Public Affairs 856
Trade, Competition, and Governance in a Global Economy

Lecture 21

4/5/2017

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UW Madison

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Outline

- Multilateralism
- Regional Trading Arrangements
- New regionalism
- TPP
- TIPP

Introduction

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- To avoid such losses due to tariffs, international agreements to reduce tariffs and move toward free trade are needed. These international agreements take several forms.
- The WTO is a **multilateral agreement**, involving many countries, with agreement to lower tariffs between all the members.
- There are also smaller **regional trade agreements**, involving several countries, often located near each other.

1 International Trade Agreements

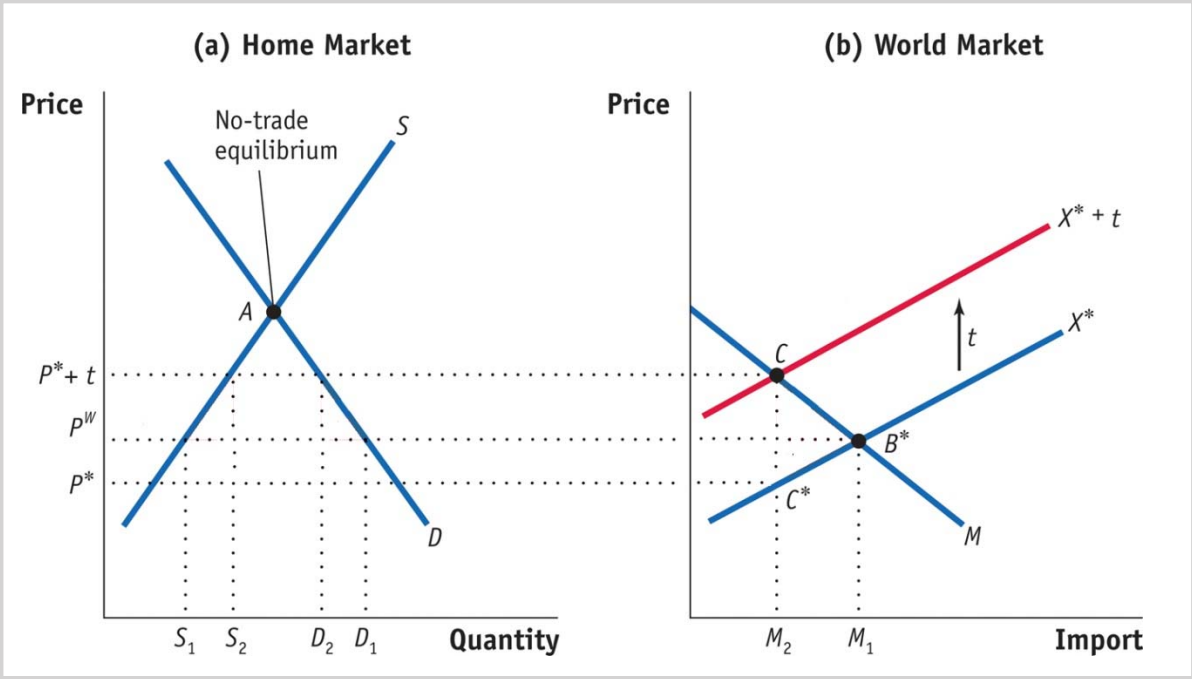
- When countries seek to reduce trade barriers between themselves, they enter into a **trade agreement**—a pact to reduce or eliminate trade restrictions.
- Under the **most favored nation principle** of the WTO, the lower tariffs agreed to in multilateral negotiations must be extended *equally* to all WTO members.
- The WTO is an example of a multilateral trade agreement, which we analyze first in this section.

1 International Trade Agreements

The Logic of Multilateral Trade Agreements

Tariffs for a Large Country

FIGURE 11-1 (1 of 2) Tariff for a Large Country



The tariff shifts up the export supply curve from X^* to $X^* + t$.

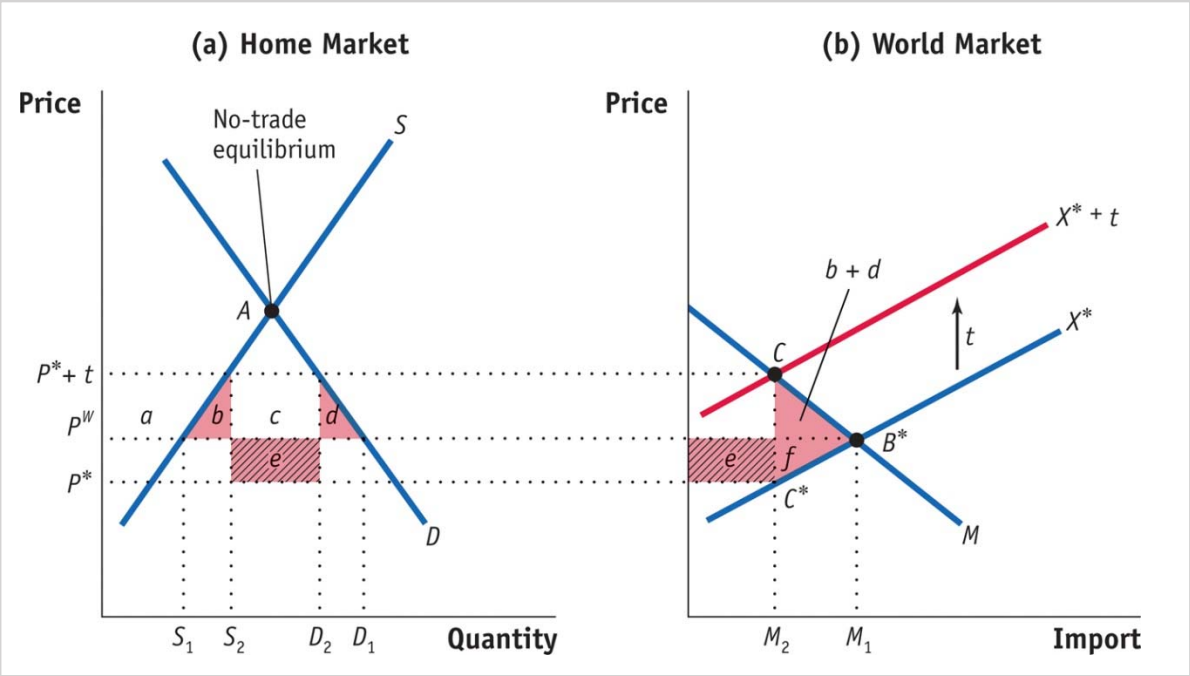
As a result, the Home price increases from P^W to $P^* + t$, and the Foreign price falls from P^W to P^*.

1 International Trade Agreements

The Logic of Multilateral Trade Agreements

Tariffs for a Large Country

FIGURE 11-1 (2 of 2) Tariff for a Large Country (continued)



The deadweight loss at Home is the area of the triangle ($b + d$), and Home also has a terms-of-trade gain of area e.

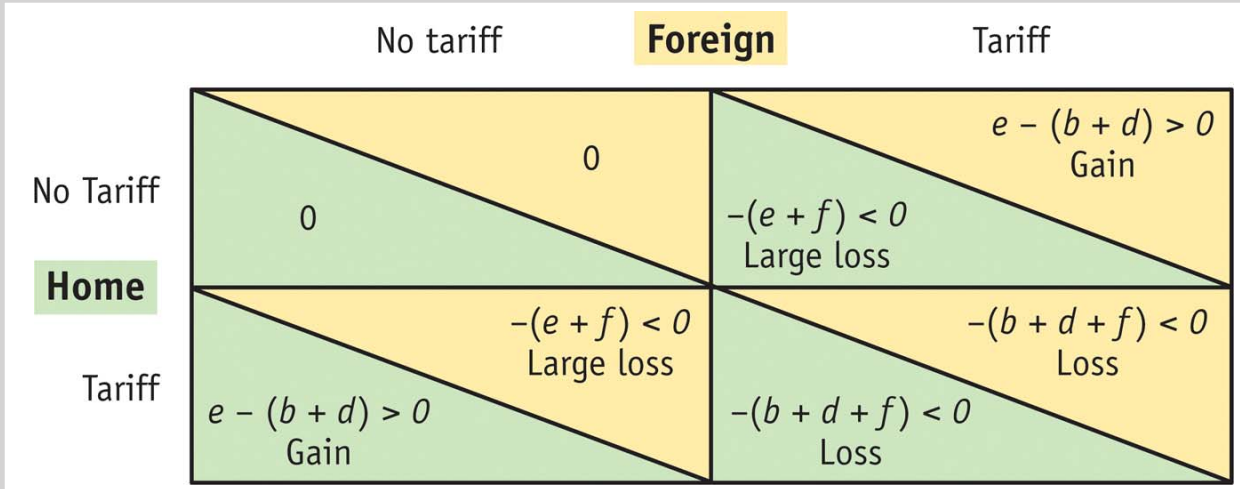
Foreign loses the area ($e + f$), so the net loss in world welfare is the triangle ($b + d + f$).

1 International Trade Agreements

The Logic of Multilateral Trade Agreements

Payoff Matrix

FIGURE 11-2



Payoffs in a Tariff Game This payoff matrix shows the welfare of the Home and Foreign countries as compared with free trade (upper-left quadrant in which neither country applies a tariff). Welfare depends on whether one or both countries apply a tariff. The structure of payoffs is similar to the "**prisoner's dilemma**" because both countries suffer a loss when they both apply tariffs, and yet this is the unique Nash equilibrium.

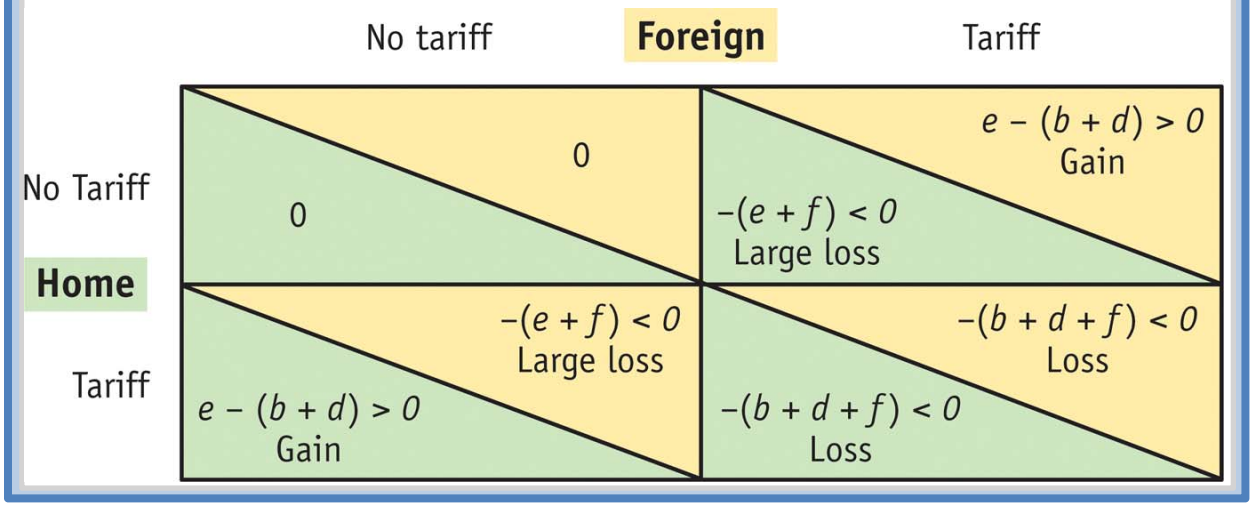
1 International Trade Agreements

The Logic of Multilateral Trade Agreements

J.Baker1

Prisoner's Dilemma The pattern of payoffs in Figure 11-2 has a special structure called the prisoner's dilemma. Each country acting on its own has an incentive to apply a tariff, but if they both apply tariffs, they will both be worse off.

FIGURE 11-2 (revisited)



Nash Equilibrium The only Nash equilibrium in Figure 11-2 is for both countries to apply a tariff (lower-right quadrant). The Nash equilibrium in this case leads to an outcome that is undesirable for both countries even though it is the best outcome for each country given that the other country is imposing a tariff.

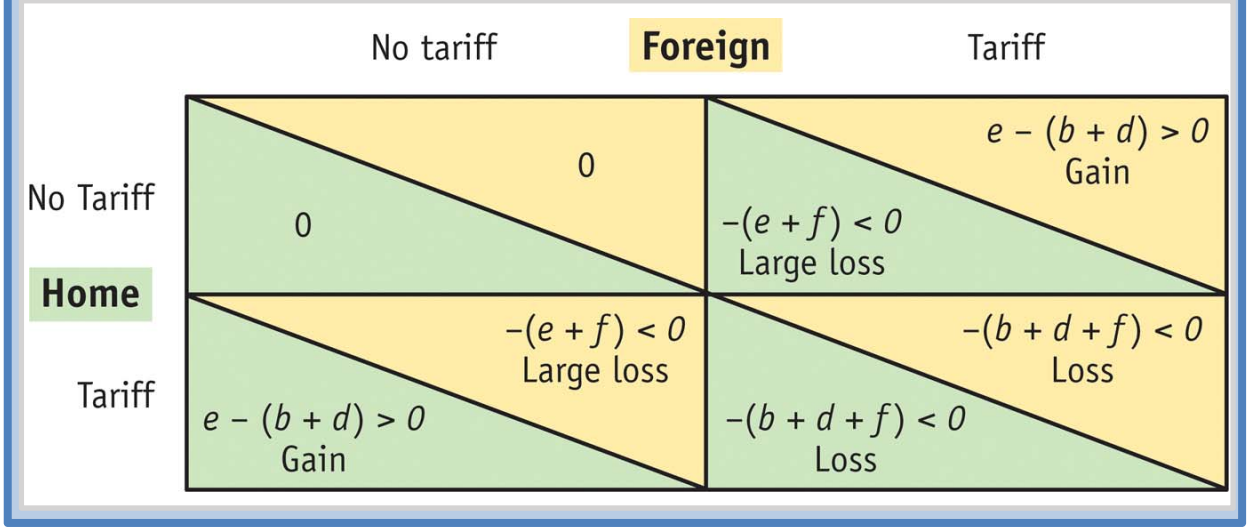
Slide 8

J.Baker1 Switched subheads of Nash & Prisoner's to match how they appear in the textbook.
JNB, 7/16/2014

1 International Trade Agreements

The Logic of Multilateral Trade Agreements

FIGURE 11-2 (revisited)



Trade Agreement

- This bad outcome can be avoided if the countries enter into some kind of trade agreement.
- The WTO mechanism eliminated the prisoner's dilemma by providing an incentive to remove tariffs; the outcome was in the preferred upper-left quadrant of the payoff matrix in Figure 11-2, rather than the original Nash equilibrium in the lower-right quadrant.

1 International Trade Agreements

Regional Trade Agreements

Under regional trade agreements, several countries eliminate tariffs among themselves but maintain tariffs against countries outside the region.

Regional trade agreements are sometimes called **preferential trade agreements**, to emphasize that the member countries are favored over other countries.

Free-Trade Area

A **free-trade area** is a group of countries agreeing to eliminate tariffs (and other barriers to trade) among themselves but keeping whatever tariffs they formerly had with the rest of the world.

1 International Trade Agreements

Regional Trade Agreements

Customs Union

A **customs union** is similar to a free-trade area, except that in addition to eliminating tariffs among countries in the union, the countries within a customs union also agree to a *common* schedule of tariffs with each country outside the union.

Rules of Origin

Free-trade areas have complex **rules of origin**, which specify what type of goods can be shipped duty-free within the free-trade area. These rules are not needed in a customs union.

Trade Creation and Trade Diversion

When a regional trade agreement is formed and trade increases between member countries, the increase in trade can be of two types.

- The first type of trade increase, **trade creation**, occurs when a member country imports a product from another member country that it formerly produced for itself.

- The second reason for trade to increase within a regional agreement is due to **trade diversion**, which occurs when a member country imports a product from another member country that it formerly imported *from a country outside of the new trade region.*

1 International Trade Agreements

Numerical Example of Trade Creation and Diversion

TABLE 11-1 Cost of Importing an Automobile Part

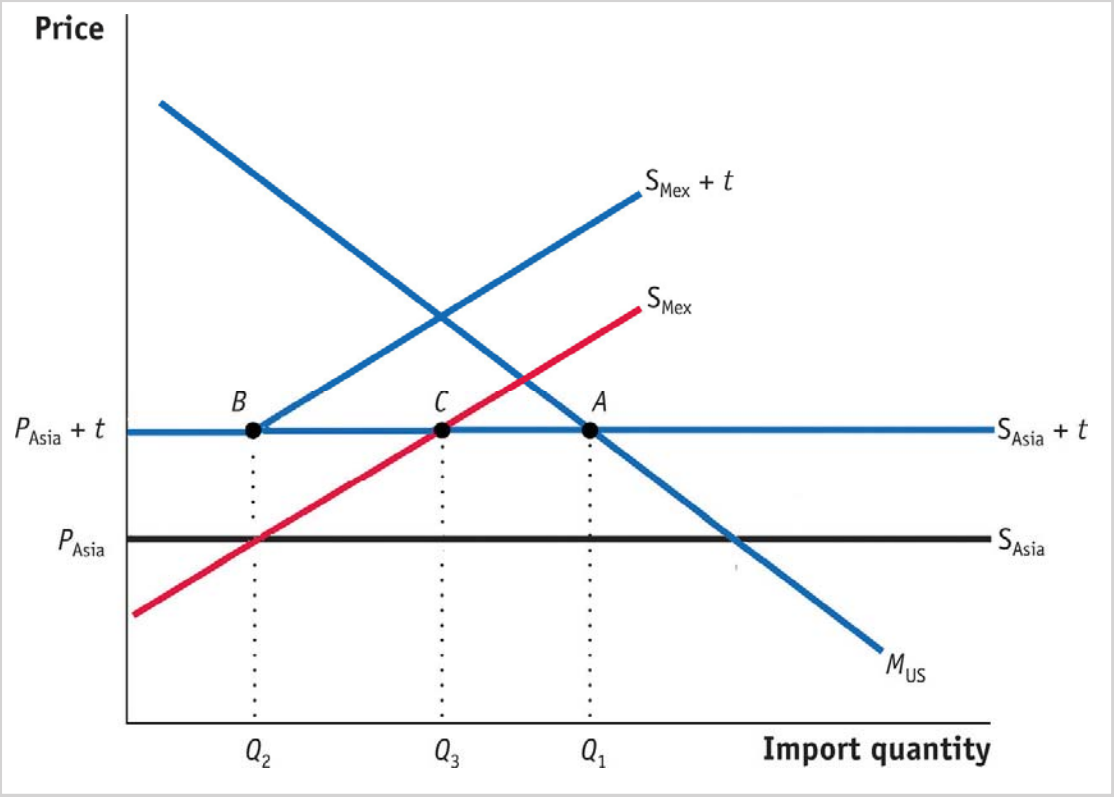
This table shows the cost to the United States of purchasing an automobile part from various source countries, with and without tariffs. If there is a 20% tariff on all countries, then it would be cheapest for the United States to buy the auto part from itself (for $22). But when the tariff is eliminated on Mexico after NAFTA, then the U.S. would instead buy from that country (for $20), which illustrates the idea of trade creation. If instead we start with a 10% tariff on all countries, then it would be cheapest for the U.S. to buy from Asia (for $20.90). When the tariff on Mexico is eliminated under NAFTA, then the U.S. would instead buy there (for $20), illustrating the idea of trade diversion.

	U.S. Tariff		
	0%	10%	20%
From Mexico, before NAFTA	$20	$22	$24
From Asia, before NAFTA	$19	$20.90	$22.80
From Mexico, after NAFTA	$20	$20	$20
From Asia, after NAFTA	$19	$20.90	$22.80
From the United States	$22	$22	$22

1 International Trade Agreements

Trade Diversion in a Graph

FIGURE 11-3 (1 of 2) Trade Diversion

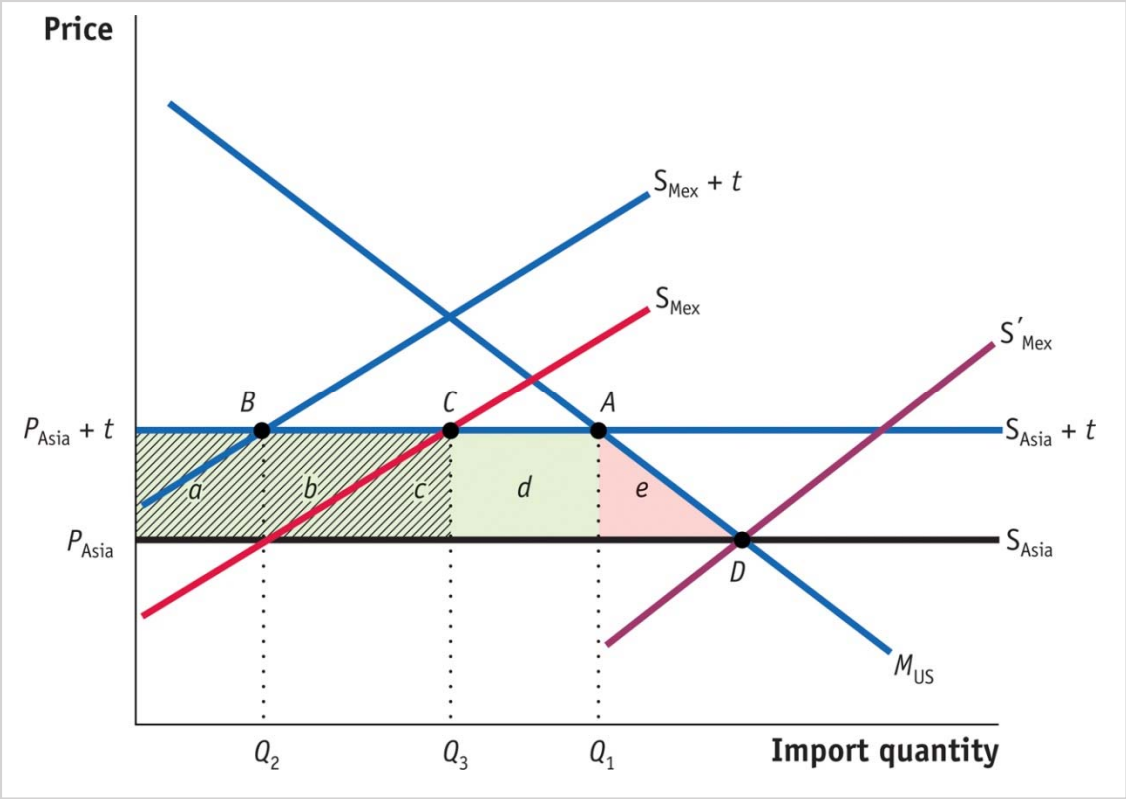


With Mexico and Asia facing the same tariff of t for sales into the United States, the equilibrium is at A with the quantity Q_2 exported by Mexico and the remainder exported by Asia at a price of $P_{\text{Asia}} + t$.

1 International Trade Agreements

Trade Diversion in a Graph

FIGURE 11-3 (2 of 2) Trade Diversion (continued)



U.S. tariff revenue is the area $(a + b + c + d)$.

Eliminating the tariff with Mexico under NAFTA leads to an expansion of Mexican exports to Q_3.

The United States loses the tariff revenue $(a + b + c)$, which is the U.S. loss as a result of trade diversion from Asia to Mexico.

Loss in U.S. tariff revenue: $-(a + b + c)$

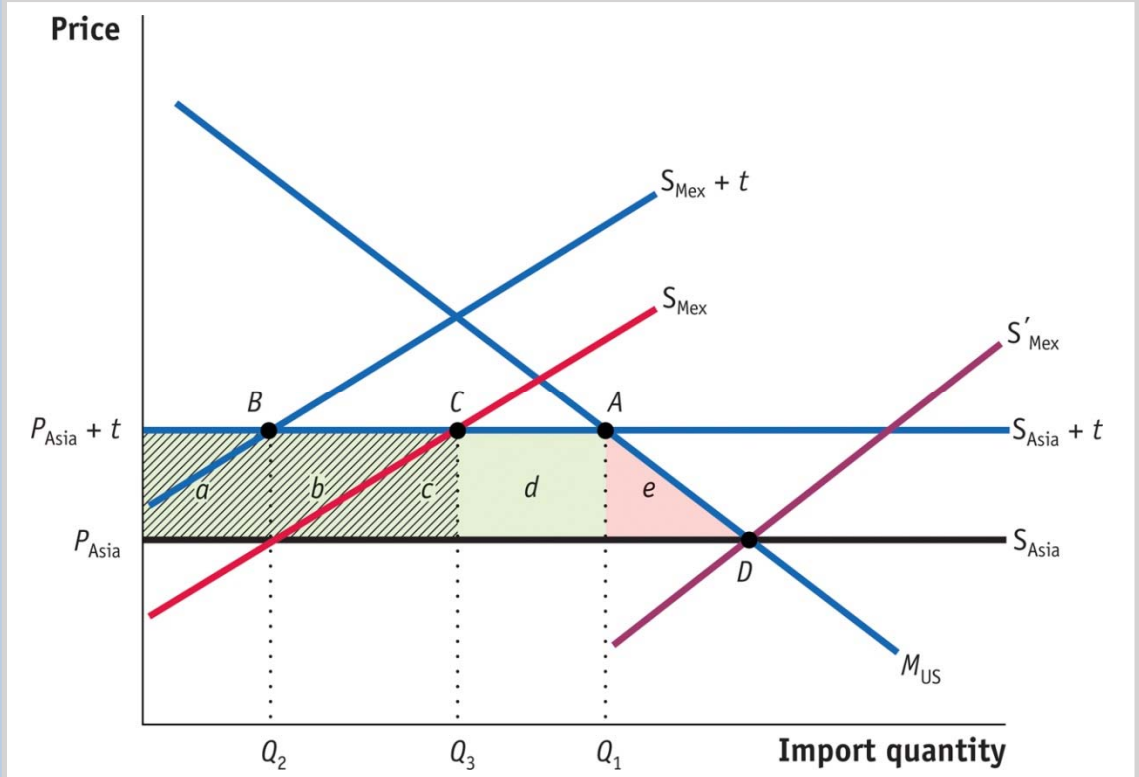
Gain in Mexico's producer surplus: $+(a + b)$

Combined effect due to NAFTA: $-c$

1 International Trade Agreements

Trade Diversion in a Graph

FIGURE 11-3 (revisited)



Gain in consumer surplus: $+ (a + b + c + d + e)$

Loss in tariff revenue: $- (a + b + c + d)$

Net effect on U.S. welfare: $+ e$

Not All Trade Diversion Creates a Loss

Suppose that after joining NAFTA, Mexico has considerable investment in the auto parts industry, and its supply curve shifts to S'_{Mex} rather than S_{Mex}. Then equilibrium imports to the United States will occur at point D, at the price P_{Asia}, and Mexico will *fully* replace Asia as a supplier of auto parts.

APPLICATION

Trade Creation and Diversion for Canada

The effect of free-trade agreements on Canadian manufacturing industries can be measured by the difference between trade created and trade diverted:

$$80\% \times 54\% - 20\% \times 40\% = 35\% > 0.$$

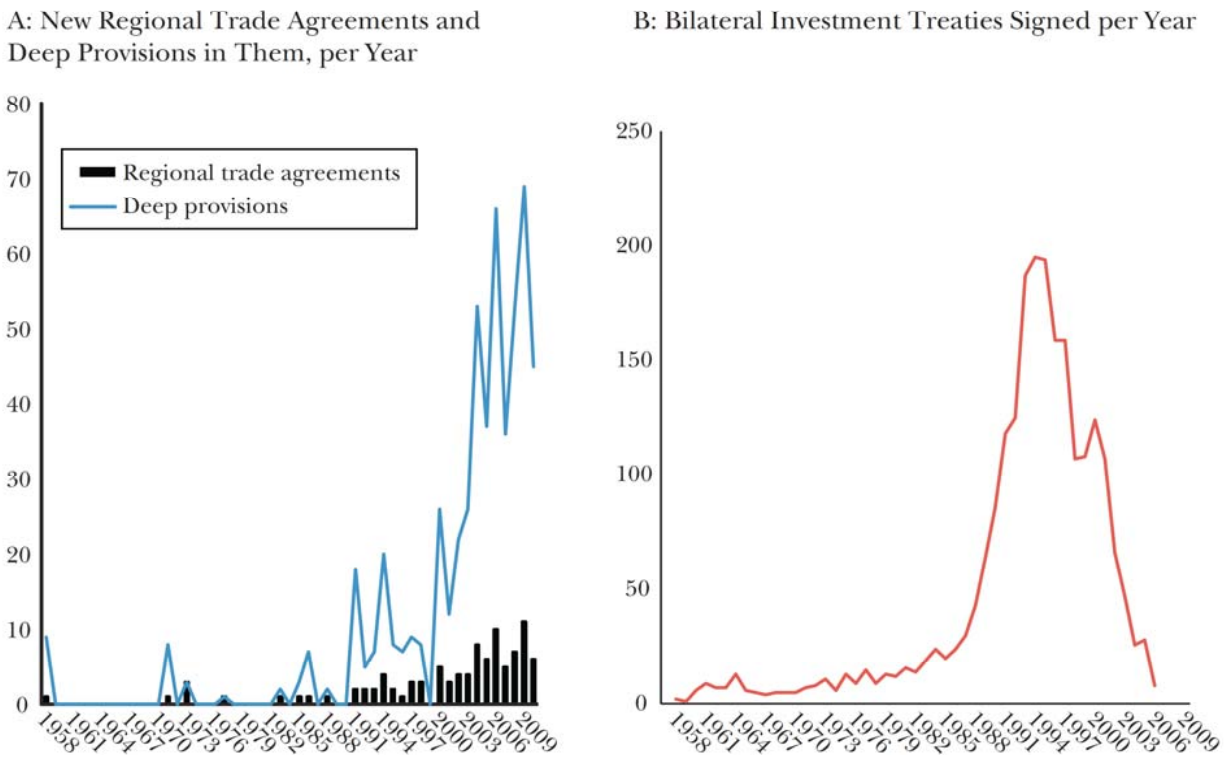
Share of U.S. imports	Increase in U.S. imports	Share of other imports	Decrease in other imports

Because this calculation is positive we conclude that trade creation exceeded trade diversion. Therefore, Canada definitely gained from the free-trade agreement with the United States

New Regionalism

Figure 2

Number of Regional Trade Agreements, Deep Provisions, and Bilateral Investment Treaties



Sources: WTO RTA database (left) and UNCTAD online data (right).
Notes: Deep provisions are defined as beyond tariff cutting; see Baldwin (2012) for details. The provisions counted as deep include those that constrict nation laws on foreign investment, intellectual property rights, regulatory convergence, short-term movement of managers and technicians, and capital flows.

Baldwin, "Future of multilateralism," *JEP* (2016)

European Economic Community

NAFTA

Mercosur

US Plurilateral and Bilateral FTAs

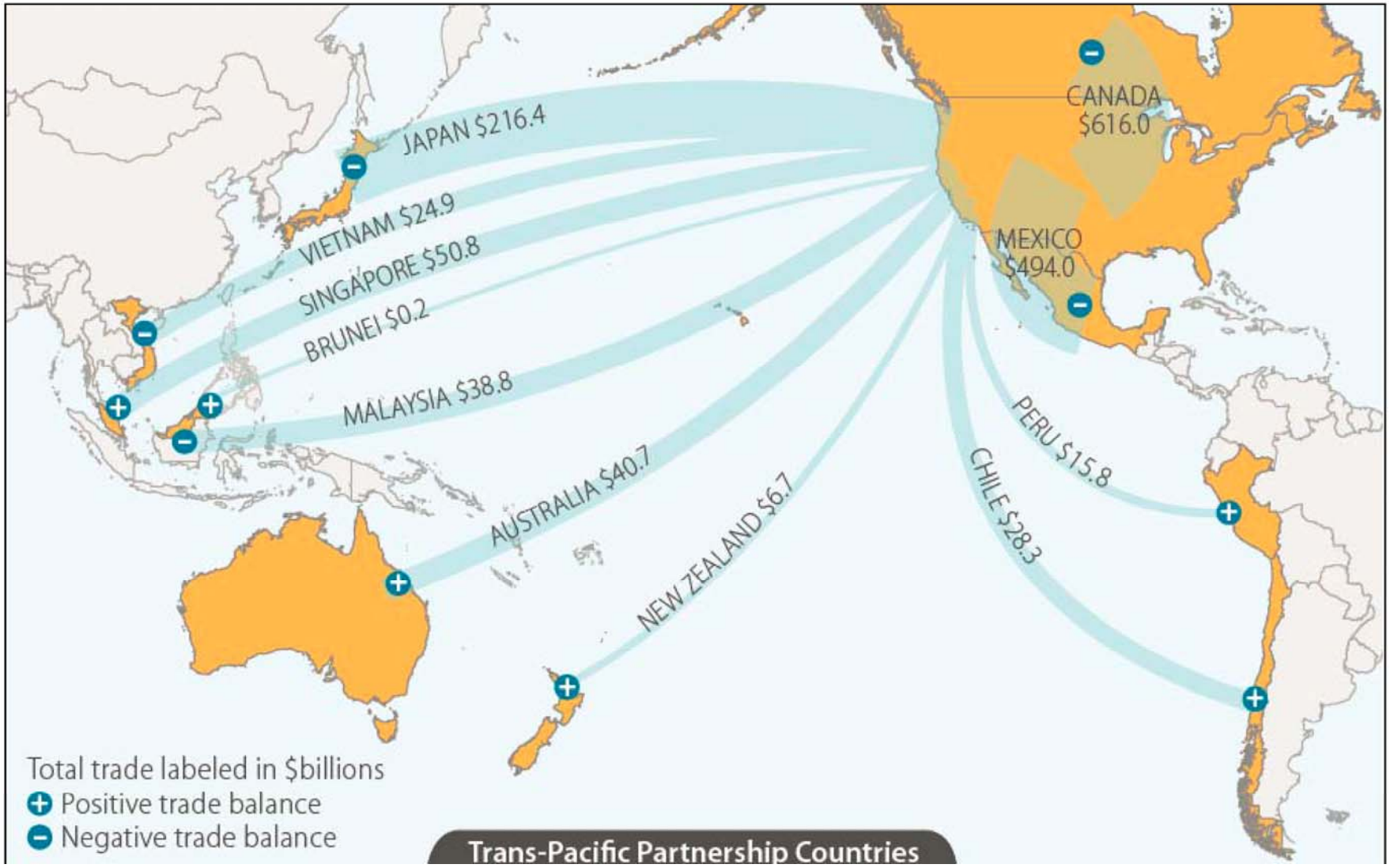
https://www.wto.org/english/tratop_e/region_e/region_e.htm

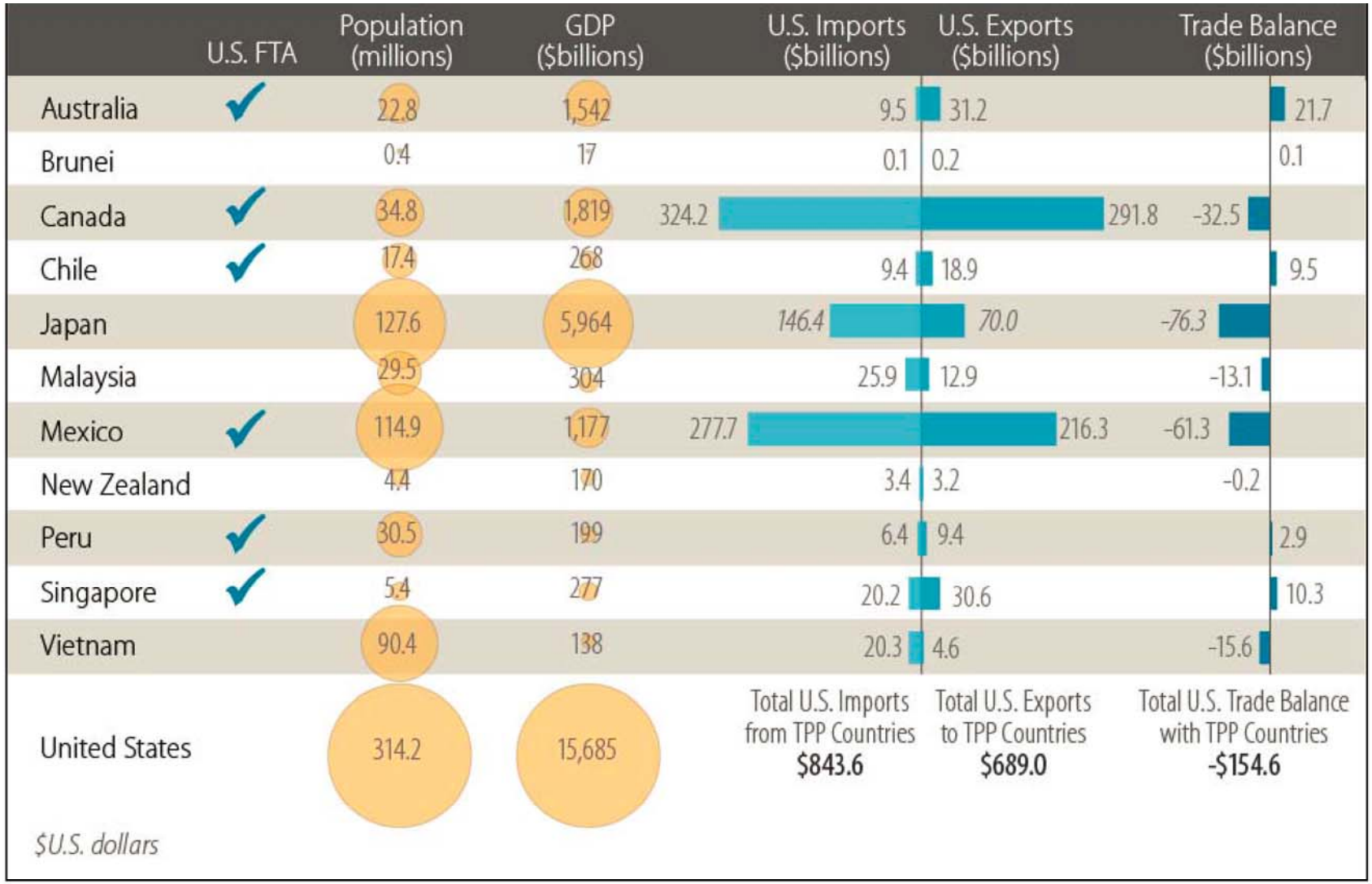
US FTAs

- Dominican Republic - Central America - US FTA (CAFTA-DR)
- Korea, Republic of - United States
- North American Free Trade Agreement (NAFTA)
- United States - Australia
- United States - Bahrain
- United States - Chile
- United States - Colombia
- United States - Israel
- United States - Jordan
- United States - Morocco
- United States - Oman
- United States - Panama
- United States - Peru
- United States - Singapore

https://www.wto.org/english/tratop_e/region_e/region_e.htm

Figure 1. Trans-Pacific Partnership Countries





Source: Analysis by CRS. FTA data from the United States Trade Representative (USTR). Population and GDP data from IMF, World Economic Outlook, April 2013. Trade data from the U.S. International Trade Commission (ITC).

Note: Does not include trade in services.

Table 1. APEC Members and Economic Statistics, 2012

	Member	GDP (in billions of U.S. dollars)	Population (in millions)	GDP/Capita (in U.S. dollars at PPP)	Real GDP Growth (%)
TPP Countries	Australia	$1,542	22.8	$42,640	3.58
	Brunei	$17	0.4	$54,389	1.30
	Canada	$1,819	34.8	$42,734	1.84
	Chile	$268	17.4	$18,419	5.47
	Japan	$5,964	127.6	$36,266	2.00
	Malaysia	$304	29.5	$16,922	5.61
	Mexico	$1,177	114.9	$15,312	3.95
	New Zealand	$170	4.4	$29,730	2.54
	Peru	$199	30.5	$10,719	6.28
	Singapore	$277	5.4	$60,410	1.32
	Vietnam	$138	90.4	$3,548	5.02
	Non-U.S. TPP Total	$11,874	478.0		
	United States	$15,685	314.2	$49,922	2.21
	Total	$27,558	792.2		
Other APEC	China	$8,227	1,354.0	$9,162	7.80
	Hong Kong	$263	7.2	$51,494	1.44
	Indonesia	$878	244.5	$4,977	6.23

Table 4. Top U.S.-TPP Trade Categories

(in millions of U.S. dollars and percentage, 2012)

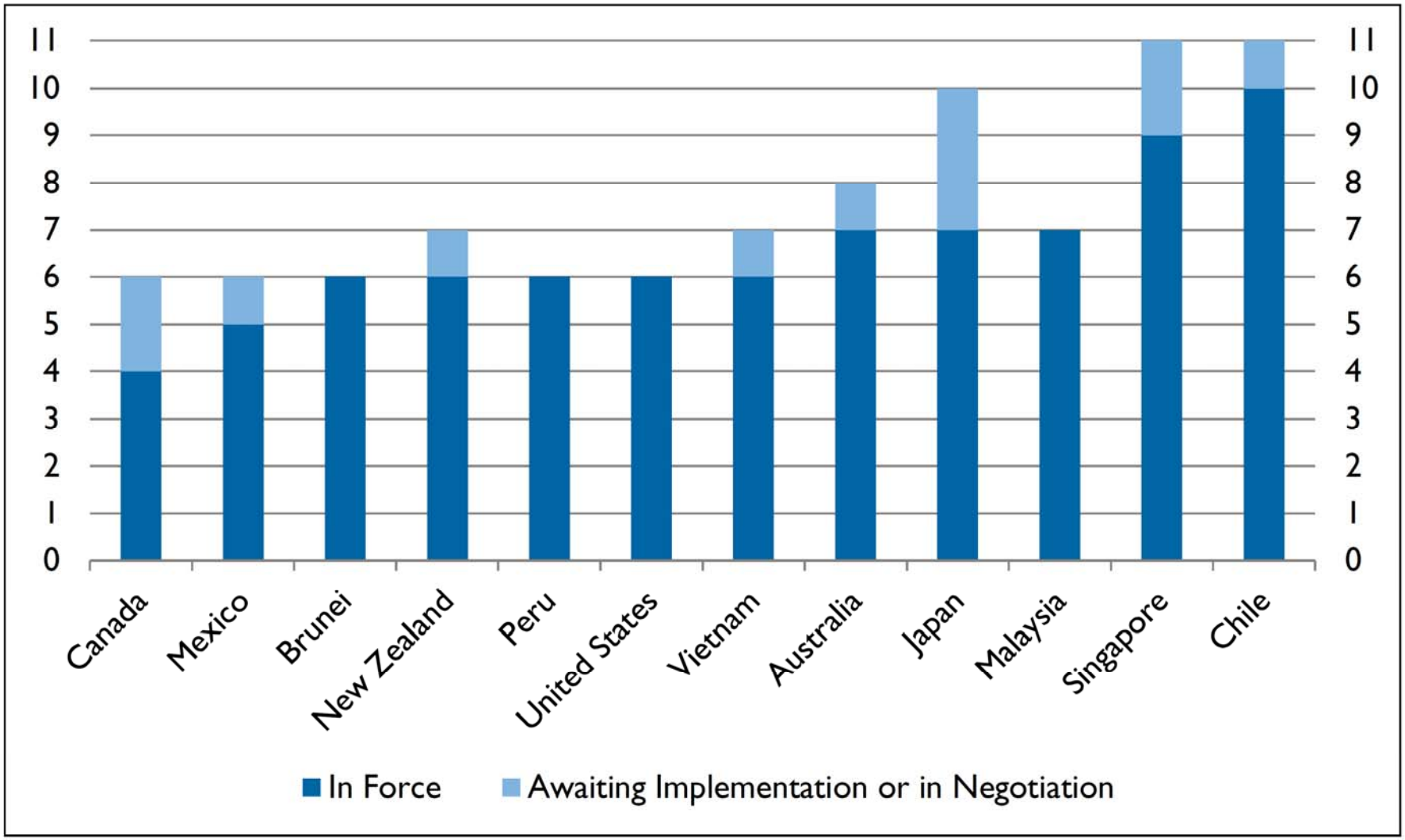
Country	Top U.S. Imports	Value	Percent of Total	Top U.S. Exports	Value	Percent of Total
Australia	(1) Meat	$1,574	17%	(1) Ag. & Constr. Machinery	$5,692	18%
	(2) Nonferrous Metal	$1,035	11%	(2) Aircraft & Parts	$2,206	7%
	(3) Metal Ores	$676	7%	(3) Motor Vehicles	$1,664	5%
Brunei	(1) Oil & Gas	$75	87%	(1) Aircraft & Parts	$31	20%
	(2) Apparel	$4	5%	(2) Ag. & Constr. Machinery	$20	13%
	(3) Chemicals	$3	3%	(3) Misc. Metal Products	$15	10%
Canada	(1) Oil & Gas	$82,257	25%	(1) Motor Vehicle Parts	$26,286	9%
	(2) Motor Vehicles	$46,499	14%	(2) Motor Vehicles	$24,826	9%
	(3) Petroleum & Coal Products	$18,782	6%	(3) Ag. & Constr. Machinery	$13,109	4%
Chile	(1) Nonferrous Metal	$3,627	39%	(1) Petroleum & Coal Products	$5,634	30%
	(2) Fruits and Nuts	$1,229	13%	(2) Ag. & Constr. Machinery	$2,040	11%
	(3) Farmed Fish	$564	6%	(3) Aircraft & Parts	$1,380	7%
Japan	(1) Motor Vehicles	$38,259	26%	(1) Aircraft & Parts	$8,468	12%
	(2) Motor Vehicle Parts	$15,229	10%	(2) Oilseeds & Grains	$5,269	8%
	(3) Semicon. & Elec. Components	$6,268	4%	(3) Pharmaceuticals & Medicines	$4,360	6%

Malaysia	(1) Semicon. & Elec. Components	$7,439	29%	(1) Semicon. & Elec. Components	$4,771	37%
	(2) Communications Equip.	$4,888	19%	(2) Aircraft & Parts	$1,215	9%
	(3) Computer Equip.	$2,109	8%	(3) Navigation & Electro-Medical	$625	5%
Mexico	(1) Oil & Gas	$37,328	13%	(1) Aircraft & Parts	$20,755	10%
	(2) Motor Vehicles	$35,347	13%	(2) Motor Vehicle Parts	$19,577	9%
	(3) Motor Vehicle Parts	$33,334	12%	(3) Computer Equip.	$14,457	7%
New Zealand	(1) Meat	$1,104	32%	(1) Aircraft & Parts	$511	16%
	(2) Dairy Products	$619	18%	(2) Ag. & Constr. Machinery	$184	6%
	(3) Beverages	$264	8%	(3) Motor Vehicles	$166	5%
Peru	(1) Nonferrous Metal	$2,281	35%	(1) Petroleum & Coal Products	$2,278	24%
	(2) Petroleum & Coal Products	$1,098	17%	(2) Ag. & Constr. Machinery	$973	10%
	(3) Apparel	$599	9%	(3) Computer Equip.	$698	7%
Singapore	(1) Pharmaceuticals & Medicines	$4,202	21%	(1) Petroleum & Coal Products	$4,405	14%
	(2) Computer Equip.	$3,087	15%	(2) Aircraft & Parts	$4,025	13%
	(3) Semicon. & Elec. Components	$2,020	10%	(3) Semicon. & Elec. Components	$2,452	8%
Vietnam	(1) Apparel	$6,946	34%	(1) Semicon. & Elec. Components	$559	12%
	(2) Footwear	$2,404	12%	(2) Oilseeds & Grains	$380	8%
	(3) Furniture	$1,995	10%	(3) Meat	$300	6%

Source: Analysis by CRS. Data from the ITC.

Notes: 4-digit North American Industry Classification System (NAICS) categories. Excludes "special classification" categories 9900 and 9800.

Figure 4. Existing Trade Agreements Among TPP Members



Source: Analysis by CRS. Data from individual TPP government websites.

Major Issues

- Market access

- Tariff reduction varies by country since bilateral

- Agriculture

- Biggest opportunities in Japan, Malaysia, Vietnam (non-FTA).

- Beef, pork for Japan; poultry, dairy for Canada

- Textiles/apparel

- Phaseout, important to Vietnam

Intellectual Property Rights

- **Biologics.** Provides countries a choice between an eight-year data exclusivity period for biologic medicines or, alternatively, at least five years with possible additional measures that could "deliver a comparable market outcome."
- **Pharmaceutical Patents.** Requires countries to provide a five-year data exclusivity period for pharmaceuticals, patent linkage, and patent term extension in their domestic law, and an additional three years of data exclusivity for new clinical information for an existing drug covering a new indication, formulation, or administration. Includes phase-in periods for developing countries to adopt these provisions and allows countries to take measures to protect public health consistent with the WTO TRIPs agreement.

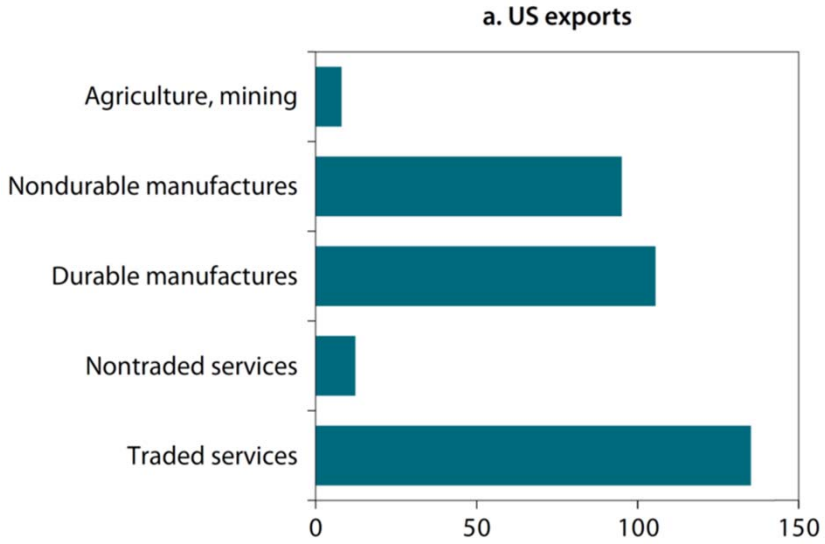
- **Copyright.** Increases copyright terms to 70 years with phase-in periods for countries currently providing 50 years of protection. Includes civil and criminal penalties for circumventing TPM (technological protection measures), and prohibits selling devices and services for breaking TPM with exceptions for non-infringing uses. Requires criminal penalties for camcording in movie theatres. Includes nonbinding language encouraging countries to achieve appropriate balance between users and rights-holders in copyright systems—known as "fair use" in the United States. Adopts U.S.-style "notice and takedown" provisions to address Internet Service Provider (ISP) liability. For specific countries, allows certain existing alternative systems.
- **Trademarks.** Requires *Ex Officio* authority for customs agents to seize counterfeit and pirated goods. Provides discretion to authorities to seize "in transit" goods or share information concerning such goods with the country of final destination and to seize goods with "confusingly similar" trademarks. Provides disciplines on the use of geographical indications.

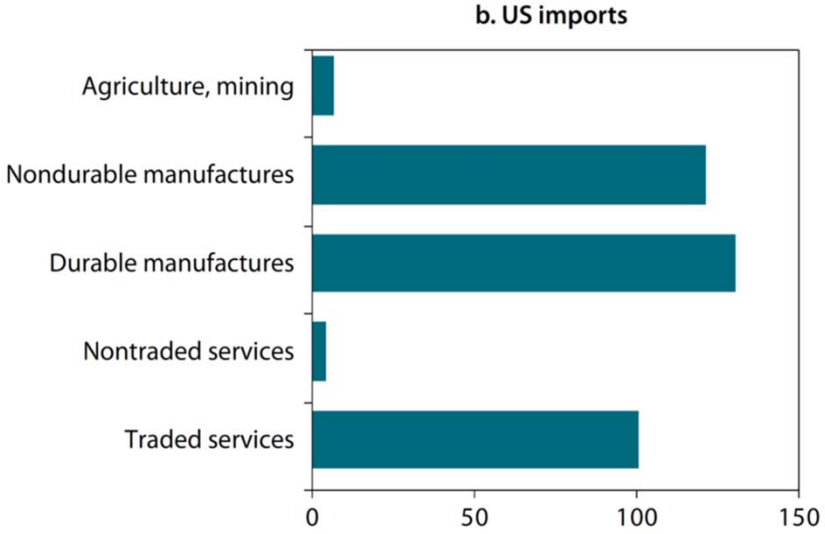
Petri and Plummer (PIIE, 2016)

The TPP is modeled in three steps. First, the CGE model is solved to project global growth and trade over 2015–30. This "baseline" solution includes the effects of 63 regional trade agreements that have been concluded among TPP partners but are in some cases not yet fully implemented. Second, the provisions of the TPP are mapped into projected changes in tariffs, NTBs on goods and services, and barriers on foreign direct investment (FDI). This step assumes that 20 percent of the NTB liberalization under the TPP also applies to partners who are not TPP members, an effect not included in our previous work.[13] Third, the model is run with the barriers projected under the TPP, and the results are compared to the baseline solution.

The model assumes that the TPP will affect neither total employment nor the national savings (or equivalently trade balances) of countries. This "macroeconomic closure" assumption allows modern trade models to focus on the goals of trade policy—namely sustained productivity and wage increases through changes in trade patterns and industry output levels. With minor variations, the assumption

Petri and Plummer (PIIE, 2016)





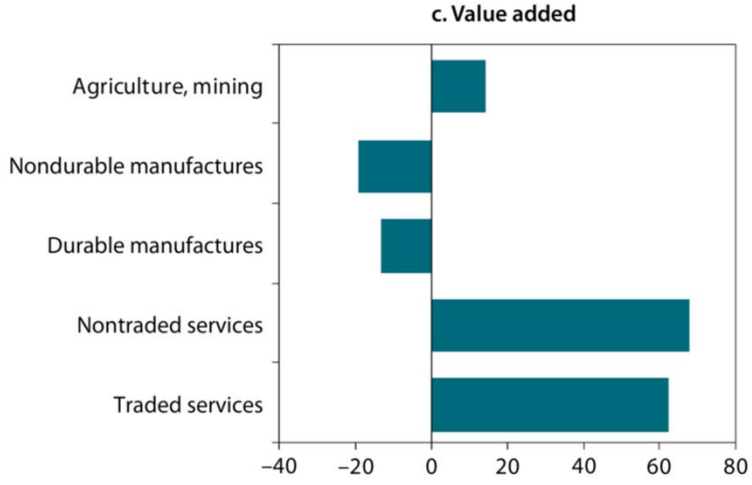
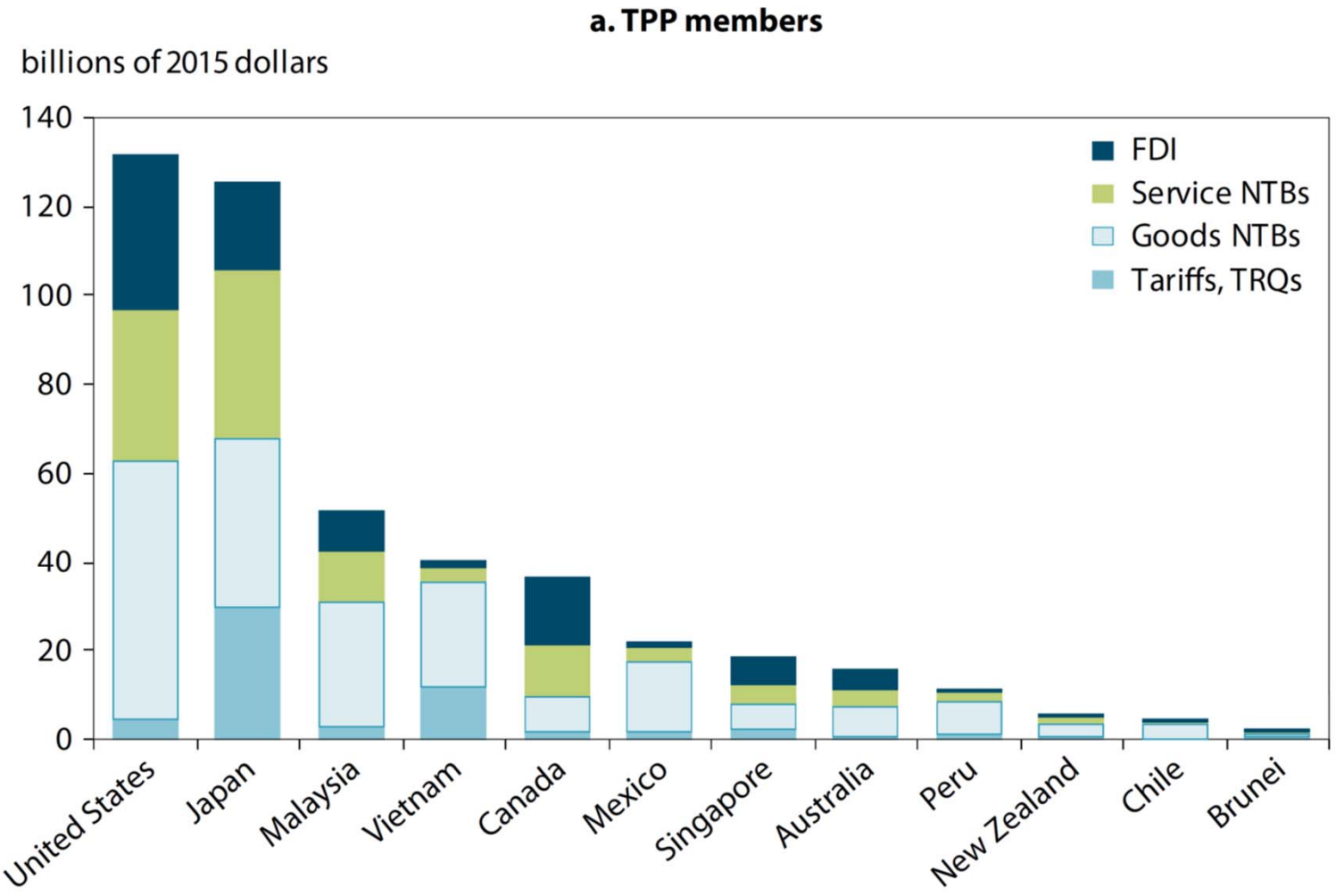
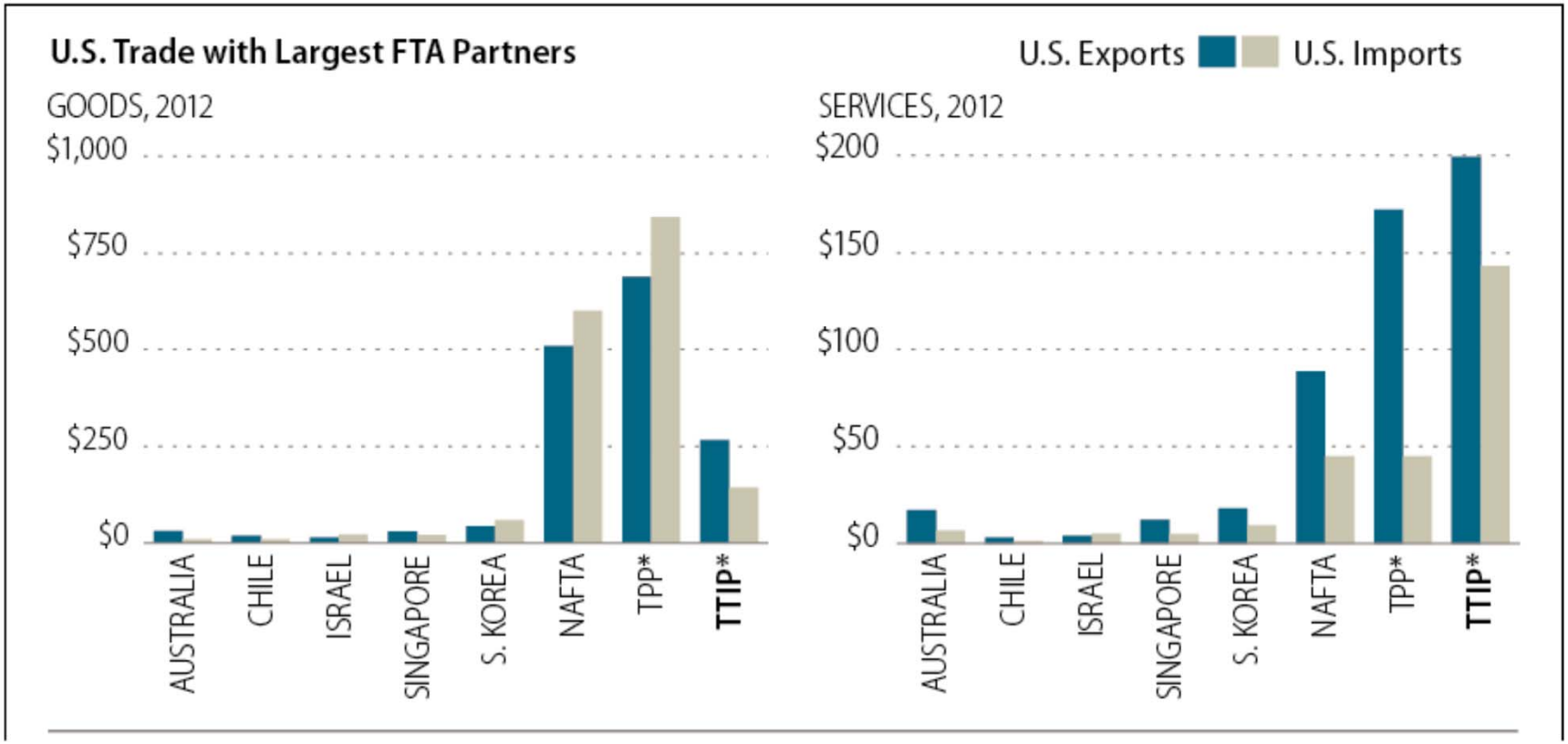


Figure 3 TPP income effects and their composition, 2030



TTIP

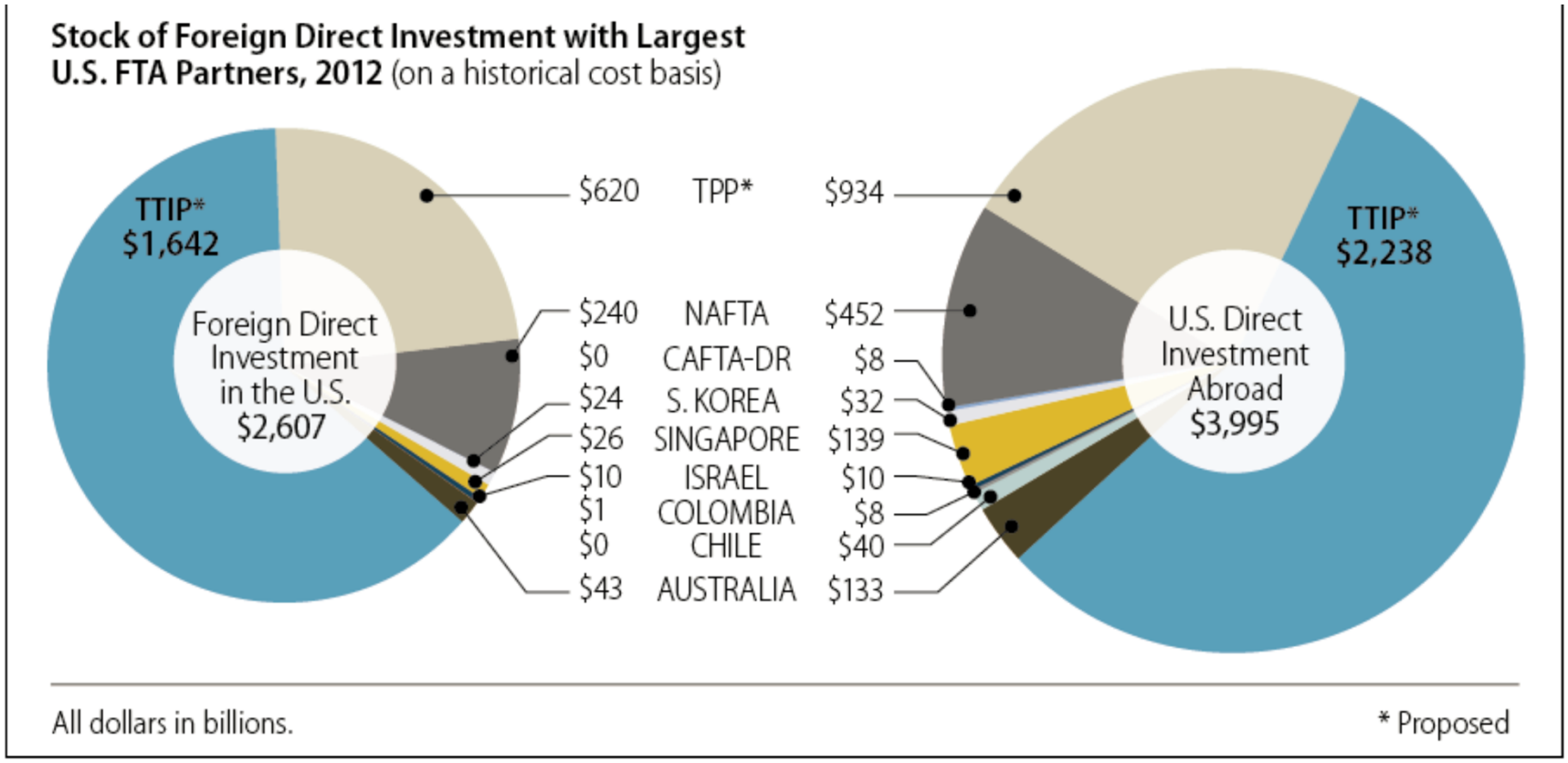
Figure 3. U.S. Trade and Investment with Free Trade Agreement (FTA) Partners



TTIP


U.S. Trade with Largest FTA Partners, 2012
Exports
SERVICES
GOODS
Imports
SERVICES
GOODS
$900
$750
$600
$450
$300
$150
$0
AUSTRALIA
CHILE
ISRAEL
SINGAPORE
S. KOREA
NAFTA
TPP*
TTIP*

TTIP


Stock of Foreign Direct Investment with Largest U.S. FTA Partners, 2012 (on a historical cost basis)
TTIP*
$1,642
Foreign Direct Investment in the U.S.
$2,607
$620
TPP*
$934
$240
NAFTA
$452
$0
CAFTA-DR
$8
$24
S. KOREA
$32
$26
SINGAPORE
$139
$10
ISRAEL
$10
$1
COLOMBIA
$8
$0
CHILE
$40
$43
AUSTRALIA
$133
TTIP*
$2,238
U.S. Direct Investment Abroad
$3,995
All dollars in billions.
* Proposed

TTIP

TTIP Negotiations in a Nutshell

Market access: Some "traditional" market access issues may play a lesser role in the TTIP context than they have in other trade negotiations. U.S. and EU tariffs are already quite low, though given the magnitude of the transatlantic relations, further elimination and reduction of tariffs could yield significant economic gains. Commitments in other areas, such as further opening of government procurement markets, could also lead to greater market access.

Regulations: Divergent regulations that may serve as non-tariff barriers and regulatory issues are widely regarded by stakeholders as a core component of the TTIP negotiations. Economic gains from greater regulatory cooperation and compatibility could be significant. At the same time, there is skepticism about whether a comprehensive transatlantic agreement on regulatory issues can be reached.

Rules: TTIP negotiations in trade-related rules, such as intellectual property rights (IPR), could build on the rules contained in the WTO agreements. Many of these areas, while not addressed in the WTO, have become a standard part of U.S. and EU FTAs with other countries; these include investment, IPR, labor, and the environment. The negotiations also could break new ground on other issues that are modestly treated, or not at all, in prior U.S. FTAs and multilateral agreements.

In their approaches to these issues, the United States and EU generally are regarded as having more commonalities than differences. For instance, both sides have strong commitments to protecting consumer health and safety through regulations and maintaining strong overall protections for investment, IPR, labor, and the environment. Nevertheless, certain areas—such as regulations related to genetically modified organisms or rules for cultural exceptions for the audiovisual sector and geographical indications—could be contested areas. To the extent that TTIP is used to advance multilateral trade liberalization, debates about the impact of certain regulations, standards, and rules on third countries may be heightened.