

Non Tariff Measures: A “Quantum of Solace” for Trade Protectionists?

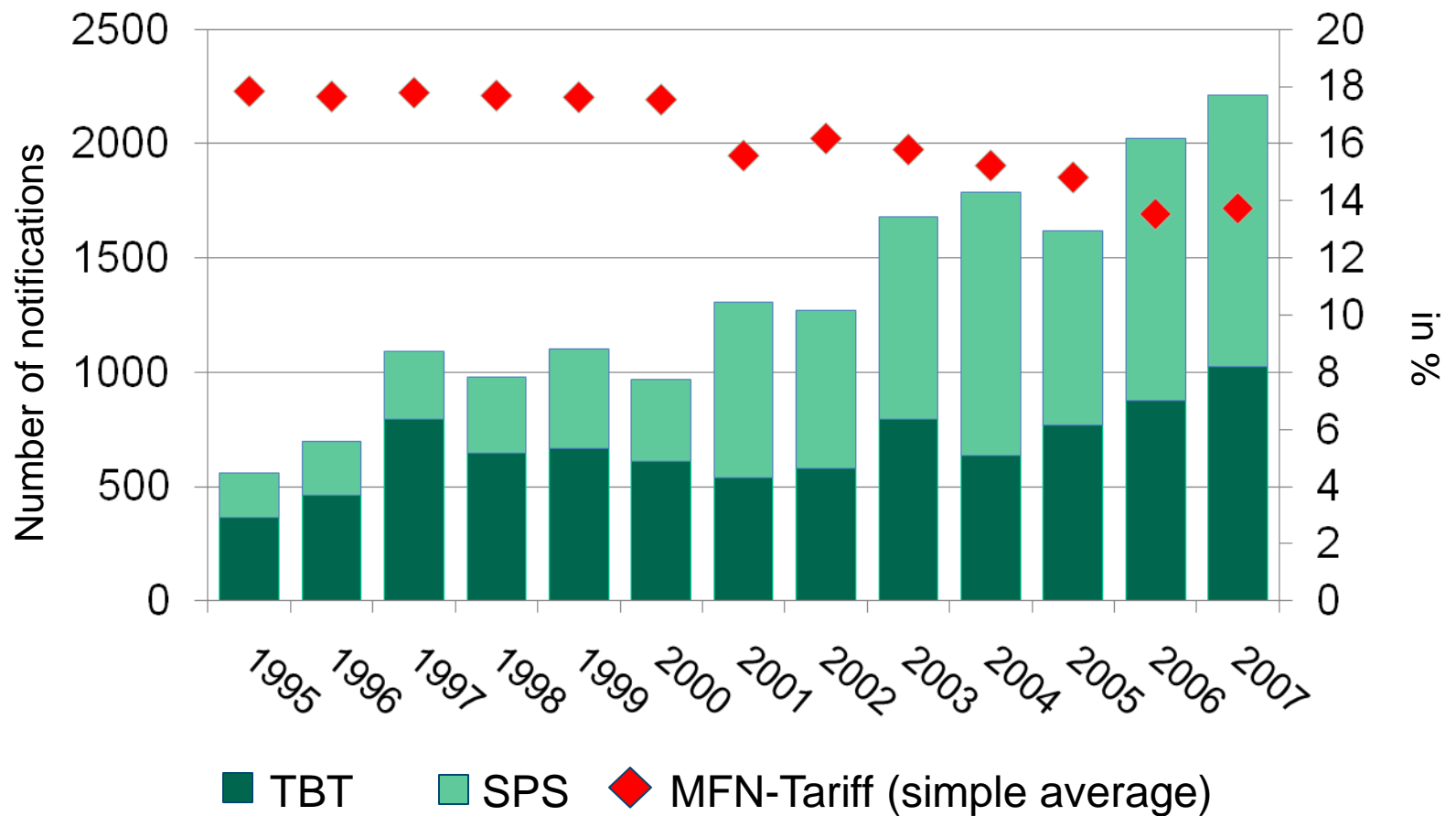
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WTO notifications of TBT and SPS measures



NTMs in the financial crisis

Implementation of 47 trade measures, according to the World Bank's monitoring list from October 2008 to February 2009, e.g.,

- China's import ban on Irish pork, rejection of Italian brandy, British sauce, Dutch eggs and Spanish dairy products...
- Indonesia's requirement that five product categories (including food products) would be permitted in only five ports and airports

"Incipient but Worrisome Trends" (World Bank, March 2009)

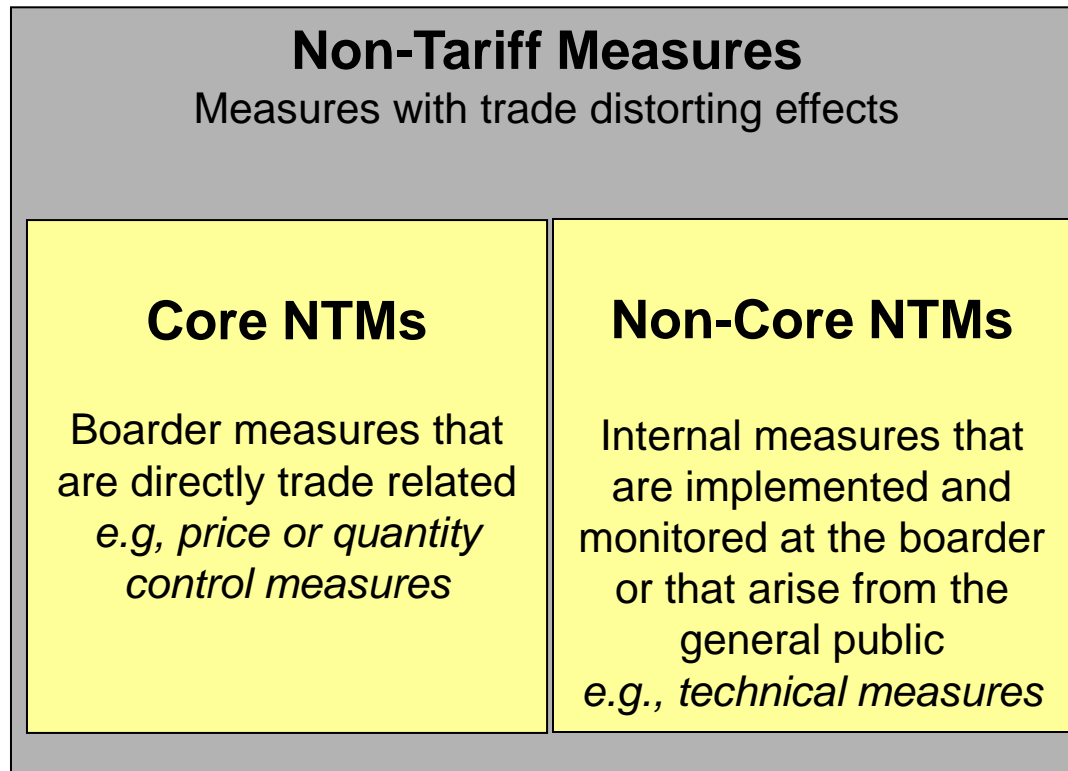
NTMs in the financial crisis

According to the EU Commission 223 trade restrictiveness measures are planned or introduced from October 2008 to October 2009 but

“The use of border measures ... has been clearly contained given the existing WTO disciplines that had a notable effect...At the same time other types of behind-the-border trade restrictions have multiplied where WTO rules are less stringent.”

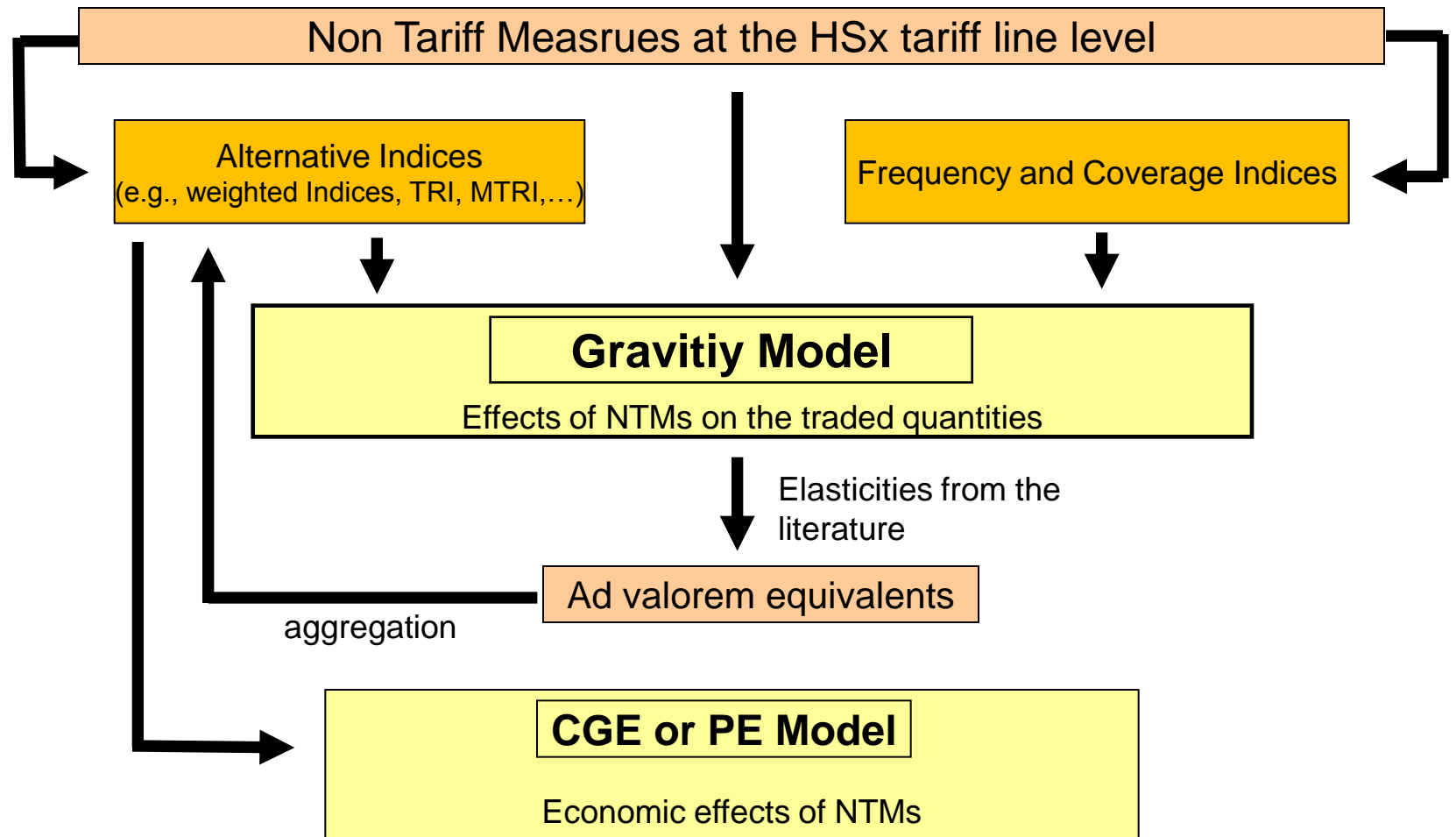
(EU Commission, 2009)

Definition of Core and Non-Core NTMs



- **great variability in design**
(various effects on trade)
- **trade impeding**
(non tariff barriers)
- **trade creating**
(more transparency, information, compatibility, reduction of risks)
- **trade diverting**
(discriminatory effects)

Concept of the project



Concept of the project

Non Tariff Measures at the HSx tariff line level

Frequency and Coverage Indices



Inventory Approach

Frequency Ratio

Accounts for the presence or absence of NTMs

Problem: Does not reflect the relative importance of NTMs

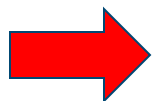
No information about trade restrictiveness

Trade Coverage Ratio

Percentage of trade subject to NTMs

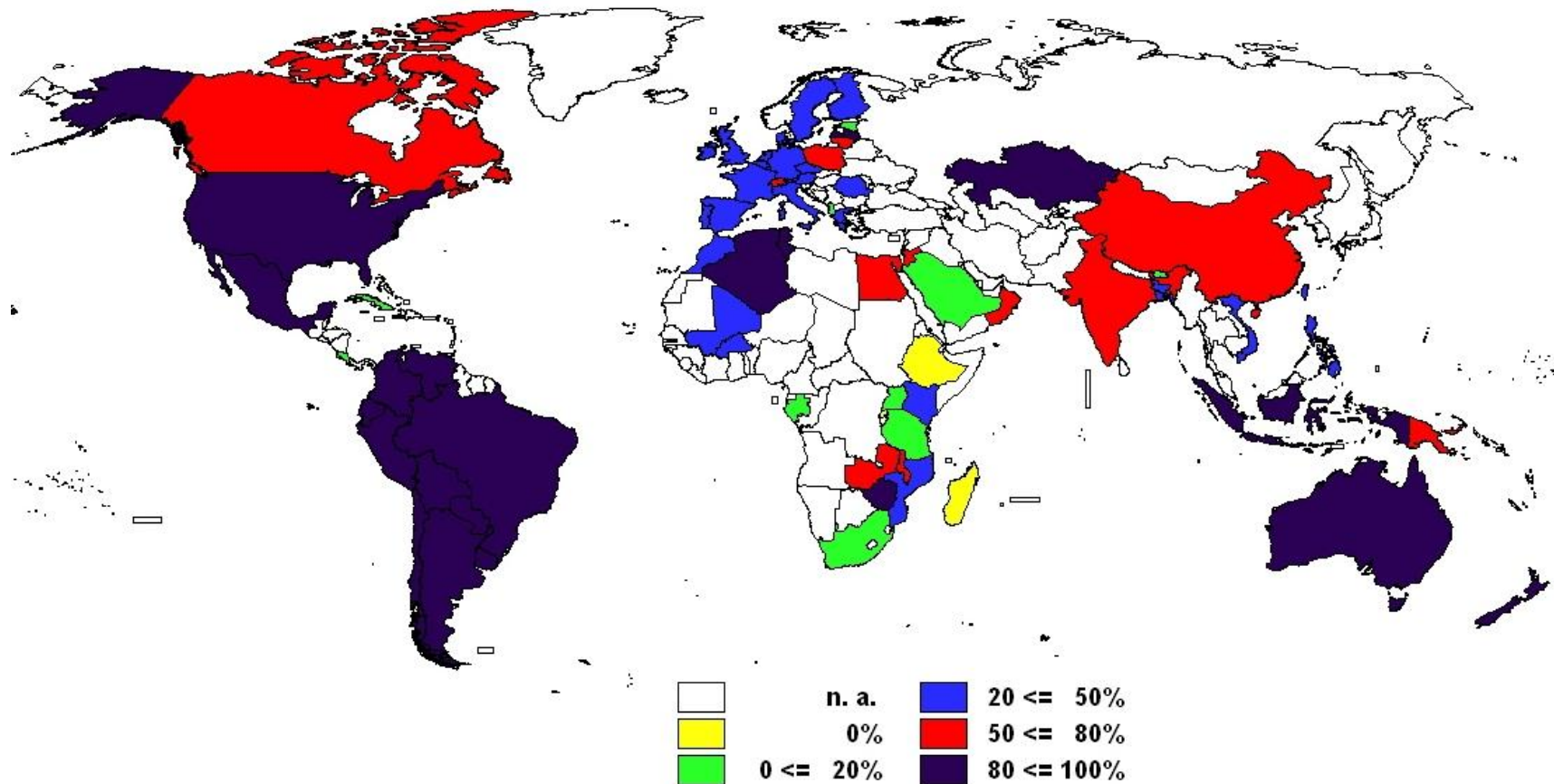
Problem: Endogenous import values

No information about trade restrictiveness

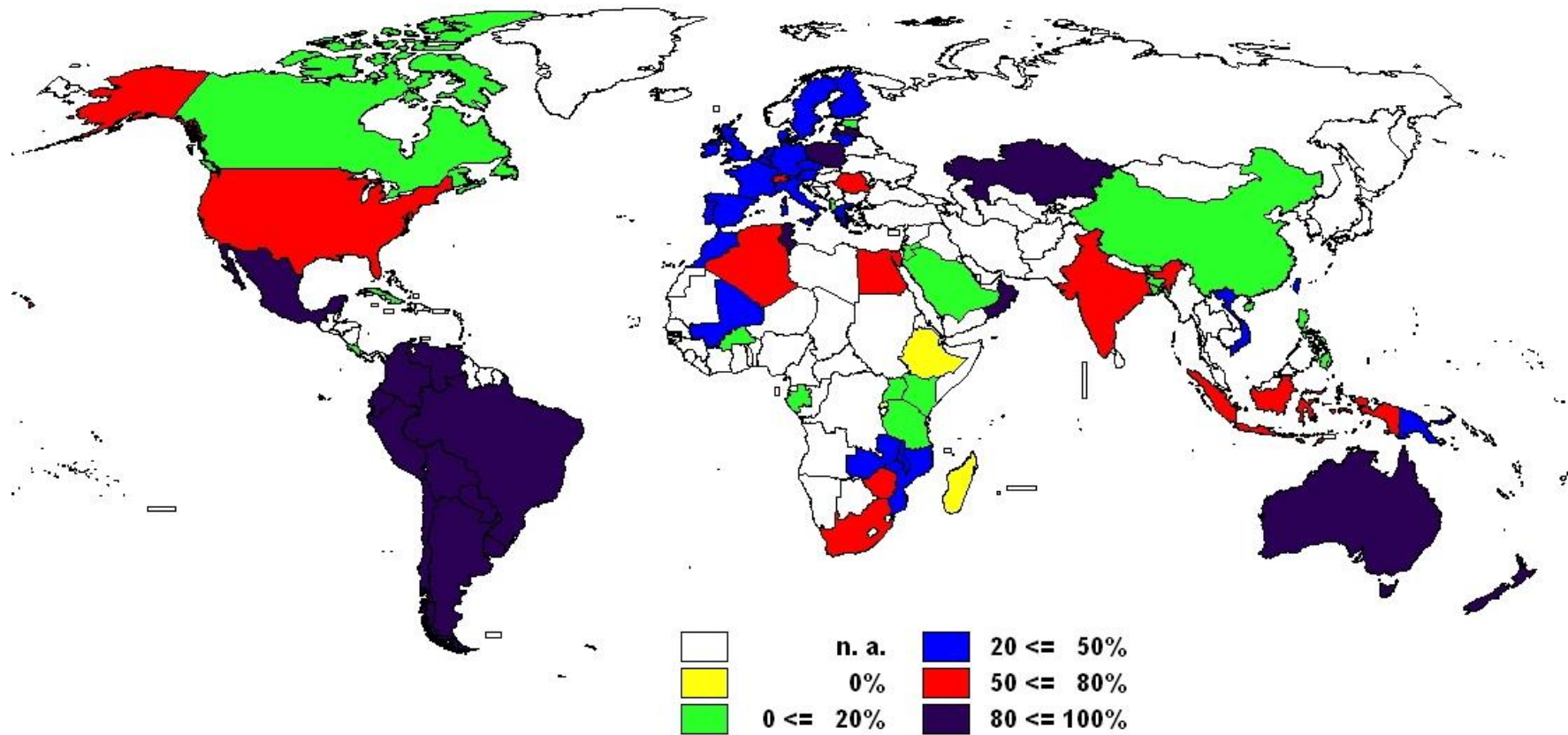


Could be used as explanatory variables in models, e.g., gravity models

Occurrence of NTMs in agriculture Import Coverage Ratio



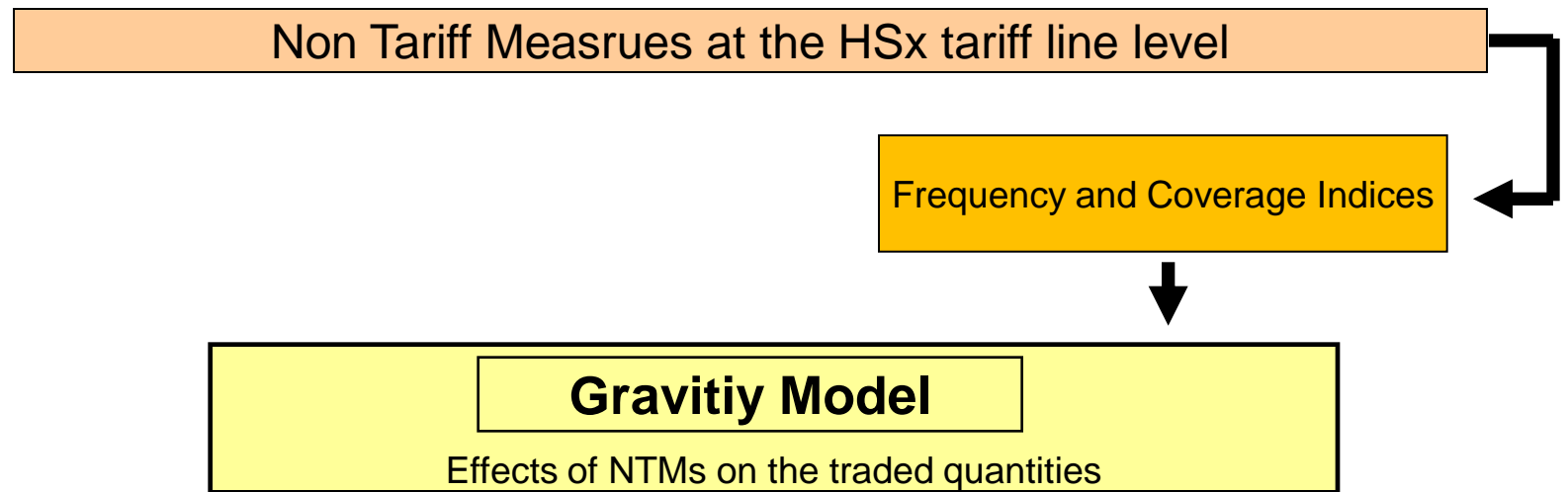
Occurrence of NTMs in agriculture Import Frequency Ratio



TRAINS data material

- Data is fragmentary
- Only few years for specific countries are available.
- ➔ Comparison of all countries in one year is not possible
- Some countries report old data, e.g., most recent year 1993 for some African countries
- Reporting on different tariff line levels (HS2 to HS12) makes the aggregation more difficult (within one country and between countries)
- Biased against the notification behavior of countries

Concept of the project



Why do we decide on the gravity approach?

Price based approach

- Comparison of the domestic price (with NTM) with a reference price (without NTM)
- Calculation of Ad Valorem Tariff Equivalents (AVE)

$$TE = \left(\frac{P_d - P_r}{P_r} \right) \cdot 100$$

P_d = domestic price

P_r = reference price (world market price under free trade)



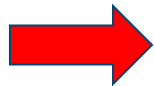
How to find the reference price?

A complete model have to be specified and estimated

Why do we decide on the gravity approach?

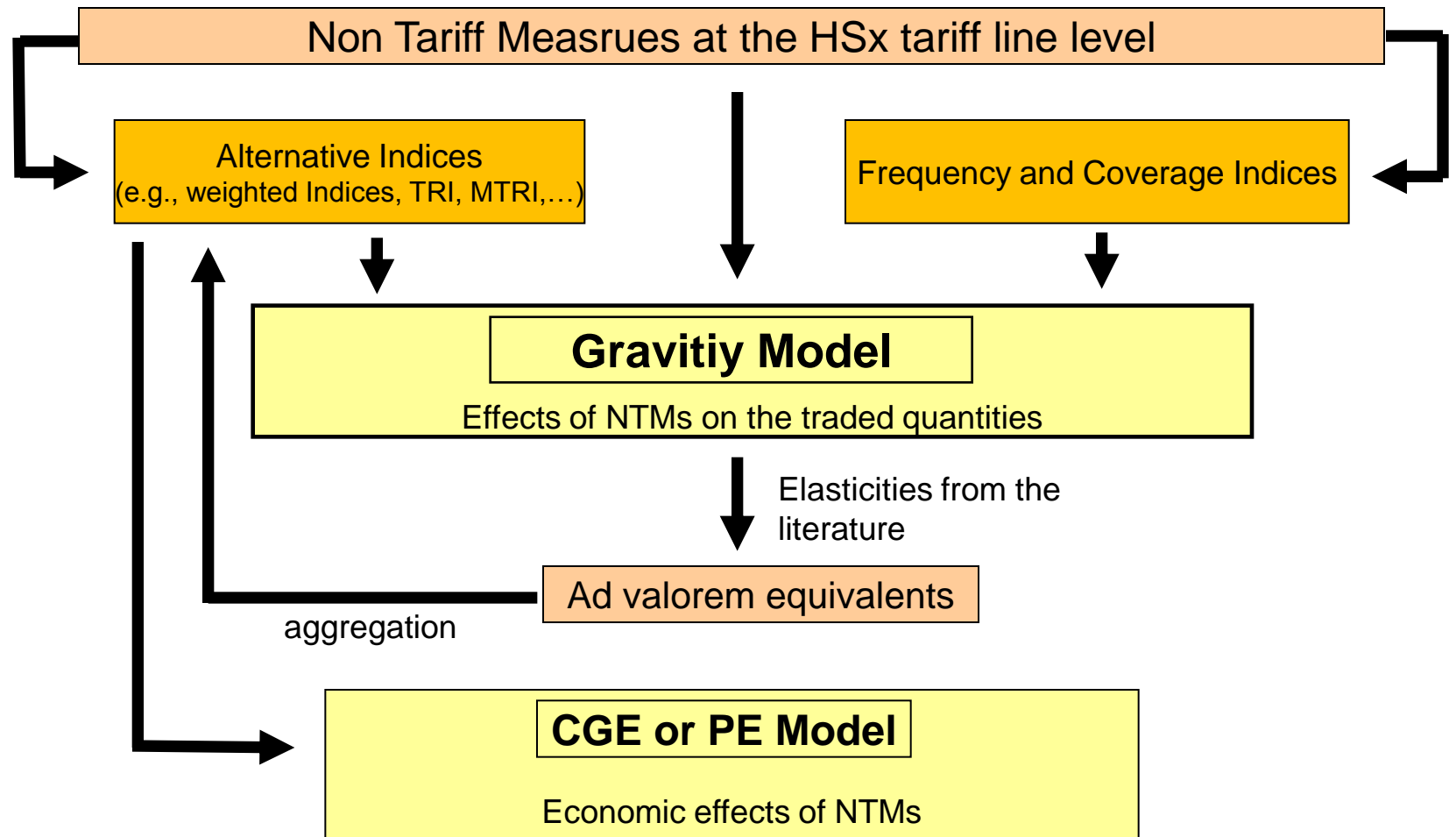
Quantity based approach (gravity approach)

- Econometric estimation of the traded quantities without NTMs with the gravity approach and comparison with observed trade data.
- Indirect estimation of tariff equivalents through price elasticities from the literature



This approach can be applied for large data sets

Concept of the project



Partial or general equilibrium models

- Price wedge or tariff equivalent of the NTMs
= difference between (ideally undistorted) world market and domestic price

Difficulties:

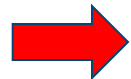
- If imports and domestically produced goods are imperfect substitutes
 - Variability of prices leads to varying price wedges
- Inputs:
 - Volume changes from, e.g., gravity models

Three categories of economic effects according to Fugazza and Maur (2008)

- Supply Shift Effect
- Demand Shift Effect
- Protection Effect

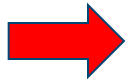
Supply Shift Effect

= E.g., standards or technical regulations that change compatibility



Need for an appropriate supply function

- Fixed and variable costs can be affected
- Two types of fixed costs:
 - 1) Related to setting up production (generic)
 - 2) Specific to any destination market



Could be modeled via increasing returns to scale

Demand Shift Effect

E.g., Affecting consumer behavior by compulsory information

 Lack of empirical data

Could be modeled by adjusting the Armington elasticity of substitution among imported goods or between imported and domestic goods.

 Elasticities are difficult to compute

Protection Effects

Generate a wedge between the world market and the domestic price of the importing or exporting country.

Change in import or export tax

- But: NTBs generate no tax revenue
- How to interpret the welfare effects?

Efficiency effects

- = Changes in the price of imports from a particular trading partner.
- Assumption: Price wedge is entirely explained by the efficiency losses/gains.

Challenges

- Globally consistent data sets
- Appropriate weighting of tariff equivalents to compute sectoral and regional data bases
- Distinction between the effects of tariffs and NTMs
Additive ?
- Discriminatory effects of NTMs between foreign trading partners
need for bilateral price wedges

More slides...



Data sources, quantitative

WTO Documentation

- NTM notifications of member states
- extensive set of computation

United States International Trade Commission data base (USITC)

- different data sources
- 53 countries
- list of complaints by exporters


Trade Analysis and Information System (TRAINS), UNCTAD

- 97 countries and 5000 products
- more than 100 measures

Data sources, qualitativ

- WTO trade disputes
- Business surveys

NTMs in the WTO

- Tariffication of NTMs in the Uruguay Round
 extensive set of computation
- Disciplines on NTBs: Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary Measures (SPS)

Frequency Ratio

Accounts for the presence or absence of NTMs

Problem: Does not reflect the relative importance of NTMs

$$FR_{j,t} = \left[\frac{\sum_{i=1}^k D_{i,j,t} \cdot U_{i,j,t}}{\sum_{i=1}^k U_{i,j,t}} \right] \cdot 100$$

i = tariff line

j = importing country

t = year

D = dummy variable (1 = NTM; 0 = no NTM)

U = dummy variable (1 = imports; 0 = no imports)

Trade Coverage Ratio

Percentage of trade subject to NTMs

Problem: Endogenous import values

$$CR_{j,t} = \left[\frac{\sum_{i=1}^k D_{i,j,t} \cdot M_{i,j,t}}{\sum_{i=1}^k M_{i,j,t}} \right] \cdot 100$$

i = tariff line

j = importing country

t = year

D = dummy variable (1= NTM; 0 = no NTM)

M = import value