

ECONOMIC EFFECTS OF PREFERENTIAL TRADE AGREEMENTS

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Outline

- Introduction: international trade liberalisation
- Types of PTAs
- Why PTAs?
- Towards deep integration
- PTAs and WTO
- Economic effects of PTAs
 - Need to look inside the agreements!
- Key issues and discussion

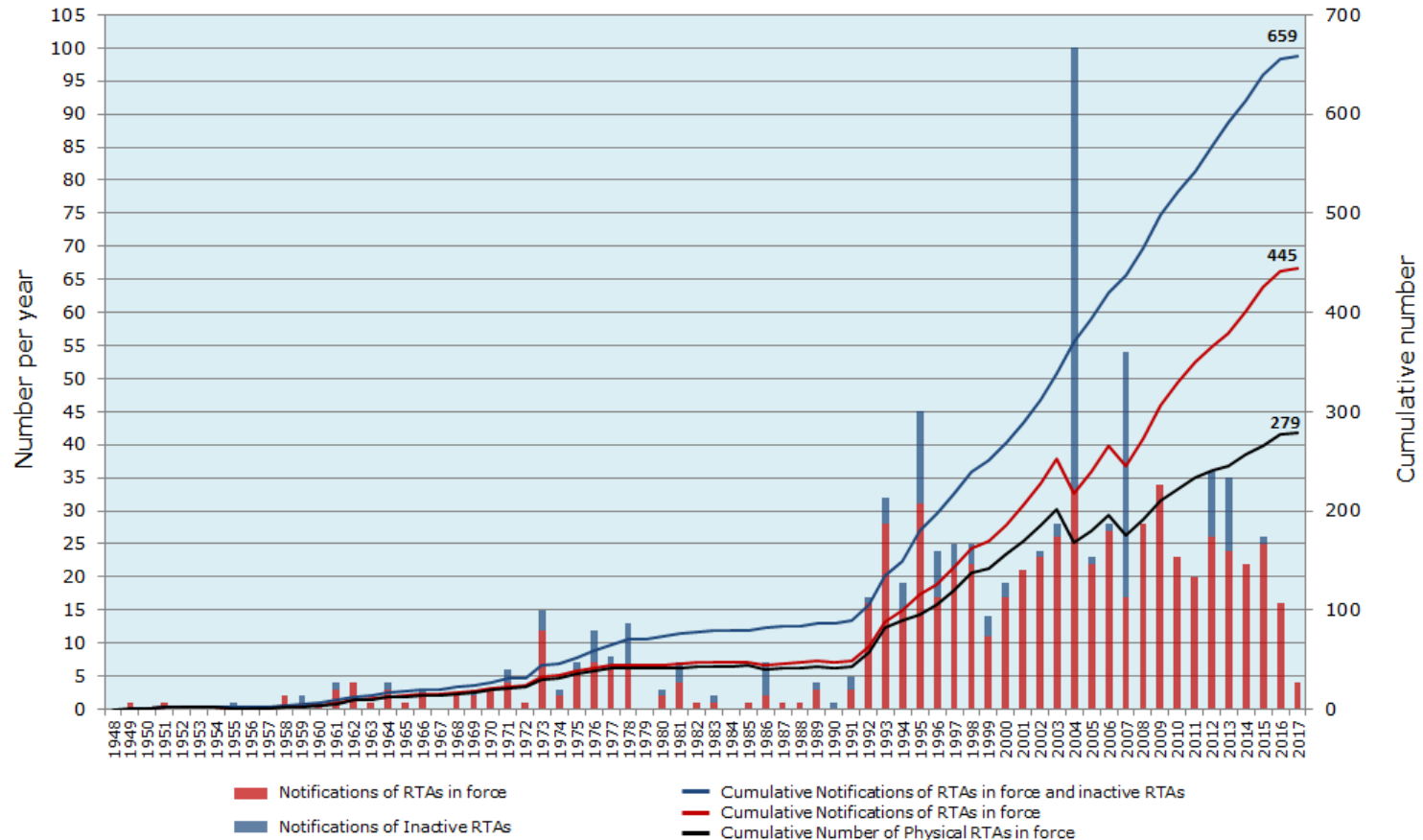
Literature

- Dür, A., Baccini, L. and Elsig, M. (2014) The design of international trade agreements: Introducing a new dataset. *The Review of International Organisations*, vol. 9, p. 353-375
- Kohl, T., Brakman, S. and Garretsen, H. (2016) Do trade agreements stimulate international trade differently? Evidence from 296 trade agreements. *The World Economy*, vol. 39.1, p. 97-131

Introduction

- **Large progress has been made regarding trade liberalisation**
- **GATT 1947**
- **The creation of the WTO solidified progress and fostered further movement**
- **However, since Doha (2001) progress has slowed down**
 - Different types of countries, coalitions, explosion of topics
- **At the same time, marked proliferation of PTAs**
 - Variety of (groups of) countries, varying content
- **Last couple of decades increased focus on these PTAs**

Evolution of Regional Trade Agreements in the world, 1948-2017



Note: Notifications of RTAs: goods, services & accessions to an RTA are counted separately. Physical RTAs: goods, services & accessions to an RTA are counted together. The cumulative lines show the number of notifications/physical RTAs that were in force for a given year.
Source: RTA Section, WTO Secretariat, 20 June 2017.

Source: WTO

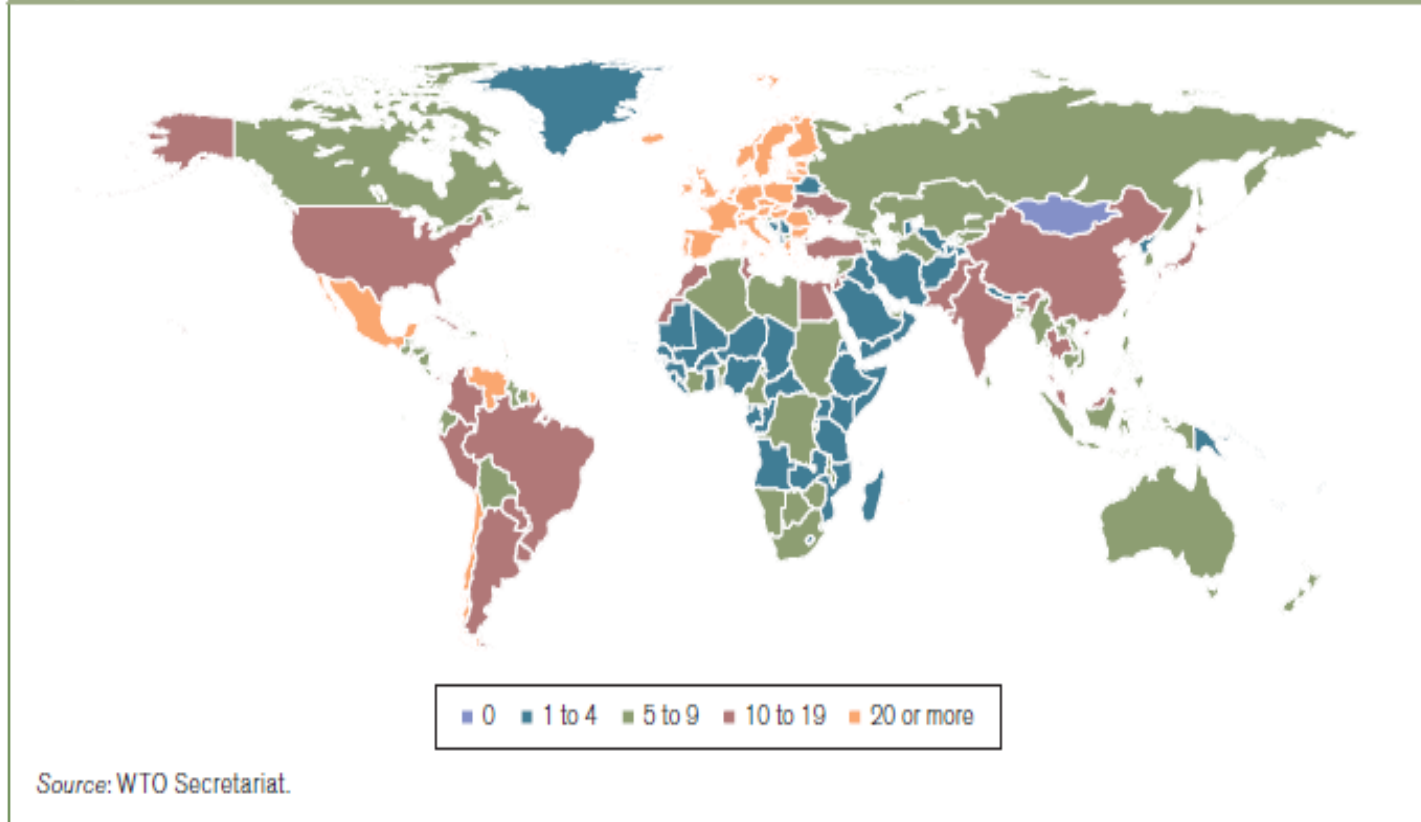
- **Literature mixes two related types of trade agreement**
- **Preferential trade arrangements = unilateral trade preferences**
These include Generalized System of Preferences Schemes
and other non-reciprocal schemes
- **Regional trade agreements = reciprocal trade agreements**
between two or more partners
 - EU
 - Mercosur (Brazil, Argentina, Uruguay, Paraguay Venezuela)
 - Nafta (US, Canada, Mexico)
 - ASEAN (Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam, Laos, Myanmar, Cambodia)

The debate on PTAs focuses on the second type of agreement

WTO and PTAs

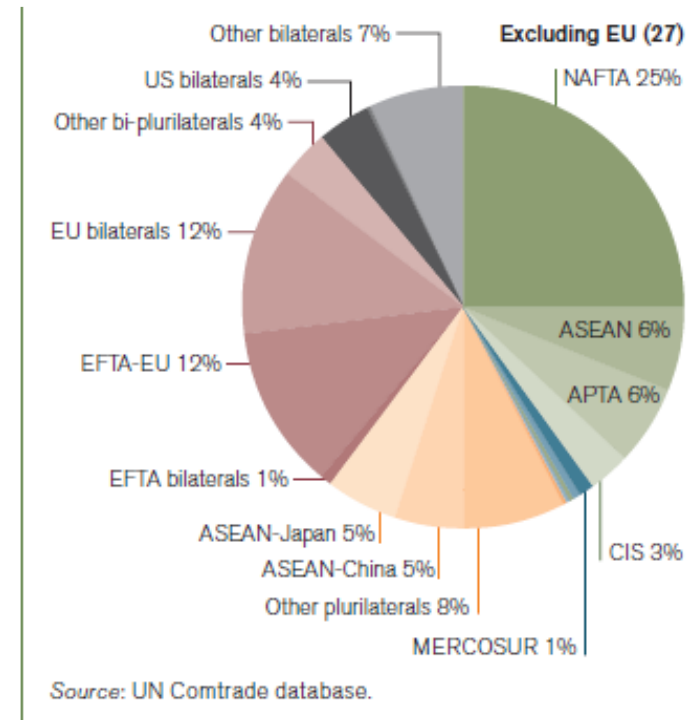
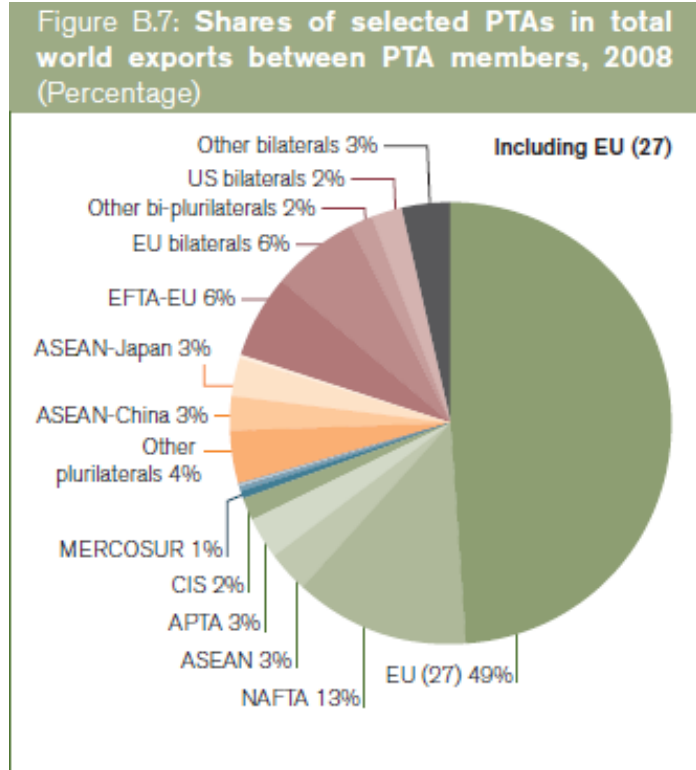
- WTO: principle of non-discrimination
- PTAs: discriminatory, participants benefit from preferred access to markets
- GATT article XXIV: Countries may enter into preferential trade agreements by fully liberalising “substantially” all trade between them while not raising trade barriers for outsiders
- In reality, only a limited degree of worldwide international trade is of the preferential type
- Traditionally, in WTO context PTAs seen as mechanism to fasten trade liberalisation

Map B.1: Membership in PTAs in force, 2010, notified and non-notified PTAs, by country

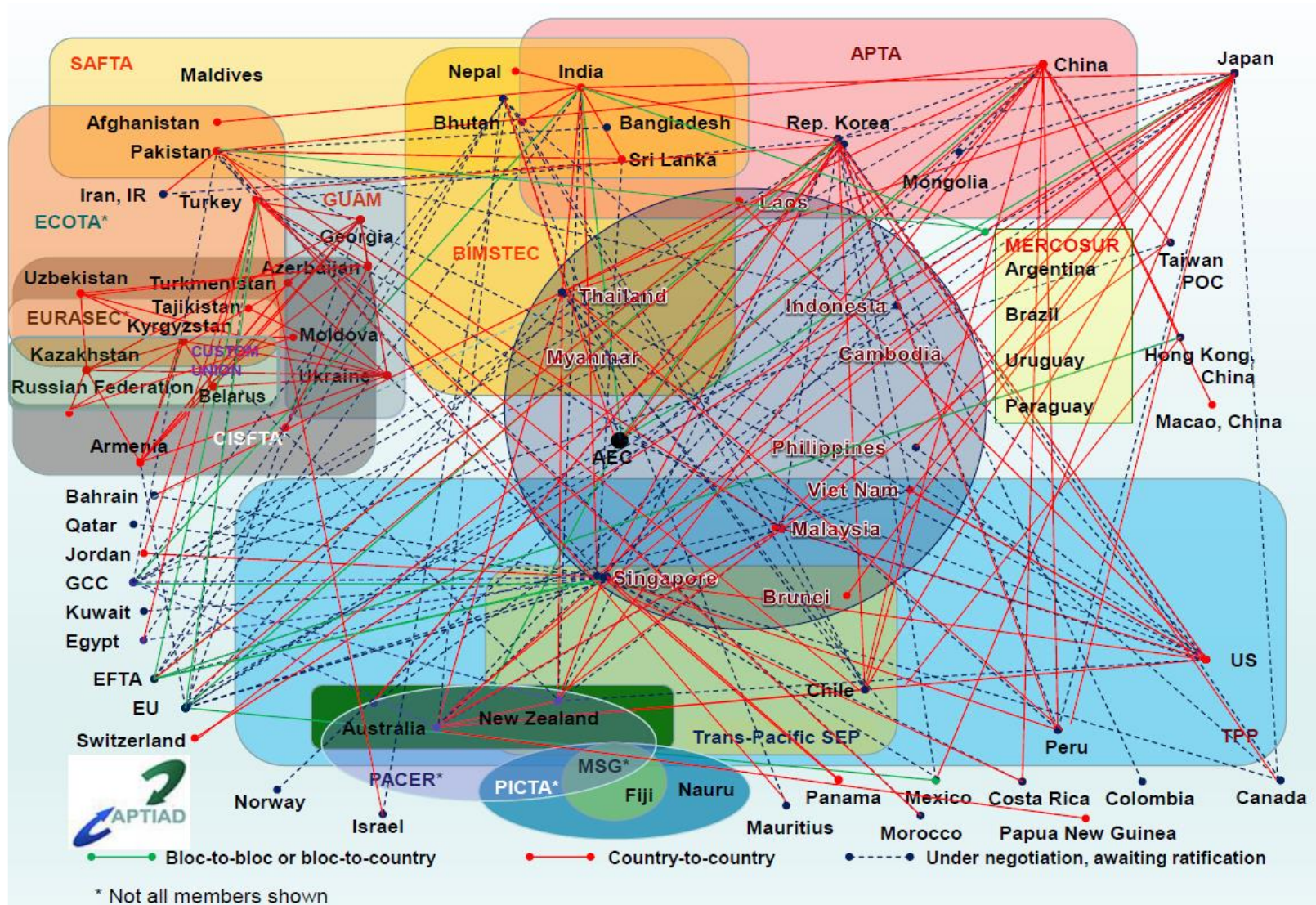


World Trade Report 2011 “The WTO and preferential trade agreements: From co-existence to coherence”

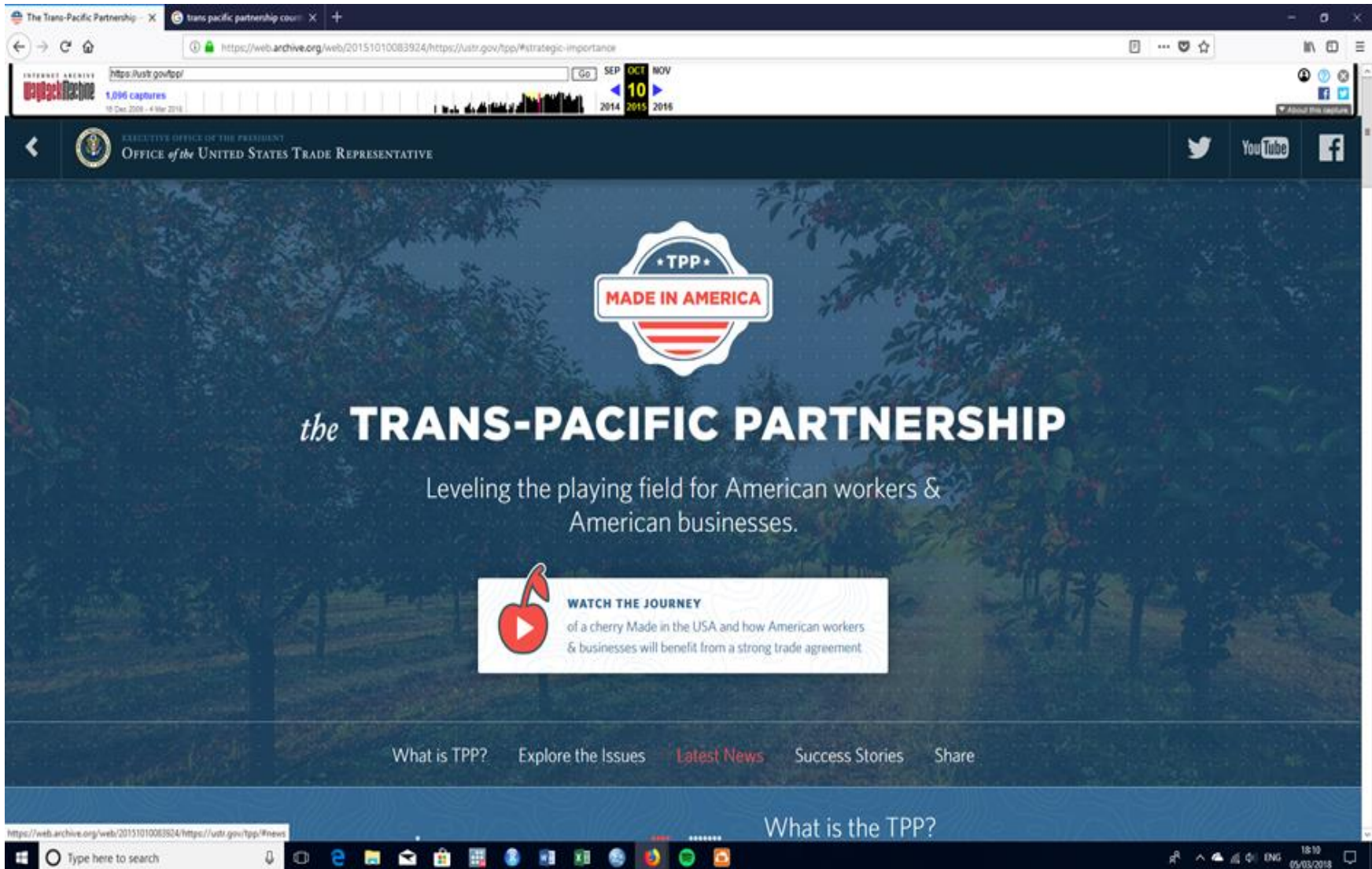
Relative importance largest PTAs



Asia: noodle bowl PTAs



US rejects TPP



The screenshot shows a web browser displaying the official website of the Office of the United States Trade Representative (USTR) for the Trans-Pacific Partnership (TPP). The browser's address bar shows the URL: <https://web.archive.org/web/20151010083924/https://ustr.gov/tpp/#strategic-importance>. The website header includes the USTR logo and the text "EXECUTIVE OFFICE OF THE PRESIDENT OFFICE of the UNITED STATES TRADE REPRESENTATIVE". A navigation bar at the top right contains social media icons for Twitter, YouTube, and Facebook. The main content area features a large "MADE IN AMERICA" logo with a shield and stripes, set against a background of a cherry orchard. Below the logo, the text reads "the **TRANS-PACIFIC PARTNERSHIP**" and "Leveling the playing field for American workers & American businesses." A central call-to-action box with a play button icon says "WATCH THE JOURNEY" and "of a cherry Made in the USA and how American workers & businesses will benefit from a strong trade agreement." At the bottom, a navigation menu includes "What is TPP?", "Explore the Issues", "Latest News", "Success Stories", and "Share". The footer of the page contains the text "What is the TPP?". The browser's taskbar at the bottom shows the Windows Start button, a search bar, and various application icons, with the system tray displaying the date and time as 18:10 on 05/03/2018.

What is the TPP?

The **Trans-Pacific Partnership (TPP)** writes the rules for global trade—rules that will help increase Made-in-America exports, grow the American economy, support well-paying American jobs, and strengthen the American middle class.

Made in America

TPP will make it easier for American entrepreneurs, farmers, and small business owners to sell Made-In-America products abroad by eliminating **more than 18,000 taxes & other trade barriers** on American products across the 11 other countries in the TPP—barriers that put American products at an unfair disadvantage today.

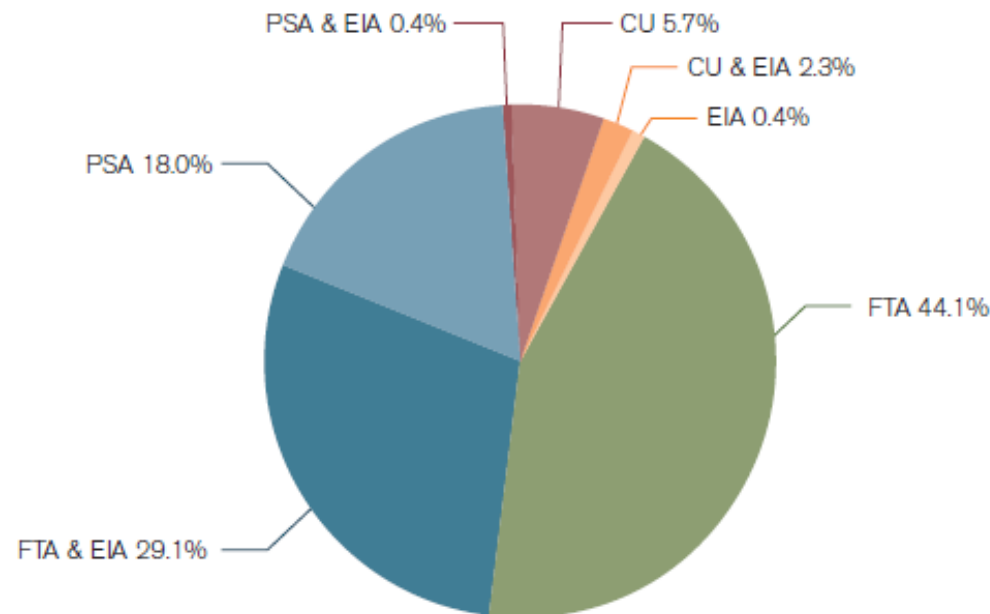
Global Leadership

The rules of the road are up for grabs in Asia. If we don't pass this agreement and **write those rules**, competitors will set weak rules of the road, threatening American jobs and workers while undermining U.S. leadership in Asia.

TPP signed March 8

- **Ministerial Statement: Comprehensive and Progressive Agreement for Trans-Pacific Partnership**
- We, the Ministers and Senior Officials representing Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam, are pleased to announce that today we are signing the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (hereinafter referred to as “the Agreement”).
- Ministers shared the view that, by achieving a high standard and well-balanced outcome, the Agreement will strengthen the mutually-beneficial linkages among our economies, boost trade, investment and economic growth in the Asia-Pacific region, and create new opportunities for businesses, consumers, families, farmers and workers. The Agreement demonstrates our collective commitment to an effective, rules-based and transparent trading system which is open to all economies willing to accept these principles.
- The signing of the Agreement enables us to move to the next phase. Ministers expressed their determination to complete their domestic processes to bring the Agreement into force expeditiously.
- Ministers welcome the interest shown by a number of other economies wishing to accede to the Agreement. This interest affirms our shared objective, through the Agreement, of creating a platform that promotes high standards for broader economic integration in the future.

Figure B.4: Type of PTAs in force, 2010, notified and non-notified PTAs



Note: As explained in the introduction, the term "preferential trade agreement" (PTA) is used in this report to denote reciprocal preferential agreements in general. For the purposes of this figure, we follow the classification in Acharya et al. (2011): A "free trade agreement" (FTA) denotes an agreement between two or more parties in which tariffs and other trade barriers are eliminated on most or all trade and each party maintains its own tariff structure vis-a-vis third parties. A "customs union" (CU) is an agreement between two or more parties in which tariffs and other trade barriers are eliminated on most or all trade and, in addition, the parties adopt a common commercial policy towards third parties which includes the establishment of a common external tariff. The term "partial scope agreement" (PSA) is employed to describe an agreement between two or more parties in which the parties offer each other concessions on a selected number of products or sectors. Economic integration agreements (EIA) refer to agreements on trade in services through which two or more parties offer preferential market access to each other.

Source: WTO Secretariat.

Different types

- **System of preferential tariffs:** lower trade restrictions between participants
 - **Free trade association:** no trade restrictions between members, individual policies towards non members
 - **Customs union:** FTA + common policy towards non-members
 - **Common market:** CU + free movement capital and labour
 - **Economic union:** CM + common economic policies
 - **Economic and monetary union:** EU + common currency
 - **Political union** 😞
-
- Traditionally, assumption has been that once started, there would be an inherent movement towards stronger integration
 - How do you solve problems that occur in a trade agreement?
 - Move to the next phase!
 - **More recent: preferential tariffs and free trade associations with deep integration elements**

Reasons for proliferation PTAs (1)

- **PTAs have been around for a long time**
- **Progress in WTO has slowed down**
 - Victim of its own success?
- **Similar for EU**
 - Monetary Union selective participation
 - EU of two speeds?
- **PTAs good alternative for multilateral negotiations**
 - Flexibility and speed
 - Fewer negotiating partners

Reasons for proliferation PTAs (2)

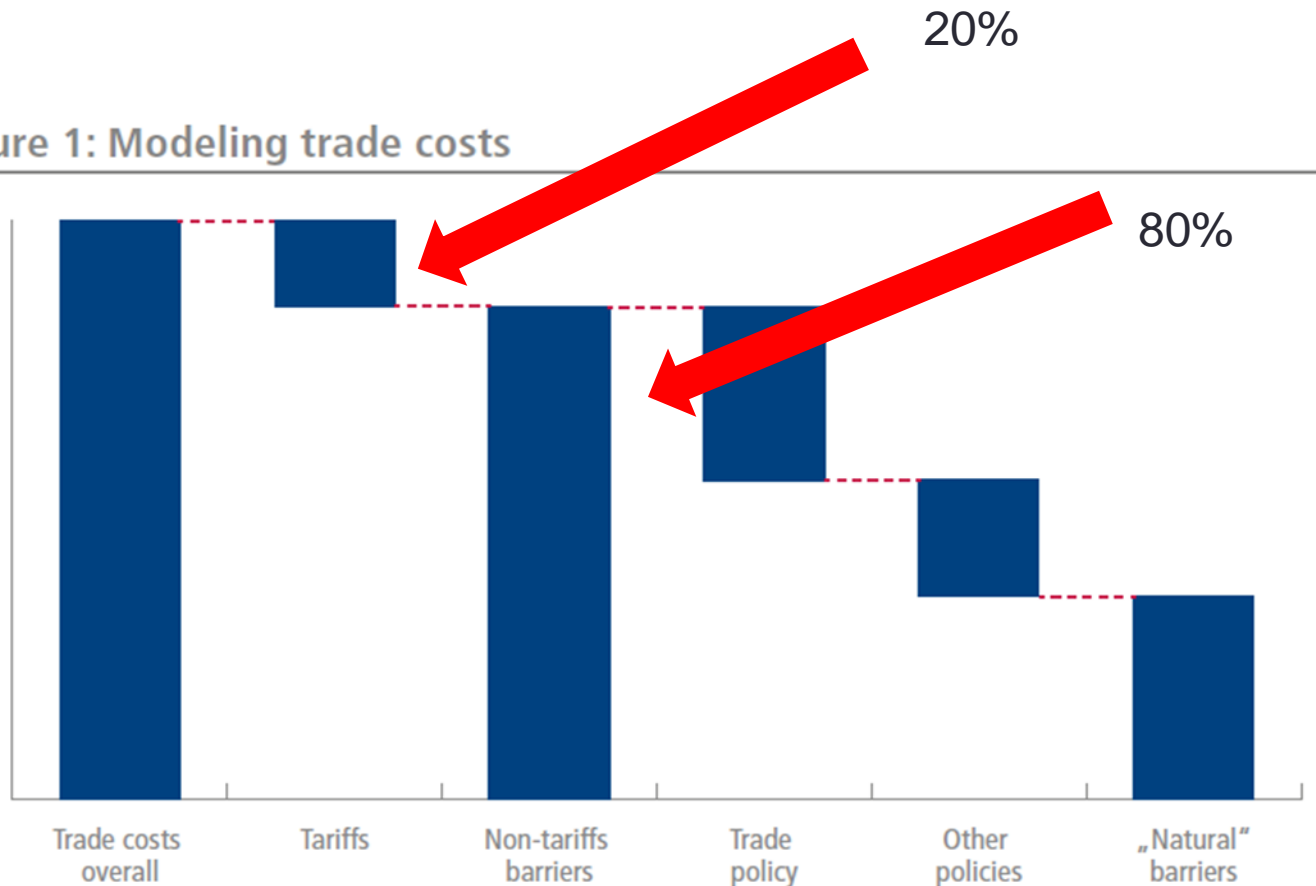
- **Trade liberalisation has changed**
 - Not much more to gain from tariff reduction
 - Non tariff barriers more tricky
 - e.g. Services, finance, technology
- **Substantial gains still to be made, but more detailed in terms of countries, sectors, etc.**
 - e.g. car industry: import US cars with automatic gears
- **Economic stagnation of world economy**
 - Recovery from latest financial crisis goes slow
 - Countries can not wait for WTO-effects to foster growth
 - Countries don't want to miss the boat; every country is doing it
- **Multinational enterprises**
 - General trade liberalisation no longer required
 - Specific deals can still create benefits
 - Global value chains also important for this

PTAs and deep integration

- **Traditionally, agreements characterised by shallow integration**
 - Directly linked to border measures
- **Last couple of decades: growing importance of deep integration**
 - Measures that are linked to domestic policies “behind the border”
- **Deep integration usually linked to the build up of different trade agreements**
 - FTA → CU → CM → EU → EMU
- **Now more and more “lighter” trade agreements contain elements of deep integration**
 - Institutions sufficiently strong in PTAs?

Gains from trade liberalisation

Figure 1: Modeling trade costs



Source: Schematic representation by ifo Institut

Deep integration

- **Protection** of multinational enterprises
- **Liberalisation** of behind the border barriers to trade
- **Harmonisation** of domestic trade rules to enhance efficiency of international production

Non-tariff barriers

- **Limiting Market Access**
 - Import quotas, export restraints
 - Administrative and regulatory burdens discriminating against foreign firms (e.g. procurement)
- **Costs associated with operating in different markets**
 - Approval conditions and procedures
 - Different standards regarding environment, health, consumer protection
 - Industry standards
 - Packaging and information requirements
- **How to assess need for NTBs**
 - Some of these are there for good reasons!
 - Mixture of backgrounds (labour rights, environmental protection)

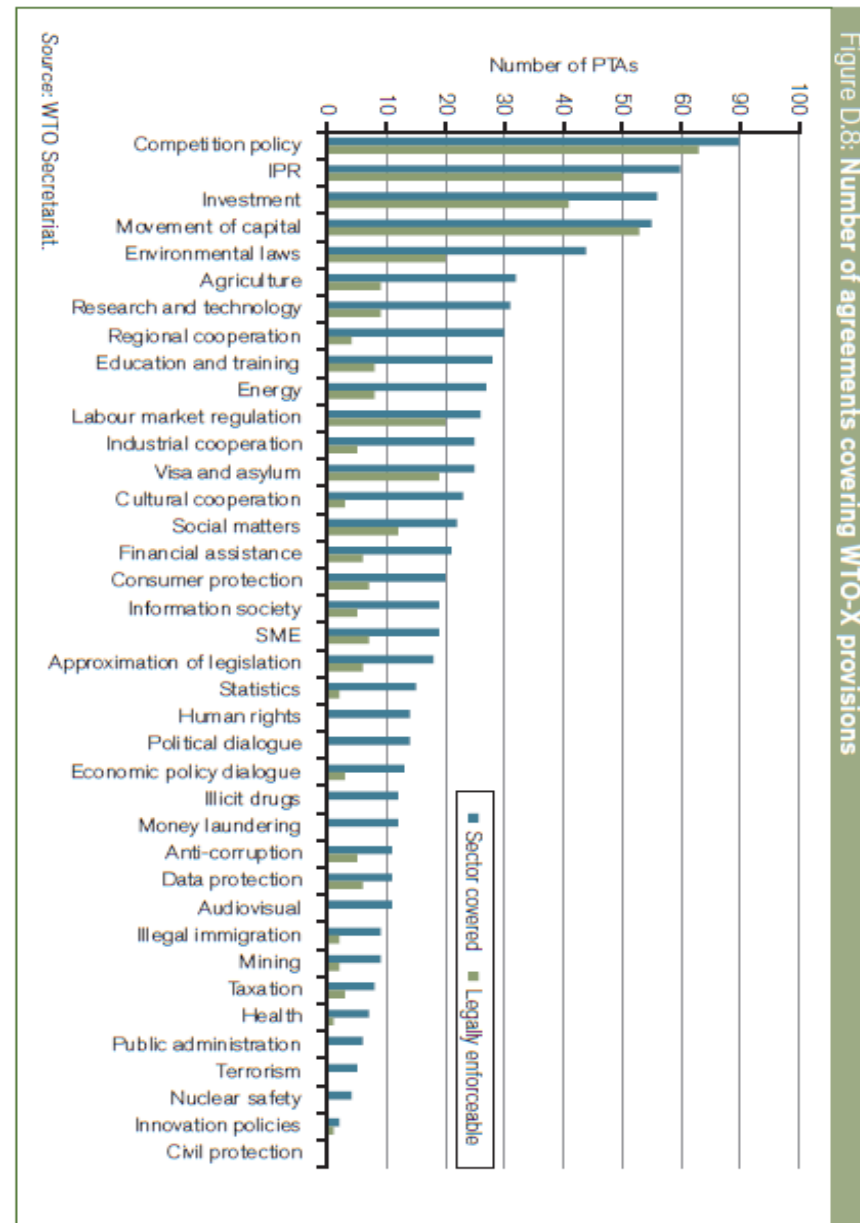
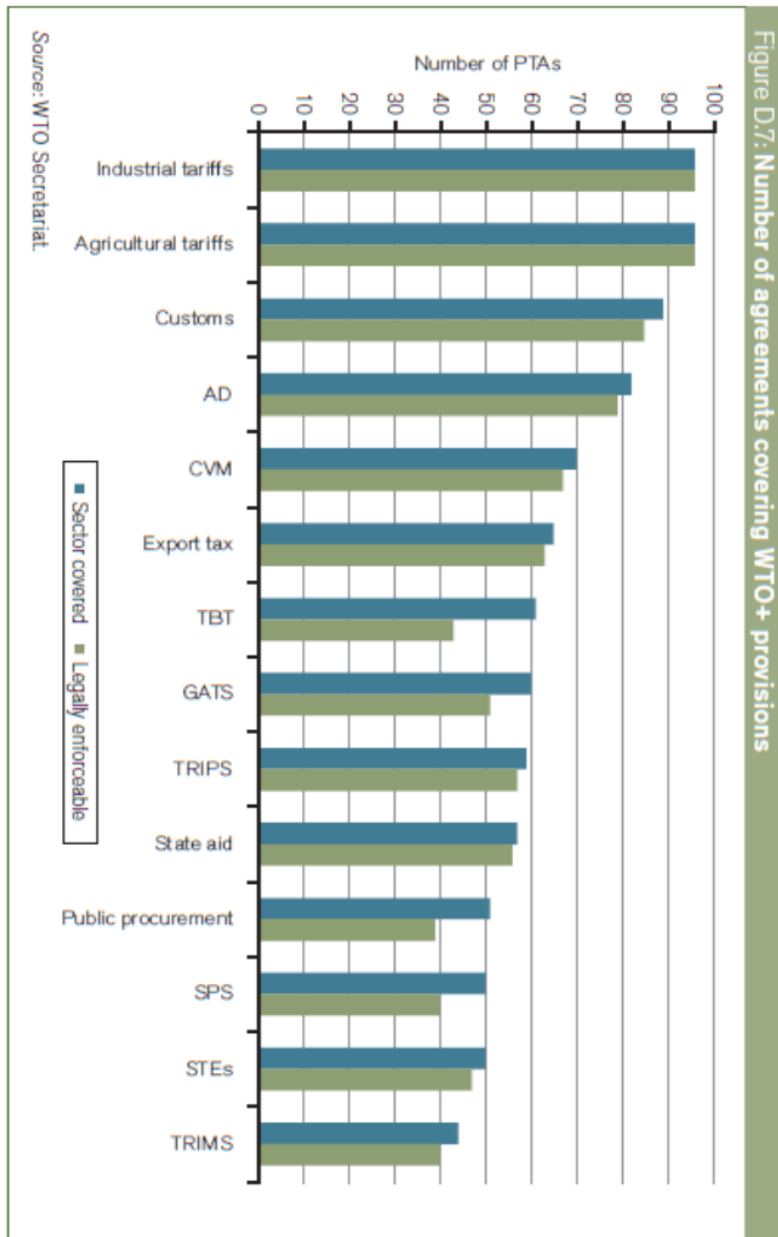
Example: topics negotiated on for TPP

- **Market access for goods**
 - Trade remedies
 - Dispute settlement
- **Cross-border services**
 - Financial services
 - Telecommunications
- **Cooperation & capacity building**
 - Customs
 - E-commerce
 - Environment
 - Labour
- **Competition policy**
 - Government procurement
 - Intellectual property
 - Investment
 - Technical barriers to trade
 - Rules of origin
 - Textiles / apparel

WTO and PTAs

Table D.2: WTO+ and WTO-X policy areas in PTAs		
WTO+ areas	WTO-X areas	
PTA industrial goods	Anti-corruption	Health
PTA agricultural goods	Competition policy	Human rights
Customs administration	Environmental laws	Illegal immigration
Export taxes	IPR	Illicit drugs
SPS measures	Investment measures	Industrial cooperation
State trading enterprises	Labour market regulation	Information society
Technical barriers to trade	Movement of capital	Mining
Countervailing measures	Consumer protection	Money laundering
Anti-dumping	Data protection	Nuclear safety
State aid	Agriculture	Political dialogue
Public procurement	Approximation of legislation	Public administration
TRIMS measures	Audiovisual	Regional cooperation
GATS	Civil protection	Research and technology
TRIPS	Innovation policies	SMEs
	Cultural cooperation	Social matters
	Economic policy dialogue	Statistics
	Education and training	Taxation
	Energy	Terrorism
	Financial assistance	Visa and asylum

Source: Horn et al. (2010).



Effects of PTAs

- **Trade creation versus trade diversion**
 - Static analysis
 - Theoretically, possibility of trade diversion
 - In reality, no real evidence for this
 - Several studies find evidence of trade creation
 - Natural trading partners hypothesis
- **Dynamic analysis emphasizes importance of scale economies, learning effects, spillovers, technology creation, etc.**
 - More difficult to quantify
- **WTO+ versus WTO-x**

PTAs and trade

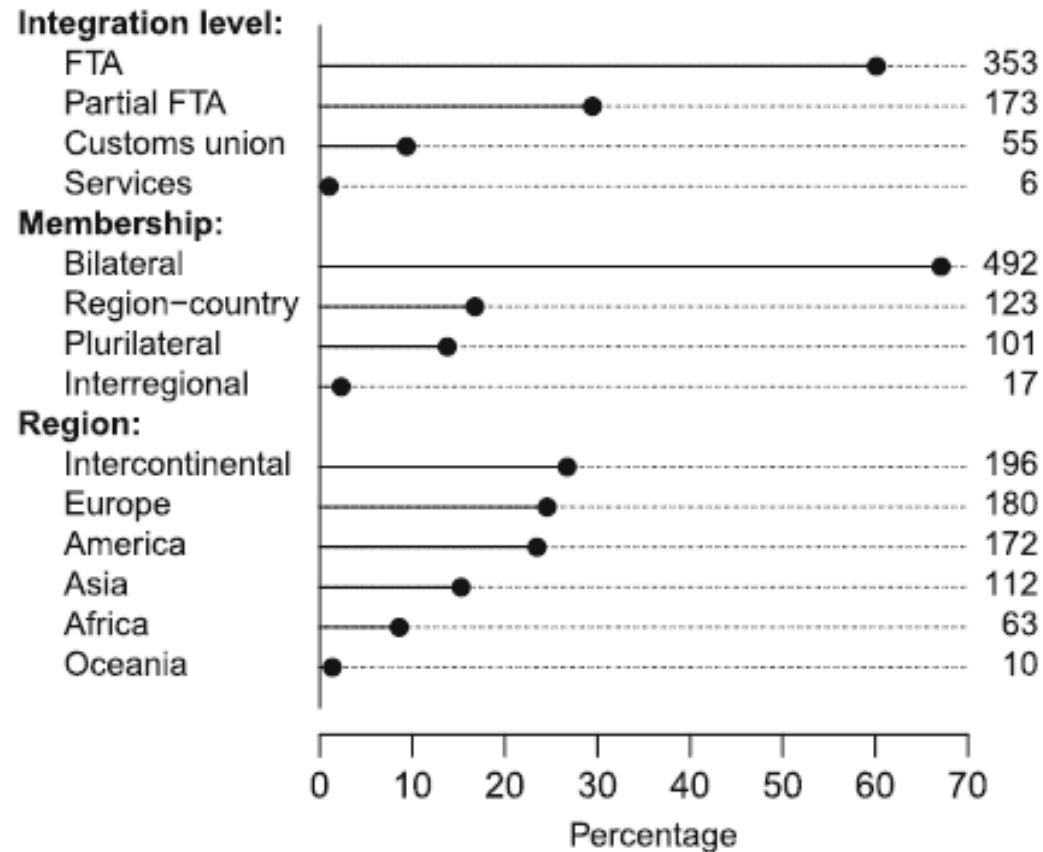
- **Increasing number of studies look at whether PTA membership enhances international trade**
- **In line with studies that have examined trade effects of WTO membership**
- **One set of studies controls for yes/no membership**
- **Findings are mixed**

- **More recent**
 - PTA membership and content of PTA

Dür et al. (2014)

- **733 PTAs signed between 1945-2009 examined**
- **587 agreements with full text availability**
 - 3318 initial members
- **10 broad items**
 - Market access, services, investments, IPR, competition, public procurement, standards, trade remedies, non-trade issues, dispute settlement
- **DESTA dataset**
- <https://www.designoftradeagreements.org/>

Types and regional composition

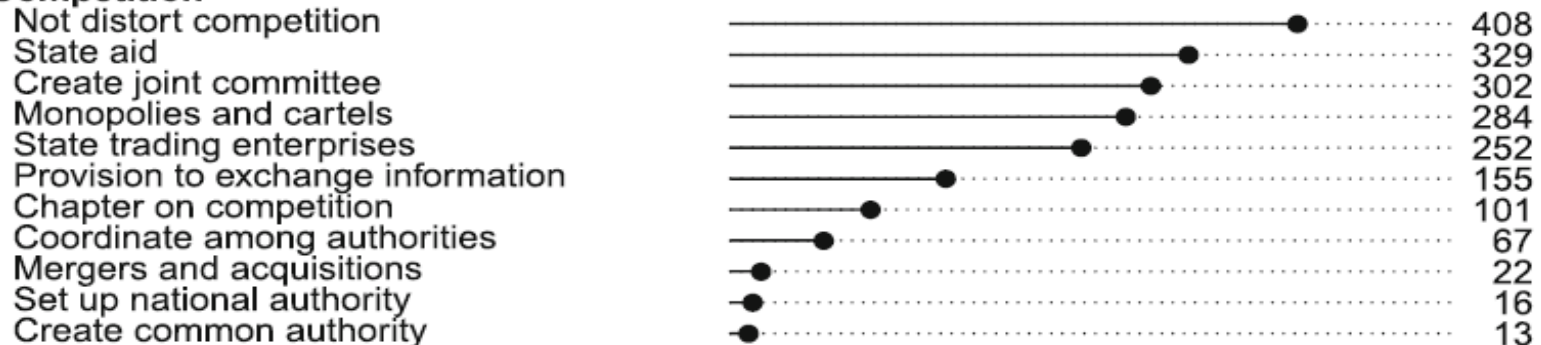


Variation in agreement design (1)

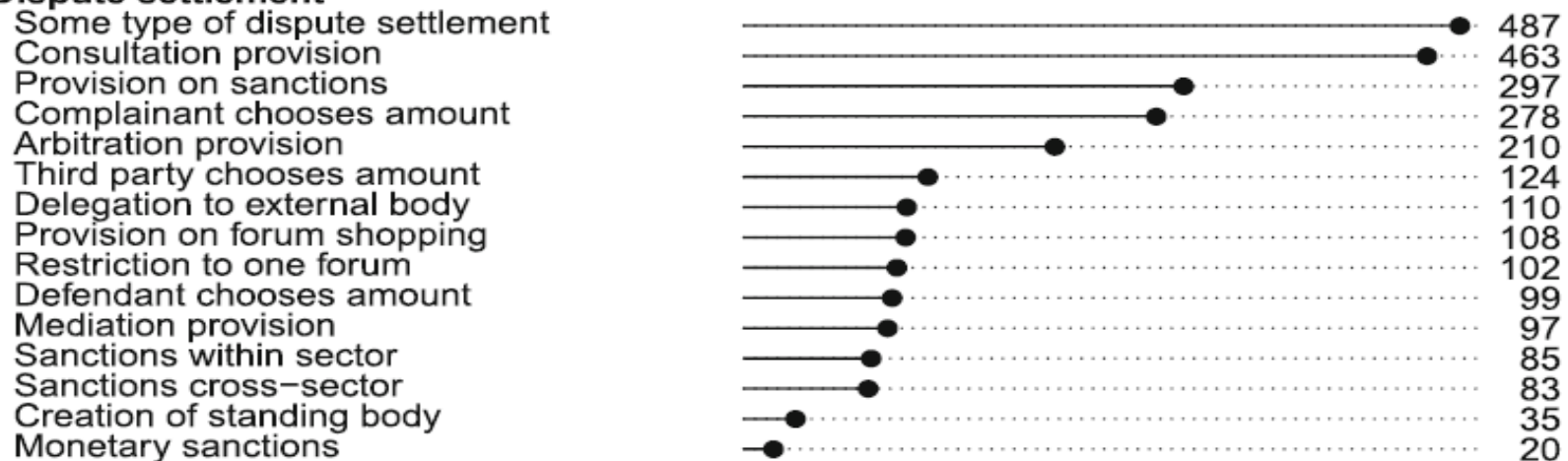
Services		
Service liberalization mentioned		285
GATS reference		190
Movement of natural persons		120
National treatment		102
MFN treatment		80
Negative list approach		79
Positive list approach		51
Investments		
Protection aimed for		218
Restrictions to transfers and payments		93
Non-discrimination (operation)		88
National treatment		87
Non-discrimination (post-establishment)		86
Non-discrimination (pre-establishment)		86
Non-discrimination (mergers)		85
Compensation in case of expropriation		80
MFN treatment		78
Beyond services		76
Investor-Country DSM		76
Based on BIT		17
Only in services chapter		6
IPRs		
At least general reference		261
MFN treatment		115
Paris convention		89
Bern convention		87
Provisions related to enforcement		76
Rome convention		70
References to geographical indications		48
WIPO copyright treaty		35
WIPO phonograms treaty		34
References to pharmaceuticals		19

Variation in agreement design (2)

Competition



Dispute settlement



Measuring the depth of PTAs

Table 1 Operationalization of depth (additive index)

Variable	Value
More than a partial scope agreement?	0/1
Substantive provision on services?	0/1
Substantive provision on investments?	0/1
Substantive provision on standards?	0/1
Substantive provision on public procurement?	0/1
Substantive provision on competition?	0/1
Substantive provision on intellectual property rights?	0/1
Total range	0/7

Development over time

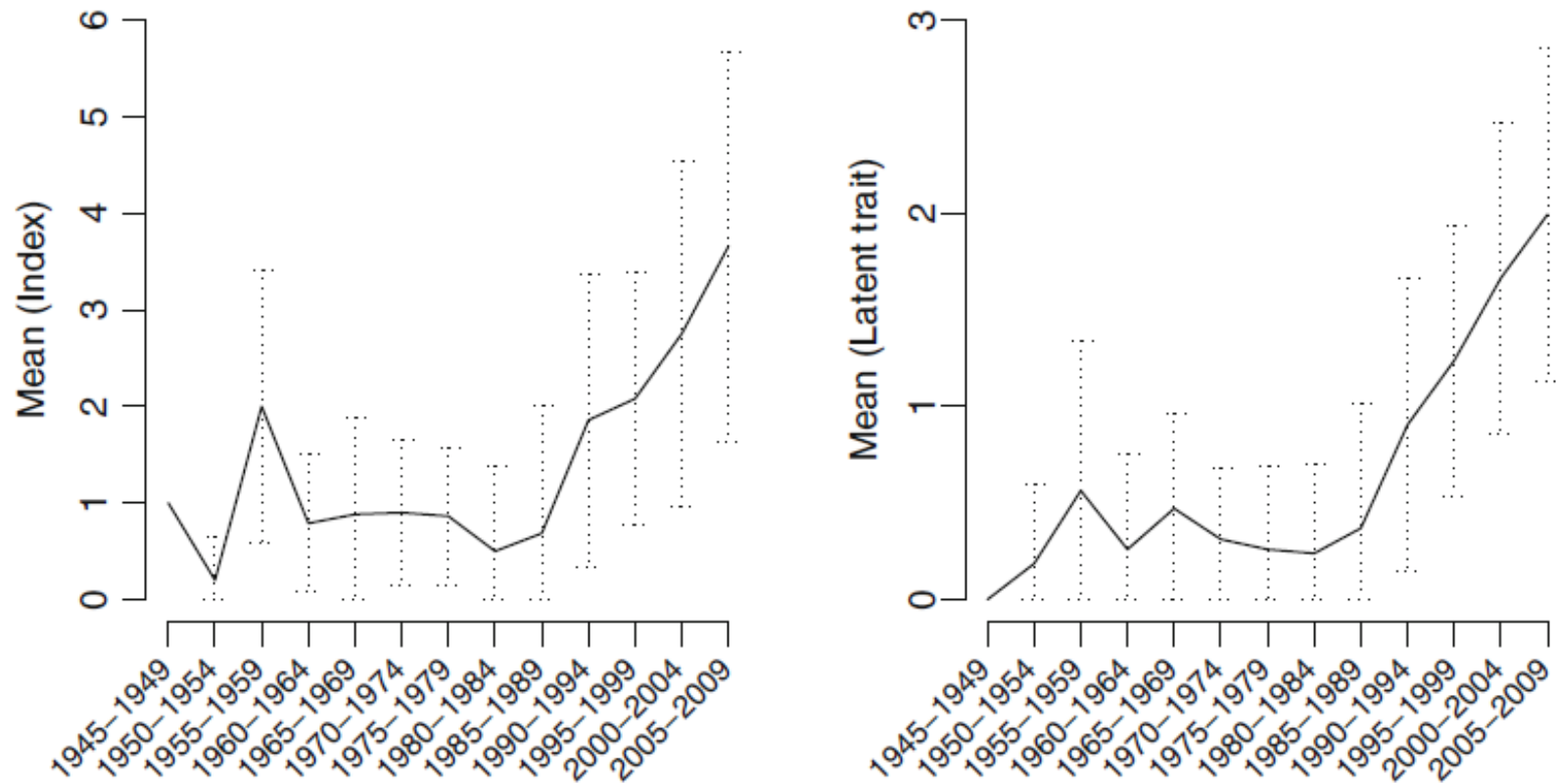
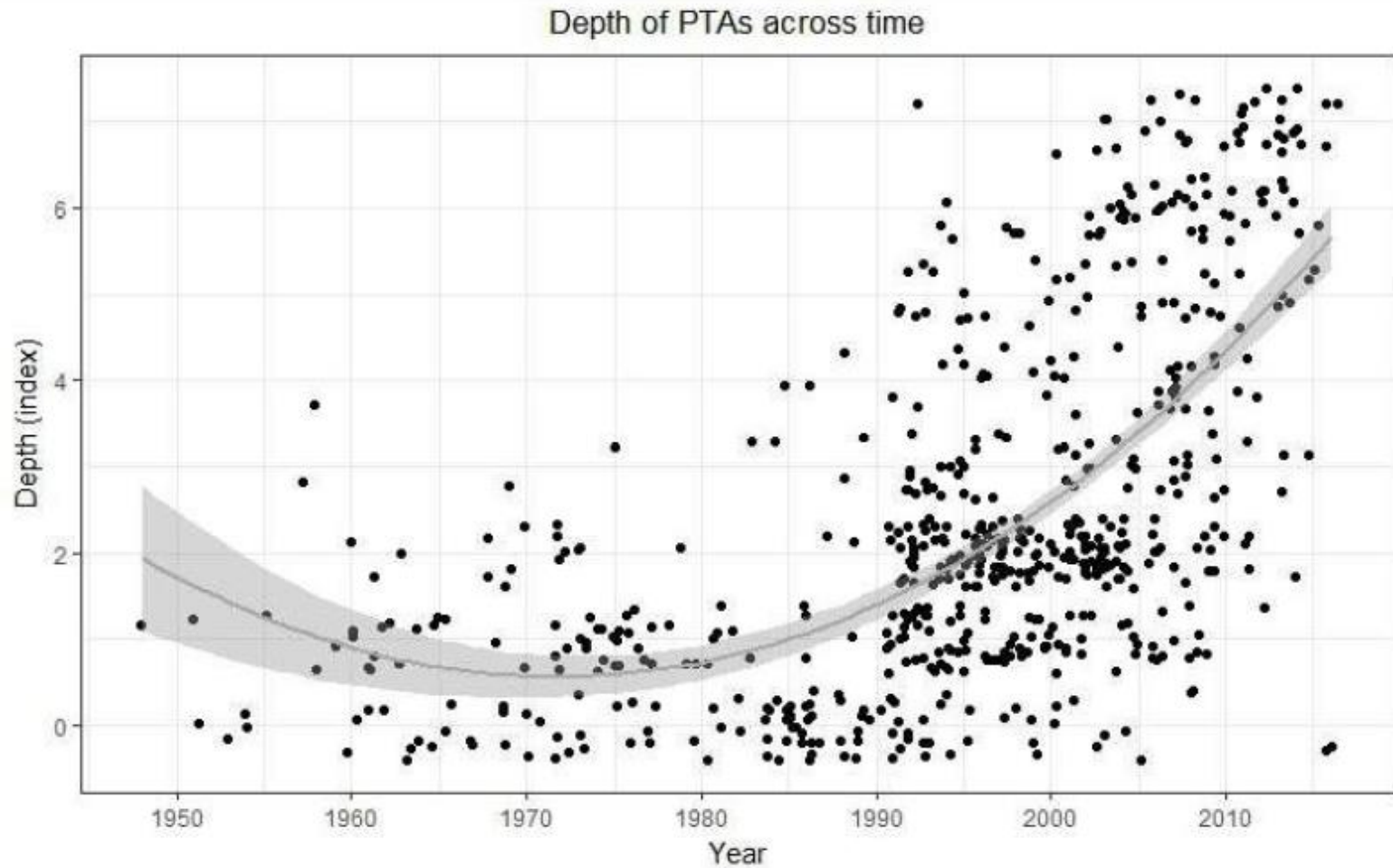


Fig. 5 Depth over time. The vertical bars show the standard errors of the means

Depth of PTAs across time



Empirical strategy

$$\ln Trade_{ij,t} = \alpha + \beta_1 PTA_{ij,t-1} + \beta_2 Depth_{ij,t-1} + \beta_3 X_{ij,t-1} + \gamma_{ij} + \theta_t + \epsilon. \quad (1)$$

Control variables

GATT/WTO

Regime

Conflict

lnGDP

Distance

Contiguity

Common language

Common colony

Common legal system

Common currency

Estimated effects of PTA and depth

Table 2 Baseline models

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	ln(Trade)	ln(Trade)	ln(Trade)	ln(Trade)	ln(Trade)	ln(Trade)
<i>PTA</i>	0.265*** (0.015)	0.053*** (0.017)	0.100*** (0.016)	-0.007 (0.022)	0.209*** (0.015)	0.205*** (0.021)
<i>Depth(index)</i>		0.155*** (0.006)			0.125*** (0.006)	
<i>Depth(latent)</i>			0.260*** (0.013)			
<i>Shallow_anticipatory</i>				-0.100*** (0.012)		0.040*** (0.014)
<i>Shallow_short - term</i>				0.087*** (0.021)		-0.014 (0.022)
<i>Shallow_medium - term</i>				0.175 (0.022)		0.107*** (0.022)
<i>Shallow_Long - term</i>				0.286*** (0.031)		0.122*** (0.030)
<i>Deep_anticipatory</i>				0.269*** (0.015)		0.212*** (0.012)
<i>Deep_short - term</i>				0.452*** (0.020)		0.236*** (0.019)
<i>Deep_medium - term</i>				0.363*** (0.019)		0.384*** (0.020)
<i>Deep_Long - term</i>				0.207*** (0.034)		0.372*** (0.031)

Model 6
omits
other
controls

Long period effects

	Before 1990	After 1990
GATT/WTO	0.19 (0.02)a	0.02 (0.013)
PTA	0.36 (0.02)a	0.31 (0.03)a
GATT/WTO	0.20 (0.02)a	0.01 (0.012)
PTA	0.28 (0.03)a	0.05 (0.03)c
Depth	0.09 (0.01)a	0.10 (0.001)a

Effects PTAs and time

Table 3 The effect of PTAs on trade

Main variables	Increase in trade (%)	C.I.
Model 1 (PTA & GATT/WTO) & Model 4 (design variables)		
<i>Deep_anticipatory</i>	31	[27, 35]
<i>Deep_short – term</i>	57	[51, 63]
<i>Deep_middle – term</i>	44	[39, 49]
<i>Deep_long – term</i>	23	[15, 32]
<i>Shallow_anticipatory</i>	-10	[-12, -7]
<i>Shallow_short – term</i>	9	[5, 14]
<i>Shallow_middle – term</i>	19	[14, 24]
<i>Shallow_long – term</i>	33	[25, 41]
<i>PTA</i>	31	[27, 34]
<i>GATT/WTO</i>	4	[2, 7]

Kohl et al. (2016)

TABLE 1
Descriptive Statistics of Provisions' Coverage and Legal Enforceability

<i>Type</i>	<i>Provision</i>	<i>(1)</i> <i>Number</i> <i>Covered</i>	<i>(2)</i> <i>Number</i> <i>Enforceable</i>	<i>(3)</i> <i>Sample</i> <i>Covered</i> <i>(%)</i>	<i>(4)</i> <i>Sample</i> <i>Enforceable</i> <i>(%)</i>	<i>(5)</i> <i>Column</i> <i>2/Column 1</i> <i>(%)</i>
WTO ⁺	Agriculture	189	188	64	64	99
	AD and CVM	220	217	74	73	99
	Customs administration	216	214	73	72	99
	Export restrictions	256	256	86	86	100
	Import restrictions	292	292	99	99	100
	Intellectual property rights	191	180	65	61	94
	Investment	162	85	55	29	52
	Public procurement	172	103	58	35	60
	Sanitary and phytosanitary	182	163	61	55	90
	Services	168	86	57	29	51
	State aid	190	187	64	63	98
	State trading enterprises	162	149	55	50	92
	Technical barriers to trade	187	138	63	47	74
WTO ^x	Capital mobility	212	212	72	72	100
	Competition	209	181	71	61	87
	Environment	89	66	30	22	74
	Labour	48	43	16	15	90

Index of trade heterogeneity

For WTO⁺ provisions, agreement *A*'s total number of WTO⁺ provisions is divided by the maximum number of provisions that can be covered. The maximum number is 13. Hence, the index for WTO⁺ coverage is as follows:

$$IWTO_A^{+,z} = \sum WTO_A^{+,z} / 13, \quad (1)$$

where superscript *z* (*z* = *C*, *E*) is *C* for provisions that are covered by agreement *A* regardless of their legal enforceability, and *E* for only those provisions that are legally enforceable. *IWTO*⁺ ranges between 0 (incomprehensive; no coverage of WTO⁺ provisions) and 1 (comprehensive; full coverage of WTO⁺ provisions).

Similarly, the index for WTO^X coverage is based on a maximum of four provisions and is as follows:

$$IWTO_A^{X,z} = \sum WTO_A^{X,z} / 4. \quad (2)$$

$$TAI_A^z = \frac{1}{2} (IWTO_A^{+,z} + IWTO_A^{X,z})$$

$$TAI_A^{z*} = \frac{1}{17} \left(\sum WTO_A^{+,z} + \sum WTO_A^{X,z} \right)$$

Identifying effect on trade

$$\ln(M_{ijt}) = \alpha + \beta_1 \ln(GDP_{it}) + \beta_2 \ln(GDP_{jt}) + \beta_3 \ln(Distance_{ij}) + \beta_4 TA_{ijt} + F_{it} + F_{jt} + F_{ij} + \varepsilon_{ijt}$$

$$\ln(M_{ijt}) = \alpha + \beta_1 TA_{ijt} + F_{it} + F_{jt} + F_{ij} + \varepsilon_{ijt}$$

M = imports

221 countries

1948-2011

TABLE 5
Main Results

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
TA	0.443*** (0.025)						
TAI ^C		0.521*** (0.033)					
TAI ^E			0.511*** (0.033)				
TAI ^{C*}				0.593*** (0.037)			
TAI ^{E*}					0.606*** (0.037)		
IWTO ^{+, C}						0.166*** (0.083)	
IWTO ^{X, C}						0.354*** (0.084)	
IWTO ^{+, E}							0.545*** (0.093)
IWTO ^{X, E}							0.062 (0.091)
R ²	0.928	0.928	0.928	0.928	0.928	0.928	0.928
Adj. R ²	0.922	0.922	0.922	0.922	0.922	0.922	0.922
N	601,986	601,986	601,986	601,986	601,986	601,986	601,986

Notes:

(i) Dependent variable: $\ln(M)_{ijt}$. Model estimated with OLS, importer-year, exporter-year and importer-exporter fixed effects. Robust standard errors (clustered by dyad) are in parentheses.

(ii) Coefficients marked ***/**/* are statistically significant at the 1/5/10% level. Other regressors are perfectly collinear with the fixed effects. Fixed effects not reported for brevity.

$$TAI_A^z = \frac{1}{2} (IWTO_A^{+,z} + IWTO_A^{X,z})$$

$$TAI_A^{z*} = \frac{1}{17} \left(\sum WTO_A^{+,z} + \sum WTO_A^{X,z} \right)$$

Interacting with WTO membership

TABLE 6
Interaction with WTO Membership of Trade Agreements' (TA) Participants

Variable	(1)	(2)	(3)	(4)
TAI ^C	-1.099*** (0.348)			
TAI ^E		-1.169*** (0.385)		
TAI ^{C*}			-1.014*** (0.316)	
TAI ^{E*}				-1.123*** (0.374)
Mixed membership	0.732*** (0.061)	0.745*** (0.060)	0.814*** (0.066)	0.798*** (0.065)
All in WTO	0.157* (0.091)	-0.068 (0.080)	0.299*** (0.101)	-0.017 (0.091)
TAI ^C × mixed membership	0.415 (0.360)			
TAI ^C × all in WTO	1.633** (0.367)			
TAI ^E × mixed membership		0.402 (0.397)		
TAI ^E × all in WTO		2.143*** (0.402)		
TAI ^{C*} × mixed membership			0.208 (0.329)	
TAI ^{C*} × all in WTO			1.337*** (0.342)	
TAI ^{E*} × mixed membership				0.265 (0.387)
TAI ^{E*} × all in WTO				1.994*** (0.395)
R ²	0.928	0.928	0.928	0.928
Adj. R ²	0.922	0.922	0.922	0.922
N	601,986	601,986	601,986	601,986

Notes:

(i) Dependent variable: $\ln(M)_{ijt}$. Model estimated with OLS, importer-year, exporter-year and importer-exporter fixed effects. Robust standard errors (clustered by dyad) are in parentheses.

(ii) Coefficients marked ***/**/* are statistically significant at the 1/5/10% level.

(iii) Other regressors are perfectly collinear with the fixed effects.

(iv) Fixed effects not reported for brevity.

Key issues (1)

- **Strong increase in PTAs**
- **Not surprising?**
 - Economic context: countries in search for growth
 - Multinational enterprises and global value chains
 - GATT/WTO has obtained initial gains from trade liberalisation
- **Incentives not there for countries to pursue similar goals via WTO**
 - But at some stage successful PTAs need to be more formalised / extended / increased integration
 - WTO can play key role here?
 - This can take some time!
 - Many sensitive topics are addressed in PTAs

Key issues (2)

- **Most PTAs don't reach the CU stage of integration**
 - But they cover a lot, much more than the traditional theories contained!
- **Deep integration is striking**
 - Protection, liberalization, harmonisation
 - Trial and error, large heterogeneity
 - Little attention is paid to the question whether PTAs are efficient in their structure / actions
 - What is best practice?
- **Overall effects**
 - Little evidence of trade diversion, some evidence of trade creation
 - Heterogeneity and wide range of contents makes it difficult to identify full welfare effects
- **Empirical studies find that the content of PTAs is important for their positive impact on trade**

Discussion points (1)

Future integration: WTO or PTAs?

Discussion points (2)

PTA integration: are the protesters right?