



Sanitary, Phytosanitary and Technical Measures in Agri-food Trade

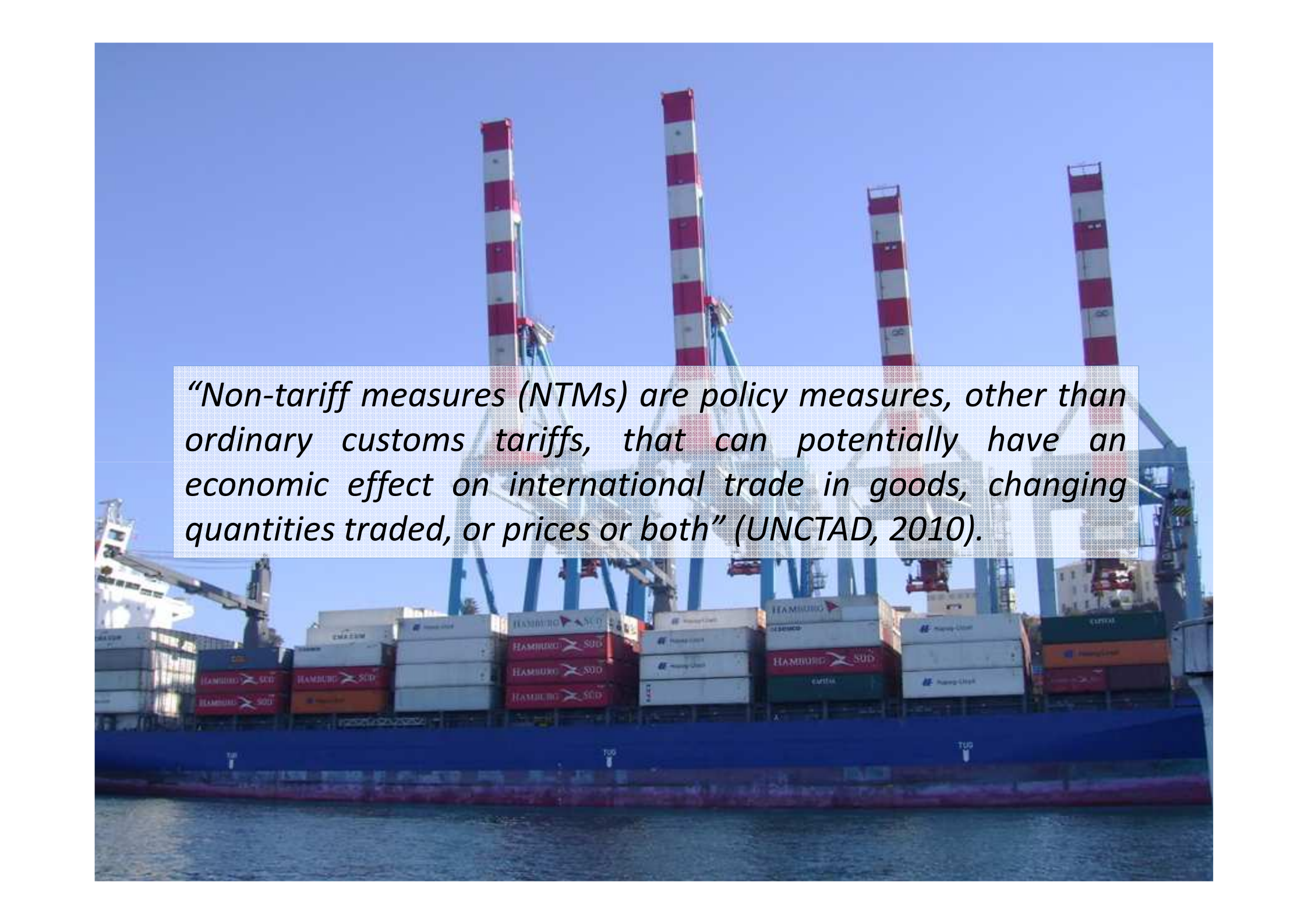
Dr. Sofía Boza
Department of Agricultural Economics
Faculty of Agricultural Sciences
University of Chile

Brown Bag Seminar, April, 16. GTAP, Purdue University

Overview

- Introduction
- SPS/TBT Agreements
- WTO member participation
- Current research review
- Project: “Assessing the impact of sanitary, phytosanitary and technical requirements on Chilean food and agricultural trade”





“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” (UNCTAD, 2010).

Policy objectives on Non Tariff Measures

Market Failures

- Information asymmetries
- Externalities (positive and negative)
- Infant industries
- Consumption network effects
- Monopoly power

Beggar-thy-neighbour policies

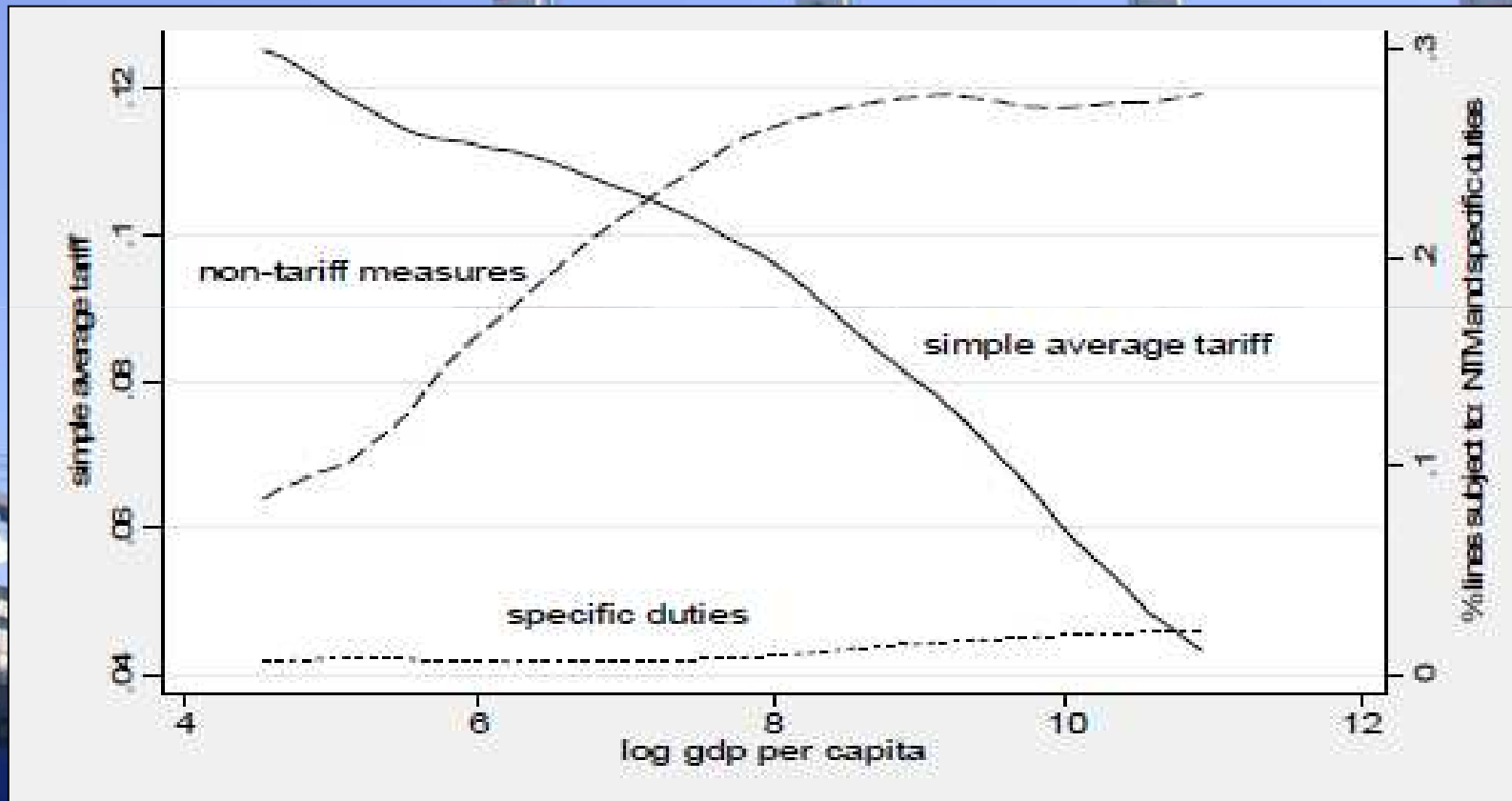
- Manipulation of the terms of trade
- Profit-shifting to the national industry

Political economy

- Protection of interest (pressure) groups

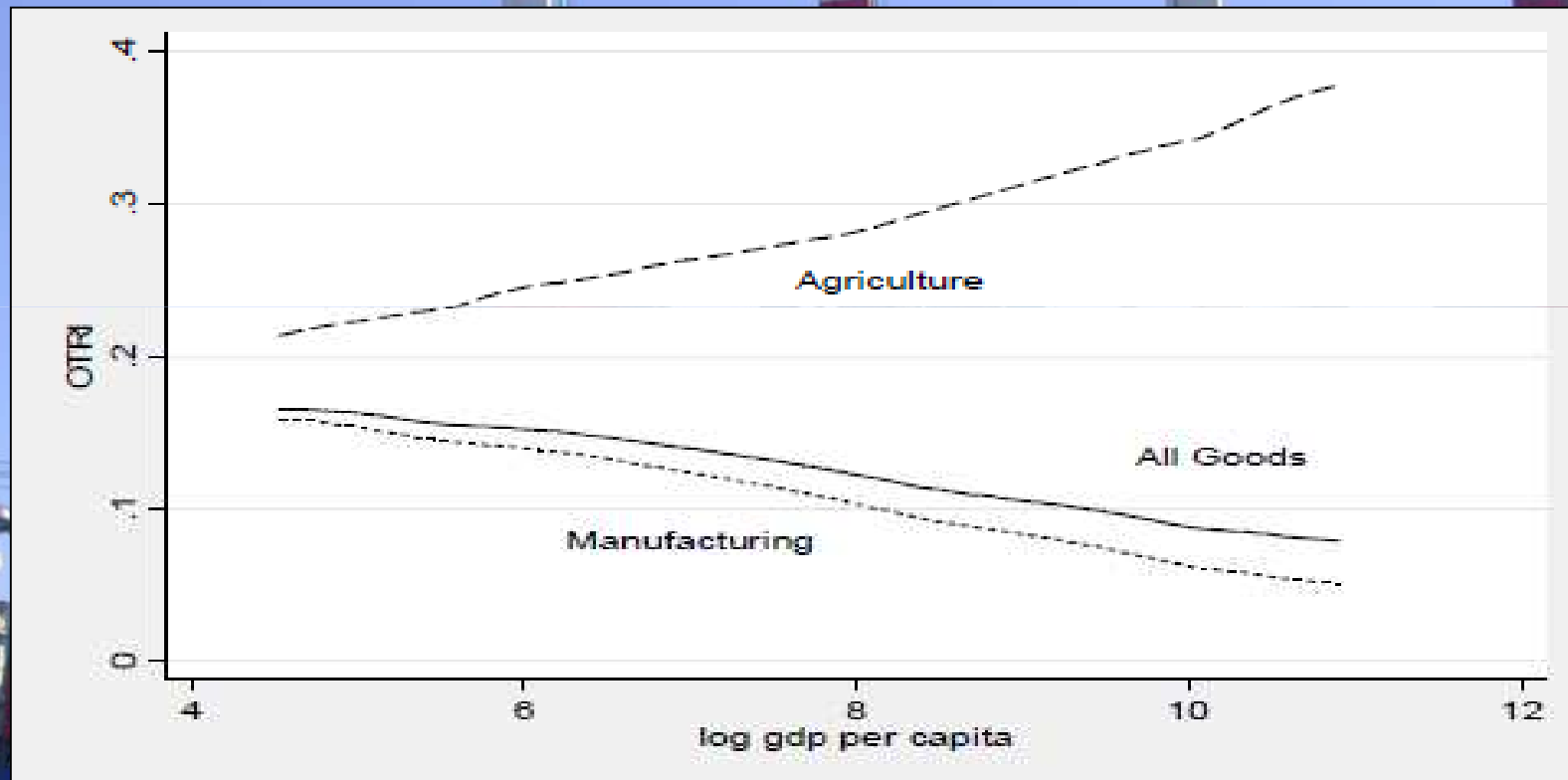
Source: WTO, 2012

Use of tariffs, special duties and NTMs (simple average tariff/% of tariff lines HS6) in accordance with GDP level



Source: Hoeckman & Nicita, 2008

Overall Restrictiveness Index (OTRI) in accordance with GDP level



Source: Hoeckman & Nicita, 2008

NON TARIFF MEASURES

Technical

Sanitary and
Phytosanitary
Measures, Technical
Barriers to Trade,
Customs Formalities

Non technical

Contingent measures,
quotas, price control,
subsidies, distribution,
intellectual property,
rules of origin...

Export related

Export taxes, export
quotas and export
prohibitions

TRENDS IN AGRI-FOOD TRADE

Sanitary emergencies related to food (e. g. BSE, H5N1, H1N1, E-coli...)

Increased consumer awareness of food safety and quality

Inclusion of food safety and quality in public policy agenda

Proliferation of SPS/TBT requirements on international agri-food trade

Chronology of multilateral agreements on SPS/TBT

- GATT (1947) --- Allowing the imposition of food safety standards on imported products in order to protect human, animal and plant health (art. XX.b.)
- Tokyo Round (1979) --- TBT Agreement - “Standards Code” (includes harmonization and transparency principles. Only 32 members)
- Uruguay Round (1986-1993) --- More depth regarding trade issues related to agriculture sector (including food safety and quality)
- 1995 --- Entry into force of Technical Obstacles to Trade and Sanitary and Phytosanitary Measures WTO Agreements



WTO SPS Agreement – General objective

“Reaffirming that no Member should be prevented from adopting or enforcing measures necessary to protect **human, animal or plant life or health**, subject to the requirement that these measures are not applied in a manner which would constitute a **means of arbitrary or unjustifiable discrimination** between Members where the same conditions prevail or a **disguised restriction on international trade**” (SPS Agreement, preamble)



WTO SPS Agreement – Principles

Non-discrimination

Harmonization

Equivalence

Scientific evidence

Regionalization

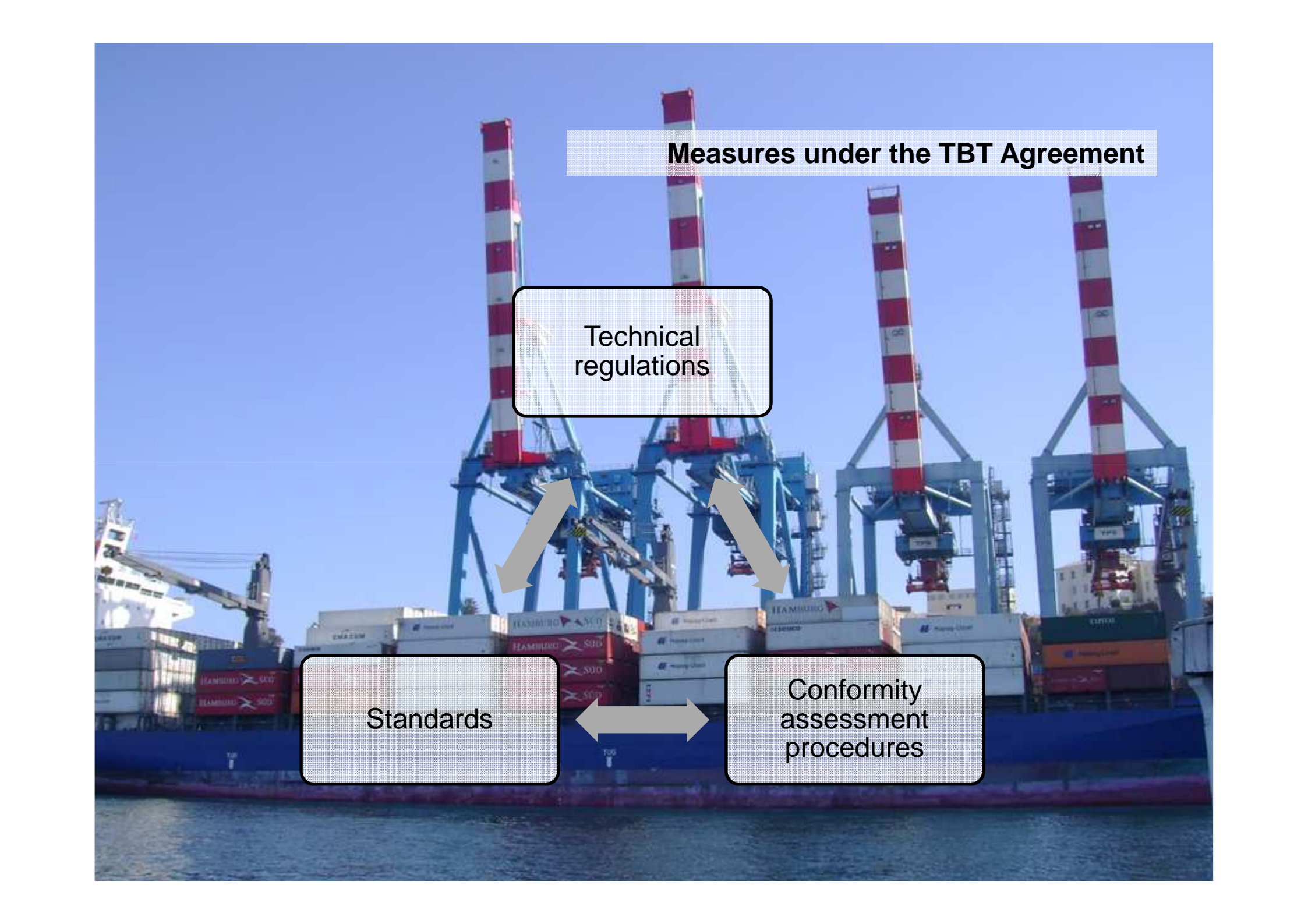
Transparency

Technical assistance and special treatment

The background image shows a port scene with several tall, red and white striped cranes against a clear blue sky. In the foreground, a large blue container ship is docked, with its deck covered in stacks of colorful shipping containers. The containers are labeled with various logos, including 'HAMBURG SUD' and 'EMPA'. The ship's hull is dark blue with 'TUG' visible on the side. The water in the foreground is dark blue.

WTO TBT Agreement – General objective

“Recognizing that no country should be prevented from taking measures necessary to ensure the **quality** of its exports, or for the protection of **human, animal or plant life or health**, of the **environment**, or for the **prevention of deceptive practices**, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a **means of arbitrary or unjustifiable discrimination** between countries where the same conditions prevail or a **disguised restriction on international trade**” (TBT Agreement, preamble)

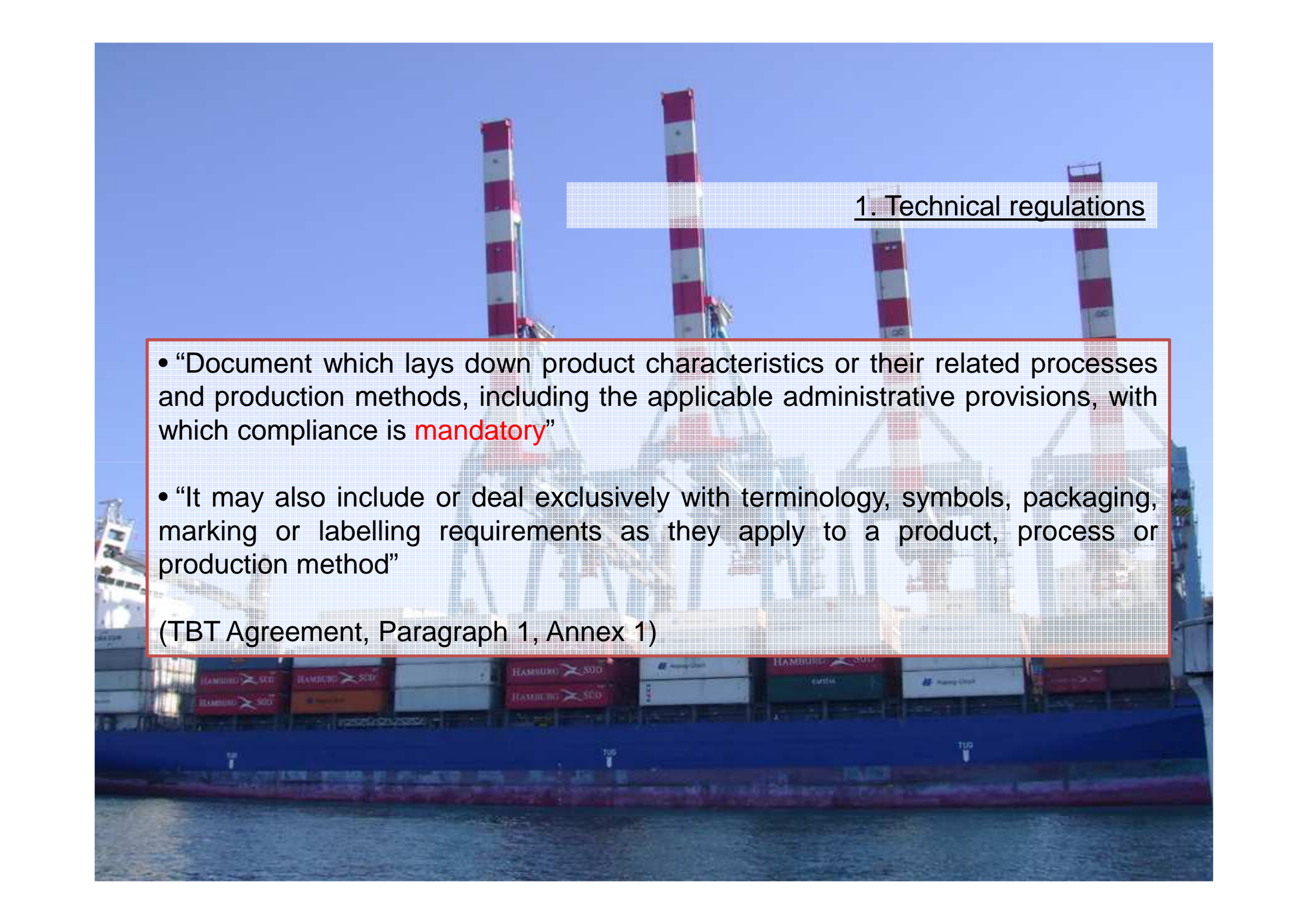


Measures under the TBT Agreement

Technical regulations

Standards

Conformity assessment procedures

The background image shows a port scene with several tall, red and white striped cranes against a clear blue sky. In the foreground, a large blue container ship is docked, with its deck visible, showing stacks of containers. Some containers are red with the 'HAMBURG' logo and 'SCD' text, while others are white with 'EMTEK' and 'HAMBURG' logos. The ship's hull is blue with 'TUG' markings. The water is dark blue.

1. Technical regulations

- “Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is **mandatory**”
- “It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method”

(TBT Agreement, Paragraph 1, Annex 1)

The background image shows a port scene with several tall, red and white striped cranes against a clear blue sky. In the foreground, a large blue container ship is docked, with its deck covered in stacks of colorful shipping containers. The ship's name 'TUG' is visible on the side. The water in the foreground is dark blue.

2. Standards

- “Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is **not mandatory**”
- “It may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process or production method”

(TBT Agreement, Paragraph 2, Annex 1)

The background image shows a port scene with several tall, red and white striped cranes. In the foreground, a large blue container ship is docked, with various colored containers (red, white, green) stacked on its deck. The sky is clear and blue.

3. Conformity assessment procedures

- “Any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled”
- *Explanatory note* “Conformity assessment procedures include, *inter alia*, procedures for sampling, testing and inspection; evaluation, verification and assurance of conformity; registration, accreditation and approval as well as their combinations”

(TBT Agreement, Paragraph 3, Annex 1)

The background of the slide is a photograph of a port. Several tall, red and white striped cranes are visible against a clear blue sky. In the foreground, a large blue and white cargo ship is docked, with various shipping containers stacked on its deck. The water of the harbor is visible at the bottom of the frame.

WTO TBT Agreement – Principles

Non-discrimination

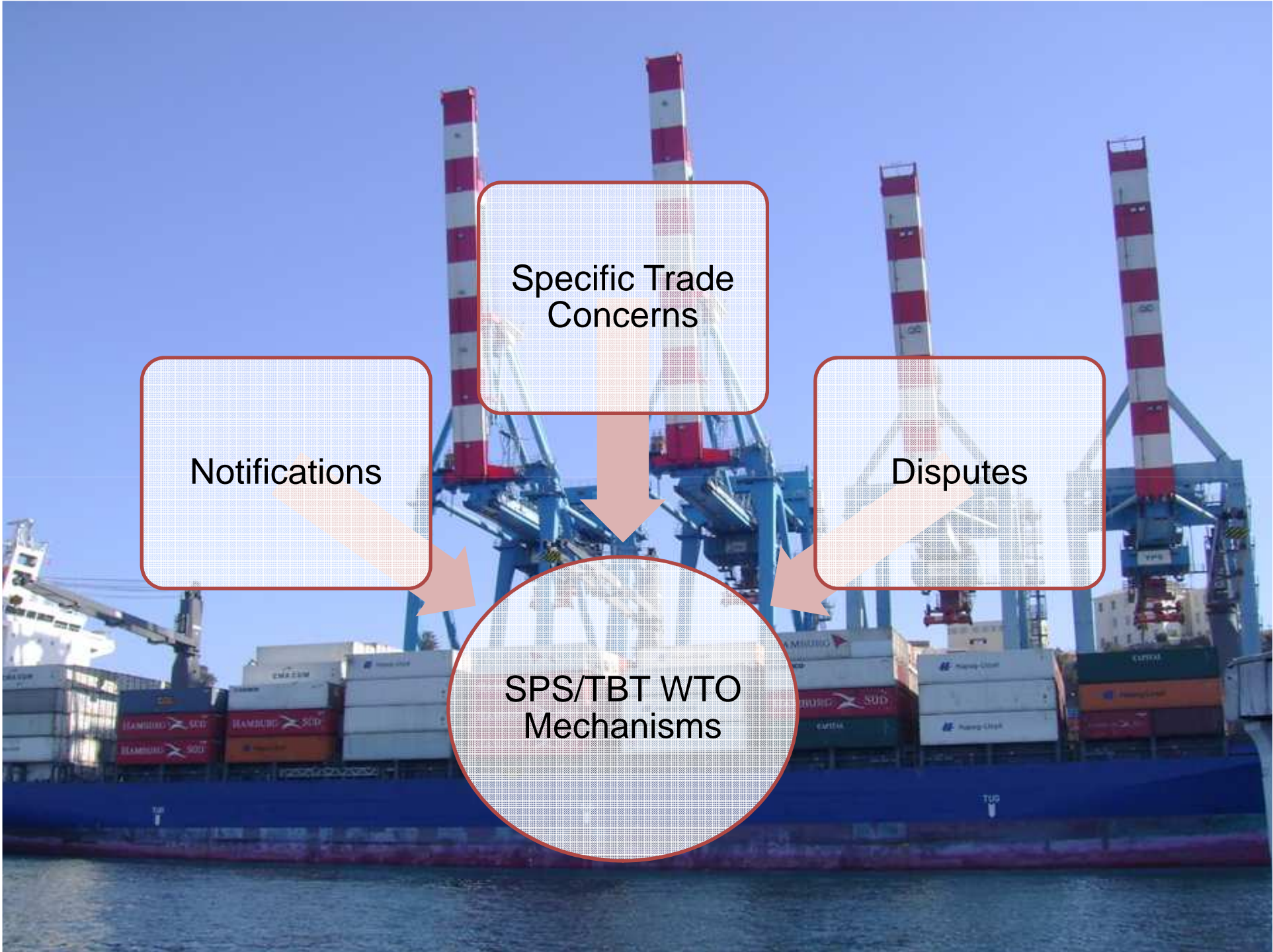
Prevention of unnecessary obstacles

Harmonization

Equivalence and mutual recognition

Transparency

Technical assistance and special treatment



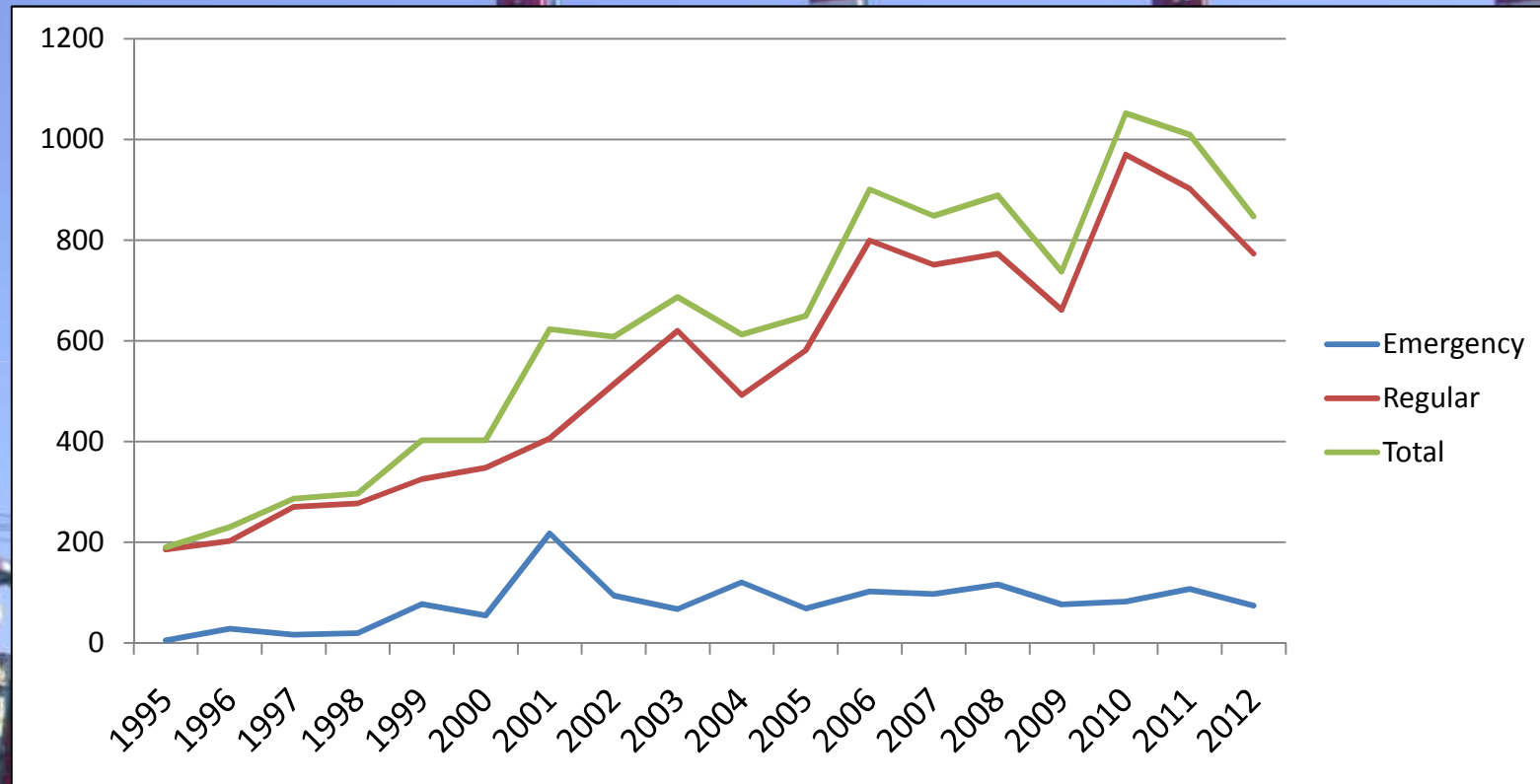
Specific Trade Concerns

Notifications

Disputes

SPS/TBT WTO Mechanisms

Number of SPS notifications per year (1995-2012)



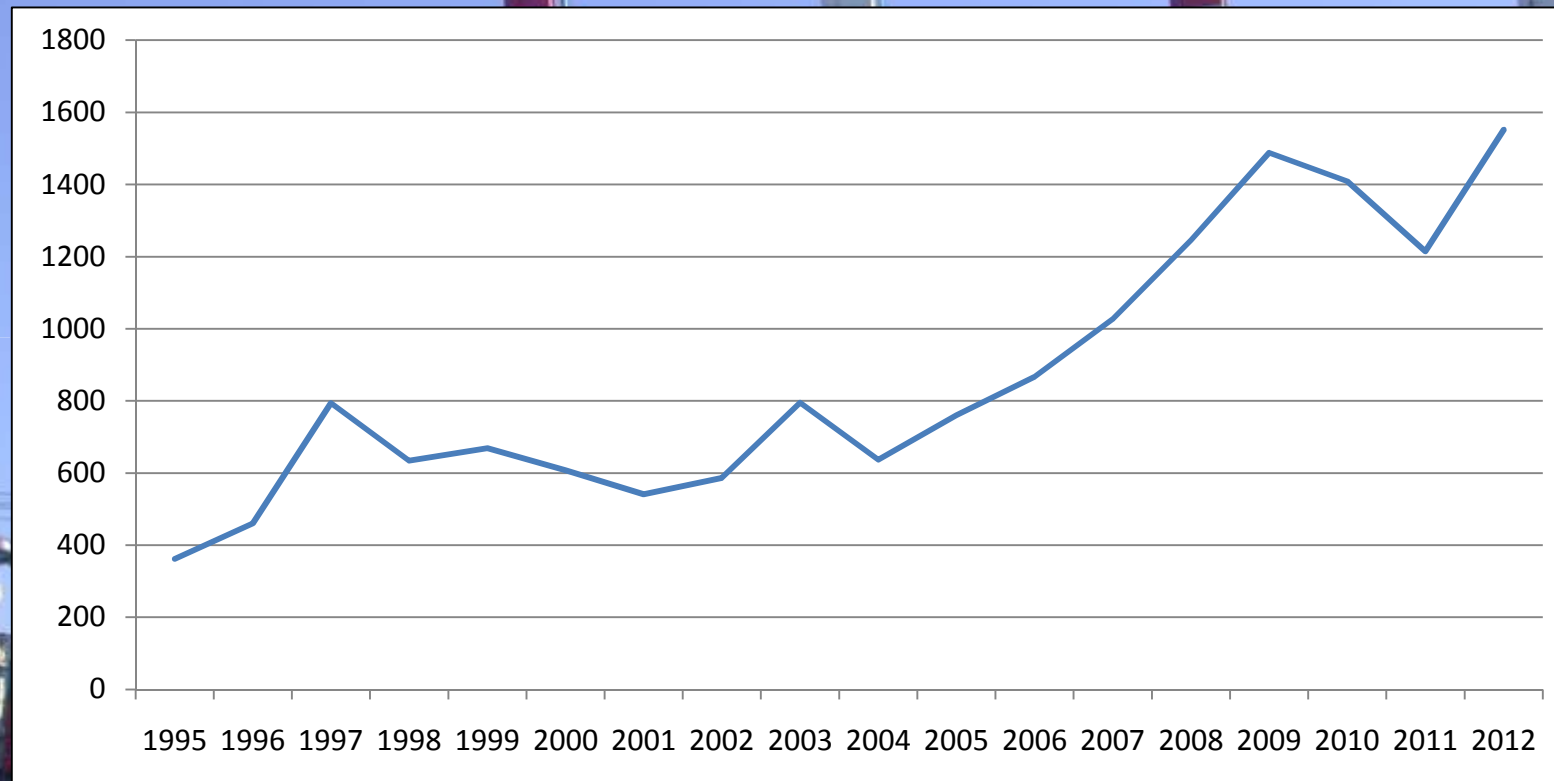
Source: Compiled by author based on WTO I-TIP database

Countries participation on SPS notifications by income level (1995-2012)



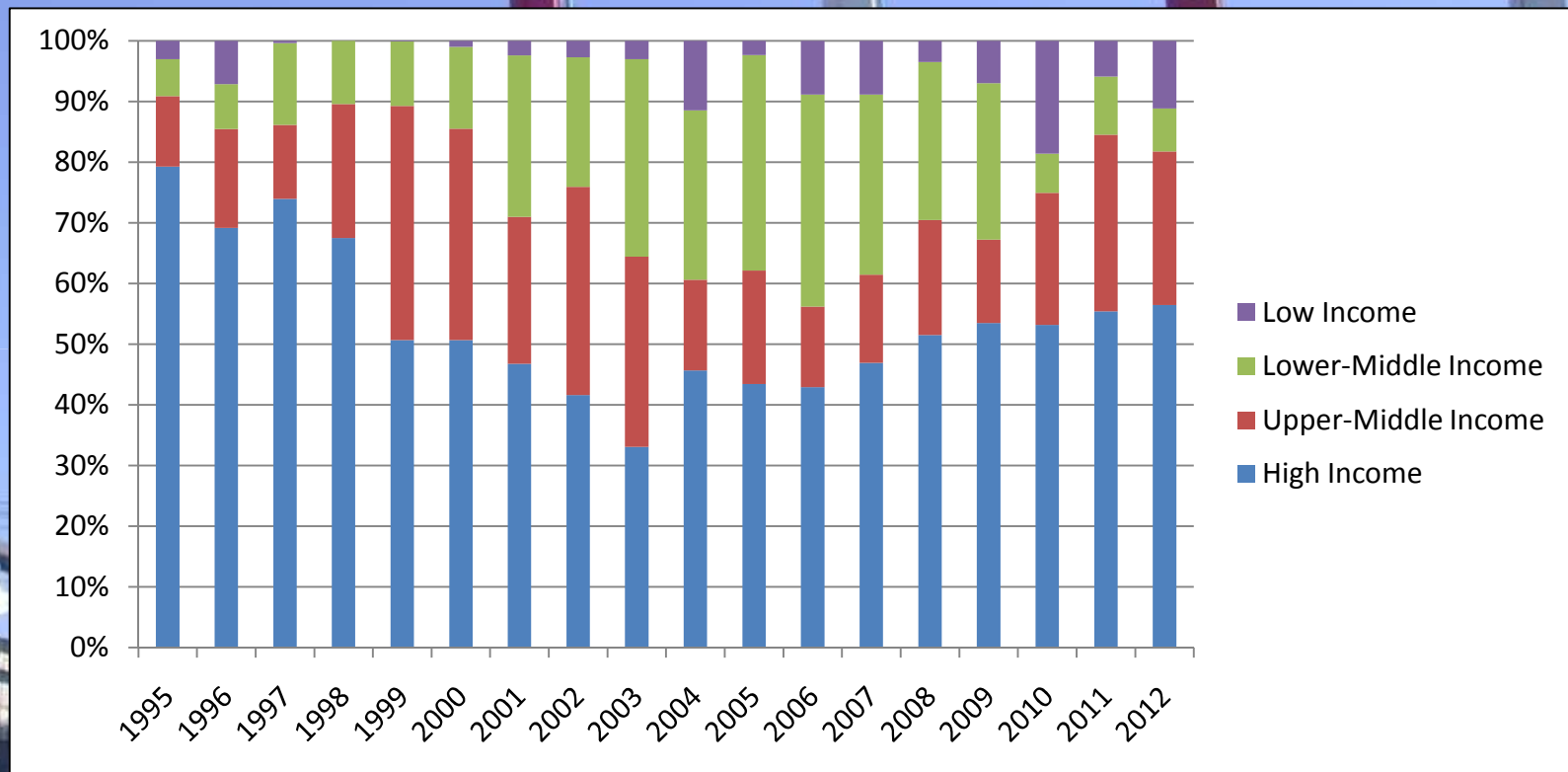
Source: Compiled by author based on WTO I-TIP database

Number of TBT notifications per year (1995-2012)



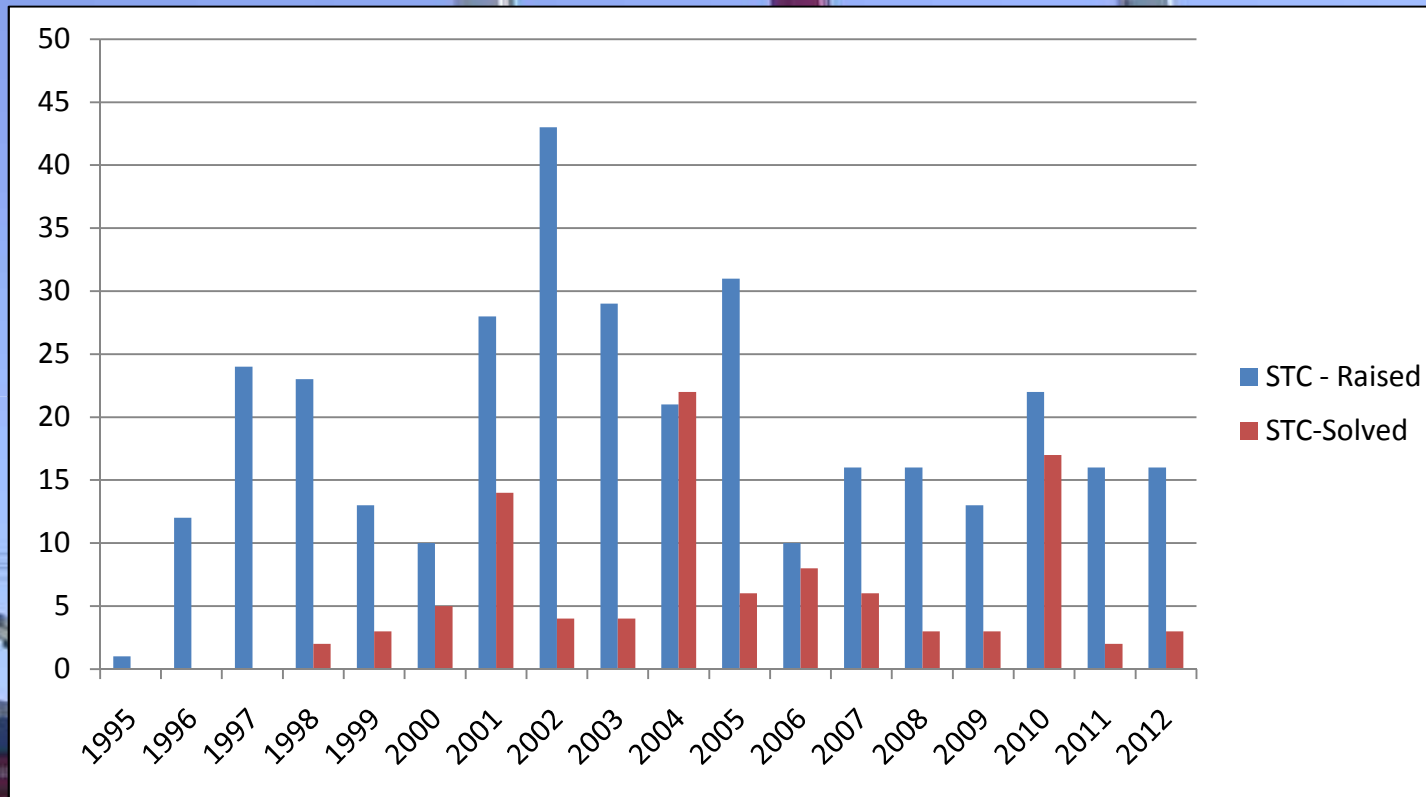
Source: Compiled by author based on WTO I-TIP database

Countries' participation in TBT notifications by income level (1995-2012)



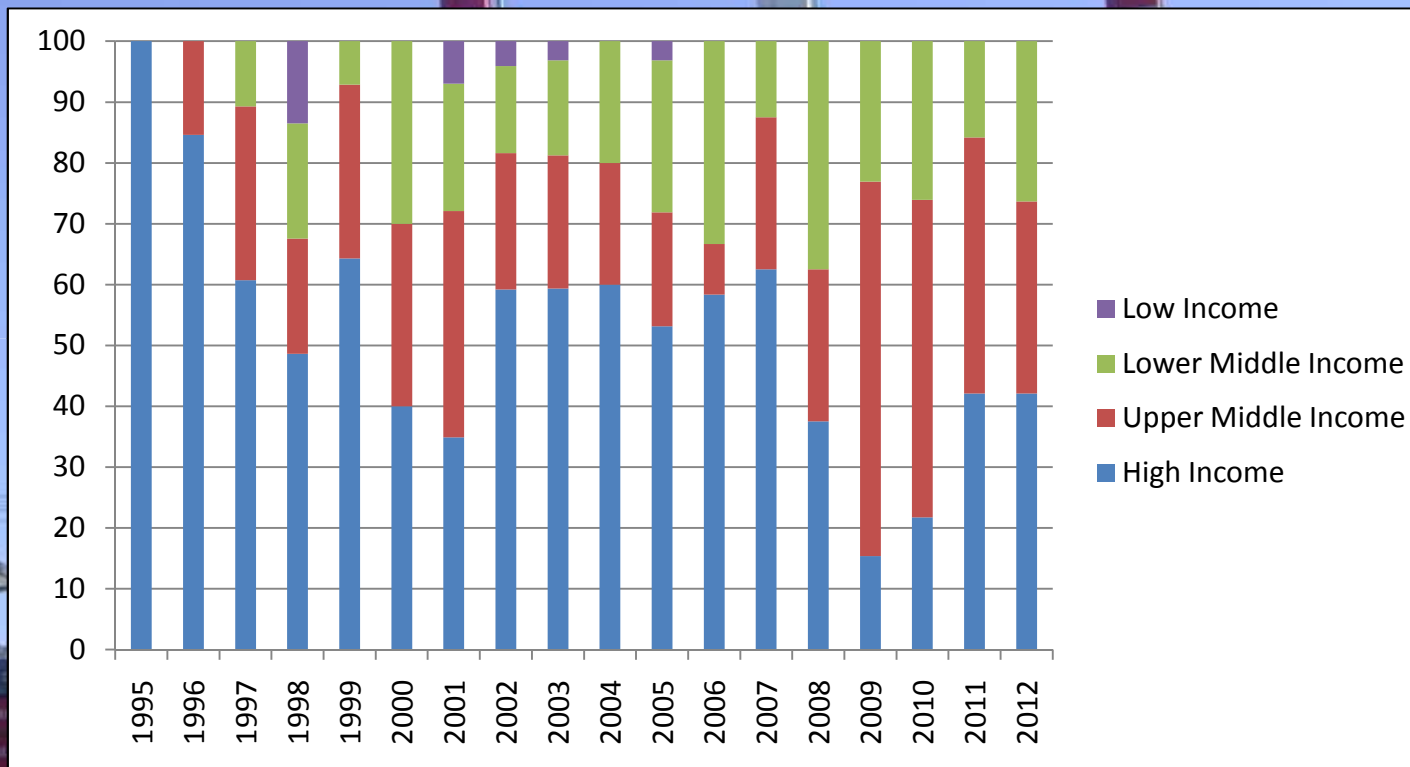
Source: Compiled by author based on WTO I-TIP database

Number of SPS Specific Trade Concerns per year (1995-2012)



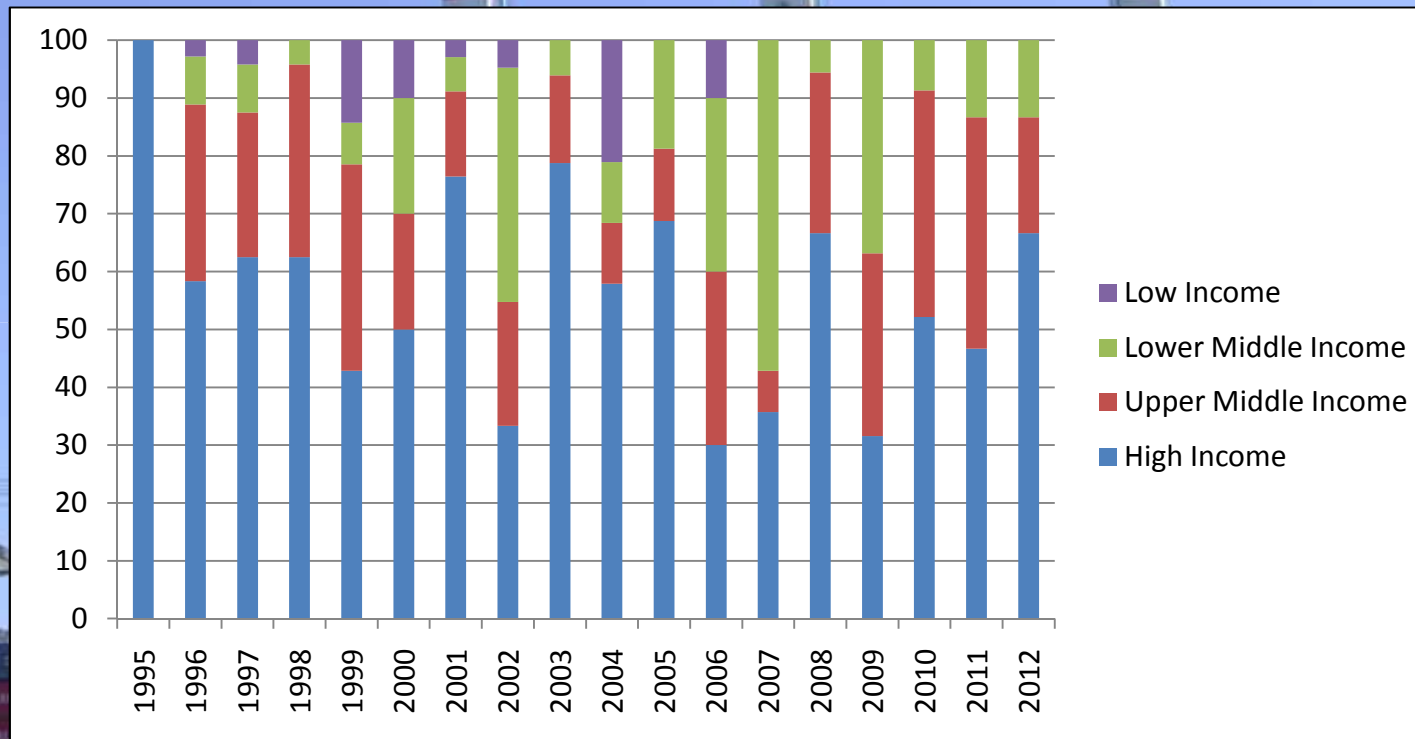
Source: Compiled by author based on WTO I-TIP database

Annual percentage of participation as concerned country in SPS-STCs according to members' income level (1995-2012)



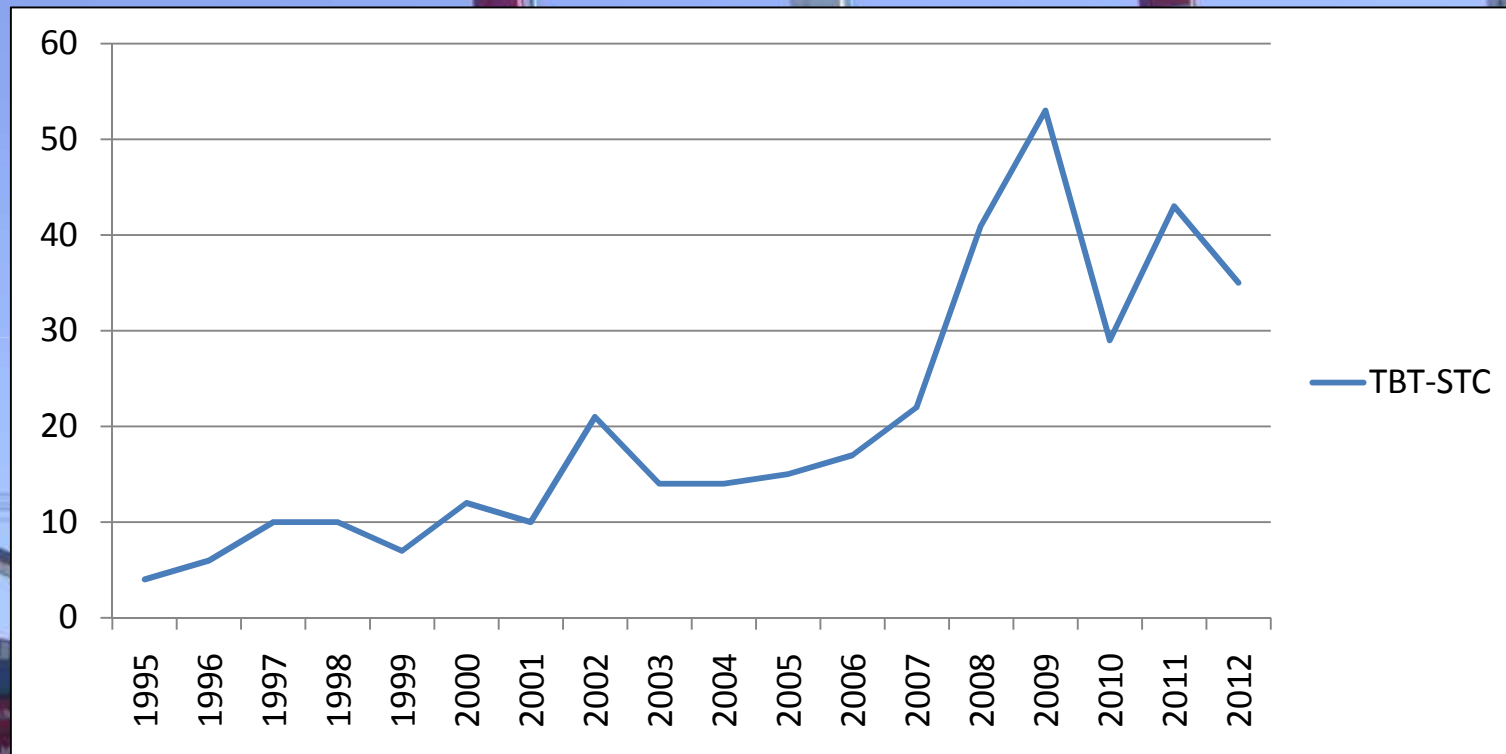
Source: Compiled by author based on WTO I-TIP database

Annual percentage of participation as maintaining country in SPS-STCs according with members' income level (1995-2012)



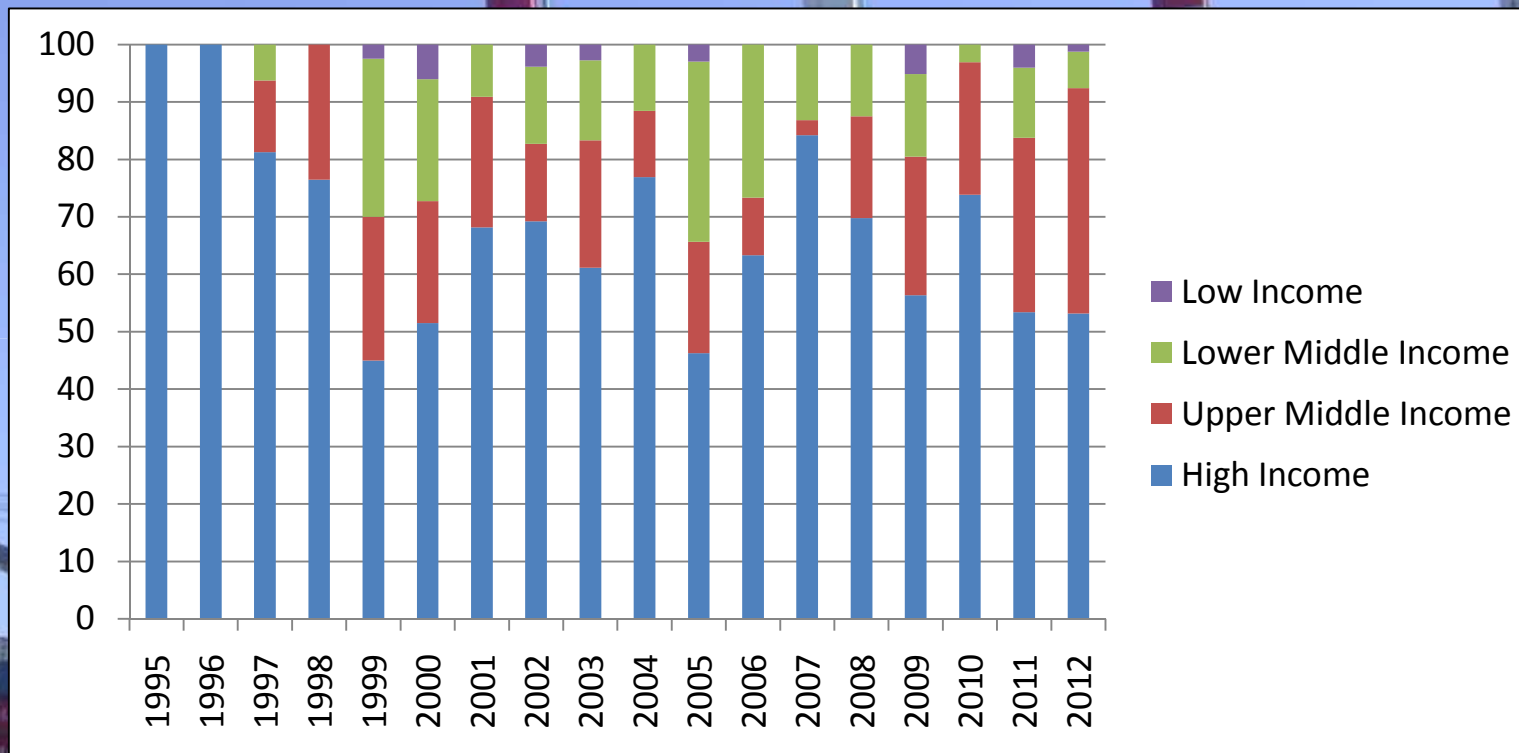
Source: Compiled by author based on WTO I-TIP database

Number of TBT Specific Trade Concerns per year (1995-2012)



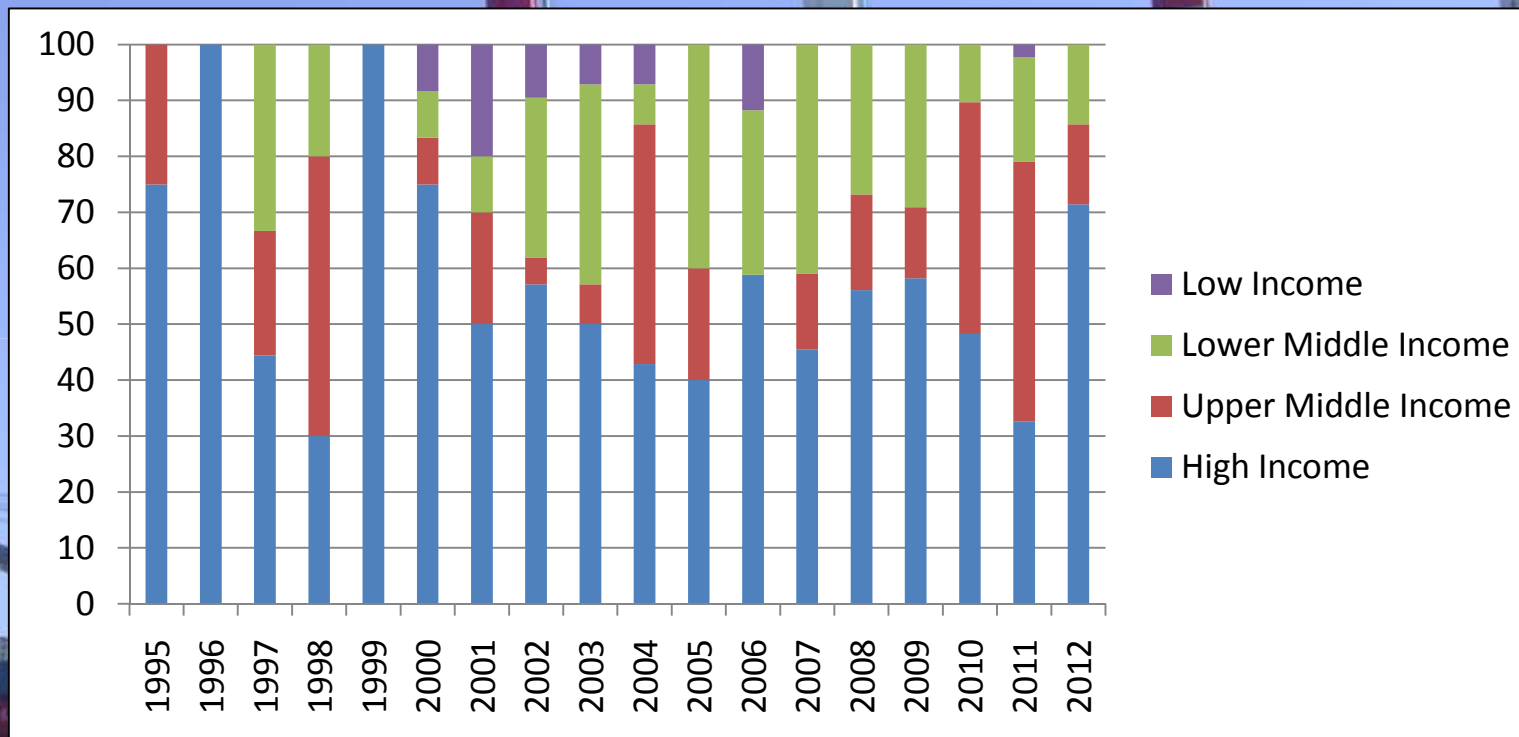
Source: Compiled by author based on WTO I-TIP database

Annual percentage of participation as concerned country in TBT-STCs according to members' income level (1995-2012)



Source: Compiled by author based on WTO I-TIP database

Annual percentage of participation as maintaining country in TBT-STCs according to members' income level (1995-2012)



Source: Compiled by author based on WTO I-TIP database

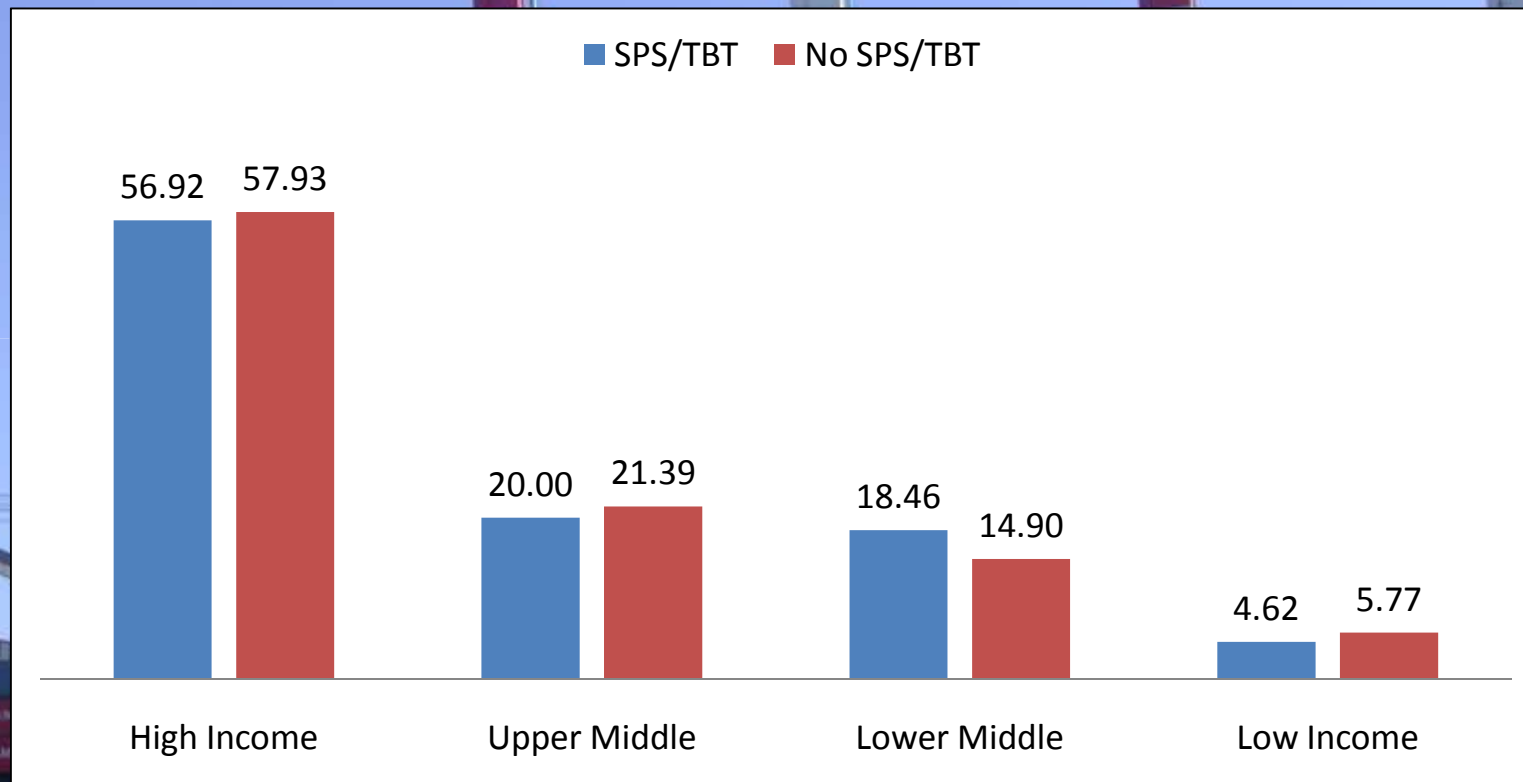
The background of the slide is a photograph of a port. In the foreground, there is a large blue container ship with several stacks of colorful containers (red, white, blue, and orange) on its deck. Some containers have the 'HAMBURG SUD' logo. In the background, several tall, red and white striped cranes are visible against a clear blue sky. The water of the port is visible at the bottom of the frame.

Number of WTO disputes initiated per year

	SPS/TBT	No SPS/TBT		SPS/TBT	No SPS/TBT
1995	10	15	2004	0	19
1996	5	34	2005	0	11
1997	6	44	2006	0	21
1998	6	35	2007	2	11
1999	0	30	2008	3	16
2000	3	31	2009	5	9
2001	4	19	2010	1	16
2002	6	31	2011	0	8
2003	7	19	2012	7	20

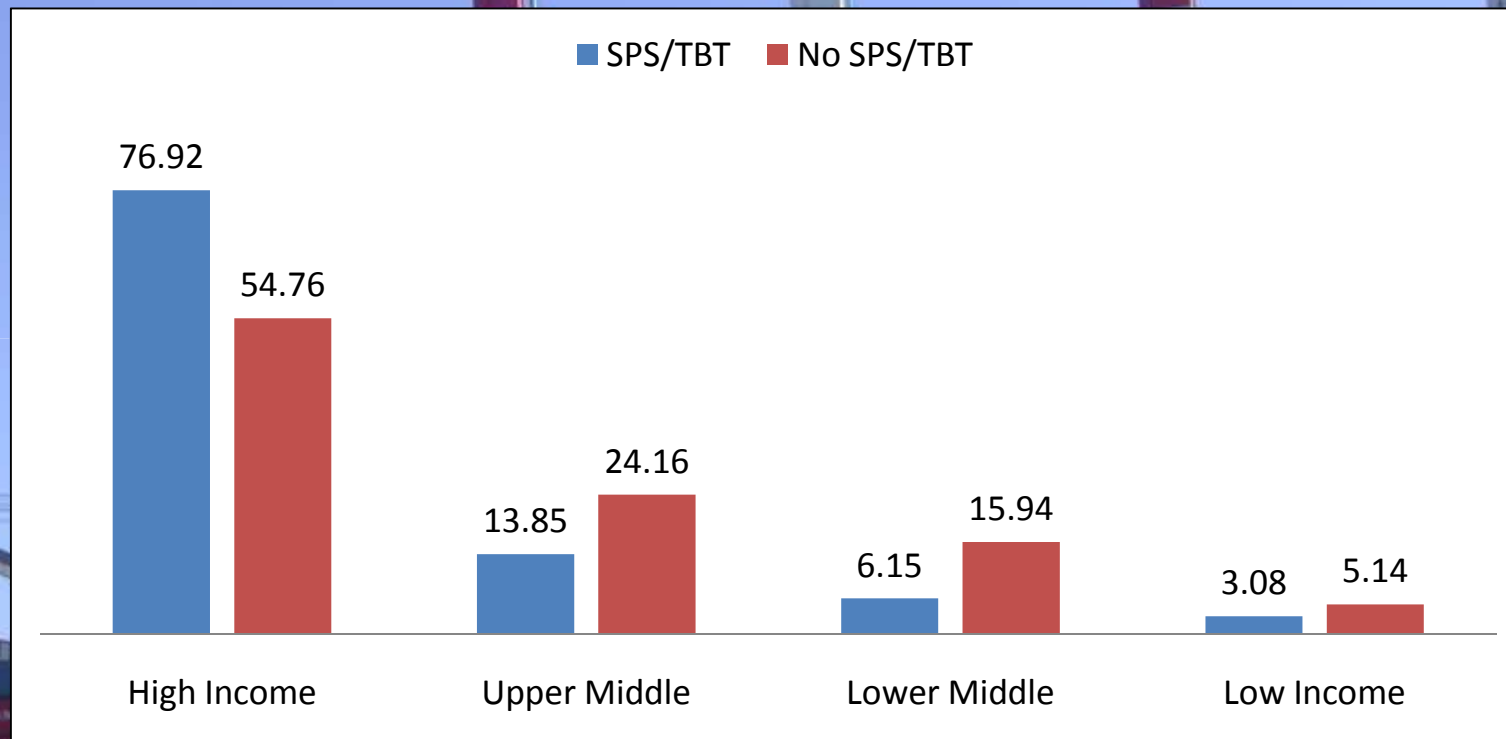
Source: Compiled by author based on WTO I-TIP database

Participation in SPS/TBT disputes as complainant country according to income level (% of the total, 1995-2012)



Source: Compiled by author based on WTO I-TIP database

Participation in SPS/TBT disputes as respondent country according to income level (% of the total, 1995-2012)



Source: Compiled by author based on WTO I-TIP database

Working paper “Assessing the impact of sanitary, phytosanitary and technical requirements on food and agricultural trade: what does current research tell us?”, SECO/WTI Academic Cooperation Project, 2/2013

Literature review on the following topics:

- SPS/TBT on a specific product and/or motivation impact
- SPS/TBT on a pool of products and motivations impact
- Effects of the heterogeneity/homogeneity regarding SPS/TBT



SPS/TBT impact on a specific product and/or motivation

Authors (year)	Specific Issue	SPS/TBT Effects
Xiong & Beghin (2012)	-African nut exports to the EU -EU standard on aflatoxins MRL	- Non significant
Wei, Huang & Yang (2012)	-Chinese tea exports -Pesticides MRLs	- Negative impact
Schlueter, Wieck & Heckeley (2009)	-Meat product trade -Analysis of different SPS requirements	-Contradictory impacts (according to measure)
Wieck, Schlueter & Britz (2012)	-Poultry meat trade -Quarantine measures – Avian Flu	-Negative impact (raw) -Positive impact (cooked)
Beghin & Melatos (2012)	-Pork meat trade -Australian quarantine regime	- Negative impact
Disdier & Fontagné (2010)	-Exports from USA, Canada and Argent. -EU moratory on GMO	- Negative impact
Wilson & Bray (2010)	-Fish exports to the USA -HACCP mandatory requirements	-Negative impact
Disdier & Marette (2010)	-Crustacean trade -Cloranfenicol MRL standards	-Negative impact (volume)

Source: Boza (2013)

SPS/TBT impact on a pool of products and motivations

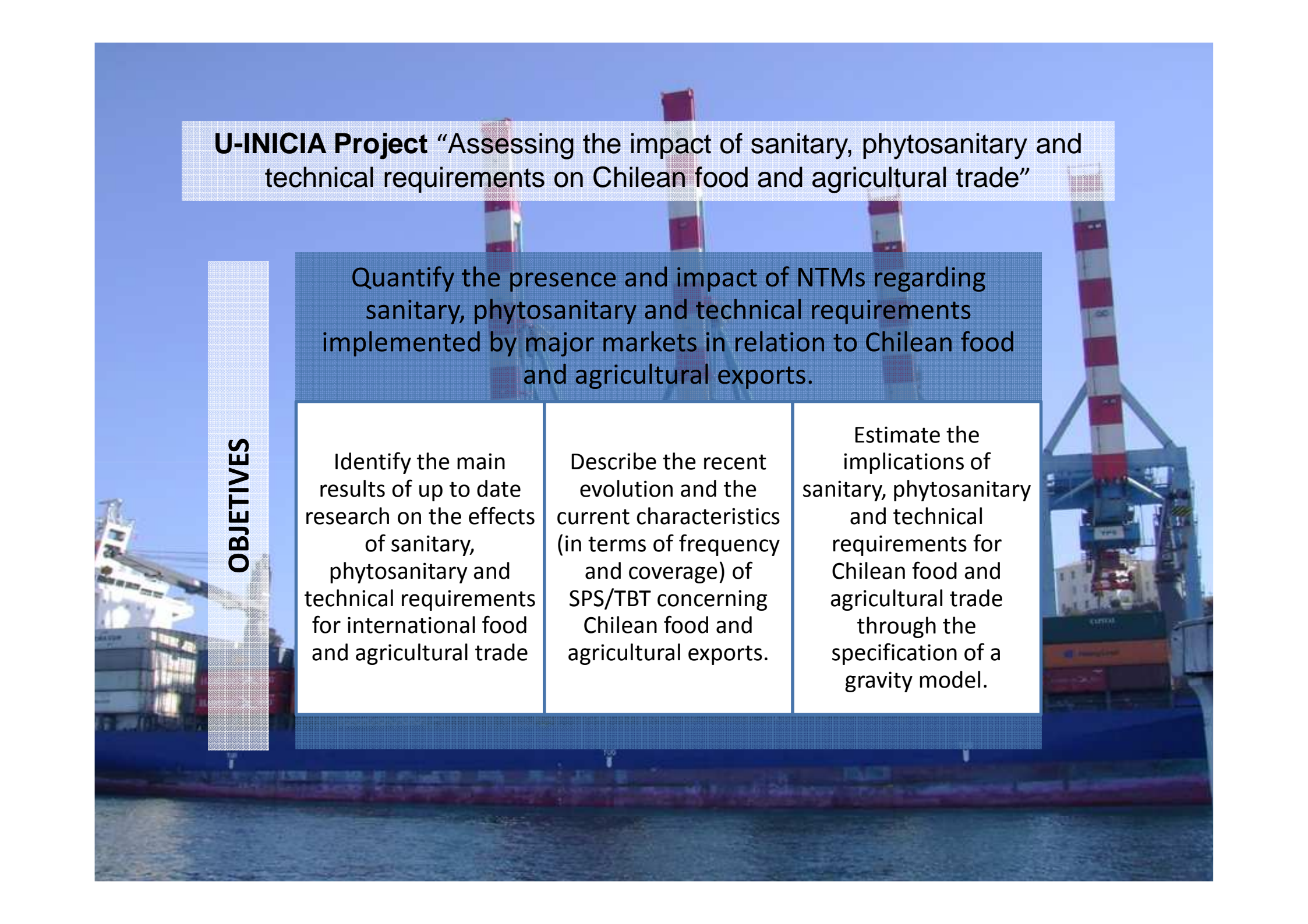
Authors (year)	Specific Issue	SPS/TBT Effects
Hoeckman & Nicita (2008)	- Global trade overview - Tariffs, NTMs and “red tape”	- Significant impact
Disdier, Fontagné & Mimouni (2008)	- International agricultural trade - SPS/TBT	- Non significant (OECD) - Negative impact (non OECD)
Crivelli & Groschl (2012)	- International agricultural trade - SPS/TBT	- Contradictory impacts (according to measure)
Bao & Qiu (2010)	- Imports to China - TBT raised by China	- Negative impact
Song & Chen (2010)	- Chinese agricultural exports - SPS	- Non significant (voluntary) - Positive impact (mandatory)
Mangelsdorf, Portugal-Pérez & Wilson (2012)	- Chinese agricultural exports - Standards (local/international)	- Negative impact (short term) - Positive impact (long term)
Meneguelli Pinto de Souza & Lee (2011)	- Brazilian poultry exports - SPS/TBT	- Contradictory impacts (according to measure)
Melo et. al. (2012)	- Chilean fruit exports - SPS	- Negative impact (according to perceived stringency)

Source: Boza (2013)

Effects of the heterogeneity/homogeneity regarding SPS/TBT

Authors (year)	Specific Issue	SPS/TBT Effects
Winchester et al. (2012)	-Agricultural trade -EU members and nine non EU countries -SPS/TBT heterogeneity	- Non significant (heterogeneity)
Disdier, Fontagné & Cadot (2012)	-South-South agricultural trade -TBT harmonization disclosures in North-South trade agreements	-Positive impact (N-S) -Negative impact (S-S)
Vigani, Raimondi & Olper (2009)	-Agricultural trade -GMO regulations	-Positive impact (homogeneity)
Drogué & Demaría (2012)	-Fruit trade (apples and pears) -Pesticides MRL legislation	-Positive impact

Source: Boza (2013)



U-INICIA Project “Assessing the impact of sanitary, phytosanitary and technical requirements on Chilean food and agricultural trade”

OBJETIVES

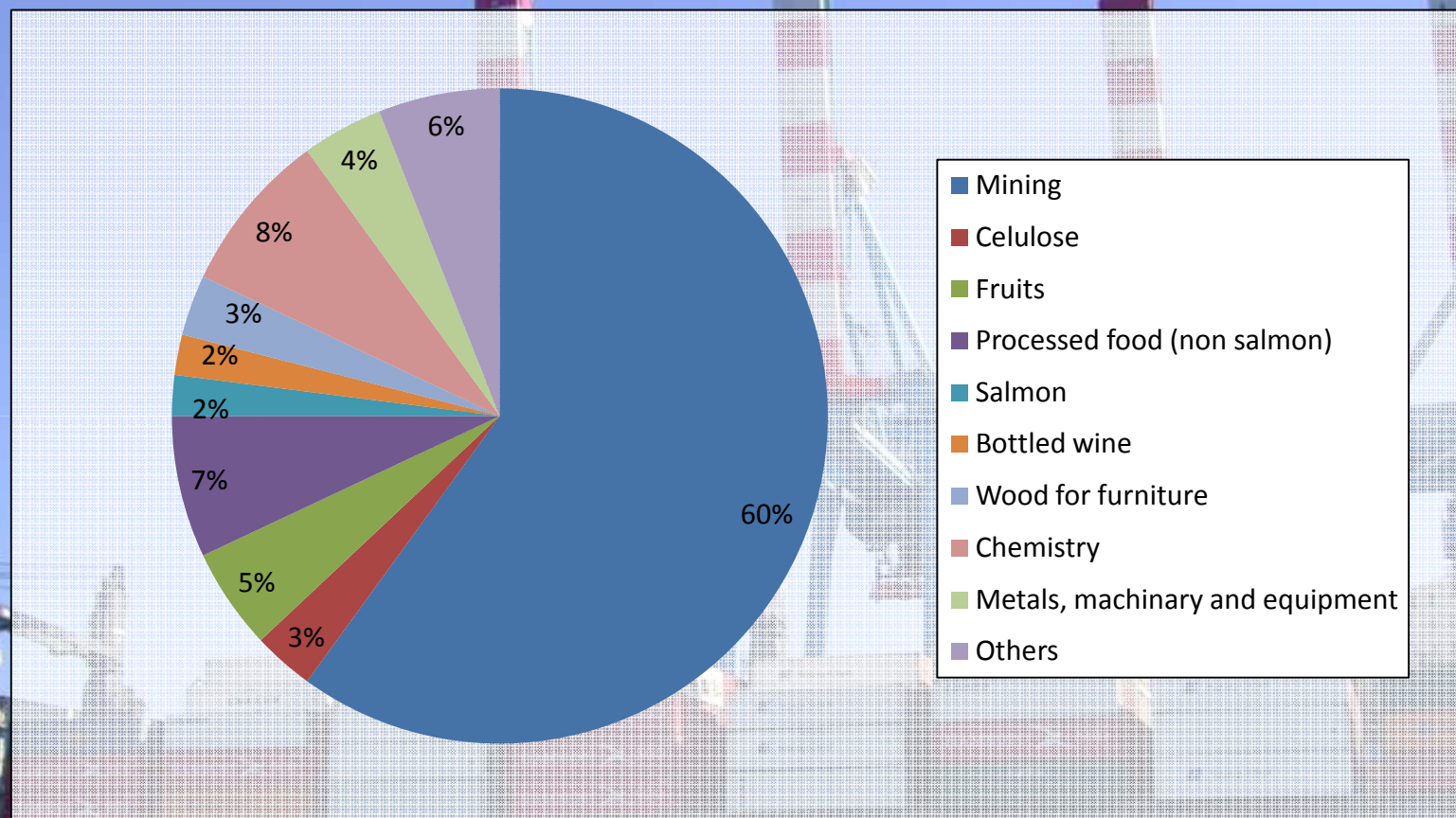
Quantify the presence and impact of NTMs regarding sanitary, phytosanitary and technical requirements implemented by major markets in relation to Chilean food and agricultural exports.

Identify the main results of up to date research on the effects of sanitary, phytosanitary and technical requirements for international food and agricultural trade

Describe the recent evolution and the current characteristics (in terms of frequency and coverage) of SPS/TBT concerning Chilean food and agricultural exports.

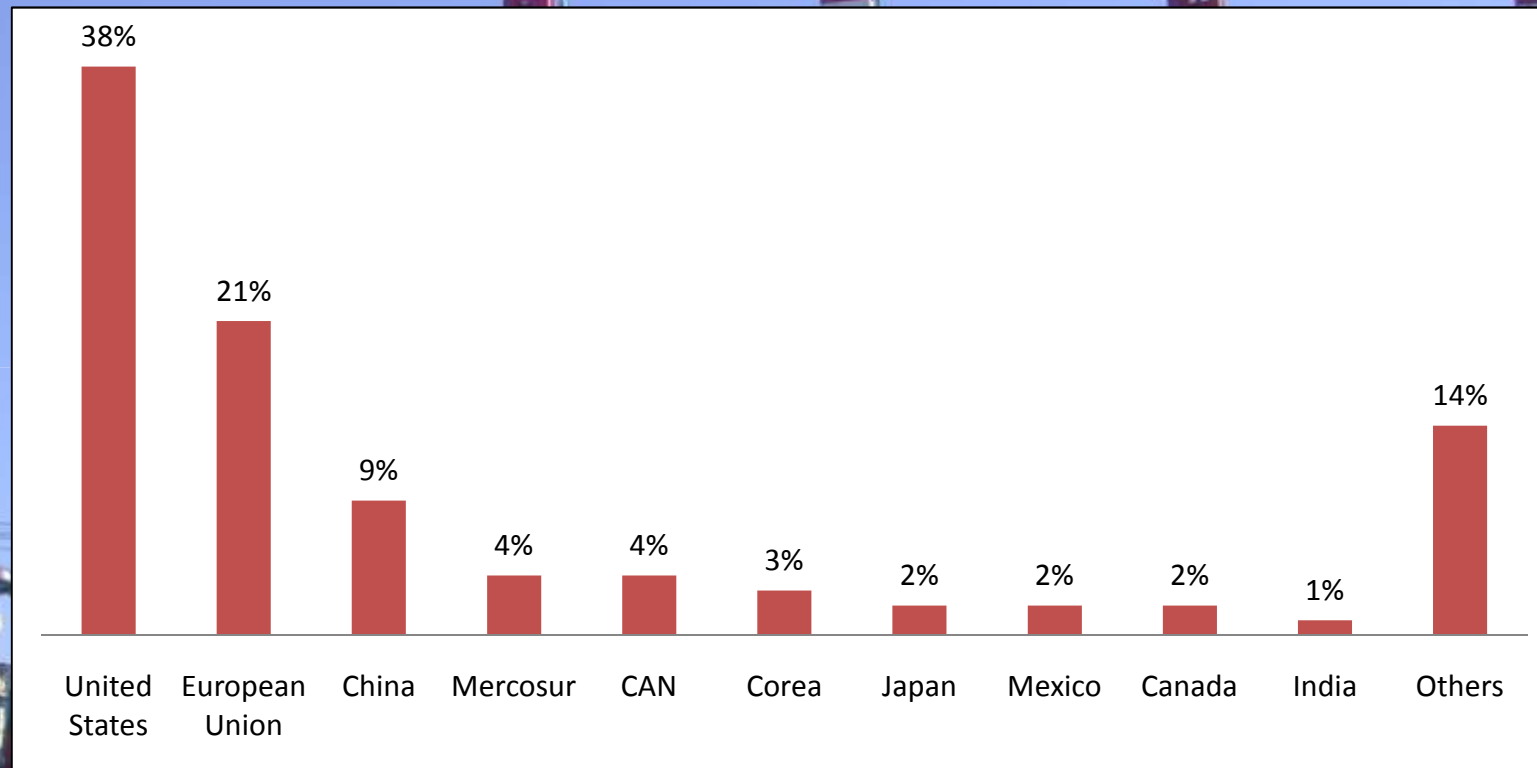
Estimate the implications of sanitary, phytosanitary and technical requirements for Chilean food and agricultural trade through the specification of a gravity model.

Composition of Chilean exports (% FOB US\$, 2012)



Source: Compiled by author based on DIRECON (2013)

Destinations of Chilean agri-food exports (% FOB US\$, 2012)



Source: Compiled by author based on DIRECON (2013)

WORK PLAN

Stage 1: Literature Review

- Activities: Complete a review of the most recent research about the effects of sanitary, phytosanitary and technical requirements on international trade.

Stage 2.1: SPS/TBT Data Collection

- Activities: Begin collecting and tabulating secondary information on SPS/TBT notifications and concerns from the World Trade Organization I-TIP database.

Stage 2.2: Descriptive analysis

- Activities: Estimate frequency indices, coverage ratios and groups according to WITS classification using data in SPS/TBT generated database. Synthesize and analyze results obtained.

Stage 3: Model estimation

- Activities: Collect additional data needed to estimate the gravity model (volumes traded, GDP, distance, tariffs and consumption). Specify the model and estimate the parameters using a variety of approaches. Analyze results and compare them with preceding research.



Dr. Sofía Boza
Department of Agricultural Economics
Faculty of Agricultural Sciences
University of Chile
sofiaboza@u.uchile.cl