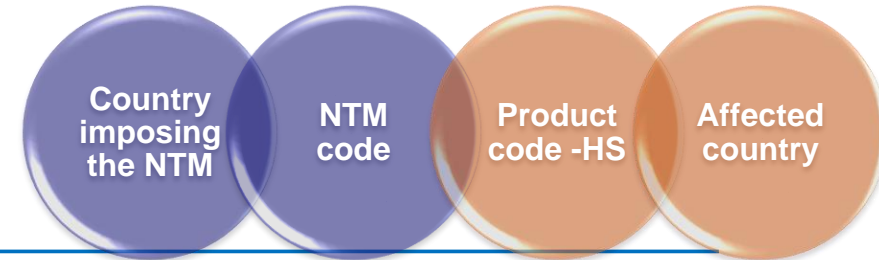


Imposing country	Affected partner	Affected product	Is there an NTM?	NTM code
A	B	1	Yes	A110
A	B	2	Yes	A830
A	B	1	Yes	E120
A	D	3	No	
A	E	3	Yes	E120
A	E	4	Yes	B810
A	F	5	No	
A	F	6	Yes	E220



# Indicators for Descriptive Statistics.

## Incidence measures



Imposing country	Affected partner	Affected product	Is there an NTM?	NTM code	Trade Value \$
A	B	1	Yes	A110	10
A	B	2	Yes	A830	20
A	B	1	Yes	E120	10
A	D	3	No		50
A	E	3	Yes	E120	20
A	E	4	Yes	B810	0
A	F	5	No		0
A	F	6	Yes	E220	0

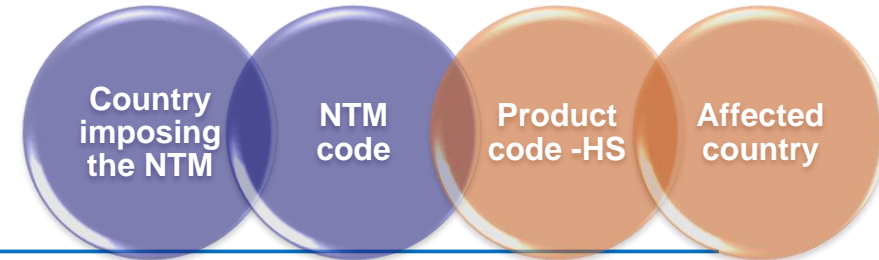
Traded Products

Non-Traded Products



# Indicators for Descriptive Statistics.

## Incidence measures



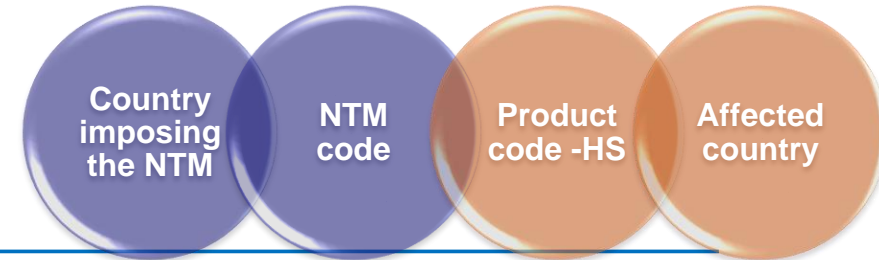
Imposing country	Affected partner	Affected product	Is there an NTM?	NTM code	Trade Value \$
A	B	1	Yes	A110 & E120	10
A	B	2	Yes	A830	20
A	D	3	No		50
A	E	3	Yes	E120	20

} Traded Products



# Indicators for Descriptive Statistics.

## Incidence measures



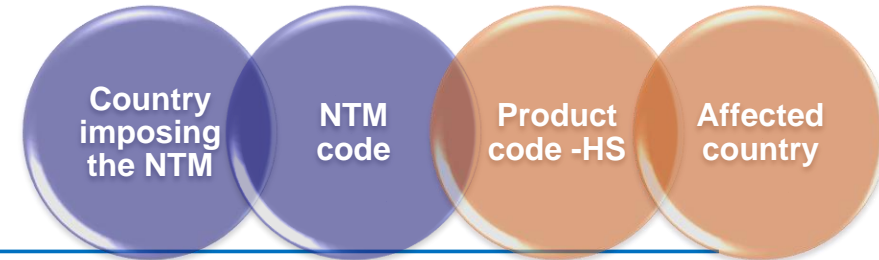
Imposing country	Affected partner	Affected product	Is there an NTM?	NTM code	Trade Value \$
A	B	1	Yes	A110 & E120	10
A	B	2	Yes	A830	20
A	D	3	No		50
A	E	3	Yes	E120	20
Indicator result			3/4		50/100
			<b>0.75</b>		<b>0.50</b>
			<b>Frequency Index</b>		<b>Coverage Ratio</b>

Traded Products



# Indicators for Descriptive Statistics.

## Incidence measures



Imposing country	Affected partner	Affected product	Is there an NTM?	NTM code	Trade Value \$	How many diff NTM?
A	B	1	Yes	A110 & E120	10	2
A	B	2	Yes	A830	20	1
A	D	3	No		50	0
A	E	3	Yes	E120	20	1
			yes 3/all 4		50/100	4/5 (average)
			<b>0.75</b>		<b>0.50</b>	<b>0.8</b>
			Frequency Index		Coverage Ratio	Prevalence Score
			From 0 to 1		From 0 to 1	



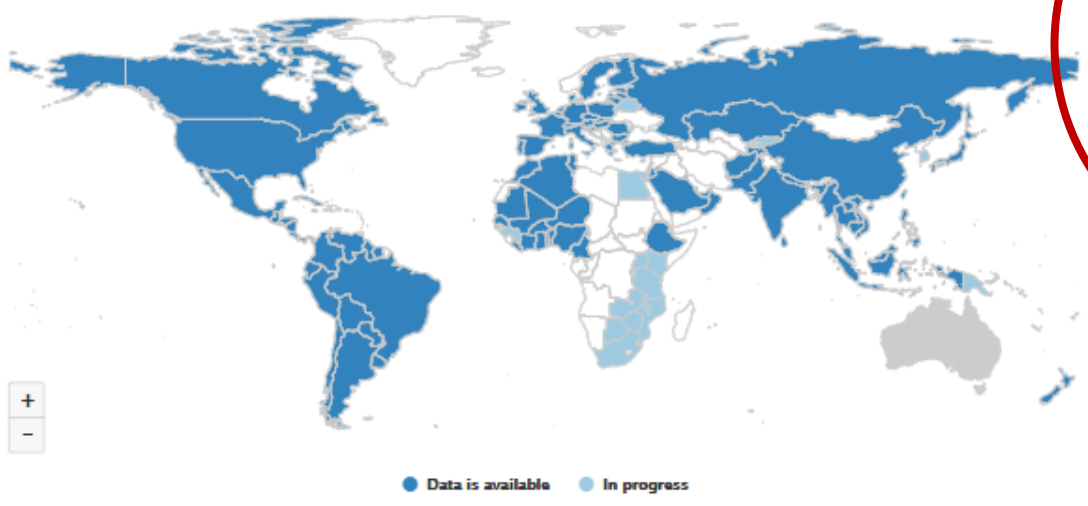
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## Data on non-tariff measures



unctad.org/ntm

NTM usage by country

Australia

**Australia**

- Frequency Index 62%
- Coverage Ratio 77%
- Prevalence Score 3.7

By Sector By Measure







Partners: UNCTAD

**INTRODUCTION**

The World Integrated Trade Solution provides access to international merchandise trade measures (NTM) data. Browse by country to obtain countries exports, imports and relevant development data.

Register and log in to WITS to perform custom analysis using standard and derived product classifications.

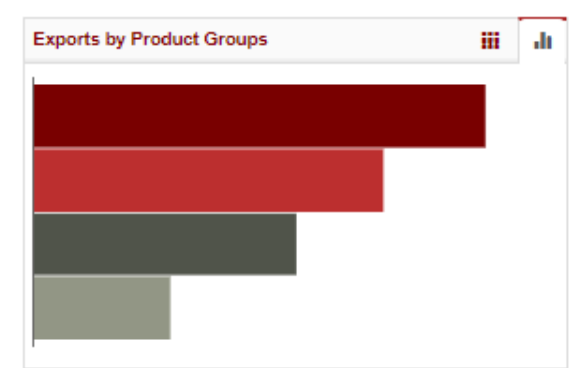
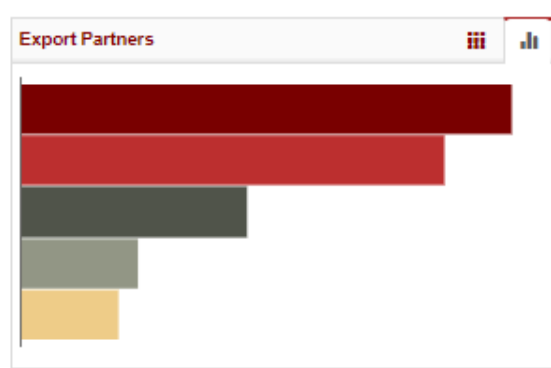
By Country By Indicator Register Login

- Summary
- By Country
- Visualization
- Data Download
- Metadata
- Data Availability
- About NTM

MY COUNTRY: United States 2017 VIEW TRADE SUMMARY/ AT A GLANCE

Trade Summary	
Import (US\$ Mil)	2,407,390
Export (US\$ Mil)	1,545,809
Weighted Average Tariff (%)	1.68
Trade (% of GDP)	...
GDP (current US\$ Mil)	19,390,804

[View All »](#)



- POPULAR COUNTRIES/ INDICATORS**
- Countries Indicators
- China At a Glance
  - United States At a Glance
  - India At a Glance
  - Pakistan At a Glance
  - Mexico At a Glance
  - Brazil At a Glance
  - Germany At a Glance

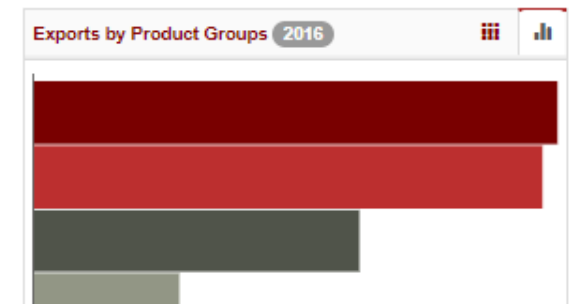
**WORLD AT A GLANCE**

**Top Importers 2016**

	Trade (US\$ Mil)	Share %
United States	1,945,159	13.29
China	1,261,714	8.62
Germany	918,090	6.28
United Kingdom	610,647	4.17
Hong Kong, China	582,557	3.98

**Top Exporters 2016**

	Trade (US\$ Mil)	Share %
China	2,077,109	14.08
United States	1,292,436	8.76
Germany	1,145,973	7.77
Japan	661,678	4.49
France	488,825	3.31





Summary | Prevalence | Measures

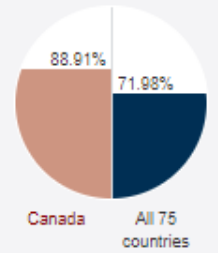
### Canada Non-Tariff Measure (NTM) Summary

Change selection (country)

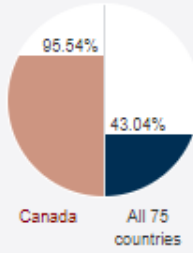
#### Imports

Looking for specific products?

##### Coverage ratio



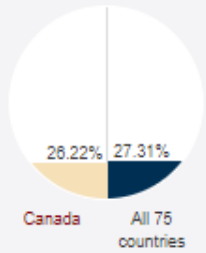
##### Frequency ratio



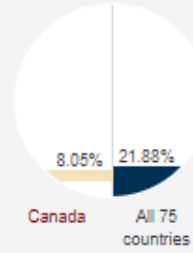
#### Exports

Looking for specific products?

##### Coverage ratio



##### Frequency ratio



Importations of Canada have a coverage ratio of 88.91% and a frequency ratio of 95.54% for non-tariff measures. Exports of Canada have a coverage ratio of 26.22% and a frequency ratio of 8.05% for non-tariff measures.

#### Canada Top ten most imposed non-tariff measures

NTM Frequency and Coverage ratio, total imports, NTM Affected Product count NTM affected Trade (sorted by coverage ratio)

Legend Max Min

Print view | Download Data

Measure	NTM Coverage Ratio	NTM Frequency Ratio	NTM affected product - Count	NTM affected Trade
---------	--------------------	---------------------	------------------------------	--------------------

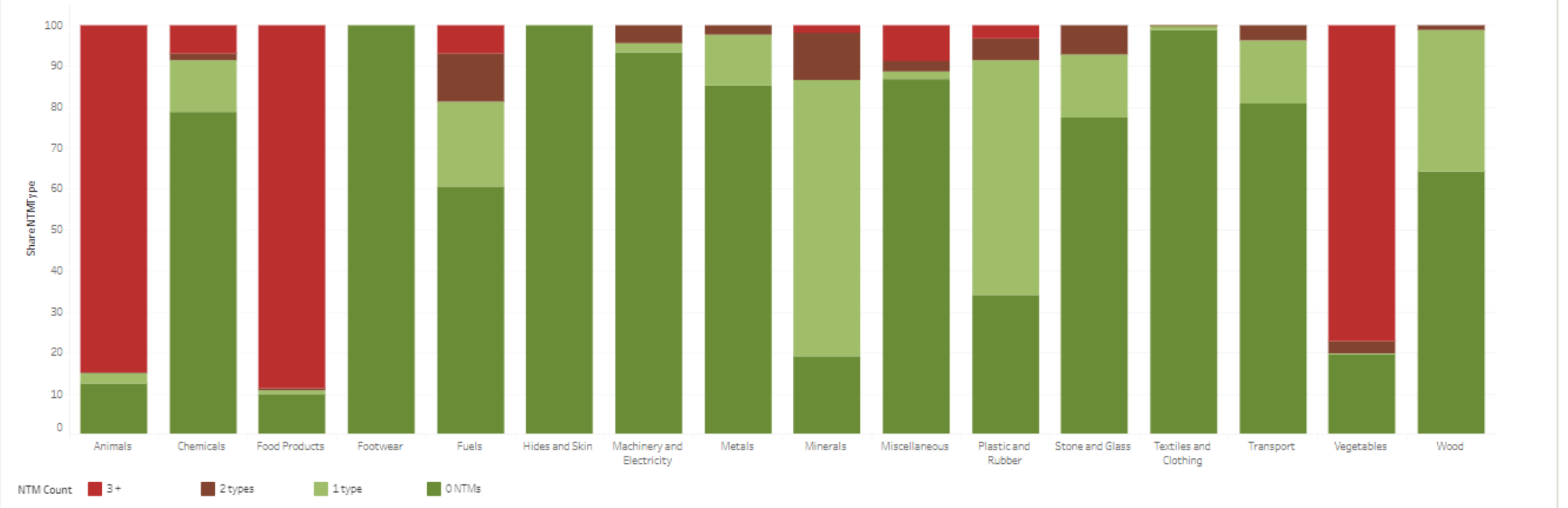


### Sectors Affected by NTM

Use this visualization to see in which sector is Non-Tariff Measure prevalent.

Other Visualizations Custom Query

Which sectors are affected by Non-Tariff Measures (NTM) the most for Thailand ?





Google Underwater Search  
https://elgoog.im/underwater/

### Duty free imports affected by NTM's

Use this visualization check percentage of duty free imports affected by NTM chapter.

Other Visualizations Custom Query

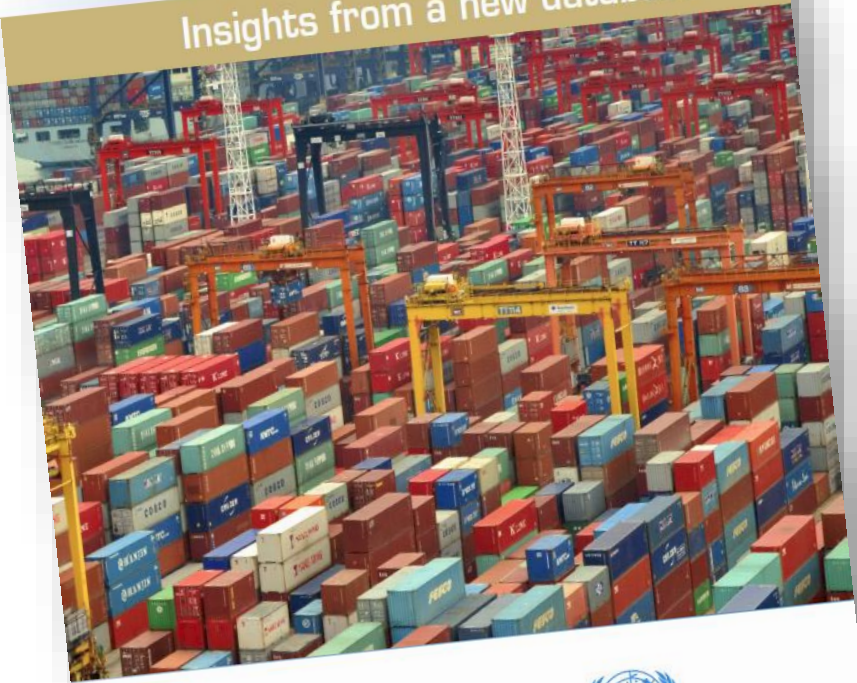
#### Duty Free Imports affected by NTM measure

Country Name A: Sanitary and phytos. B: Technical barriers to. C: Pre-shipment inspec. D: Price control measur. E: Licences, quotas, pr. F: Charges, taxes and o. G: Finance measures H: Anti-competitive me. I: Trade-related invest. J: Distribution restricti. N: Intellectual property

Country Name	A: Sanitary and phytos.	B: Technical barriers to.	C: Pre-shipment inspec.	D: Price control measur.	E: Licences, quotas, pr.	F: Charges, taxes and o.	G: Finance measures	H: Anti-competitive me.	I: Trade-related invest.	J: Distribution restricti.	N: Intellectual property
Algeria	0.00	0.13			0.12			0.10			
Antigua and Barbuda	0.26	0.14	0.26		0.03	0.66					
Argentina	3.51	3.70	0.09		2.34	6.46	2.57	7.06			
Australia	3.55	34.02	0.56		0.22	16.20					0.03
Bahamas, The	5.73	2.36	1.17			25.86	0.24	3.90			
Bahrain	4.03	6.41	4.69		2.29	1.34		0.01			
Benin		3.62	2.86		0.09	2.31			0.00		
Bolivia	1.56	1.73			0.00	0.06					
Brazil	6.40	14.39	2.63	2.57	11.08	0.04		8.60			
Burkina Faso	7.10	4.18	1.72					2.16			
Canada	4.03	24.32	1.15		3.00	47.96		0.00			
Chile	0.05	0.00			0.05						
Colombia	10.16	14.81	3.17	0.49	18.84	2.64		0.84			
Costa Rica	0.01	0.80			0.01	0.04					
Cote d'Ivoire		0.02	0.04								
Cuba	0.48	4.33						0.42			
Dominica	2.59	1.52	0.53		0.25	0.25					
Ecuador	2.91	12.07	0.38		3.03	0.54		0.04			
Ethiopia(excludes Eritrea)	0.02	4.39	7.68			0.01					
European Union	5.26	41.51	1.79		1.51		0.19	0.45			
Gambia, The	10.12	10.51			0.01	0.01					

## THE UNSEEN IMPACT OF NON-TARIFF MEASURES:

Insights from a new database



## Key findings:

- Developed countries regulate more products and a higher share of imports than developing countries
- Agricultural products are more regulated than manufactures and natural resources
- Technical Barriers to Trade are the most frequent form of NTMs
- Based on data for 109 countries, covering 90% of global trade



More info:  
[unctad.org/ntm](https://unctad.org/ntm)

Data:  
[Trains.unctad.org](https://trains.unctad.org)  
[Wits.worldbank.org](https://wits.worldbank.org)

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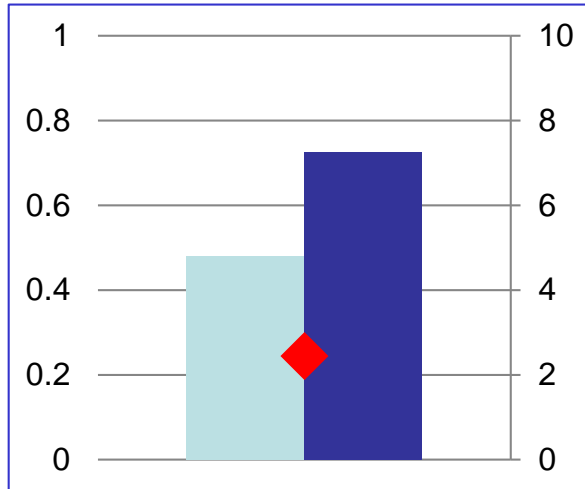


More info:  
[unctad.org/ntm](https://unctad.org/ntm)

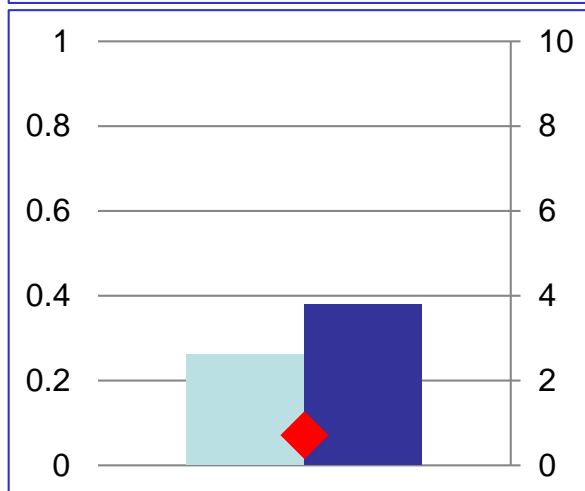
# NTM use pattern, grand global average

- Frequency Index
- Coverage Ratio
- ◆ Prevalence Score

Import measures



Export measures



- FI : Almost half the traded products face at least one NTM
- CR: About 3/4 of the trade face at least one NTM
- PS: every traded product faces more than 2 MTN on average
  
- Based on data for 109 countries, which cover 90% of world trade

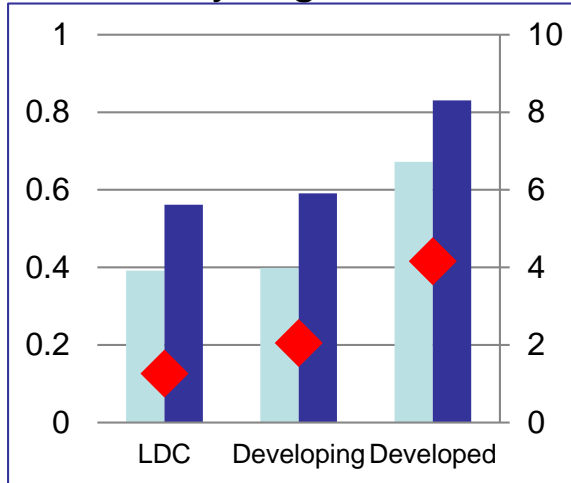


# NTM use pattern

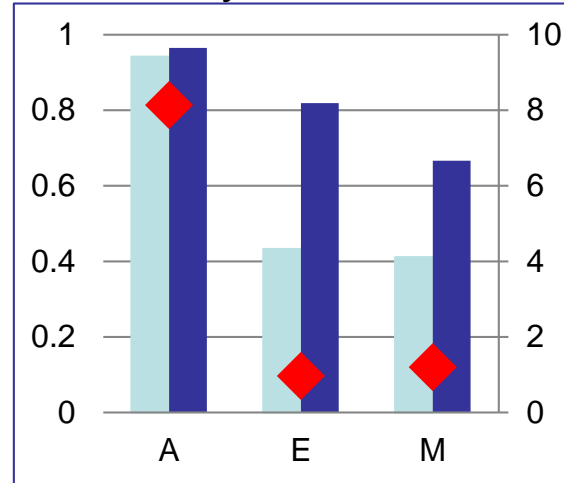
- Frequency Index
- Coverage Ratio
- ◆ Prevalence Score

Import measures

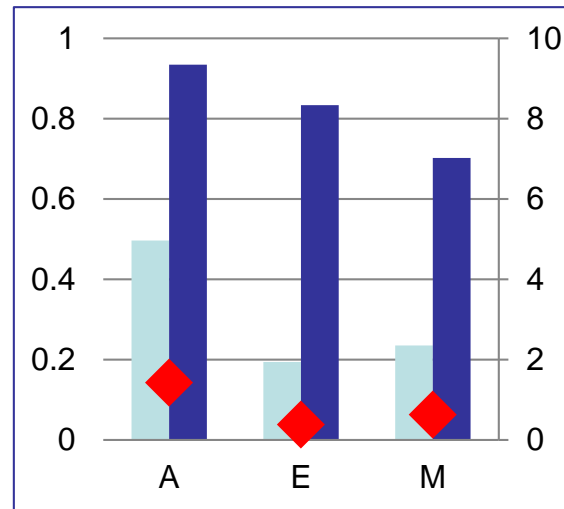
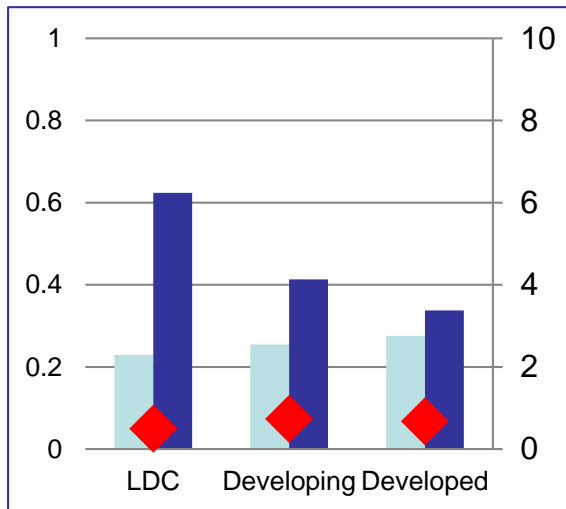
By region



By sector



Export measures



- Developed countries regulate their products, both in number of products and number of measures
- Agriculture products (A) are more regulated than Natural resources (E) and manufactures (M)
- Based on data for 109 countries, which cover 90% of world trade

Enhancing transparency

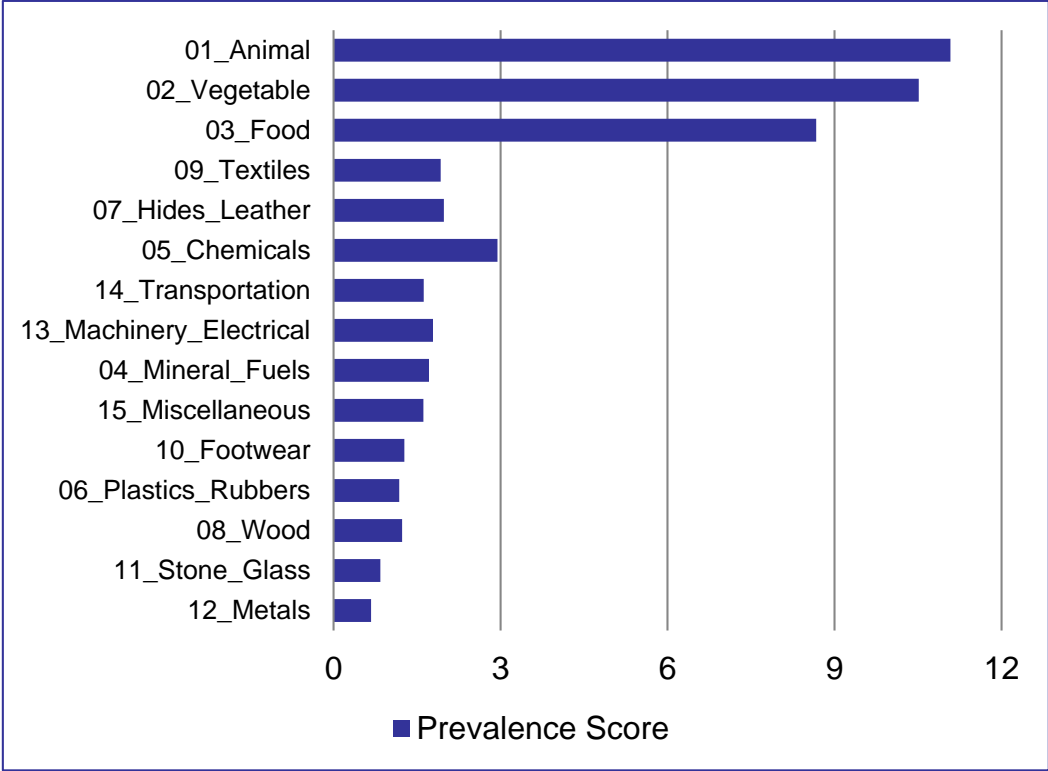
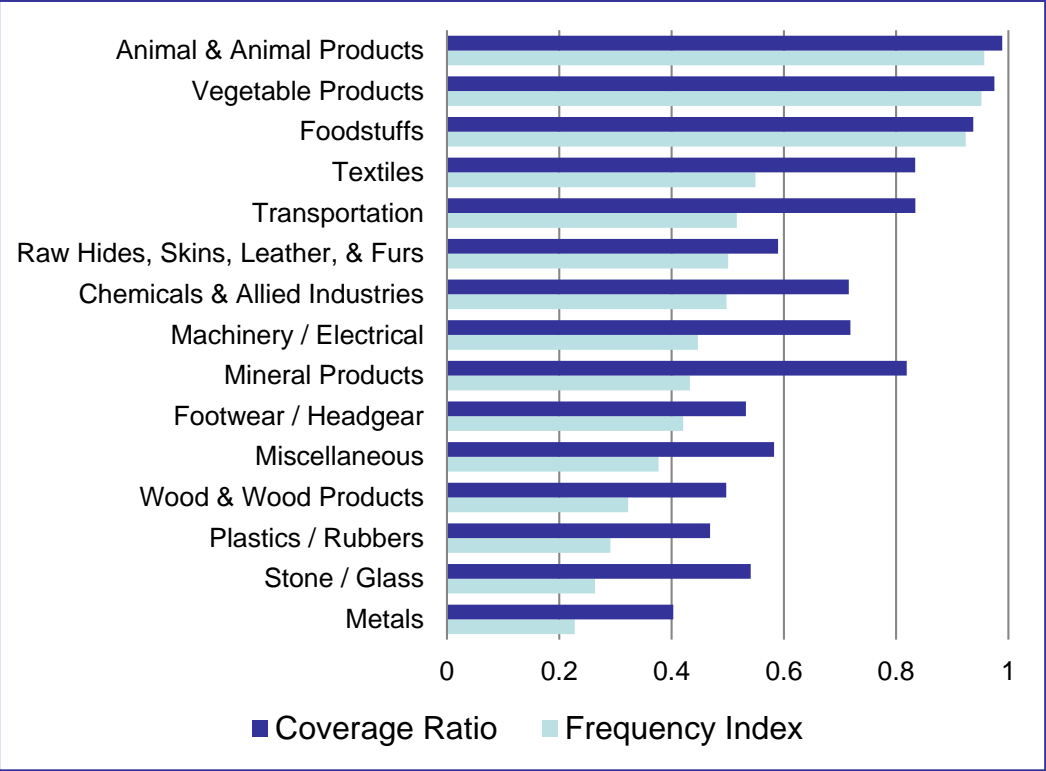
Support low-income countries and small producers

Getting it right now





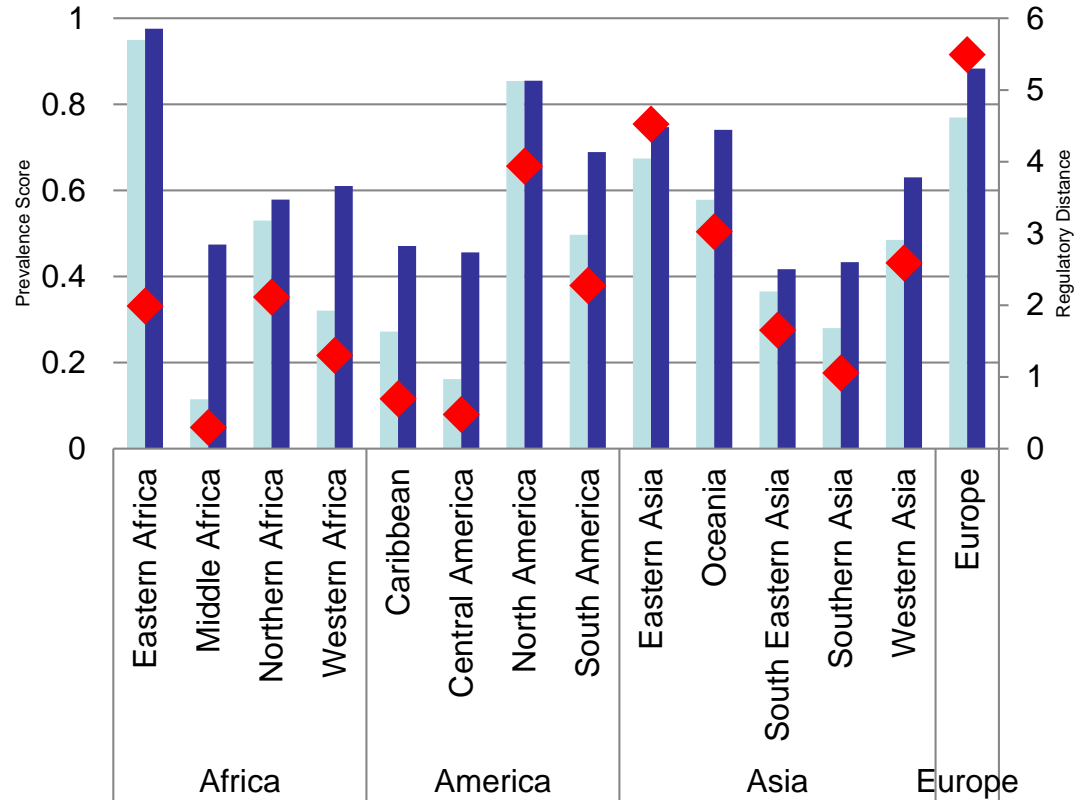
# NTM use pattern, by sector



# NTM use pattern (2016)

- Frequency Index
- Coverage Ratio
- ◆ Prevalence Score

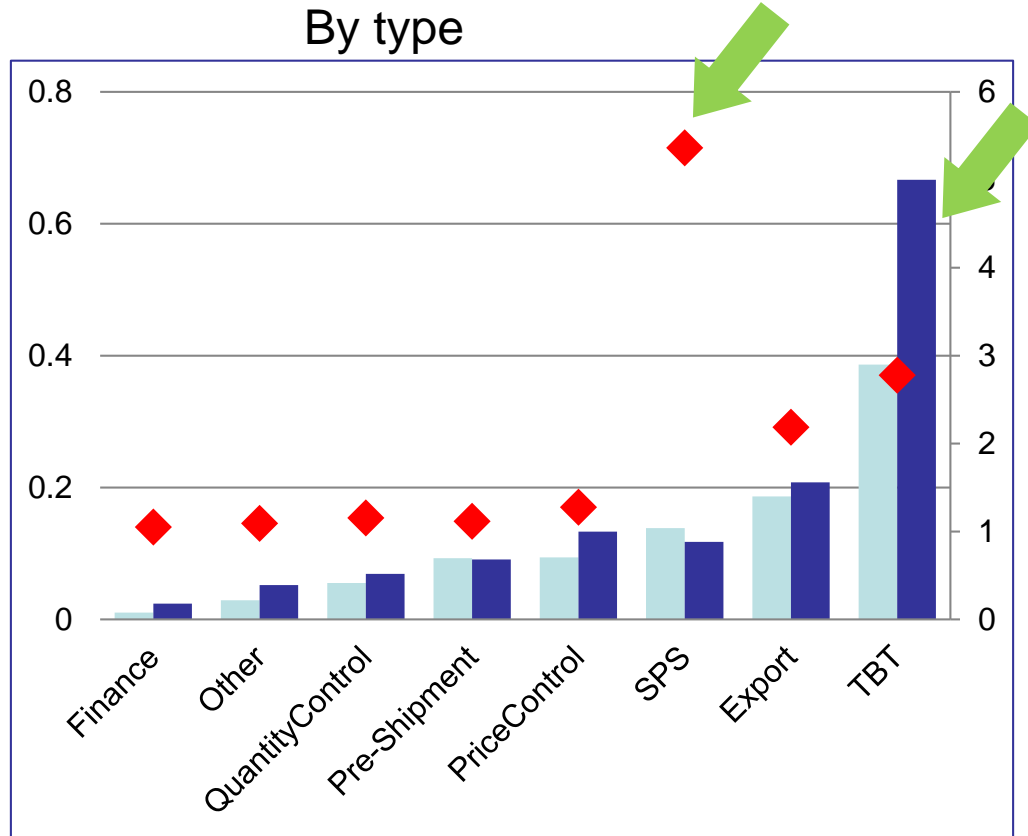
By region



- Use patterns of NTM is different for sub-regions, within broad regions

# NTM use pattern, by type

- Frequency Index
- Coverage Ratio
- ◆ Prevalence Score



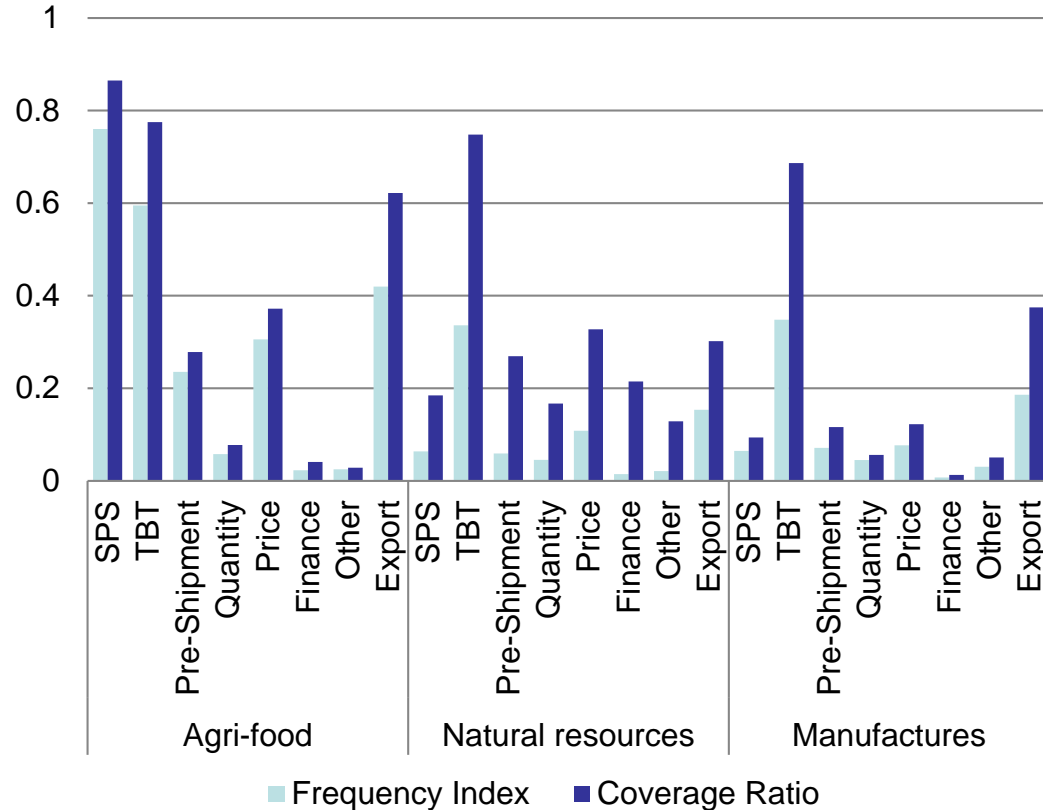
- Technical measures are more frequently used than other types
- SPS measures have the highest Prevalence Score

Regulatory reassessment at the national level is important to ensure coherent policy measures

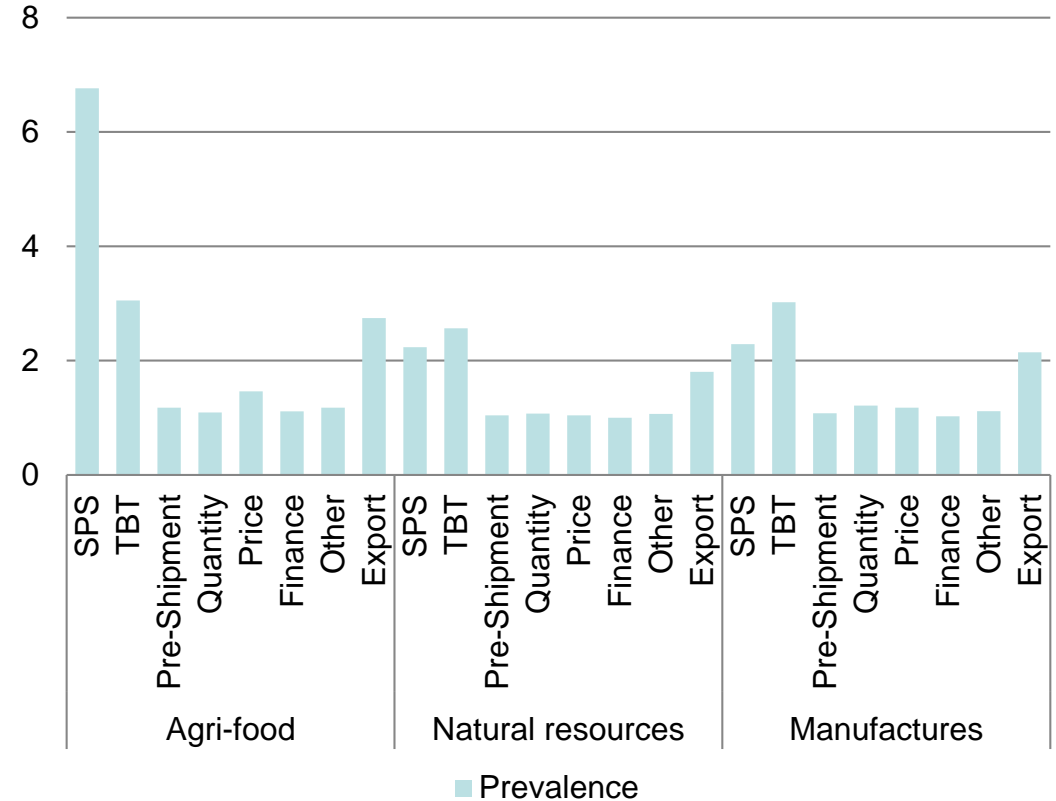
Regulatory cooperation should be pursued at multiple levels

# Key findings, by type of measure and group of products

## Frequency Index Coverage Ratio



## Prevalence Score



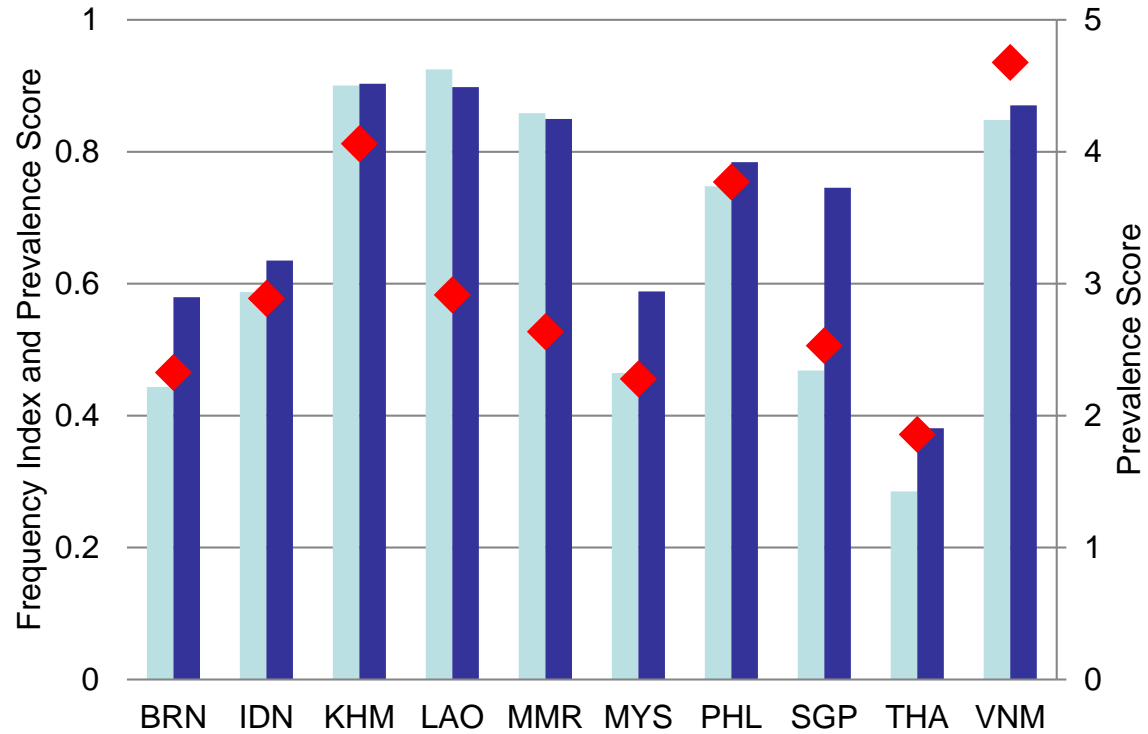
- Agri-food products are highly regulated by SPS and TBT
- Manufactures are regulated mainly by TBT

- SPS measures have the highest Prevalence Score, more than 6 measures on average on every product

# NTM use pattern in ASEAN , 2018

By country, selected

- Frequency Index
- Coverage Ratio
- ◆ Prevalence Score

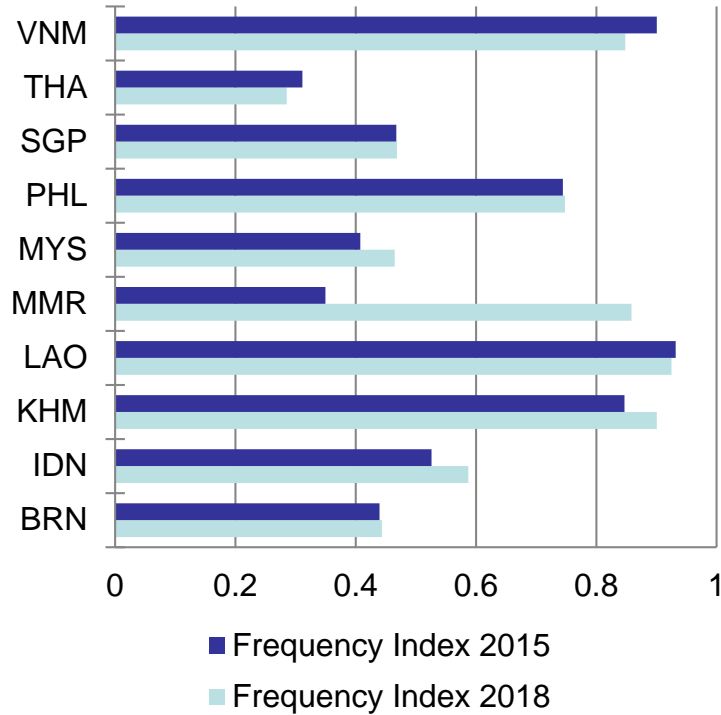


- FI : 0.56
- CR : 0.68
- PS : 2.84

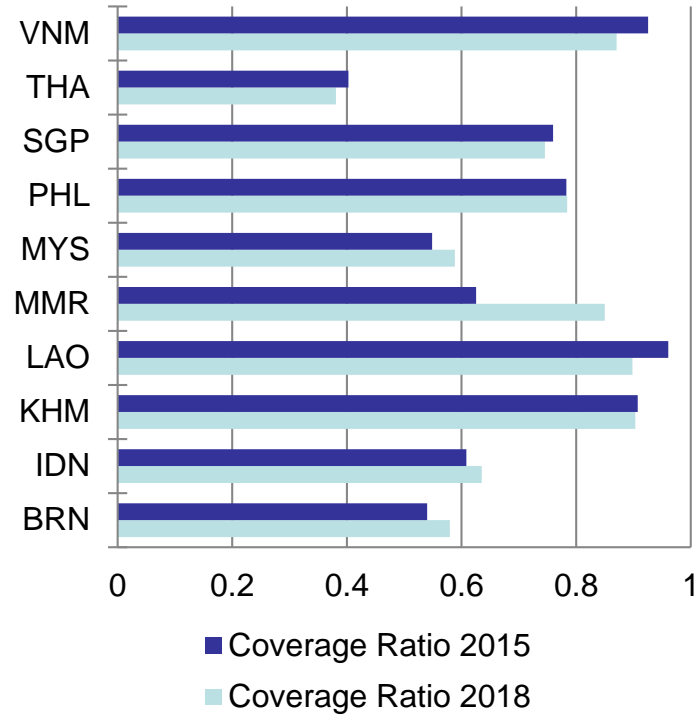
# Import NTMs in ASEAN , 2015 & 2018

By country, selected

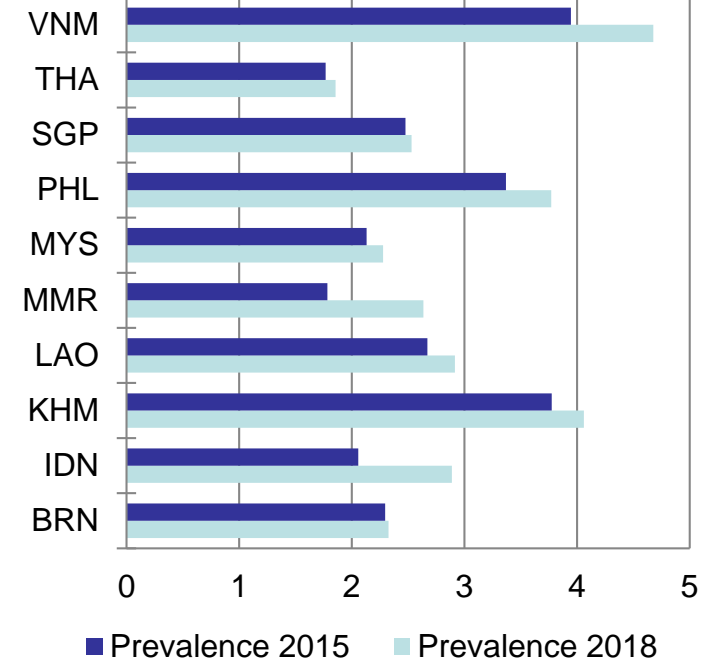
## Frequency Index, 2015 & 2018



## Coverage Ratio, 2015 & 2018



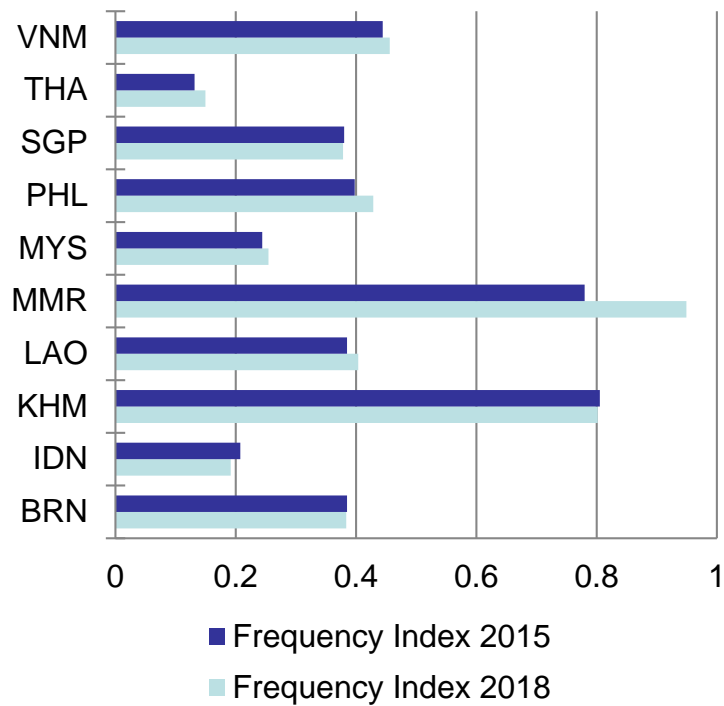
## Prevalence Score, 2015 & 2018



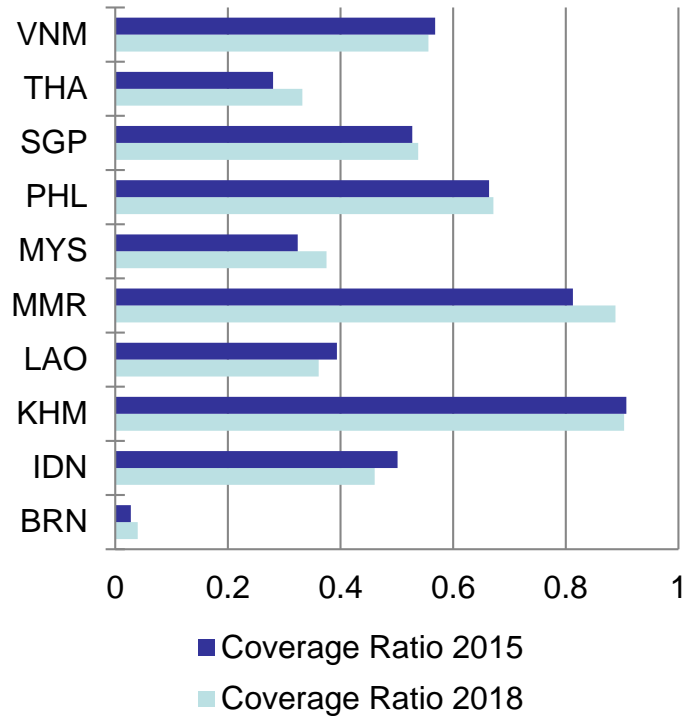
# Export NTMs in ASEAN , 2015 & 2018

By country, selected

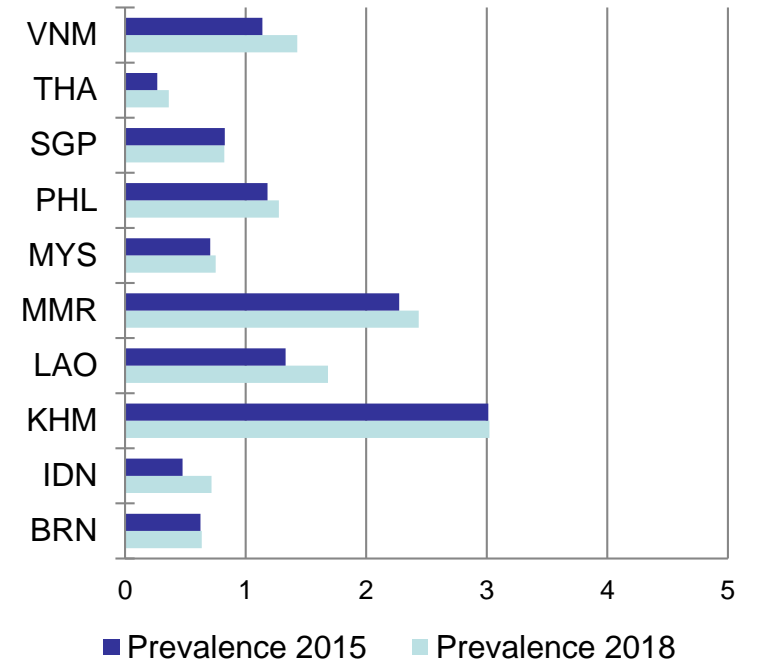
### Frequency Index, 2015 & 2018



### Coverage Ratio, 2015 & 2018



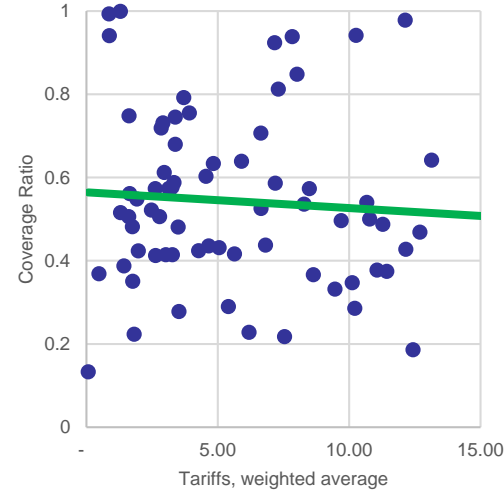
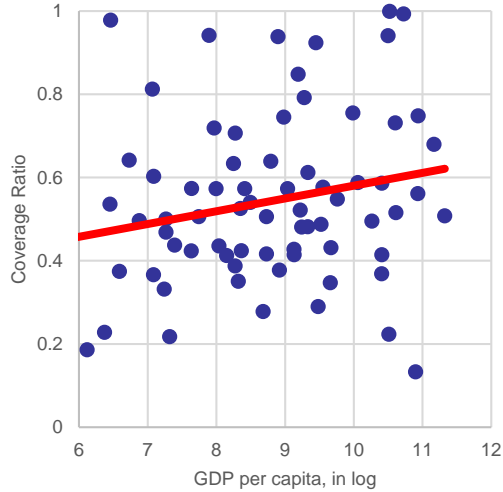
### Prevalence Score, 2015 & 2018



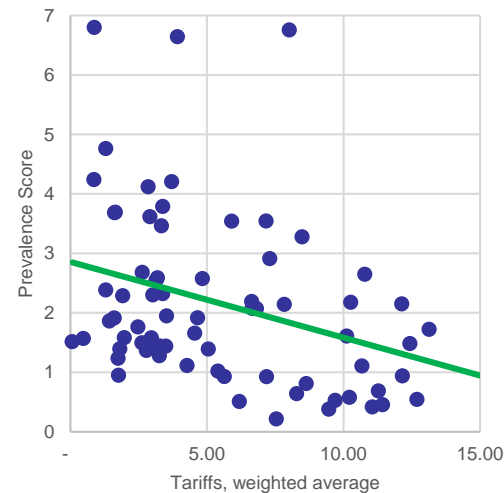
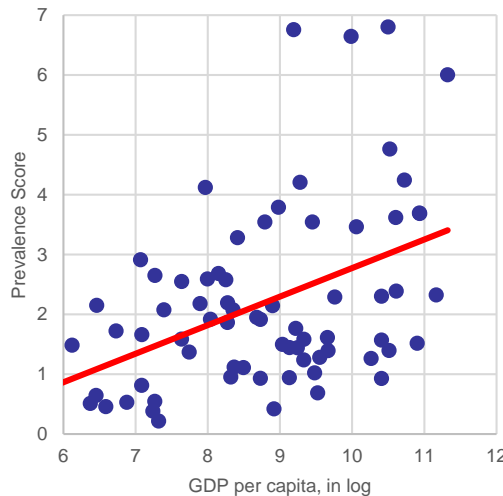
# NTM positively correlated to GDPpc (globally)

## NTM negatively correlated to average tariffs

Coverage Ratio



Prevalence Score



- More developed countries use :
- more NTM
  - less tariffs (policy substitution?)
  
  - But also
  - Better trade facilitation

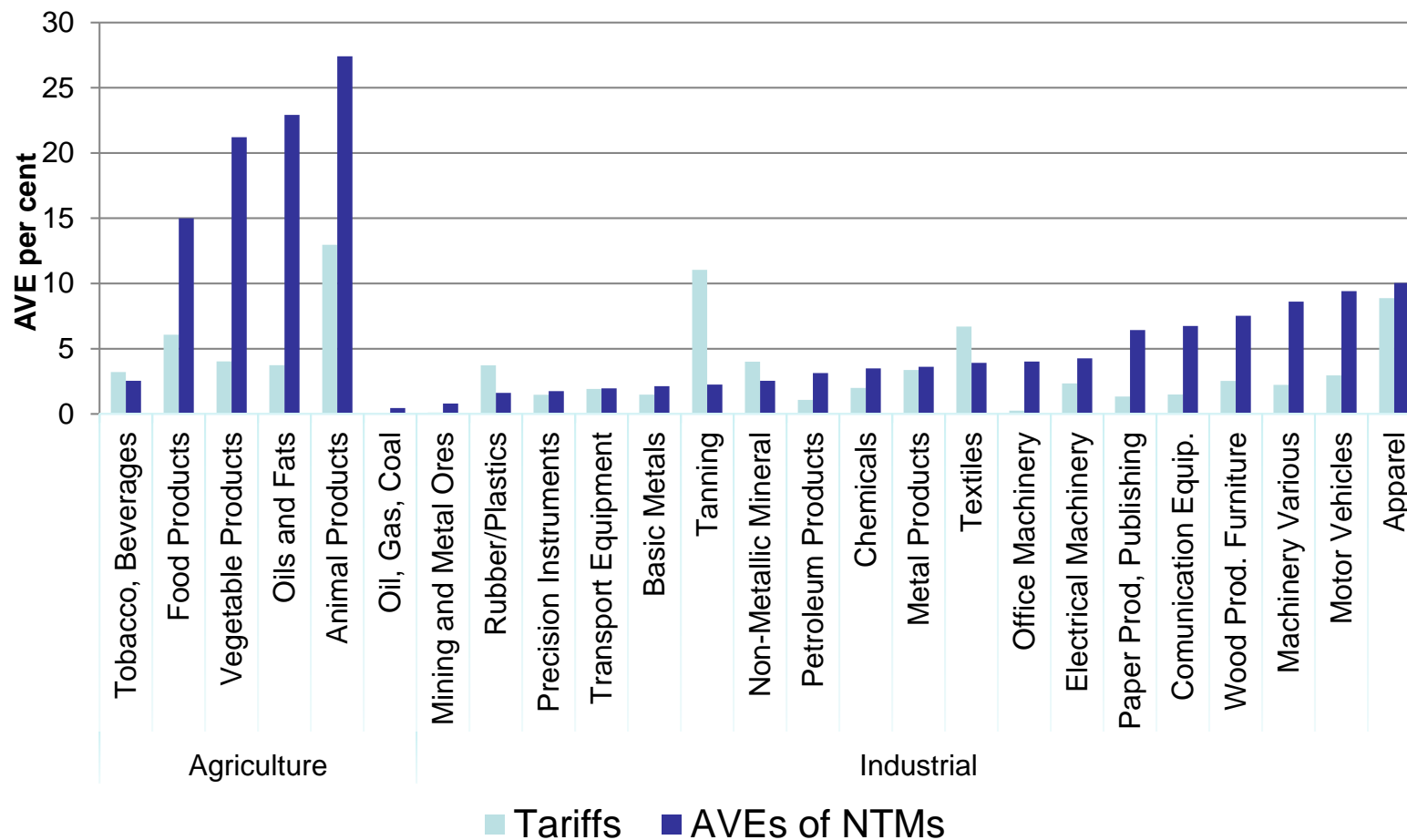
GDP per capita (ln)

Tariffs (weighted average)



# Tariffs and NTM , by sector

## Ad-Valorem Equivalent (AVE)



- Tariffs are normally less costly than AVE
- AVE for agriculture are much higher
  - Those countries that are net food exporters will be more affected



## The ad-valorem equivalents (AVEs) of NTM is one way to assess its impact

---

The interpretation of AVEs of NTMs is similar to that of a tariff:

- **AVEs represent the additional costs that the presence of NTMs has on imports**
- The AVE are price effects of NTM, in %, on trade flow

### *Example*

- an AVE of 10% indicates that the NTM add about 10% to the price of the traded product

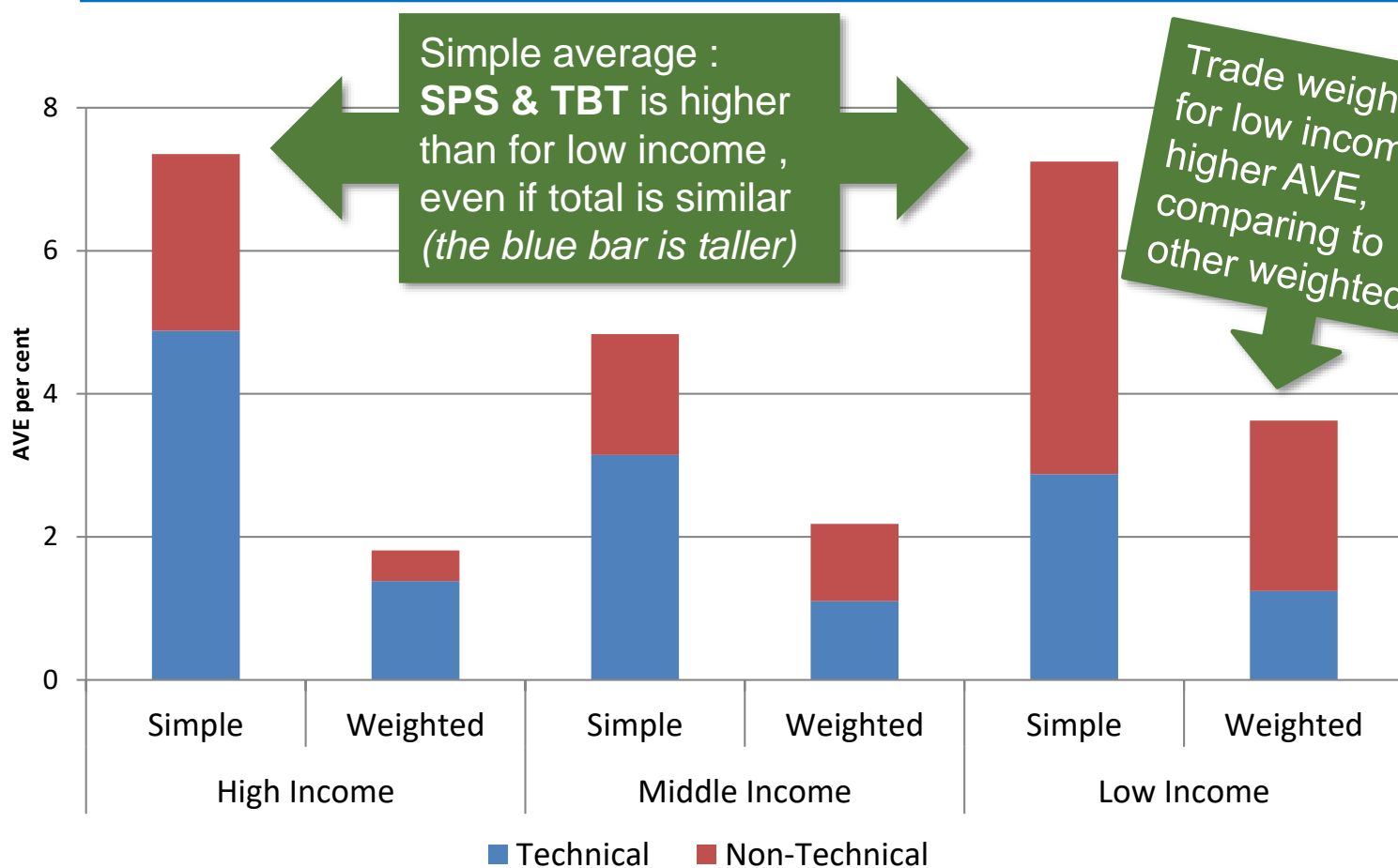
Estimates at HS6, and bilateral

About 40 importers with data on import NTM

About 200 exporters



# Kee and Nicita (2017, 2018)



Simple average : SPS & TBT is higher than for low income , even if total is similar (the blue bar is taller)

Trade weighted for low income is higher AVE, comparing to other weighted

Global average is about

- 11 % for technical measures
- 9 % for other types of measures
- Although most AVEs are low, their distribution is quite dispersed, with some relatively high values

\* Do not estimate prohibitive NTM , where there is no trade

## Exercise. Frequency Index, Coverage Ratio, Prevalence Score

---

Please open the excel file called  
“IDN NTM&trade.xls”

It contains information on **bilateral exports and imports** of Indonesia, at **HS6 digit level**, and also **information on NTM**. Specifically, how many NTM of each type for each bilateral trade relationship and HS6 product.

The file has more than 1 600 000 lines of information. This is because the number of existing products is around 5200, and countries in the world (as trade partners) are around 200. These are all combined. Data is for 2016.



2. Product code

5. 'X' are exports

nrAO are the number of all import NTM

1. Reporting country

4. 'M' are imports

nrA nrB nrC nrE nrF nrG are the number of NTM of each type

nrP are the number of export NTM

3. Partner country

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
reporter	hs6	partner	M	X	year	nrA	nrB	nrC	nrE	nrF	nrG	nrP	nrAO	nrAC	nr
BRN	903180	AUT	1.367		2018	0	0	0	1	0	0	1	1	0	
BRN	840991	AUS	11.81867		2018	0	0	0	1	0	0	1	1	0	
BRN	392690	SAU	1.863	2.109667	2018	0	0	0	0	0	0	0	0	0	
BRN	852351	AUT	0.724		2018	0	0	0	1	0	0	0	1	0	
		ESP			2018							0	0	0	
		AUT			2018							0	0	0	
		NOR			2018							5	5	3	
BRN	81190	OAS	0.184		2018	9	3	0	1	3	0	1	16	12	
BRN	400942	SWE	5.87		2018	0	0	0	0	0	0			0	
BRN	640590	TUR	0.084		2018	0	2	0	1	1	0			2	
BRN	40390	GBR	1.274		2018	9	3	1	1	3	0			13	
BRN	620469	ITA	2.631333		2018	0	0	0	0	0	0			0	
BRN	85114		0.261		2018	0	0	0	1	0	0	1	1	0	
BRN	7415		0.004		2018	0	0	0	0	0	0	0	0	0	
BRN	3920		0.206		2018	1	0	0	0	0	0	0	1	1	
BRN	180631	IDN	55.944		2018	8	3	0	1	3	0	1	15	11	
BRN	853939	DEU	3.380333		2018	0	0	0	1	0	0	1	1	0	
BRN	401691	ITA	0.036		2018	0	0	0	0	0	0	0	0	0	
BRN	230990	AUS	903.853		2018	1	0	0	0	0	0	1	1	1	
BRN	820190	HKG	0.1415		2018	0	0	0	0	0	0	0	0	0	
BRN	910211	AUS	2.333		2018	0	3	0	1	1	0	4	5	3	
BRN	281121	GBR	0.192		2018	0	0	0	0	0	0	0	0	0	

2. Product code

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nrAO are the number of all import NTM

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4. 'M' are imports

nrA nrB nrC nrE nrF nrG are the number of NTM of each type

nrP are the number of export NTM

3. Partner country

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
reporter	hs6	partner	M	X	year	nrA	nrB	nrC	nrE	nrF	nrG	nrP	nrAO	nrAC	nrAD
MYS	180631	VUT		2.529	2018	7	3	0	0	0	0	1	10	10	
MYS	71231	ARE		1.227	2018	7	3	0	0	0	0	1	10	10	
MYS	846291	USA	124.2763	6855	2018	0	0	0	0	0	0	0	0	0	
MYS	854370	LVA	7.6035	33.933	2018	0	2	0	0	0	0	0	2	2	
		CZE			2018							0	0	0	
		BRA			2018							1	11	11	
		JPN		23	2018							0	2	2	
MYS	200961	AUT			2018	7	2	0	0	0	0	1	9	9	
MYS	210111	CHN	9878.394	14343.23	2018	7	2	0	0	0	0				9
MYS	80420	PAK	1.243		2018	8	3	0	0	1	0				11
MYS	121120	HKG	2363.589	276.379	2018	7	2	0	1	1	0				9
MYS	210320	IRN		2.029	2018	8	3	0	0	0	0				11
MYS	8425		3.0943	16.8585	2018	0	0	0	0	0	0				0
MYS	8419		0.7493	314.9867	2018	0	2	0	1	1	0	2	4	2	
MYS	9027			1.872	2018	0	3	0	1	1	0	0	5	3	
MYS	190410	USA	2039.337	309.824	2018	7	2	0	0	0	0	1	9	9	
MYS	940410	ARE		4.932	2018	0	0	0	0	0	0	1	0	0	
MYS	950629	IDN	14.461	197.2847	2018	0	0	0	0	1	0	0	1	0	
MYS	151190	BRN		6430.11	2018	8	5	0	1	1	0	6	15	13	
MYS	843110	IDN	368.7957	223.619	2018	0	0	0	0	0	0	0	0	0	
MYS	280469	IND		6.336	2018	0	0	0	1	0	0	0	1	0	
MYS	960990	IDN	2.518667	26.497	2018	0	0	0	0	0	0	0	0	0	

# Exercise. Frequency Index, Coverage Ratio, Prevalence Score

## Notes

- To compute Indicators on chapters A B C D E F G H, you need to **review imports**

## Questions

### 1. Frequency Index

- a. How many products Vietnam imports ?
- b. How many of those have an NTM?
- $FI = a / b$

### 2. Coverage Ratio

- c. How much does Vietnam import ? (add up the value)
- d. How much of those imports have an NTM? (add up the value only counting the lines that have NTM)
- $CR = c / d$

### 3. Prevalence Score

- Calculate the average of column Column O, “nbrAO”
- Include all products that are imported, including those with zero values, but not those that are not imported (zero import value)
- This is the PS

# 1. Frequency Index - BRN

---

a) How many products does your country import ?

- **Suggestion.** Sort by Imports, descending order
- Then count how many lines there are with positive value of imports. Keep this number as (a)

b) How many of those have an NTM?

- **Suggestion.** Now restrict the rest of the analysis using only the traded lines (those lines for which there are imports. Some values with NTM will be discarded)
- Sort again using the variable 'nbrAO', and count how many lines there are with positive value of import NTM. Keep this number as (b)

c)  $FI = b / a$





# 1. Frequency Index - MYS

---

a) How many products does your country import ?

- **Suggestion.** Sort by Imports, descending order
- Then count how many lines there are with positive value of imports. Keep this number as (a)

b) How many of those have an NTM?

- **Suggestion.** Now restrict the rest of the analysis using only the traded lines (those lines for which there are imports. Some values with NTM will be discarded)
- Sort again using the variable 'nbrAO', and count how many lines there are with positive value of import NTM. Keep this number as (b)

c)  $FI = b / a$



## 2. Coverage Ratio - BRN

---

a) How much does your country import ? (import value)

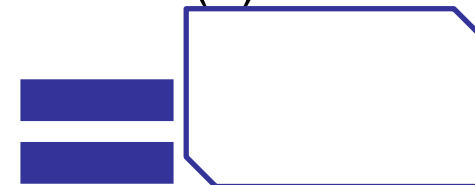
- **Suggestion.** Sum up all imports column. Keep this number as (a)



b) How much imported value has to comply with NTMs?

- **Suggestion.** Restrict the analysis using only the traded lines (those lines for which there are imports)
- Create a new column where you will copy the value of imports , but only for those lines with positive value of 'nbrAO'
- Sum up this new column (sub-set of imports column). Keep this number as (b)

c)  $CR = b / a$



## 2. Coverage Ratio – MYS

---

a) How much does your country import ? (import value)

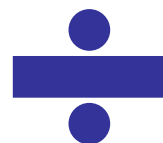
- **Suggestion.** Sum up all imports column. Keep this number as (a)



b) How much imported value has to comply with NTMs?

- **Suggestion.** Restrict the analysis using only the traded lines (those lines for which there are imports)
- Create a new column where you will copy the value of imports , but only for those lines with positive value of 'nbrAO'
- Sum up this new column (sub-set of imports column). Keep this number as (b)

c)  $CR = b / a$



### 3. Prevalence Score - BRN

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- a) Spot again the variable 'nbrAO', and compute an average of these values, including zeroes
- **Attention.** Keep the lines with trade value only, and use all of them in the average formula, including the ones with no NTM (zero value). Keep this number as (a)



### 3. Prevalence Score - MYS

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- a) Spot again the variable 'nbrAO', and compute an average of these values, including zeroes
- **Attention.** Keep the lines with trade value only, and use all of them in the average formula, including the ones with no NTM (zero value). Keep this number as (a)



**THANK YOU**

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**[www.unctad.org](http://www.unctad.org)**

**[unctad.org/ntm](http://unctad.org/ntm)**



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# Incidence measures

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Frequency index  
Share of products affected  
by at least one NTM

$$F_i = \frac{\sum_{j=1}^J \sum_{p=1}^{HS} NTM_{ijp} D_{ijp}}{\sum_{j=1}^J \sum_{p=1}^{HS} D_{ijp}} \times 100$$

Coverage Ratio  
Share of trade affected by  
at least one NTM

$$C_i = \frac{\sum_{j=1}^J \sum_{p=1}^{HS} NTM_{ijp} V_{ijp}}{\sum_{j=1}^J \sum_{p=1}^{HS} V_{ijp}} \times 100$$

Prevalence Score  
Number of different NTM  
on a product

$$P_i = \frac{\sum_{j=1}^J \sum_{p=1}^{HS} NTM_{ijp} \#NTM_{ijp} D_{ijp}}{\sum_{j=1}^J \sum_{p=1}^P D_{ijp}}$$

p, products in HS6  
j, partner country  
i, imposing country

NTM<sub>ijp</sub>, dummy for presence of NTM  
D<sub>ijp</sub>, dummy for product being traded  
V<sub>ijp</sub>, value of trade

# Incidence measures

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Regulatory Intensity  
Standardized Number of  
different NTM on a product

$$RI_i = \sum_{p=1}^{HS} S_p^w \frac{\sum_{j=1}^J D_{ijp} (\#NTM_{ijp} - \overline{\#NTM_p})}{\sigma \#NTM_p}$$

p, products in HS6  
j, partner country  
i, imposing country

NTM\_ijp, dummy for presence of NTM  
D\_ijp, dummy for product being traded  
V\_ijp, value of trade



# Partners

Various donors also support our work



Eastern African Community



SADC



ALADI in Latin America

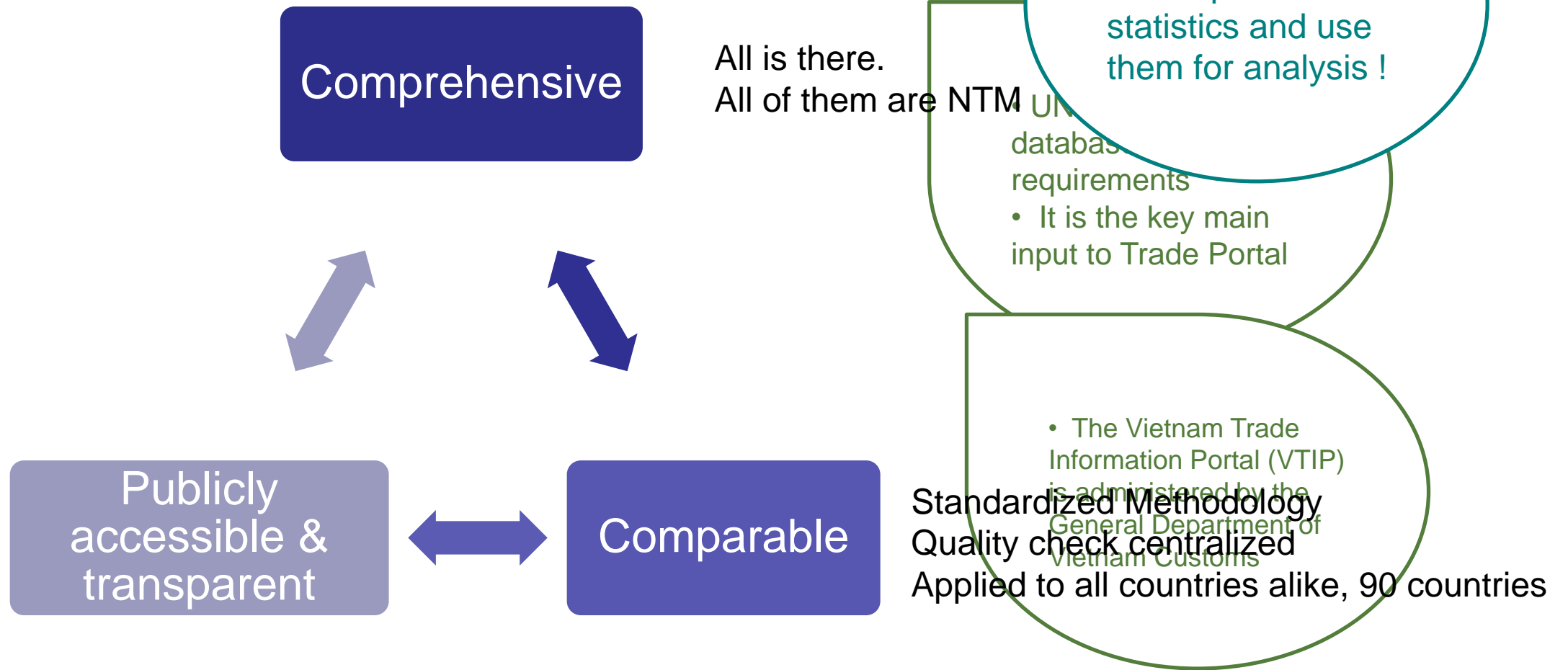


ERIA in Asia



UNECE

# - one database - one stop shop



# Apples and pears from Brazil



- To the European Union

Country imposing	Partner affected	Requirements	Measures
European Union	All Members	Sanitary and Phytosanitary	25 (18)
European Union	All Members	Technical Barriers to Trade	7 (5)
European Union	All Members	Quantity control measures	1 (1)
European Union	All Members	Other measures	1 (1)

- To Thailand

Country imposing	Partner affected	Requirements	Measures
Thailand	All Members	Sanitary and Phytosanitary	17 (10)
Thailand	All Members	Technical Barriers to Trade	3 (3)
Thailand	All Members	Price control measures	1 (1)
Thailand	All Members	Export-related measures	1

Not updated  
example !

	Example 1	Example 2
Document_Title	Biosecurity Act 2015	Biosecurity Act 2015
NTM_Code	A31	A63
Implementation_Date	2016-12-22	2016-12-22
Measure_Description	<p>15 Alternative conditions—meat and meat products</p> <p>(2) For paragraph 11(1)(b), the following table specifies alternative conditions for bringing or importing meat and meat products into Australian territory.</p> <p>(a) the goods:</p> <p>(i) were produced from animals in New Zealand; and</p> <p>(ii) are clearly <b>labelled</b> on the outermost of the largest packaged unit with the date of processing, the name and address of the place of production, and “Product of New Zealand”;</p> <p>(...)</p>	<p>16 Alternative conditions—dairy products</p> <p>(2) For paragraph 11(1)(b), the following table specifies alternative conditions for bringing or importing certain dairy products into Australian territory.</p> <p>(a) the goods:</p> <p>(i) have been commercially prepared and packaged; and</p> <p>(ii) were manufactured in an FMD-free country; and</p> <p>(iii) are for personal use;</p> <p>(...)</p>
Measure_Reference	Section 15, Item 2	Section 16, Item 1
Affected_Products_Description	<p>Meat or meat products from New Zealand, other than:</p> <p>(a) pork; or</p> <p>(b) avian meat</p>	<p>Dairy products, other than:</p> <p>(a) infant formula; or</p> <p>(b) dairy products intended for use as stockfeed</p>
Affected_Regions	New Zealand	World
Measure_Objectives	(1) This instrument provides that specified classes of goods must not be brought or imported into Australian territory unless specified conditions are complied with.	(1) This instrument provides that specified classes of goods must not be brought or imported into Australian territory unless specified conditions are complied with.
Measure_also_domestic	No	No