

Non-Tariff Measures and Agricultural Trade

Midwest Agriculture's Ties to the Global Economy

Federal Reserve Bank of Chicago

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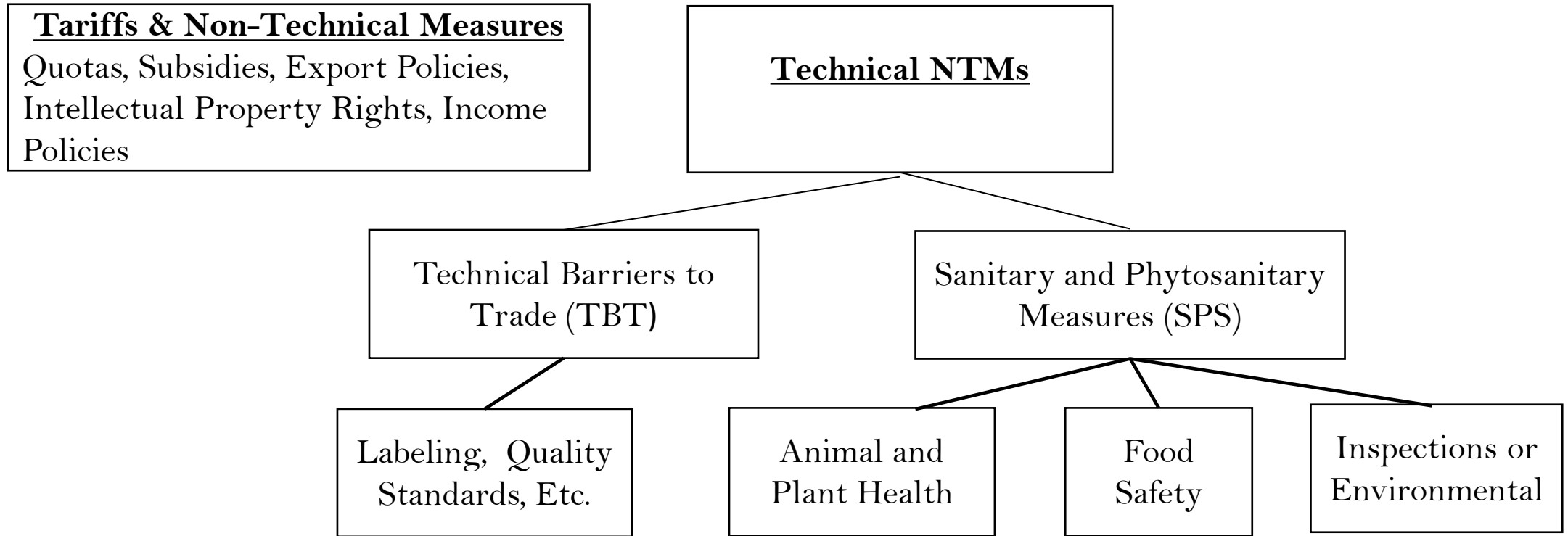
Peyton Ferrier,

Economic Research Service-USDA

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Non-Tariff Measures (NTMs)



The lowering of tariffs has, in effect, been like draining a swamp. The lower water level has revealed all the snags and stumps of non-tariff barriers that still have to be cleared away. - Robert Baldwin (1999)



Why are SPS Measures a Big Deal in Ag?

1. Growing and More Diverse Trade
 - Greater Volume, More Import Sources, Longer Distances
2. Agriculture Goods were/are Living Organisms
 - Capable of hosting pests, diseases, and invasive species.
 - Trade born pests harm both domestic agriculture and environment.
3. Desire for More Information on Food Production Processes
 - Sensitivity about chemical residues/additives, fair trade, envi. practices, GMOs
4. History of Farm Income Support and, relatedly, Trade Protection
5. Agricultural Marketing Facilitates Anonymity but Requires Trust.
 - Market scares and spillover effects are common.

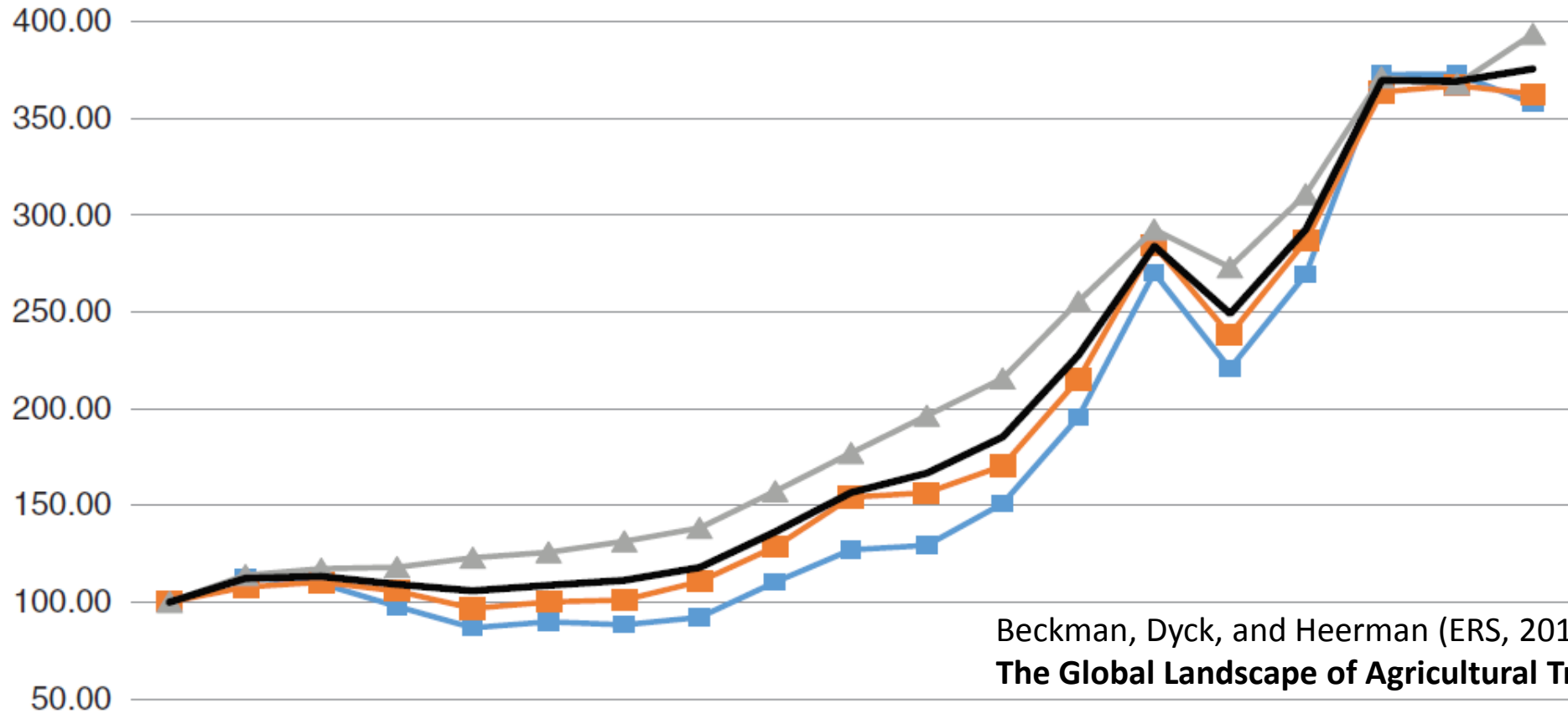


Figure 13

World agricultural imports by product category, 1995-2013

Index (2000 = 100)

World Agricultural Imports Value (US\$)



Beckman, Dyck, and Heerman (ERS, 2017)
The Global Landscape of Agricultural Trade

—■— Bulk —■— Intermediate —▲— Consumer-Oriented — Total

Types of NTMs

- **Mandatory Border Treatments** – fumigations, cold-treatment, hot-water or chemical dips, irradiation.
- **Commodity Prohibitions** (Temporary or Ongoing)
- **Regional Restrictions** (Destination or Origin)
- **Certification/Inspection/Quarantine Requirements**
- **Production Facility Registration and Inspection** – Meats, Juices, Foods requiring HACCP Plans under FDA or FSIS Regulations.
- **Low or Zero Maximum Residue Limits, Tolerances on GMO Contamination**



Trade Framework for NTMs in Agriculture

- Main Idea – Regulatory measures affecting trade should be science-based and non-discriminatory while minimizing the impact on trade.
- WTO's SPS Agreement Principles
 1. Scientific Justification
 2. Harmonization with International Standards
 3. Equivalence (Multiple Ways to the Same Outcome)
 4. Regionalization of Application
 5. Risk Assessment
 6. Transparency (e.g. Notifications Process)
 7. Temporary Provisional Measures OK (Science-Based v Precautionary Principle)
 8. Dispute Settlement Mechanisms
- WTO TBT Agreement principles are similar.
- Bilateral FTAs have similar, sometimes stronger SPS/TBT Agreements.



WTO Notification Mechanisms

- Notifications clearinghouse whenever a SPS/TBT measures change
- At meetings 3 times a year, countries register Specific Trade Concerns (STCs)
 - Raising – Country raising concern of an unjustified measure
 - Supporting/Joining – Other countries agreeing with the concern
 - Maintaining – Country with the regulation
- STCs could eventually rise to formal WTO Cases
- Jason Grant and Shawn Arita (IATRC, 2017) – Analyze STCs because:
 - STCs reveal which regs are impactful and who they affect
 - WTO frequently resolve STCs



Figure 1. SPS and TBT Notifications to the WTO, 1995-2015

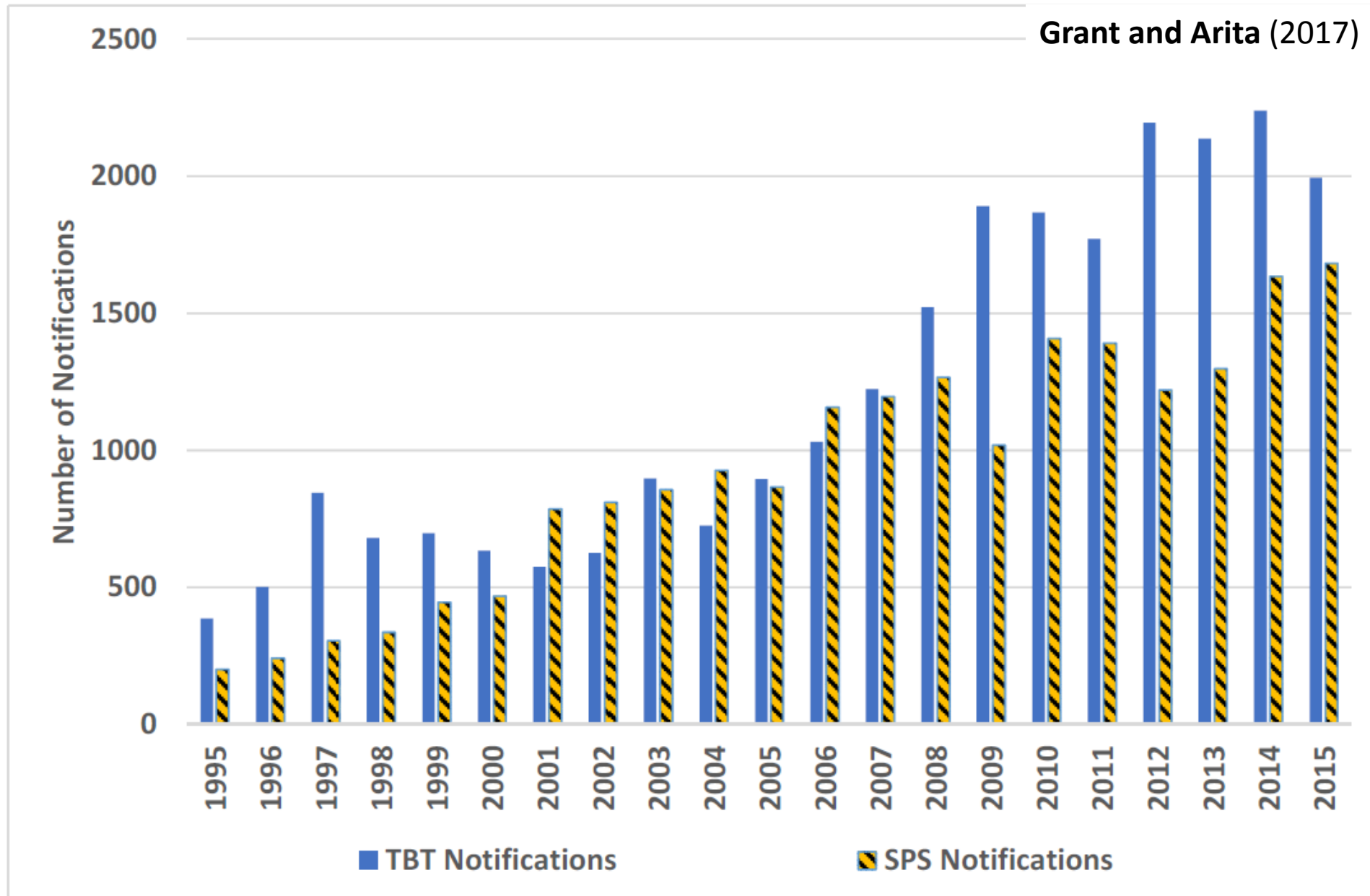


Fig 2. SPS STCs Raised and Cumulative Number of Countries Involved, 1995-2014

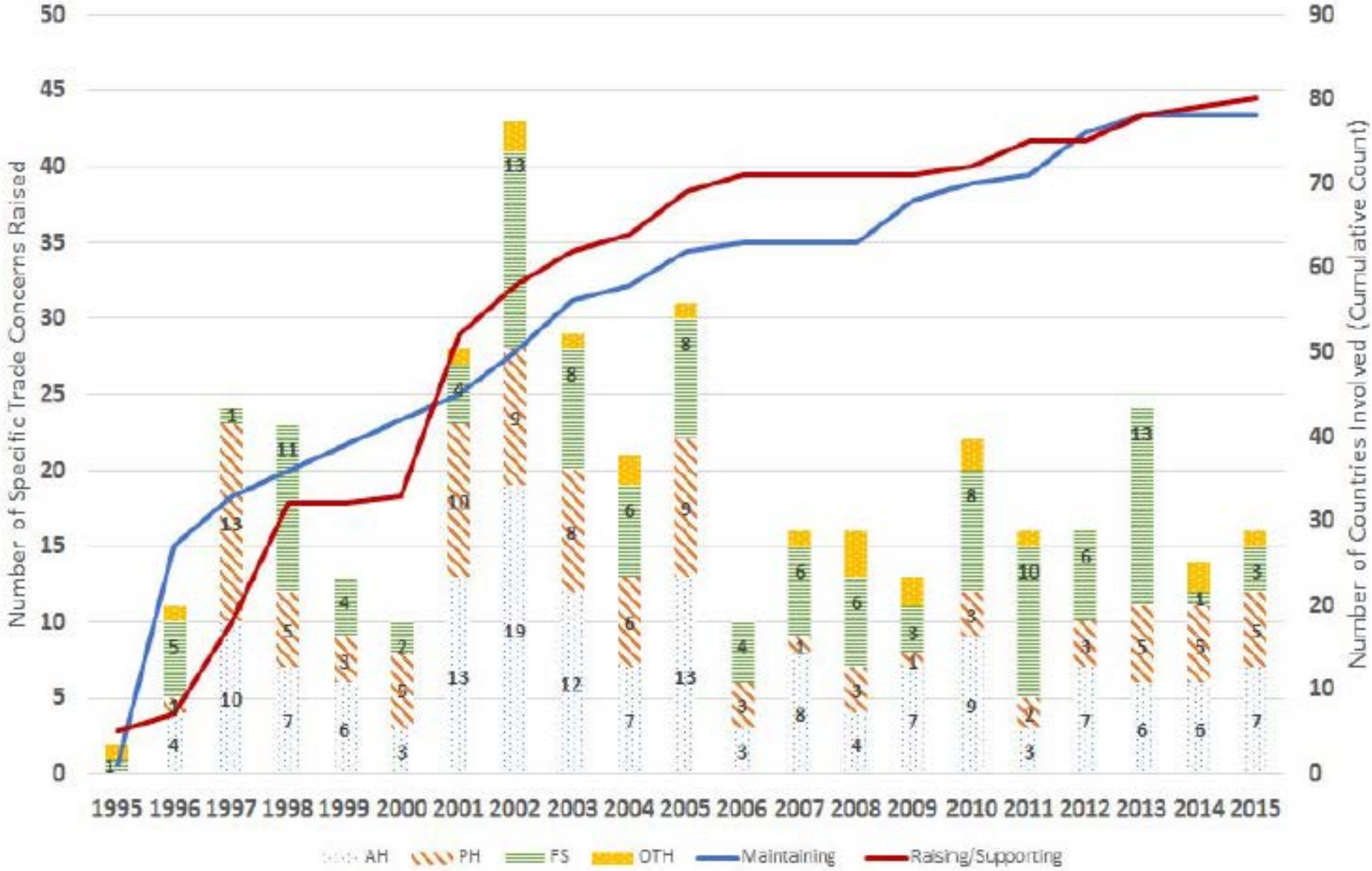
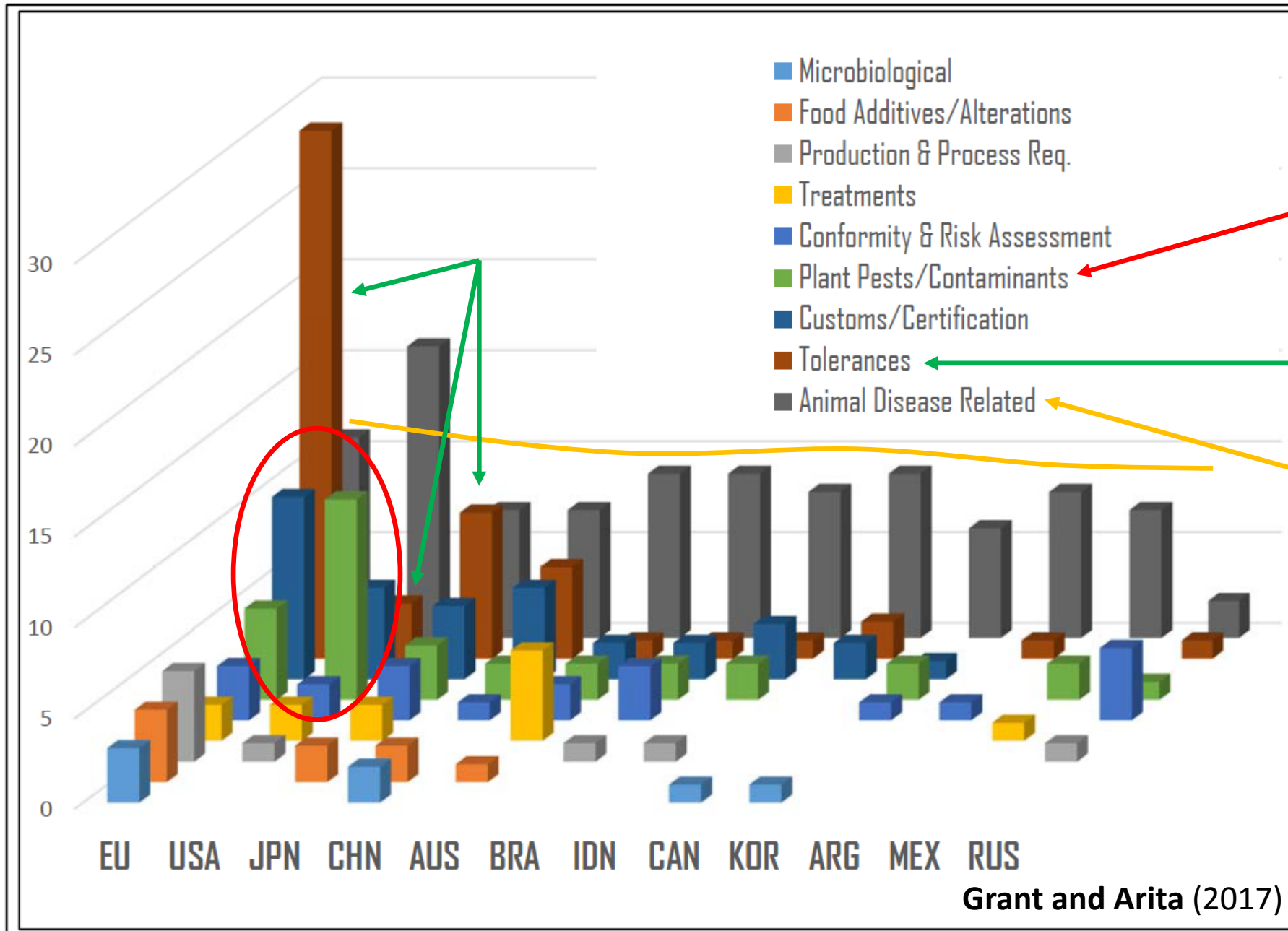


Figure 5: SPS Specific Trade Concerns by Type for Selected Markets



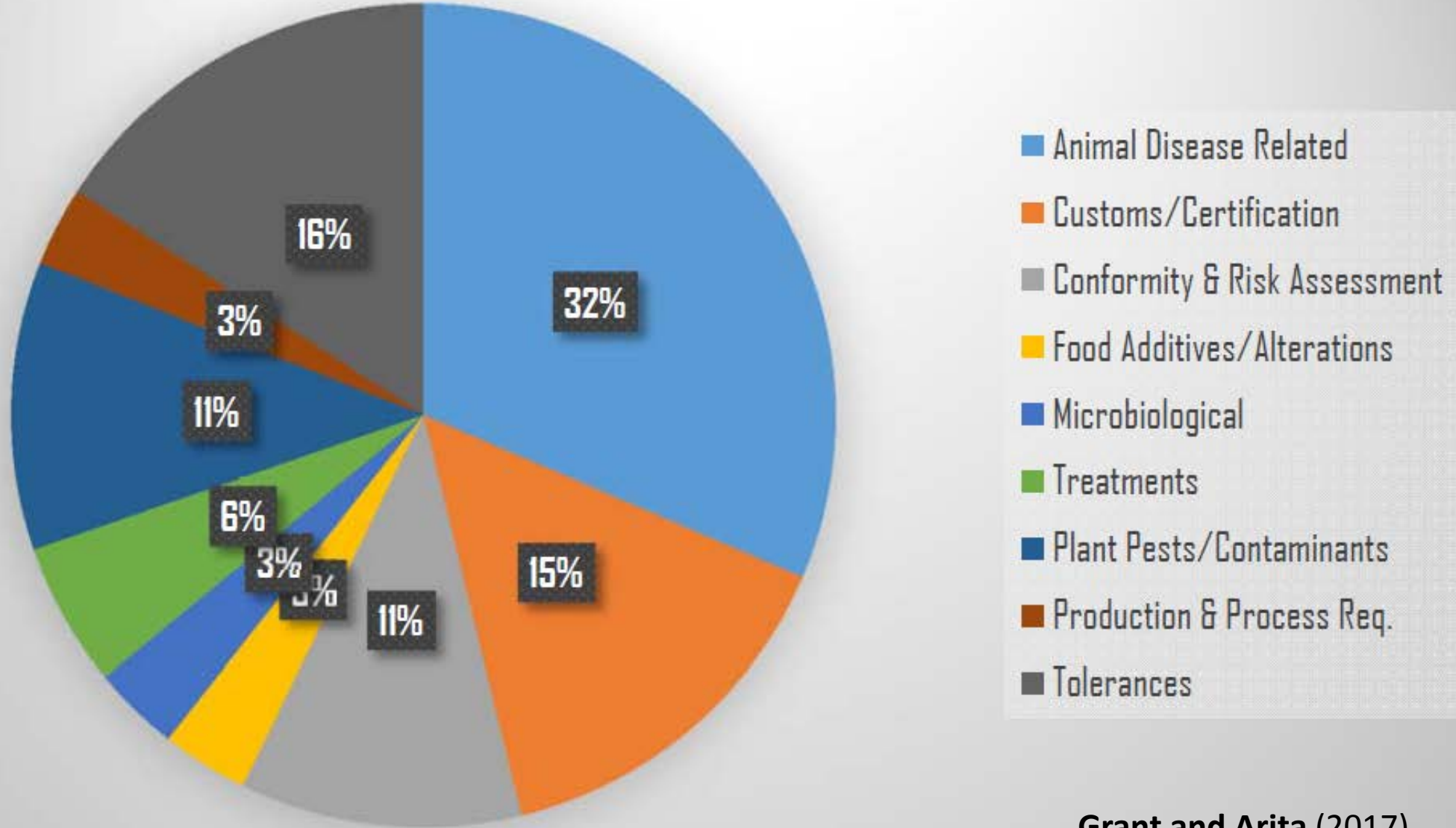
Each new U.S. fruit or veg import requires a separate pest risk assessment

Includes Maximum Residue Limits/GMO Tolerances

High across countries, especially with U.S.

Grant and Arita (2017)

Figure 3: Percentage breakdown of SPS STCs by Type (1995-2015)



Grant and Arita (2017)

How Big a Deal are NTMs for Ag Trade?

| Three Methods of Quantifying NTM costs | Pros | Cons |
|---|--|--|
| <p>1. Direct Calculation – Count up the costs of specific treatments or measures.</p> <ul style="list-style-type: none"> - <i>U.S. Apples for Fire Blight (Calvin and Krissoff, 1998)</i> - <i>Mexican Avocados (Orden and Petersen, 2006)</i> - <i>Indian Mangoes (Ferrier et al, 2012)</i> | <p>Verifiable, Reliable, Can Parse Different Costs</p> | <p>Time-Consuming, Not Generalizable</p> |
| <p>2. Price Wedge Method - Difference Prices at Origin and Destination & Subtract Shipping and other observable costs.</p> <ul style="list-style-type: none"> - <i>Fruits and Vegetables (Rickard and Lei, 2011)</i> | <p>Simple, Data readily available</p> | <p>Likely attributes an cost shifting factor to NTM</p> |
| <p>3. Quantity Gap Method - Estimating the lost trade between countries with varying NTMs (or proxies).</p> <ul style="list-style-type: none"> - <i>Fruit and Vegetable Treatments (Grant, Petersen, and Roberts, 2013)</i> - - <i>WTO Notifications Proxy (Disdier, Fontagne, and Mimouni, 2008)</i> - <i>Cross-Country Control Variables (Arita, Mitchell, Beckman, 2015)</i> | <p>Easy to Implement, Can Consider Many Goods</p> | <p>Need cross country NTMs variation to identify effects</p> |

General Caveat: NTMs can reflect consumer preferences which can lead to an over-estimation of their estimated cost.

How Big a Deal are They? Big!

| U.S Exports to the EU of: | NTM - Ad Valorem Equivalent (AVE) | Actual Tariff Rate | Primary Reason for the Restrictions |
|---------------------------|-----------------------------------|-----------------------|--|
| Beef | 23% | 70% (Out of Quota) | Ban on Growth Hormones |
| Pork | 81% | 25% | Beta Agonists, Trichinae, Other Measures |
| Poultry | 102% | 21% | Pathogen Reduction Treatment |
| Corn | 79% | 0% | Genetic Modification |
| Soy | 17% | 0% | Genetic Modification |
| Fruits* | 35% | 10% | Pesticides Residue Limits |
| Vegetables* | 53% | 14% | Pesticides Residue Limits |

Arita, Mitchell, and Beckman (2015)

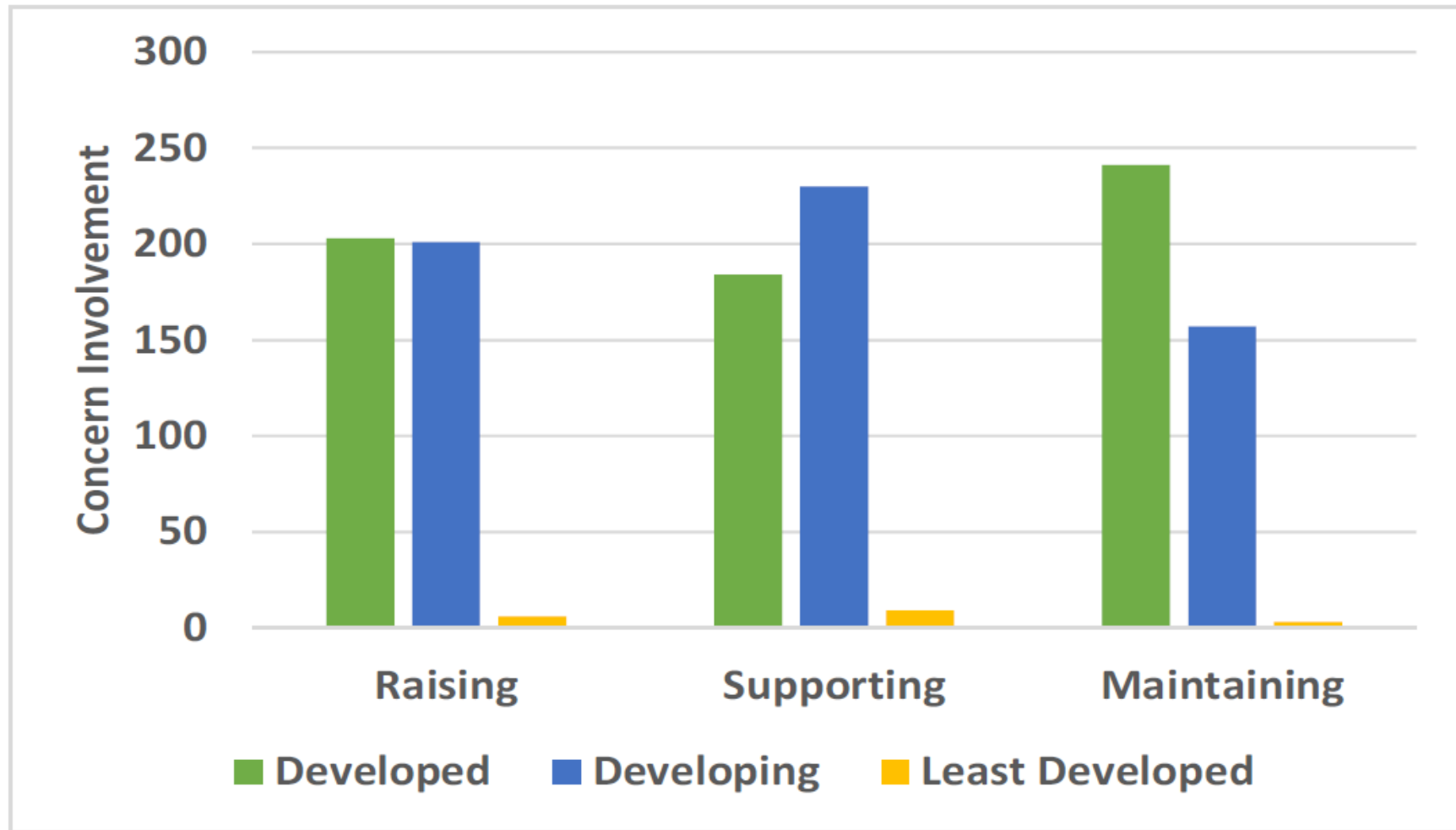


On going questions with NTMs

- Do NTMs affect poorer countries more than developed ones?
 - Ferrier (2014) – U.S. does not require poor countries to have phytosanitary treatments for FV any more than rich ones.
- Do disputes between countries with bilateral FTAs get resolved quicker and more expeditiously?
- How should public authorities address the role of private standards that may act as *de facto* NTMs?
- How will the (U.S.) Food Safety Modernization Act Produce Safety Rules add to compliance costs for foreign producers?



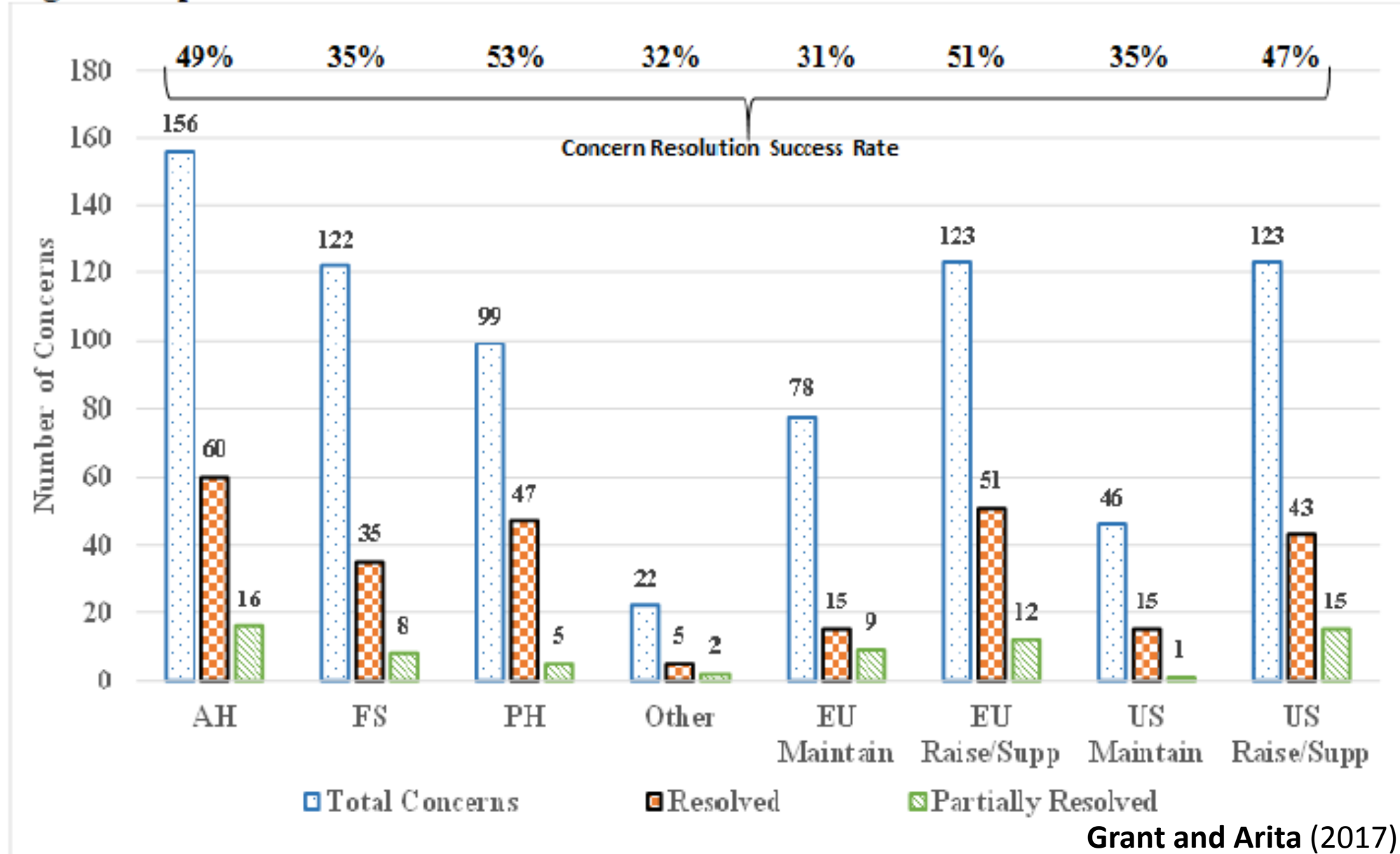
Figure 4. Specific Trade Concern Involvement by Development Status, 1995-2015



- Do NTMs
• Ferrier (treatme
- Do dispute quicker an
- How shou that may a
- How will t Rules add



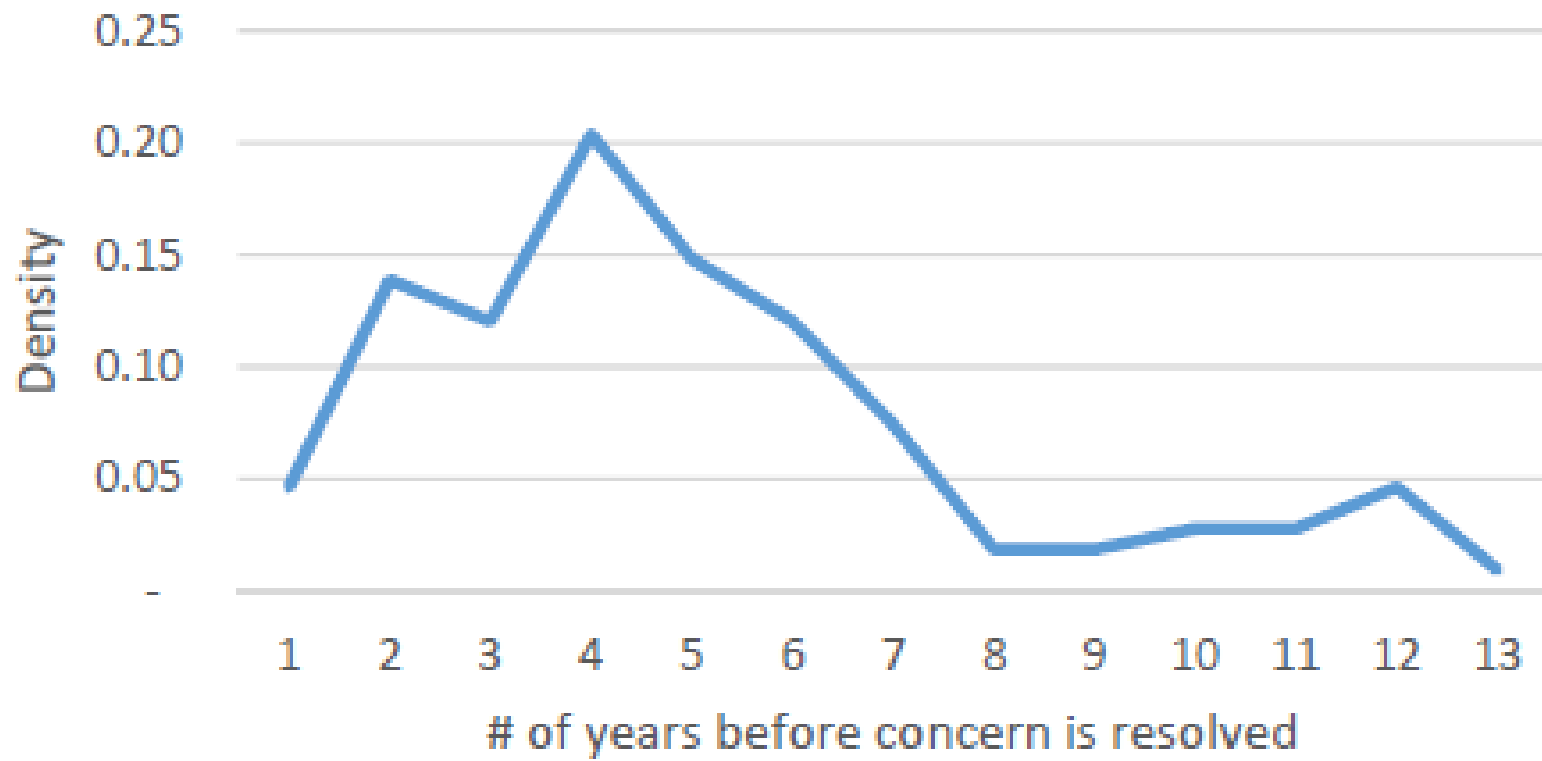
Figure 7. Specific Trade Concern Resolution and Success Rates



Grant and Arita (2017)



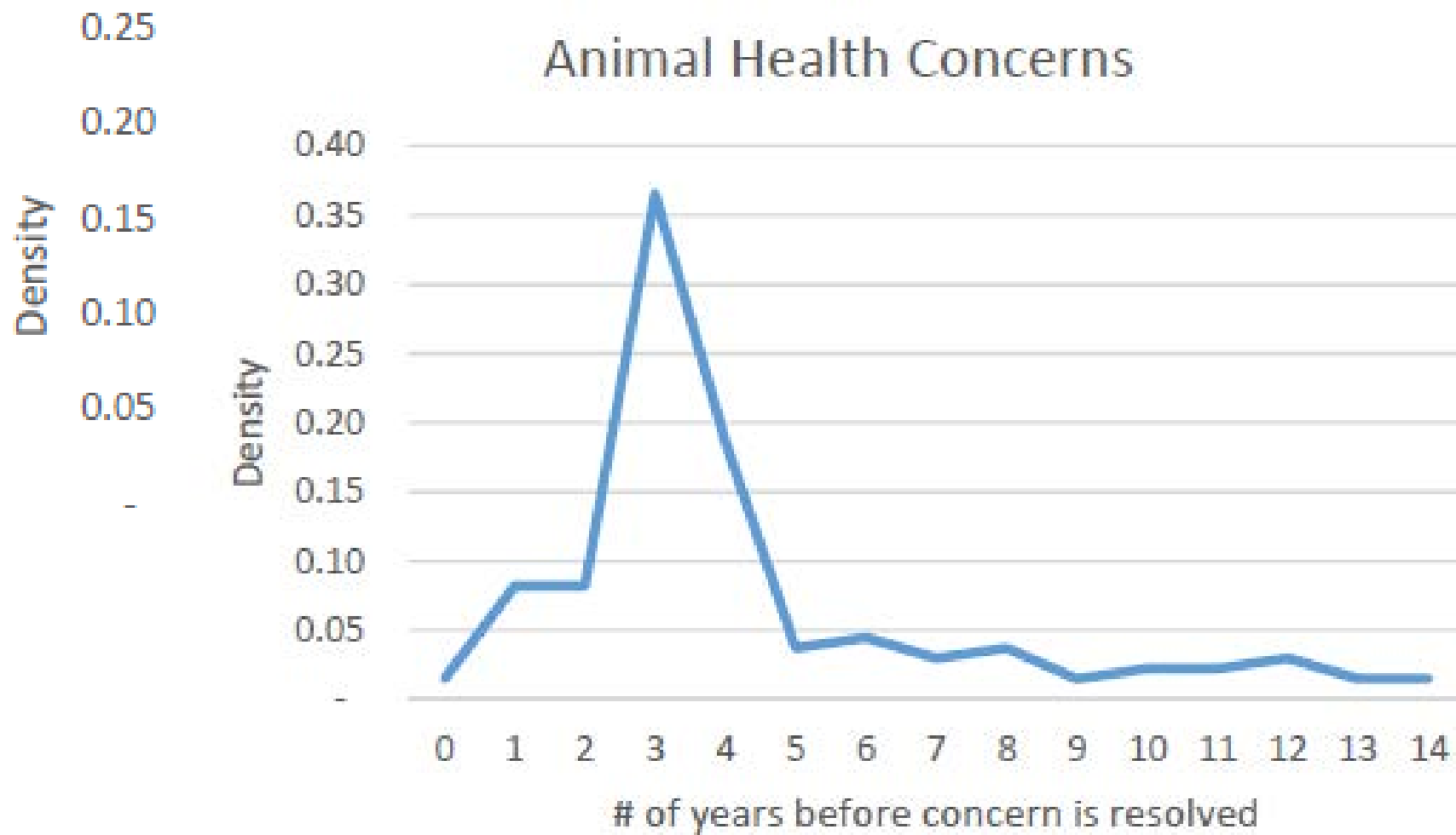
Food Safety Concerns



Grant and Arita (2017)



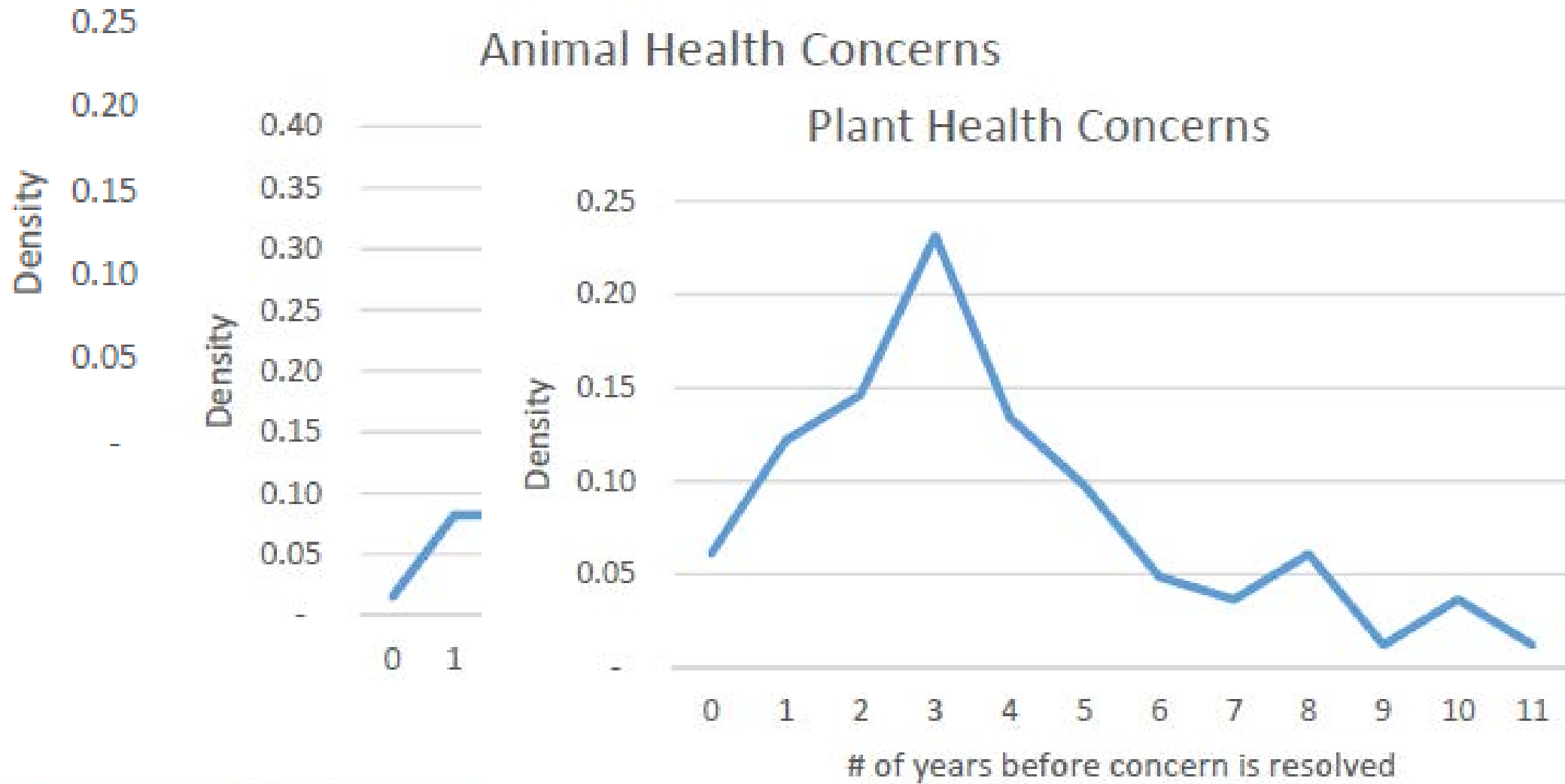
Food Safety Concerns



Grant and Arita (2017)



Food Safety Concerns



Grant and Arita (2017)



Summing Up

- **NTMs arise from domestic regulations** involving food safety, agricultural productivity and environmental concerns.
- **Some NTMs reflect consumers preferences.** Relaxation of the measure may not change trade impact if preferences drive it.
- **WTO Notifications and Special Trade Concerns have increased** in the last twenty years as trade has risen.
- **NTMs have big effects on agricultural trade**, often measured as being larger than tariffs.
- **WTO and other free trade agreements constrain arbitrary or discriminatory NTMs** and provide a framework for both formal and informal dispute resolution.



Plug some ERS Work Here:

Jason Grant and Shawn Arita, 2017. “Sanitary and Phyto-Sanitary Measures: Assessment, Measurement, and Impact” IATRC.

Shawn Arita, Lorraine Mitchell, and Jayson Beckman, 2015.
“Estimating the Effects of Selected Sanitary and Phytosanitary Measures and Technical Barriers to Trade on U.S. EU Agricultural Trade”
ERS-USDA

Jayson Beckman, John Dyck and Kari Heerman, 2017. “The Global Landscape of Agricultural Trade, 1995-2014” ERS-USDA.

Peyton Ferrier, 2014. “The Effects of Phytosanitary Regulations on U.S. Imports of Fruits and Vegetables” ERS-USDA.

