



Non-Tariff Measures (NTMs)

Arun Jacob
jacoba@un.org



Outline

- Introduction : an overview of NTMs
- Classification of NTMs
- Incidence statistics and data sources
- Data exercise - I
- Impact of NTMs
- Data exercise – II
- Conclusion





Definition

“Non-tariff measures (NTMs) are 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”

Source: UNCTAD / GNTB-MAST





Non-Tariff Measures (Examples)

Quotas	Technical requirements	Export subsidies
Import bans	Export restrictions	Minimum import price
Sanitary and phytosanitary conditions	Import licenses	Voluntary Export Restraints
Determination of eligibility (geographical)	Quality conditions, and proofs	Certificate of Origin





Definition

- All policy-related trade costs incurred from production to the final consumer, with the exclusion of tariffs
- Countries are allowed by the WTO to regulate their imports and exports in order to achieve legitimate non-trade objectives.

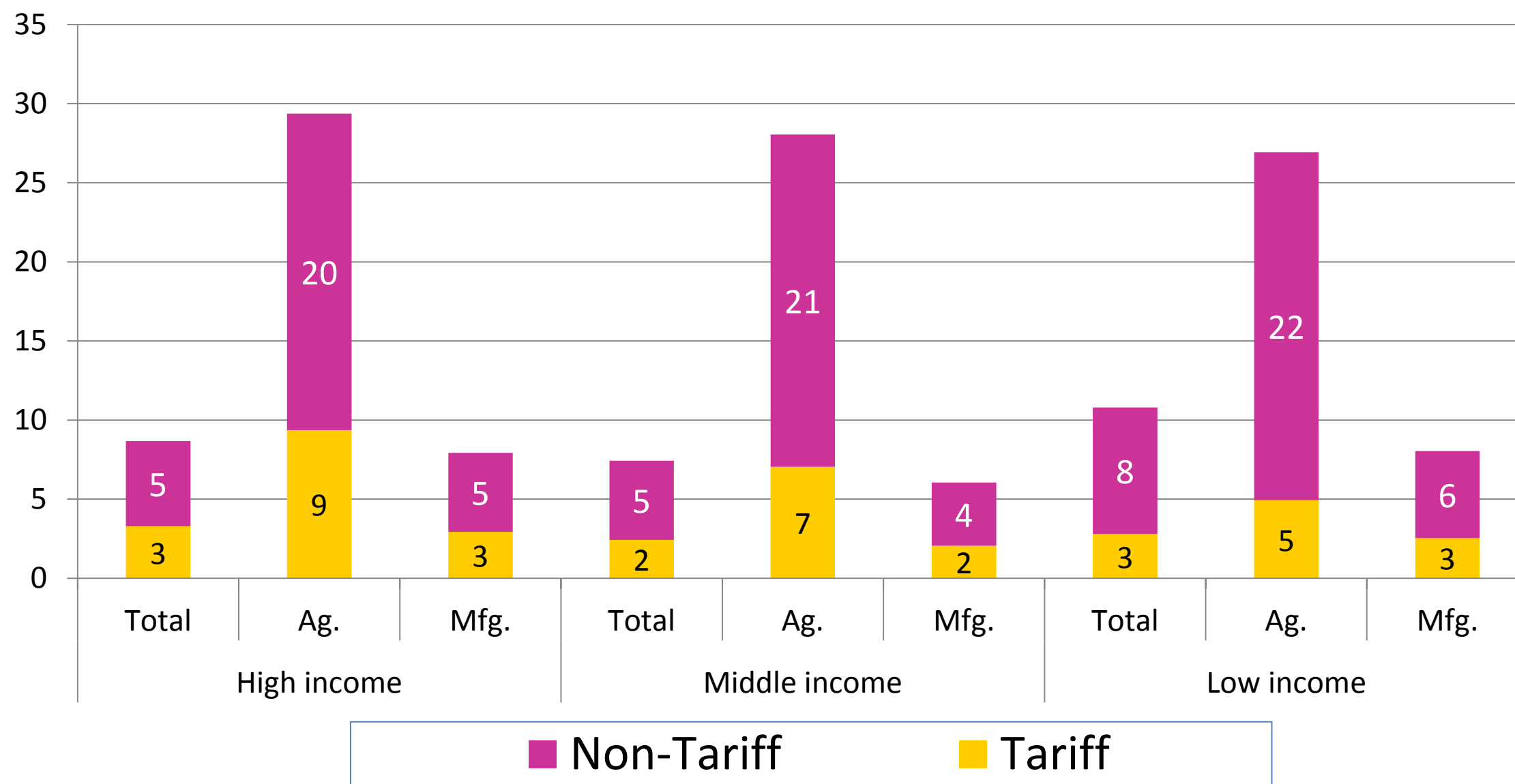
They can be used for :

- Correcting various market failures such as informational asymmetries, externalities and monopoly power (price ceiling)
- Protect consumer health (standards, certification, labelling)
- Safeguard the environment (import ban)
- Protection of national industries or infant industries (bailouts, subsidy)



Emerging importance of NTMs

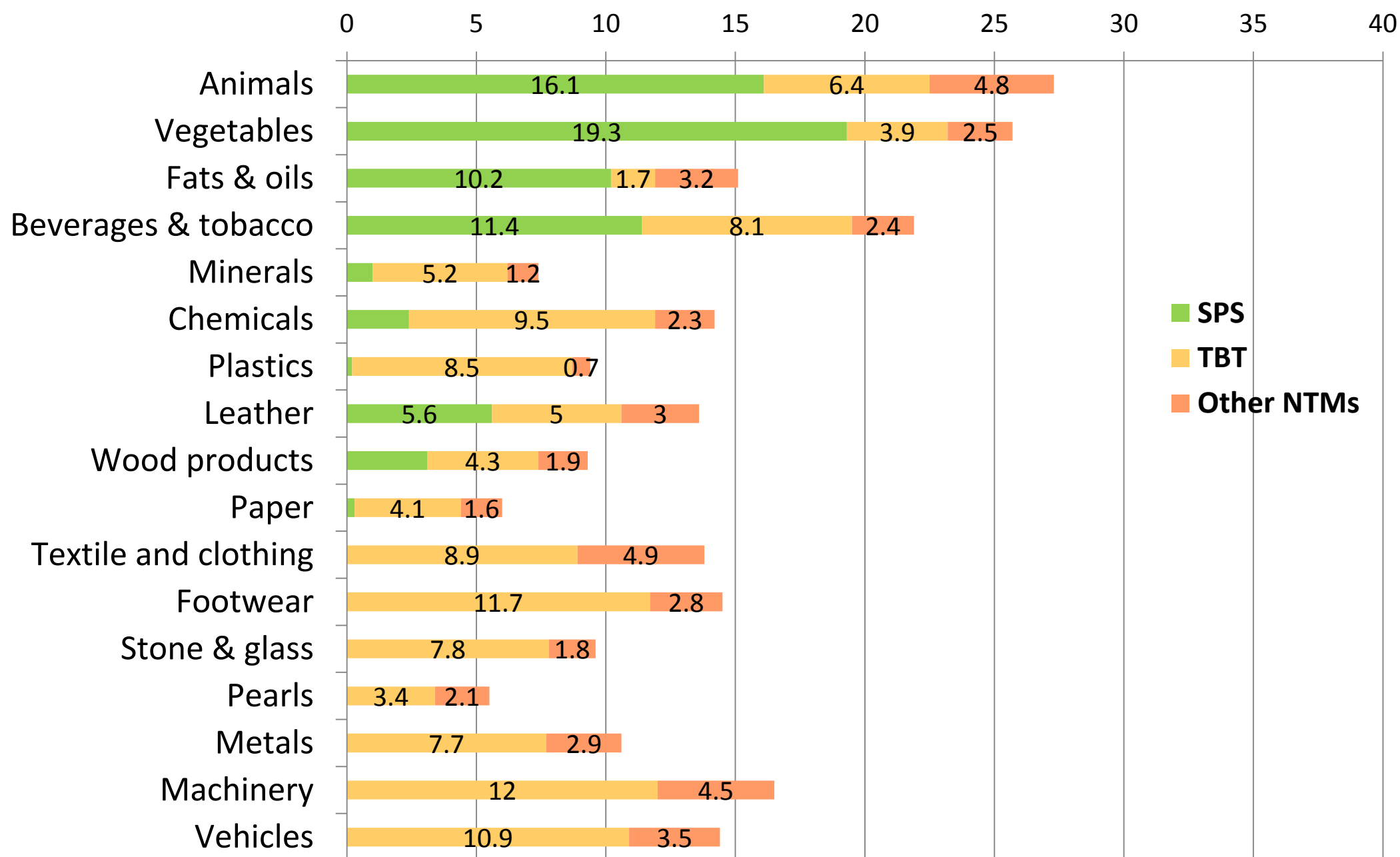
Ad-valorem equivalent faced when exporting



Source : UNCTAD



World average ad-valorem equivalent of NTMs



Source : Cadot and Gourdon (2015)





International agreements on NTMs

The SPS Agreement

- entered into force in 1995
- allows countries to adopt scientifically based measures in order to protect human, animal and plant life or health
- it recognizes the sovereign rights of WTO Members to provide the level of health protection they deem appropriate and it (tries) to ensure that NTMs are not disguised restrictions on international trade
- encourages Members to base their measures on international standards (such as FAO or WHO)





International agreements on NTMs

The TBT Agreement

- Signed in 1980 superseded by the 1995 WTO Agreement.
- Deals with technical requirements not covered by the SPS Agreement
- promotes the use of international standards and the mutual recognition of requirements and of conformity assessment procedures between WTO Members.

SPS vs TBT example





NTM overview

Barriers vs Measures:

- NTM is a neutral concept – the whole “universe”
- NTBs = subset of NTMs (no agreed definition/criteria)
- Negative effect (research, survey, complaints...), protectionist intent or legality (WTO, FTA, ...)

Procedural obstacles:

- Hardly any (NTM) policy comes without procedure... e.g customs procedures, paperwork, delays in inspections
- Sometimes considered part of NTBs





Trade Facilitation:

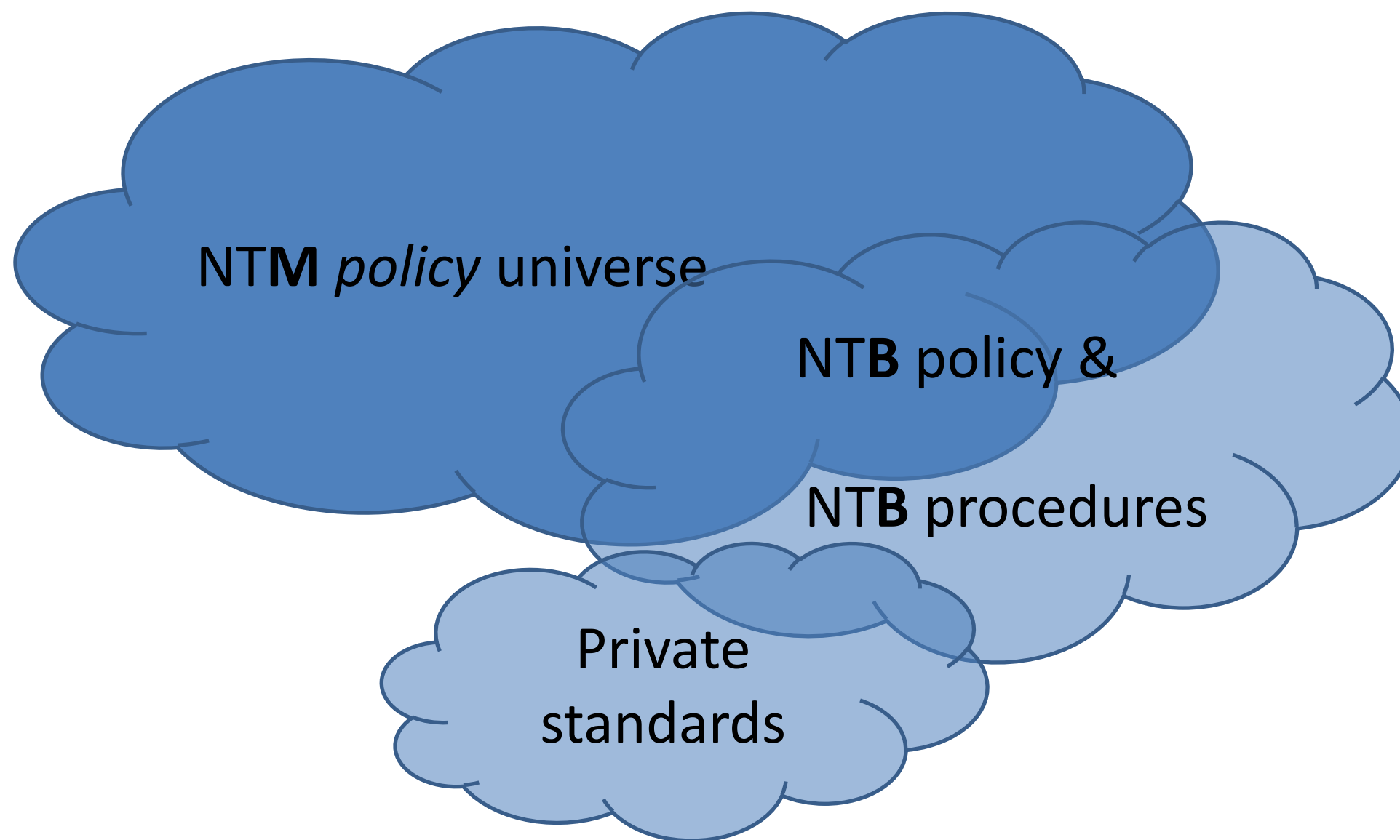
- Mostly related to procedures (which come with every NTM)
- Low hanging fruit, as it is somehow independent of the policy dimension and only relates to pure "costs"

Private standards:

- "Standards" are voluntary, a priori
- driven by consumer preferences (GAP, FairTrade) but can become de facto mandatory and highly restrictive
- Governments can make them de jure mandatory (=NTM)



NTM overview



Source : Knebel (2016)





Certain stylized facts on NTMs

- NTMs can actually be trade and/or welfare enhancing
- They can affect prices and quantities or both
- Even though applied indiscriminately, they can be discriminatory
- Among the different types of NTMs, sanitary and phytosanitary (SPS) and Technical Barriers to Trade (TBTs) are most predominant
- On the whole, TBTs are more prevalent than SPS measures, but SPS more prevalent on agri-food products than TBTs
- The exact extent of burden imposed by NTMs differ among export markets
- Mixed results on whether NTMs are complements or substitutes to tariffs (differs by country and product groups)

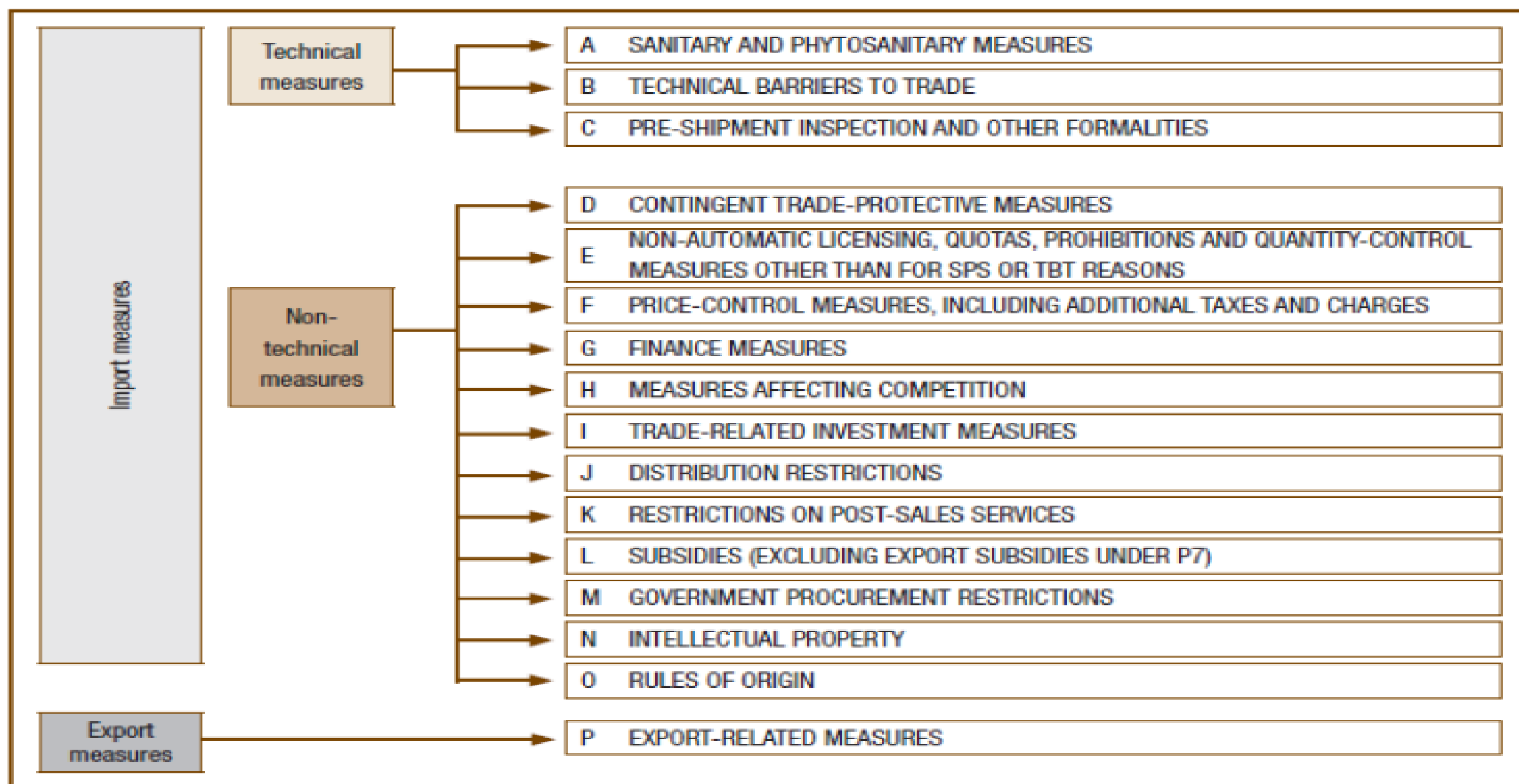


NTM Classification



Multi-Agency Support Team (MAST)

2012 classification of NTMs





NTM classification

- Tree branch structure
- NTMs are classified into 16 chapters depending on their scope and/or design (from A to P).
- Each chapter is further divided into sub-groups (up to three digits) to allow a finer classification of the regulations affecting trade
- All chapters (except chapter P, which deals with exports) reflect the requirements of the importing country with regard to its imports





Let us look at a chapter : NTM classification

A2 Tolerance limits for residues and restricted use of substances

A21 Tolerance limits for residues of or contamination by certain (non-microbiological) substances

A measure that establishes a maximum residue limit (MRL) or tolerance limit of substances such as fertilisers, pesticides, and certain chemicals and metals in food and feed, which are used during their production process but are not their intended ingredients: It includes a permissible maximum level (ML) for non-microbiological contaminants. Measures related to microbiological contaminants are classified under A4 below.

Examples: (a) MRL is established for insecticides, pesticides, heavy metals and veterinary drug residues; (b) POPs and chemicals generated during processing; (c) residues of dithianon in apples and hop.

A22 Restricted use of certain substances in foods and feeds and their contact materials

Restriction or prohibition on the use of certain substances contained in food and feed. It includes the restrictions on substances contained in the food containers that might migrate to food.

Examples: (a) Certain restrictions exist for food and feed additives used for colouring, preservation or sweeteners; (b) For food containers made of polyvinyl chloride plastic, vinyl chloride monomer must not exceed 1 mg per kg.





Quick Activity

- Please open the file 'UNCTAD NTM Classification' in your shared folder
- Please take few minutes to glance through the NTM classification document





Analyzing NTMS

Incidence

Looking at individual measures

Incidence statistics (descriptive statistics) like coverage/frequency ratio

Impact

Direct economic (on trade, prices)

Indirect economic (employment, poverty, ...)

Non-economic! Environment, health...



Incidence statistics





Incidence statistics

Frequency ratio

- Share of HS6 lines (within a group) that are affected by at least one measure

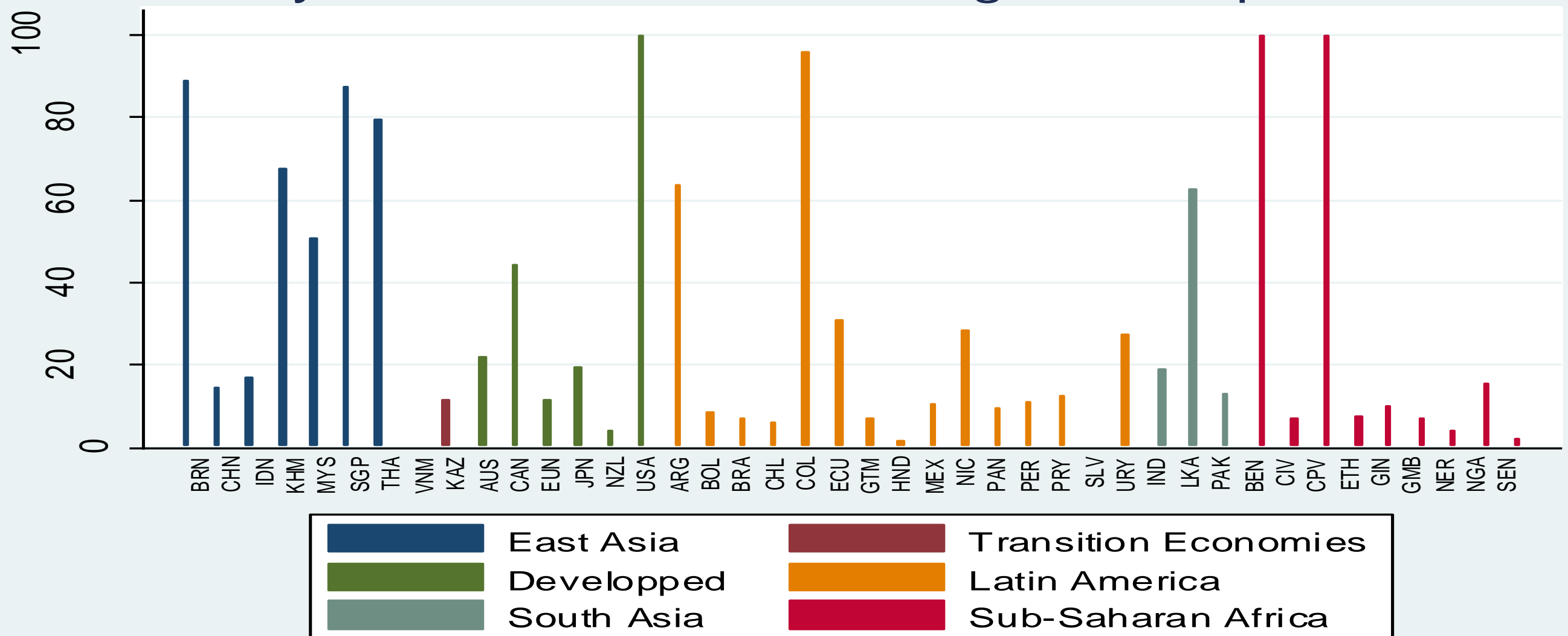
Coverage ratio

- Frequency ratio weighted by trade
- Share of value of HS6 lines (within a group) that are affected by at least one measure
- Endogeneity issue



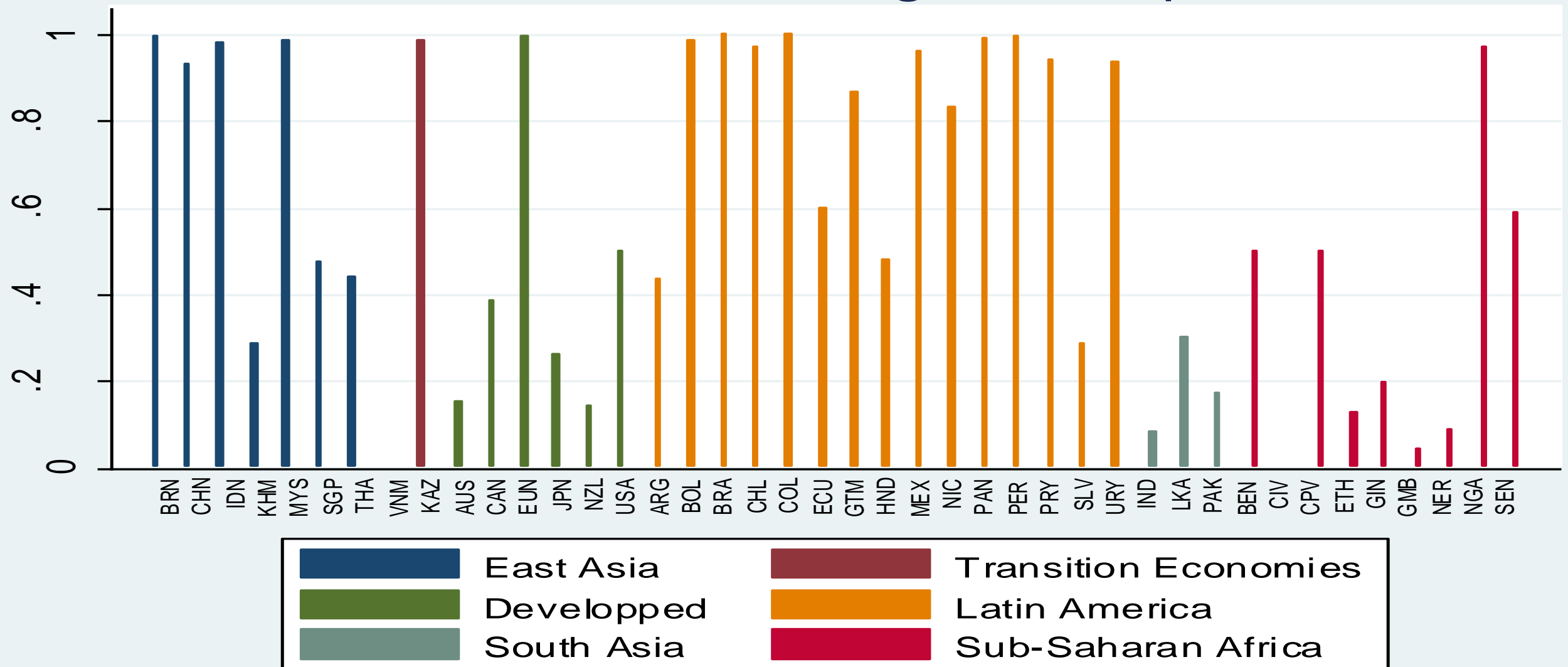
Frequency Ratio : Example

Percentage of imported hs6 digit lines covered by a non-technical NTM in agricultural products



Coverage Ratio : Example

Percentage of imported value covered by a non-technical NTM in agricultural products





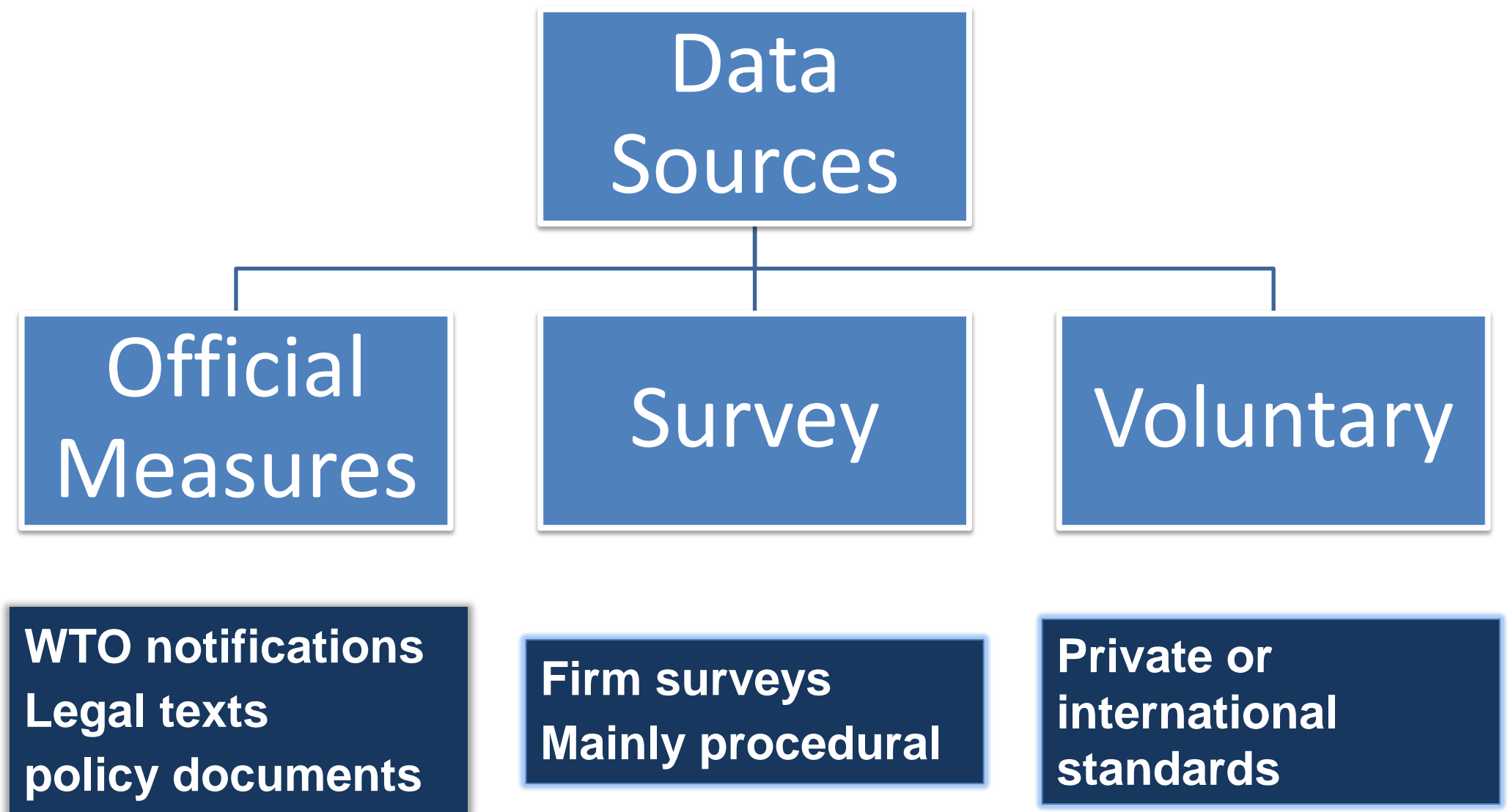
Other Incidence statistics

- Number of distinct measures per product
- Focus on specific measure types





Data Sources



Data Source I : i-tip.unctad.org



WORLD TRADE
ORGANIZATION



Français
Español

UNCTAD i-TIP in cooperation with WTO

I-TIP official NTMs: Integrated analysis and retrieval of collected official non-tariff measures

I-TIP official NTMs provides comprehensive information on non-tariff measures (NTMs) applied in merchandise trade as well as analytical tools. The information includes members' technical and non-technical measures as well as export measures (TRAINS NTM database). The information has been retrieved only official sources including mainly national laws and regulations. Measures are classified according to the International Classification of NTMs at the NTM level and the Harmonized System HS classification at the product level. It includes links to UNCTAD's TRAINS tariff database and to original documents.

The software i-TIP has been developed by the WTO for notifications and made available to UNCTAD to disseminate collected official NTM data. The United Nations gratefully acknowledge this. An objective of both organizations is to provide free access to the most comprehensive, up-to-date and highest quality non-tariff measure data.

Choose one of the following options:



GRAPHS over TIME

- You can see and select stocks or flows of Non-Tariff Measures (NTMs), by type of measure.
- See individual measures by simply clicking on any bar in the graphs!
- This option does not allow the selection of country or product affected.

TABLES by MEASURE

- Look at the incidence of NTMs by country imposing the measure.
- This option does not allow a selection of products.

TABLES by PRODUCTS

- Look at the incidence of NTMs by HS sections and chapters, and by country imposing the measure.
- See individual measures by simply clicking on any number in the tables!
- This option does not allow a selection of products.

TABLES by MEMBERS

- Look at the incidence of NTMs by WTO member and geographical regions.
- See individual measures by simply clicking on any number in the tables!

DETAILED QUERY

- Select any combination of the five criteria: type of NTM, dates, country imposing, country affected, and product. Get tabular listing of NTMs.
- Drill down for additional details.
- Export summary and detailed NTM information.

WHAT IS AVAILABLE NOW

- Interim NTM data for the United States of America (incomplete)

To be added in 2015

- Final NTM data for the United States of America
- NTM data for ASEAN
- NTM data for West Africa (ECOWAS)
- NTM data for Latin America (ALADI)
- NTM data for the European Union
- currently collecting: NTM data for several developed countries

Contact us: tab@unctad.org

Version: 1.0

Data Source 2: wits.worldbank.org

WITS World Integrated Trade Solution

Home About WITS Country Profile Reference Training GPTAD Support Links

Custom Query Share

INTRODUCTION

The World Integrated Trade Solution (WITS) software provides access to international merchandise trade, tariff and non-tariff measures (NTM) data. Browse the country profile and related pages to view trade (exports and imports with countries and by product groups), tariff (Effectively Applied and MFN) and relevant development data like Trade as percentage of GDP and others. Register and log in to WITS to perform custom analysis, using standard and derived product classifications. WITS also features built-in analytical tools that help assess the impact of tariff cuts. Use the Trade Outcomes module to assess trade competitiveness of countries by calculating and visualizing trade indicators. [Read More..](#)

WITS CUSTOM QUERY

To execute custom queries registration is necessary. [Register Now »](#)

Already a Member? [Login »](#)

SUPPORT LINKS

- Glossary
- Metadata
- Concordances
- Did you know
- FAQ

TOOLS

- Simulation Tool
- Offline Tool

FEATURED

RELATED LINKS [view all](#)

- Transparency in Trade
- United Nations - Conference on Trade and Development - TRAINS
- World Bank - Temporary Trade Barriers Database
- World Bank Trade Post (Trade Blogs)
- United Nations - Statistics Division - Comtrade

MY COUNTRY: Switzerland 2012 VIEW DETAILED DATA FOR THIS COUNTRY

Trade Summary

Import (US\$ Mil)	197,787
Export (US\$ Mil)	225,949
Weighted Average Tariff (%)	...
Trade (% of GDP)	94.16
GDP (current US\$ Mil)	631,000

[View All »](#)

Export Partners

Germany United States Italy France United Kingdom

Exports by Product Groups

Consumer goods Intermediate goods Capital goods Raw materials

WORLD AT A GLANCE

Top Importers 2012

	Trade (US\$ Mil)	Share %
United States	2,028,202	11.83
China	1,391,648	8.12
Germany	1,061,773	6.19
Japan	664,999	3.88
United Kingdom	644,221	3.76

[View All »](#)

Top Exporters 2012

	Trade (US\$ Mil)	Share %
China	2,260,298	12.90
United States	1,438,335	8.21
Germany	1,298,071	7.41
Japan	867,318	4.95
France	550,992	3.15

[View All »](#)

Exports by Product Groups 2012

Consumer goods Capital goods Intermediate goods Raw materials



Data exercise - I

Calculating descriptive statistics

Three Steps

1. Get UNCTAD NTM data from WITS

Watch out for proper data availability (only if the field 'NTM Measures' shows all types of measures (A to P))

2. Get trade data from WITS

3. Get full HS product code list at 6 digits



← → ↻ wits.worldbank.org/WITS/WITS/QuickQuery/NTMs/NTMsQuickQuery.aspx?Page=NTMs

NTM - View and Export Raw Data

This option provides you with primary information on non-tariff measures (NTMs), collected and classified by UNCTAD and st download the entire raw data on NTMs for that country/year, or filter the data by affected products, type of NTMs (according code for the affected products, NTM code (4-alpha-numeric code of the NTM Classification), source of information, date of en the affected products and specific description of the measure. [More details...](#)
A detailed inventory by country of available non-tariff measures can be [download here](#)

Reporter : Japan
Year : 2015

NTM Measures :

- ALL - All NTM Measure Codes
- A - Sanitary and phytosanitary measures
- B - Technical barriers to trade
- C - Pre-shipment inspection and other formalities
- 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

Selected NTM Measures :

ALL - All NTM Measure Codes

Added 1 NTM Measure(s)

[Remove](#) [Remove All](#)

Search based on level of aggregation

Tier : [Select Tier]

Enter a Product

OR

Products :

- All Products
- 01 -- LIVE ANIMALS
- 02 -- MEAT AND EDIBLE MEAT OFFAL
- 03 -- FISH AND CRUSTACEANS, MOLLUSCS AND
- 04 -- DAIRY PRODUCE; BIRDS' EGGS; NATURAL
- 05 -- PRODUCTS OF ANIMAL ORIGIN, NOT ELSE
- 06 -- LIVE TREES AND OTHER PLANTS; BULBS, I
- 07 -- EDIBLE VEGETABLES AND CERTAIN ROOTS

Selected Products :

All Products

Added 1 Product(s)

[Remove](#) [Remove All](#)



Data exercise - I

- We will calculate the frequency index and coverage ratio of NTMs imposed by Japan in 2015 for imports from world.
- We will replicate the methodology for a country of your choice.
- See 'NTM Data Exercise I' folder in your shared folder



Impact of NTMs





Impact of NTMs

The **ad valorem equivalent (AVE)** corresponds to the tariff equivalent that has the same impact on trade. The AVE measures the gap in the product's price with and without the NTM.

Calculating ad valorem equivalent (AVE)

I. Direct method (using prices)

$$AVE_{NTM} = \left(\frac{p_d}{p_w} \right) - (1 + \tau + c),$$

where p_d is the domestic price (net of retailers' margins), p_w is the world price (net of producers' and exporters' margins), τ is the ad valorem tariff, and c represents all other costs such as transport or insurance costs





Calculating ad valorem equivalent : Direct Method

1. the "handicraft" approach – consists of collection of precise and detailed data on all factors other than the NTM influencing the domestic price of a product
2. The domestic price of a good is regressed on the world price, on some importing country's characteristics, and on tariffs and NTMs. A simple dummy or a frequency index is usually used for the measure of the NTMs. The estimated coefficient on this NTM variable represents the AVE.





ii. Calculating AVE: Indirect Method (Quantities)

- $\ln M_{i,j,h,t}$
$$= \beta_{0,n} + \beta_{1,n} \ln(1 + t_{i,j,n,t}) + \beta_2 NTM_{i,j,n,t} + \beta_3 C_{i,j,n,t} + \varepsilon_{i,j,n,t}$$

- The impact of an NTM is

$$\widehat{\beta}_2 = \frac{\partial \ln M}{\partial NTM} = \frac{\partial \ln M}{\partial P^d} \frac{\partial P^d}{\partial NTM} = \frac{\partial \ln M}{\partial P^d} AVE$$

- The import demand elasticity is defined as $\epsilon \equiv \frac{\partial \ln M}{\partial P^d}$





DATA EXERCISE II

- Open in STATA the data file in the shared folder called “dataset_final.dta”
- Open the do file “NTM in gravity model”
- Wait for further instructions



Conclusion





NTM and SDGs

Indirect effect

- NTMs seen as trade costs
- Trade costs reduce trade opportunities

Direct effect

- NTMs are policies to protect human, animal and plant health, or to protect the environment
- Example : food security (SDG 2), ensure sustainable production, consumption (SDG 12)





Emerging Issues

Coherence

- SDGs may lead to increased regulatory activity to "directly" influence sustainability...but "indirect" linkages must not be ignored
- Need to assess costs and benefits of NTMs for coherence

Convergence

- Harmonization : both trading partners adopt a common NTM
- Mutual recognition : the reciprocal acceptance of NTMs
- Both can help reduce trade costs and (potentially) boost trade

Transparency is paramount





References

- Nicita A. and Gourdon, J., 2013, “A Preliminary Analysis on Newly Collected Data on Non-Tariff Measures”, Policy Issues in International Trade and Commodities Study Series N°53, Geneva: UNCTAD.
- These slides borrow from the course content prepared by UNCTAD Virtual Institute course on ‘Economic Analyses of NTMs’ and presentations made by UNCTAD (Mr. Christian Knebel) at the WTO/ESCAP-ARTNeT Capacity Building Workshop on "Empirical methods in trade: Analyzing non-tariff measures", 12 Dec 2016 to 16 Dec 2016 Bangkok, Thailand
- WTO-UNCTAD, 2012, A Practical Guide to Trade Policy Analysis, WTO-UNCTAD: Geneva. Chapter 2.
- WTO, 2012, World Trade Report 2012 - Trade and public policies: A closer look at non-tariff measures in the 21st century. Geneva: WTO.



Thank you

jacoba@un.org