



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**The Importance of Technical Barriers to Agri-Food Trade:  
Evidence from TBT Specific Trade Concerns (STCs) Raised at the WTO**

**David Orden, Khadija Rouchdi, and Caesar Cororaton**

*Selected Paper prepared for presentation at the International Agricultural Trade Research Consortium's (IATRC's) 2019 Annual Meeting: Recent Advances in Applied General Equilibrium Modeling: Relevance and Application to Agricultural Trade Analysis, December 8-10, 2019, Washington, DC.*

*Copyright 2019 by David Orden, Khadija Rouchdi, and Caesar Cororaton. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.*

***Importance of Technical Barriers to Agri-  
Food Trade:  
Evidence from TBT Specific Trade  
Concerns (STCs) Raised at the WTO***

**David Orden, Khadija Rouchdi and Caesar Cororaton  
Virginia Tech**

**Presented at the  
International Agricultural Trade Research Consortium  
Annual Meeting, Washington DC  
December 8-10, 2019**

# Project Overview

- Today's presentation is part of the project “Effects of Contested Regulatory Measures on U.S. and Global Agricultural Trade” (funded by USDA/NIFA)
  - Broad aim of the project is to enhance understanding about sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) regulations affecting U.S. and global agricultural trade
  - Widely accepted that these measures play an important role in determining trade opportunities, but effects are hard to quantify and so is seeking improvements in the regulatory environment
- Focus of project is on exporters' revealed concerns – the specific trade concerns (STCs) raised for discussion in the WTO SPS and TBT committees
- Undertaken by Virginia Tech's Center for Agricultural Trade with collaboration of Lee Ann Jackson, Erik Wijkström and Christiane Wolff (WTO) and Shawn Arita (USDA)

# Project Overview (cont)

- This presentation examines the extent to which TBT revealed concerns arise in relation to Agri-Food and Other Product sectors taking development levels of members into account
  - part of our taking inventory of the SPS and TBT STCs
  - Cororaton, Caesar and David Orden. “[The Importance of Technical Barriers to Agri-Food Trade: Evidence from the TBT Specific Trade Concerns Raised at the WTO.](#)” GII-ISCE Working Paper No. 2019-1, Virginia Tech, June 15, 2019
  - Khadija Rouchdi Ph.D. dissertation, in progress
- Other components of the overall project examine agri-food STCs in further depth and are utilizing econometric modes to evaluate the effects of the measures STCs are directed toward on levels and duration of trade

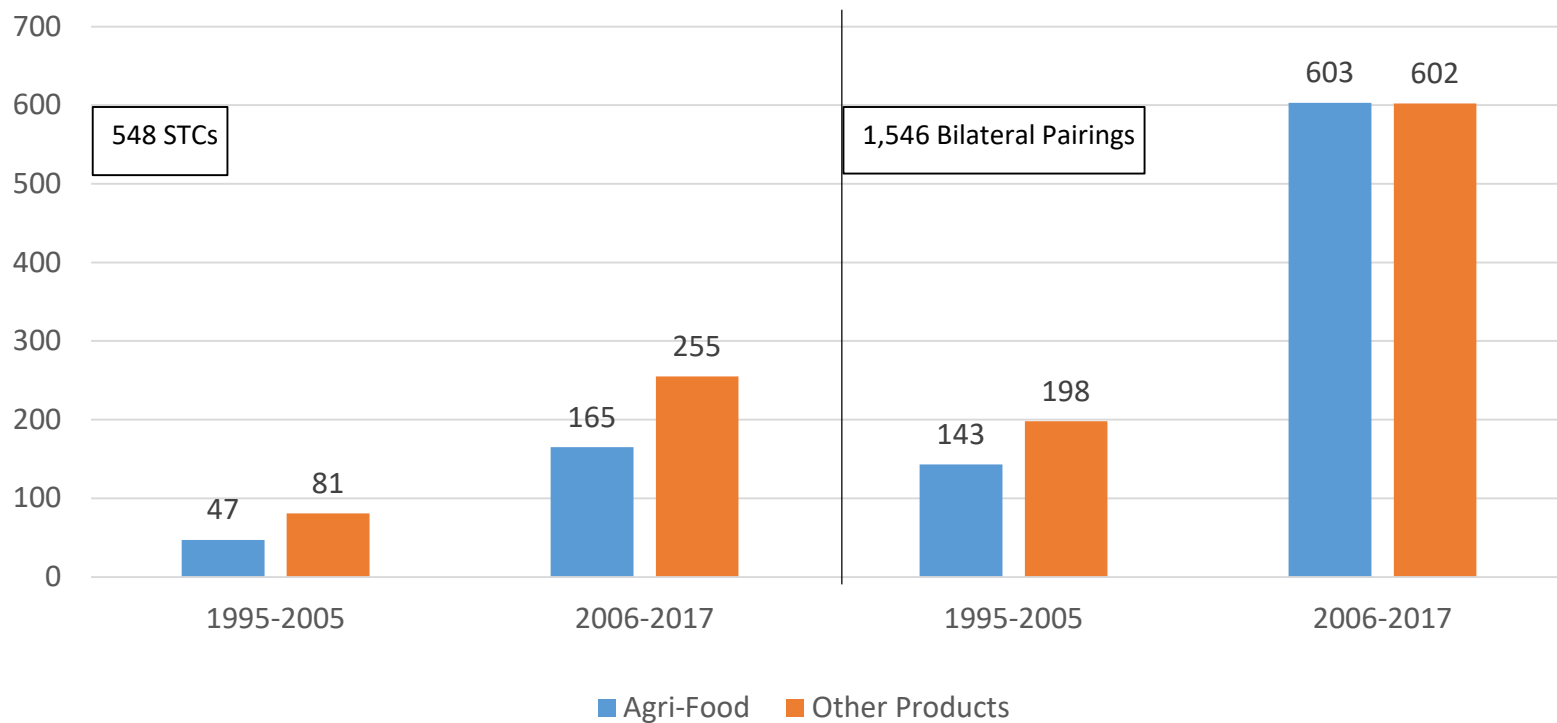
# Presentation Addresses Three Questions

- What are the **levels of participation** in agri-food and other product TBT STCs by developed and developing members in terms both of their measures maintained as importers being questioned by exporters and in raising concerns about measures of other members
- What are the **directional patterns** of these STCs (characterizing who raises STCs directed toward whom) across the two product categories and levels of development
- Are there differences in the **objectives of measures and issues raised** in STCs about agri-food versus other products or based on levels of development of members the STCs are directed toward

# Framework of the Inventory

- Database: IMS Summary of TBT STCs 1995-2017
  - Provides consistent multilateral data on importers the STCs are directed toward, when raised, products, members raising the STCs, objectives of measures, and issues raised by exporters
- 2 product groups: Agri-Food and Other Products
  - Sometimes aggregated All Products
- 2 levels of development: Developed and Developing
  - Sometimes assessed with further disaggregation
- Two angles to look at STCs from: Directed Toward Importers versus Raised By Exporters
  - 73 members involved in TBT STCs of which 48 have had one or more STCs directed toward them as importers, while 67 have raised one or more STCs as an exporter
- Two activity measurements: 548 TBT STCs; 1,546 “bilateral pairings” of members raising STCs

# STCs and Bilateral Pairings, 1995-2017





# Importance of Agri-Food STCs

- During 1995-2017, Agri-Food TBTs account for
  - 212 (38.7%) of the 548 STCs directed toward developed and developing members
  - 746 (48.3%) of the 1,546 bilateral pairings of members raising STCs
  - 374 (53.7%) of the 696 bilateral pairings raised by developing members

# Who toward Whom (based on bilateral pairings)

	Importers STC are Directed Toward			
	Agri-Food (746)		Other Products (800)	
	Developed	Developing	Developed	Developing
<b>Exporter Raising the STCs</b>				
Developed				
Number	108	264	100	378
Percent	14.5%	35.4%	12.5%	47.3%
Developing				
Number	218	156	213	109
Percent	29.2%	20.9%	26.6%	13.6%
<b>Total (Developed and Developing)</b>	<b>Column Total</b>		<b>Column Total</b>	
Number	326	420	313	487
Percent	43.7%	56.3%	39.1%	60.9%

# Disaggregation of Member Groups (Agri-Food and Other Product aggregated to All Products)

Group of Members (our categories)	Number of Members	STCs Directed Toward Group		Bilateral Pairings Directed Toward Group		Bilateral Pairings Raised by Group	
		Number	Percent	Number	Percent	Number	Percent
		<b>Developed</b>	<b>12</b>	<b>198</b>	<b>36.1%</b>	<b>639</b>	<b>41.3%</b>
US	1	49	8.9%	84	5.4%	241	15.6%
EU	1	116	21.2%	436	28.2%	256	16.6%
Other Developed	10	33	6.0%	119	7.7%	353	22.8%
<b>Developing</b>	<b>61</b>	<b>350</b>	<b>63.9%</b>	<b>907</b>	<b>58.7%</b>	<b>696</b>	<b>45.0%</b>
BRIC	4	139	25.4%	380	24.6%	130	8.4%
Other Developing							
High Income	16	79	14.4%	173	11.2%	170	11.0%
Upper-Middle Income	19	83	15.1%	212	13.7%	259	16.8%
Lower-Middle Income	15	48	8.8%	139	9.0%	118	7.6%
Least Developed	7	1	0.2%	3	0.2%	19	1.2%
<b>Total</b>	<b>73</b>	<b>548</b>	<b>100.0%</b>	<b>1,546</b>	<b>100.0%</b>	<b>1,546</b>	<b>100.0%</b>

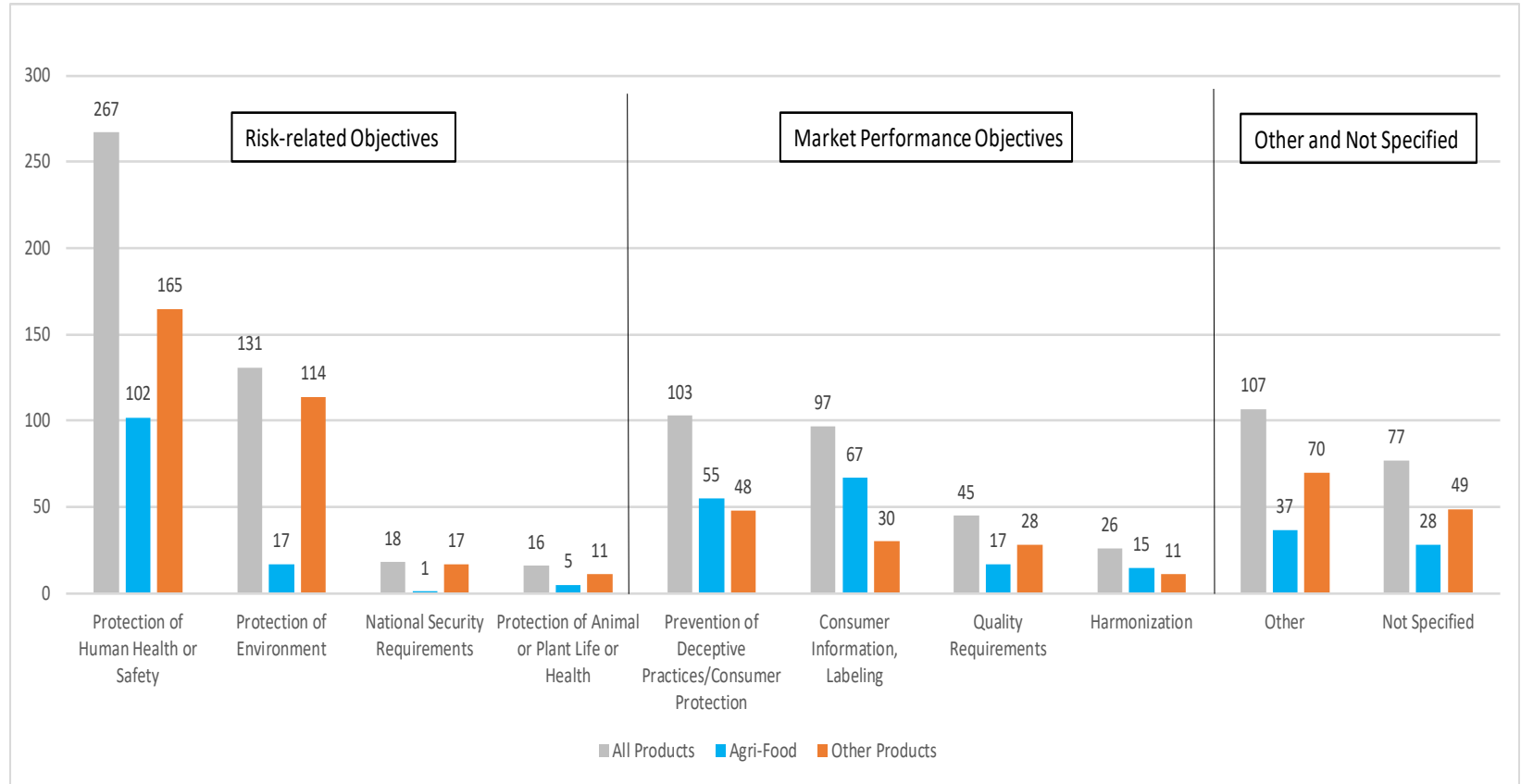
# Who toward Whom

## Eight Member Groups, All Products

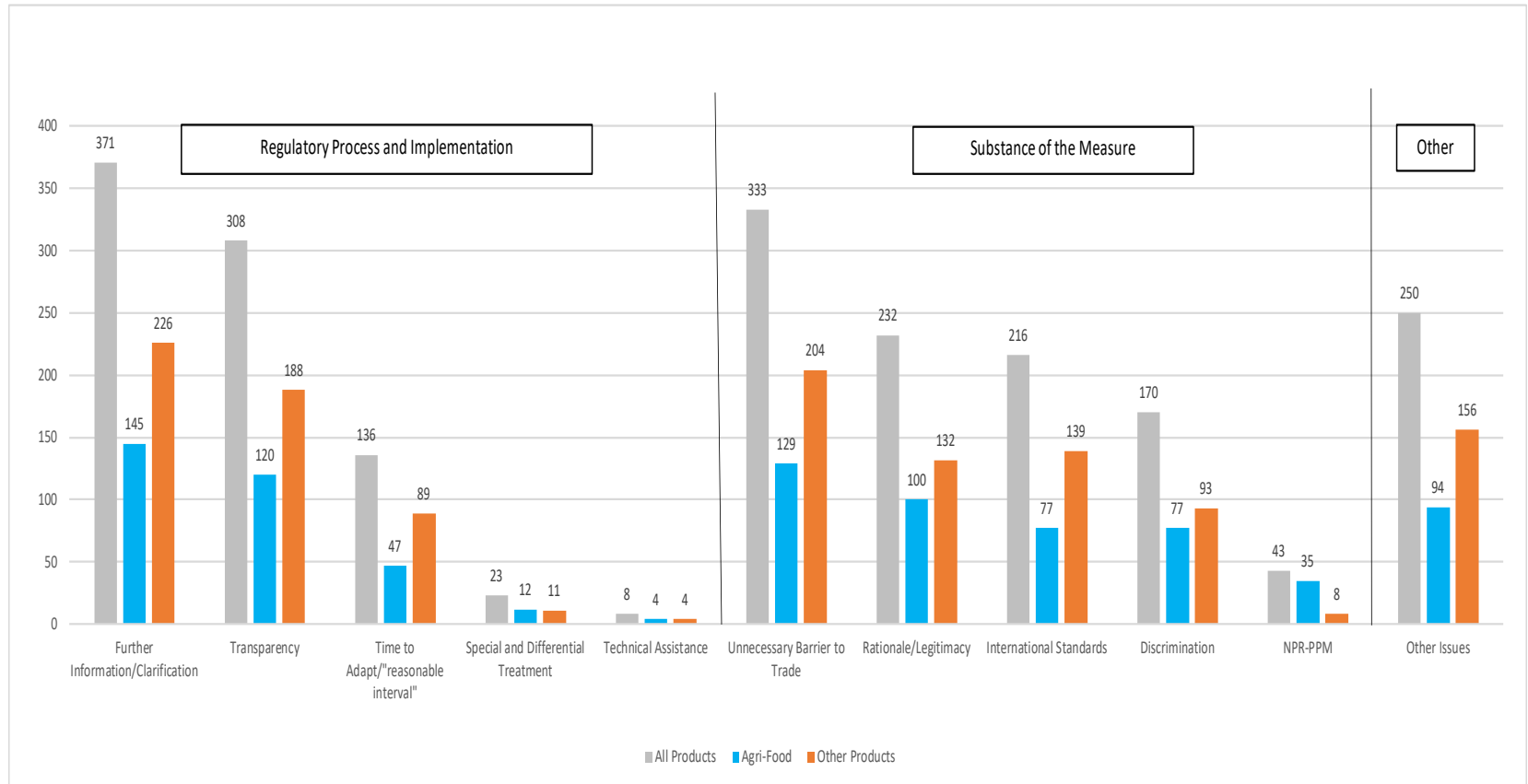
(based on bilateral pairings)

		Importers STCs are Directed Toward							Total Pairings Raised by Exporters	
		Developed			Developing					
Exporters Raising the STCs		United States	European Union	Other Developed	BRIC	Other Developing				
						High Income	Upper-Middle Income	Lower-Middle Income		Least Developed
		Percent of Bilateral Pairings Raised by Exporters Directed Toward Each Group of Importers (row sums = 100.0%)								
<b>Developed</b>										
US		0.0%	20.3%	4.1%	31.1%	15.4%	18.7%	10.0%	0.4%	241
EU		5.1%	0.0%	4.7%	38.3%	20.7%	17.2%	13.7%	0.4%	256
Other Developed		4.0%	24.4%	6.8%	28.9%	13.6%	11.6%	10.5%	0.3%	353
<b>Developing</b>										
BRIC		17.7%	51.5%	6.2%	6.9%	3.8%	8.5%	5.4%	0.0%	130
Other Developing										
High Income		8.8%	37.1%	5.9%	20.0%	5.3%	15.9%	7.1%	0.0%	170
Upper-Middle Income		5.4%	40.9%	8.5%	12.7%	7.7%	16.6%	8.1%	0.0%	259
Lower-Middle Income		4.2%	50.0%	20.3%	21.2%	0.8%	0.8%	2.5%	0.0%	118
Least Developed		0.0%	31.6%	47.4%	21.1%	0.0%	0.0%	0.0%	0.0%	19

# Objectives of Importers



# Issues Raised by Exporters



# Issues Raised by Exporters (cont)

	Agri-Food			Other Products		
	Developed	Developing	Total	Developed	Developing	Total
Number of STCs	77	135	212	121	215	336
Number of Issues	307	533	840	426	824	1,250
Average Number	4.0	3.9	4.0	3.5	3.8	3.7
Percent of STCs Directed Toward Members in which Each Issue is Raised						
<b>Regulatory Process and Implementation</b>						
Further Information/Clarification	62.3	71.9	68.4	65.3	68.4	67.3
Transparency	36.4	68.1	56.6	47.9	60.5	56.0
Time to Adapt/"Reasonable Interval"	14.3	26.7	22.2	24.8	27.4	26.5
Special and Differential Treatment	14.3	0.7	5.7	8.3	0.5	3.3
Technical Assistance	3.9	0.7	1.9	3.3	0.0	1.2
<b>Substance of the Measure</b>						
Unnecessary Barrier to Trade	70.1	55.6	60.8	57.9	62.3	60.7
Rationale/Legitimacy	48.1	46.7	47.2	39.7	39.1	39.3
International Standards	31.2	39.3	36.3	33.9	45.6	41.4
Discrimination	46.8	30.4	36.3	24.0	29.8	27.7
NPR-PPM	28.6	9.6	16.5	3.3	1.9	2.4

# Correlations among Issues Raised by Exporters about Substance of the Measure (all products)

Substance of the Measure	Substance of the Measure				
	Unnecessary Barrier to Trade	Rationale/Legitimacy	International Standards	Discrimination	NPR-PPM
Unnecessary Barrier to Trade	333	169	141	125	26
Rationale/Legitimacy	169	232	113	89	19
International Standards	141	113	216	72	8
Discrimination	125	89	72	170	16
NPR-PPM	26	19	8	16	43
Unnecessary Barrier to Trade	100.0%	72.8%	65.3%	73.5%	60.5%
Rationale/Legitimacy	50.8%	100.0%	52.3%	52.4%	44.2%
International Standards	42.3%	48.7%	100.0%	42.4%	18.6%
Discrimination	37.5%	38.4%	33.3%	100.0%	37.2%
NPR-PPM	7.8%	8.2%	3.7%	9.4%	100.0%



# Agri-Food TBT STCs Inventory: Phase 2

- More detailed case study of 31 Agri-Food TBTs STCs using minutes of TBT Committee meetings
  - Relatively intense: raised for over one year (4 or more meetings)
  - Recent: active in 2015-2017, traced forward from time first raised
  - Code minutes for IMS issues and 18 additional categories related to process (5), type of measure (5), basis/substance of measure (10)
  - Track participation intensity (e.g.: US and EU account for 22.7% of bilateral pairings; 32.3% of statements made and 38.4% of issues raised in these 31 STCs)
  - Characterize issues among concerned exporters and dynamics of the STCs for four sub-groups: alcoholic beverages (10); nutrition warning labeling (6); horizontal regulations (5); and product-specific regulations (8) (narratives and coding results)
- Evaluate trade before/during/(after) STC

# Selected References

Boza, Sofia, Rodrigo Polanco and Macarena Espinoza. 2018. "Nutritional Regulation and International Trade in APEC Economies: The New Chilean Food Labeling Law." *Asian Journal of WTO & International Health Law and Policy* 14 (2019): 73-113.

Cororaton, Caesar and David Orden. "[The Importance of Technical Barriers to Agri-Food Trade: Evidence from the TBT Specific Trade Concerns Raised at the WTO.](#)" GII-ISCE Working Paper No. 2019-1, Virginia Tech, June 15, 2019.

Grant, Jason H. and Shawn Arita. 2017. "Sanitary and Phytosanitary Measures: Assessment, Measurement, and Impact." Commissioned Paper 21, International Agricultural Trade Research Consortium (IATRC).

Horn, Henrik, Petros C. Mavroidis and Erik N. Wijkström. 2013. "In the Shadow of the DSU: Addressing Specific Trade Concerns in the WTO SPS and TBT Committees." *Journal of World Trade* 47:4: 729-760.

Holzer, Kateryna. 2019. "Addressing Tensions and Avoiding Disputes: Specific Trade Concerns in the TBT Committee." *Global Trade and Customs Journal* 14:3: 102-116.

World Trade Organization (WTO), Committee on Technical Barriers to Trade. 2018a. "Twenty-Third Annual Review of the Implementation and Operation of the TBT Agreement: Note by the Secretariat." G/TBT/40, 12 March.

World Trade Organization (WTO), Committee on Technical Barriers to Trade. 2018b. "Eighth Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade under Article 15.4." G/TBT/41, 19 November.