Sanitary, Phytosanitary and Technical Measures in Agri-food Trade

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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

Source: UNCTAD, 2013
Inclusion of food safety and quality in public policy agenda

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

Increased consumer awareness of food safety and quality

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

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

TRENDS IN 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
“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
“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
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)
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)
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)
WTO TBT Agreement – Principles

- Non-discrimination
- Prevention of unnecessary obstacles
- Harmonization
- Equivalence and mutual recognition
- Transparency
- Technical assistance and special treatment
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
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<th>Year</th>
<th>SPS/TBT</th>
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<td>2012</td>
<td>7</td>
<td>20</td>
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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

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

Source: Boza (2013)
### SPS/TBT impact on a pool of products and motivations

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<tr>
<th>Authors (year)</th>
<th>Specific Issue</th>
<th>SPS/TBT Effects</th>
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</thead>
<tbody>
<tr>
<td>Hoeckman &amp; Nicita (2008)</td>
<td>- Global trade overview</td>
<td>- Significant impact</td>
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<td></td>
<td>- Tariffs, NTMs and “red tape”</td>
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<td>Disdier, Fontagné &amp; Mimouni (2008)</td>
<td>- International agricultural trade</td>
<td>- Non significant (OECD)</td>
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<td>- SPS/TBT</td>
<td>- Negative impact (non OECD)</td>
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<tr>
<td>Crivelli &amp; Groschl (2012)</td>
<td>- International agricultural trade</td>
<td>- Contradictory impacts (according to measure)</td>
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<tr>
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<td>- SPS/TBT</td>
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<td>Bao &amp; Qiu (2010)</td>
<td>- Imports to China</td>
<td>- Negative impact</td>
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<td></td>
<td>- TBT raised by China</td>
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<td>Song &amp; Chen (2010)</td>
<td>- Chinese agricultural exports</td>
<td>- Non significant (voluntary)</td>
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<tr>
<td></td>
<td>- SPS</td>
<td>- Positive impact (mandatory)</td>
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<tr>
<td>Mangelsdorf, Portugal-Pérez &amp; Wilson</td>
<td>- Chinese agricultural exports</td>
<td>- Negative impact (short term)</td>
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<td>(2012)</td>
<td>- Standards (local/international)</td>
<td>- Positive impact (long term)</td>
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<tr>
<td>Meneguelli Pinto de Souza &amp; Lee (2011)</td>
<td>- Brazilian poultry exports</td>
<td>- Contradictory impacts (according to measure)</td>
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<td>- SPS/TBT</td>
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<td>Melo et. al. (2012)</td>
<td>- Chilean fruit exports</td>
<td>- Negative impact (according to perceived stringency)</td>
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<td>Winchester et al. (2012)</td>
<td>Agricultural trade</td>
<td>- Non significant (heterogeneity)</td>
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<td>-EU members and nine non EU countries</td>
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<td>-SPS/TBT heterogeneity</td>
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<td>Disdier, Fontagné &amp; Cadot (2012)</td>
<td>South-South agricultural trade</td>
<td>-Positive impact (N-S)</td>
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<td>-TBT harmonization disclosures in North-South trade agreements</td>
<td>-Negative impact (S-S)</td>
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<tr>
<td>Vigani, Raimondi &amp; Olper (2009)</td>
<td>Agricultural trade</td>
<td>-Positive impact (homogeneity)</td>
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<td>-GMO regulations</td>
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<td>Drogué &amp; Demaría (2012)</td>
<td>Fruit trade (apples and pears)</td>
<td>-Positive impact</td>
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<td>-Pesticides MRL legislation</td>
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Source: Boza (2013)
**U-INICIA Project** “Assessing the impact of sanitary, phytosanitary and technical requirements on Chilean food and agricultural trade”

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.

| OBJETIVES | 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)

- United States: 38%
- European Union: 21%
- China: 9%
- Mercosur: 4%
- CAN: 4%
- Corea: 3%
- Japan: 2%
- Mexico: 2%
- Canada: 2%
- India: 1%
- Others: 14%

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.