February 2016
PIIE Briefing 16-1

ASSESSING THE TRANS-PACIFIC PARTNERSHIP

VOLUME 1: MARKET ACCESS AND SECTORAL ISSUES

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INTRODUCTION

After five and a half years of negotiations, the Barack Obama administration concluded the most ambitious free trade deal of the postwar era on October 5, 2015. The Trans-Pacific Partnership (TPP) is a comprehensive accord that encompasses provisions on lowering barriers to trade and investment in goods and services and also covers critical new issues such as digital trade, state-owned enterprises, intellectual property rights, regulatory coherence, labor, and environment. Like all trade pacts, the TPP elicited praise and criticism from economic interests in the United States and the other 11 participating countries: Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. Together the 12 TPP members account for nearly 40 percent of global GDP. For the United States, the TPP countries account for 36 percent of US two-way trade in goods and services.

To clarify and analyze the complicated elements of the treaty, the Peterson Institute for International Economics has undertaken an ambitious assessment of its key issues and outcomes in this volume, the first of a series of publications planned by the Institute. The analysis in this volume demonstrates that the agreement will deliver large economic benefits to the United States and its trading partners. The Obama administration has touted these benefits as the economic pillar for US geopolitical strategy in Asia. The agreement would establish a free trade agreement (FTA) between the United States and several new partners, including Japan and Vietnam, while upgrading existing FTAs, such as the North American Free Trade Agreement (NAFTA). The negotiators have finished their work, and the members plan to sign the agreement on February 4, 2016, but much remains to be done before the TPP is ratified and implemented.

The Institute's study will first be published as a series of PIIE Briefings and then as a book in the first half of 2016. These papers are intended to provide a useful reader's guide to the TPP and contribute to a more educated public debate over its ratification by the United States and other member countries.

In this collection, the authors examine several major market access and sectoral issues in the TPP. They find that the trade deal delivers significant benefits but falls short in some areas of earlier ambitions for a sweeping liberalization of barriers on trade and investment.

Peter A. Petri and Michael G. Plummer provide new estimates of the economic effects of the TPP, building on their original work in *The Trans-Pacific Partnership and Asia-Pacific Integration: A Quantitative Assessment* (2012). They estimate that the TPP will increase annual real incomes in the United States by $131 billion, or 0.5 percent of GDP, and annual exports by $357 billion, or 9.1 percent of exports, over baseline projections by 2030. Annual income gains by 2030 will be $492 billion for the world, including $465 billion for the 12 members of the TPP. The agreement will raise US wages but is not projected to change US employment levels; it will slightly increase "job churn," the movements of jobs between firms, by 53,700 jobs in each year during implementation of the TPP and impose adjustment costs on some workers.

Caroline Freund, Tyler Moran, and Sarah Oliver provide an overview of the extent to which tariffs will be liberalized in the TPP. They note that the majority of tariffs will be quickly eliminated, and the rest will be liberalized over time, in some cases with significant delays. Since tariffs are already low in many TPP countries, gains resulting from tariff liberalization will be small. But emerging-market participants such as Malaysia, Mexico, Peru, and Vietnam still have substantial room for liberalizing trade in goods. The schedules for phasing out or lowering tariffs differ by country, especially in agriculture. The authors caution that these delays could set a bad precedent for other multicountry trade agreements if country-specific tariffs lasting for long periods becomes the norm.

Cullen Hendrix and Barbara Kotschwar analyze the results of market access concessions in the agriculture sector. They conclude that the TPP significantly liberalizes a host of agricultural products, surpassing the record of past FTAs. But for some politically sensitive products, such as dairy and sugar, bilateral market access remains limited. The authors argue that these remaining barriers reflect complex and longstanding political economies in each country. Trying to undo them now would threaten the viability of the agreement as a whole.

Sarah Oliver assesses the auto sector, in which the TPP lowers tariffs and begins the process of mutual recognition of safety and emissions standards. She concludes that the liberalization of high auto tariffs by Vietnam, Malaysia, and other signatories will open their markets to US and Japanese automakers at a time when demand for cars in these countries is growing. But for large auto and auto parts producers, including the United States, much of the agreement protects the domestic industry through the use of rules of origin and long tariff expiration periods.

Kimberly Ann Elliott argues that for Vietnam the impact of TPP commitments in the textile and apparel sector will be limited by provisions on rules of origin similar to those in past trade agreements. Thus Vietnam and other key exporters will enjoy fewer benefits than they would have if tariffs had been eliminated altogether. Elliott concludes that for the textile and apparel sectors, at least, the TPP calls for trade that is managed rather than free.

Tyler Moran analyzes the government procurement commitments in the TPP, which represent the first major liberalization for some countries in this area. The accord also expands the commitments for countries where government procurement is already relatively open. Moran argues that the agreement does not resolve all issues, particularly with respect to procurement by governments below the federal level, but that it establishes a foundation for more ambitious commitments in future talks.

Gary Clyde Hufbauer argues that expanded services trade generates some of the largest potential TPP payoffs, especially for the US economy, with improved access to the markets of Japan, Malaysia, and Vietnam in particular. US service exports are estimated to increase by $149 billion when the TPP is implemented, the largest gain in that sector for any TPP country. Hufbauer concludes that the TPP establishes a minimum floor of liberalization, which will eventually be achieved in ongoing plurilateral talks for a Trade in Services Agreement and agreed by future TPP members.

Anna Gelpern looks at financial services, a sector where the United States is a net exporter. The TPP calls for greater access for certain financial services, some constraints on government provision of financial services (e.g., state-run postal insurance systems), and procedural safeguards for regulated service providers. The TPP chapter does preserve the fundamental ability of national authorities to continue regulating in this area, however. Gelpern concludes that permitted data localization requirements and other restrictions insisted on by Malaysia reflect the difficulties in applying trade disciplines to finance.

Theodore H. Moran and Lindsay Oldenski assess the investment provisions of the TPP and their impact on the US economy. In particular, the TPP's opening all sectors to foreign direct investment (FDI) except certain sectors on a so-called negative list will encourage greater FDI among member countries. Also likely to have

a positive effect are the treaty's call for removing performance requirements, placing limits on state-owned enterprises, and establishing an investor-state dispute settlement (ISDS) provision.

The ISDS provision, which has stirred some controversy in the United States, is analyzed by Gary Clyde Hufbauer. He argues that as a measure designed to protect firms that invest abroad against unfair or arbitrary treatment by foreign governments, the ISDS provision in the TPP improves upon the ISDS model inherited from NAFTA and contained in various bilateral investment treaties negotiated over many years.

CHAPTER 1

THE ECONOMIC EFFECTS OF THE TPP: NEW ESTIMATES

PETER A. PETRI AND MICHAEL G. PLUMMER

This chapter was published earlier as PIIE Working Paper 16-2.

1. INTRODUCTION

The Trans-Pacific Partnership (TPP), concluded on October 5, 2015, reflects inevitable compromises but appears to have met its two key objectives: to establish new, market-oriented rules in a host of rapidly changing areas of international commerce and to reduce trade and investment barriers among TPP countries to yield considerable gains for the United States and its 11 partners.[1] This chapter estimates the effects of the TPP using a comprehensive, quantitative trade model, updating results reported in Petri, Plummer, and Zhai (2012) with new data and information from the agreement.

The TPP is a landmark accord. In 2014 its member countries had combined GDP of $28 trillion, or 36 percent of world GDP, and accounted for $5.3 trillion in exports, or 23 percent of the world total.[2] They are unusually diverse, comprising low-, middle-, and high-income countries with varied economic systems. The agreement itself is deep and comprehensive, targeting economic integration with provisions that range from goods, services, and investment to critical new issues such as the digital economy, intellectual property rights, regulatory coherence, labor, and the environment. The role of the TPP in launching international cooperation on so-called next-generation trade rules cannot be assessed at this time, but it may prove to be its most valuable contribution in the long run.

Economic modeling can show, however, the effects of the scheduled liberalization elements of the TPP, provided it is ratified by its members. The estimates reported here suggest that the TPP will increase annual real incomes in the United States by $131 billion,[3] or 0.5 percent of GDP, and annual exports by $357 billion, or 9.1 percent of exports, over baseline projections by 2030, when the agreement is nearly fully implemented. Incomes after 2030 will remain above baseline results by a similar margin. To put this in context, all US invest-

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1. Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, Peru, New Zealand, Singapore, and Vietnam.
2. Data from the World Bank's *World Development Indicators* database, http://databank.worldbank.org/data/reports.aspx?source=2&Topic=21 (accessed on October 25, 2015).
3. These estimates are in constant 2015 dollars. The income concept is defined below. The apparent precision of the estimates should not be misinterpreted. Exact numerical results are provided to help readers compare relative magnitudes and check the internal consistency of results, but estimates could be one-third larger or smaller—as sensitivity analyses in section 5 indicate—due to uncertainties in data and assumptions.

ments in a given year have been estimated to raise US real incomes by 1 percent. Both labor and capital will benefit, but labor will get a somewhat more than proportionate share of the gains in total.

Given these benefits, delaying the launch of the TPP by even one year would represent a $94 billion permanent loss, or opportunity cost, to the US economy as well as create other risks. Postponing implementation will give up gains that compound over time and defer or foreclose new opportunities for the United States in international negotiations. Unexpected political challenges or competing trade projects may also erode decisions in partner countries, further increasing the costs from delaying TPP ratification. While the United States will be the largest beneficiary of the TPP in absolute terms, the agreement will generate substantial gains for Japan, Malaysia, and Vietnam as well, and solid benefits for other members.

On the other side of the ledger, while the TPP is not likely to affect overall employment in the United States, it will involve adjustment costs as US workers and capital move from less to more productive firms and industries. Section 4 estimates that 53,700 US jobs will be affected—i.e., that number is *both* eliminated in less productive import-competing firms *and* added in exporting and other expanding firms—in each year during implementation of the TPP. This kind of movement between jobs and industries is what economists refer to as "churn," and most kinds of productivity growth cannot occur without it taking place. For perspective, 55.5 million American workers changed jobs in this way in 2014[4]—so the transition effects of the TPP would represent less than 0.1 percent increase in labor market churn in a typical year.

Most workers who lose jobs do find alternative employment, but workers in specific locations, industries, or with skill shortages may experience serious transition costs including lasting wage cuts and unemployment.[5] In a similar study, Robert Lawrence (2014) estimated total such costs to displaced workers in detail and found them to be a fraction of overall US gains from an ambitious trade agreement.[6] Since the costs to the individuals displaced can be quite high, compensating them for these costs, using a fraction of the total US gains, is a compelling ethical and political objective, and policies to achieve equitable adjustment are likely to be affordable.

These estimates of the benefits of the TPP are similar to those published in 2012, but somewhat higher.[7] Nearly all information in the model has been updated, including especially assumptions about the content of the agreement, which in 2012 were based on conjectures. However, changes in the provisions from early assumptions are not a significant factor in the higher results—at the aggregate level pluses and minuses mostly offset each other. Rather, the differences are due to new data, especially on nontariff barriers (NTBs), and the inclusion of effects not analyzed in previous work. These changes are explained in the text and in appendices A and B.

2. THE TPP AGREEMENT

Trade contributes to economic performance by improving productivity and by giving producers and consumers access to greater varieties of goods at lower prices.[8] It also stimulates competition and encourages technology and investment flows. Countries have long pursued these benefits by gradually reducing tariffs through the General Agreement on Tariffs and Trade (GATT) and World Trade Organization (WTO) agreements, enabling world trade to grow twice as fast as output. In recent years, however, global negotiations have ebbed, NTBs have become more prevalent (Evenett and Fritz 2015), and world trade growth has slowed (World Bank 2015).

4. Specifically, 55.5 million workers were separated from jobs, and 58.6 million workers were hired into jobs in 2014. Data are from the Bureau of Labor Statistics, www.bls.gov/jlt/data.htm (accessed on December 28, 2015).
5. Data from the Bureau of Labor Statistics, www.bls.gov/jlt/data.htm (accessed on January 6, 2016).
6. Lawrence (with Tyler Moran) will also analyze the labor market implications of the actual TPP deal in a forthcoming essay in volume 2 of PIIE Briefings on the TPP.
7. The results presented in this chapter are consistent with the global impact estimates described in World Bank (2016).
8. The relationship between trade and economic performance has been widely studied; see, for example, WTO and World Bank (2015), OECD and WTO (2013), Stone and Shepherd (2011), Wacziarg and Welch (2008), and Sachs and Warner (1995).

Today's lower tariffs, improved logistics, and better information systems enable firms to exploit gains from international specialization far more extensively than they did in the past. Firms in the United States and elsewhere have developed complex global value chains, often focused on the Asia Pacific, to raise productivity. These systems, along with new areas of economic integration made possible by technology, have stimulated demand for still lower trade barriers, better connectivity through ports and communications, and clearer, more coherent rules to facilitate international business operations (Petri et al. 2015).

Global trade negotiations have failed to keep pace with these trends. To fill the vacuum, nearly 100 new free trade agreements (FTAs) have been signed since 2000 in the Asian region alone.[9] Yet bilateral or small regional FTAs are "second-best" strategies for deeper integration. To take advantage of an FTA, exporters have to prove that they meet "rules of origin" (ROO)[10] and often cannot do so in an agreement that does not cover complete supply chains. Also, smaller FTAs tend to focus on narrow, regional goals and have little influence on global rules. They also tend to be inefficient, as they encourage the use of costly products from FTA partners instead of those efficiently produced by nonpartners.

Absent effective global negotiations, large and ambitious regional agreements—frequently called megaregional agreements—offer a way forward. They can include a sufficient number and range of partners to limit the costs of trade diversion and to have an impact on global rules. Yet their membership can be small enough to reach compromises on difficult issues. The TPP is the first megaregional agreement concluded in over two decades (the European Single Market and the North American Free Trade Agreement were similar in ambition) and could have large, systemic effects.

Given these wider objectives, TPP negotiators sought to eliminate traditional barriers as well as update rules to meet business and social goals. In the event, the tariff reductions in the TPP are deeper and wider than anticipated, including in our 2012 study. The TPP will eliminate three-quarters of nonzero tariffs immediately on entry into force (EIF), and 99 percent when fully implemented (see chapter by Caroline Freund, Tyler Moran, and Sarah Oliver in this Briefing). However, it will include some divergences even among intraregional tariffs: Although most of its tariff schedules treat partners equally, some schedules, including those of the United States, retain differences among them.

Comprehensive rules are the most distinctive aspect of the TPP. In some areas the agreement builds on the WTO rulebook but tightens disciplines and creates new mechanisms to improve implementation. It includes more comprehensive rules for services trade and investment than were in WTO agreements and allows exceptions only on a negative-list basis. It improves mechanisms for setting food standards and technical barriers and for assessing the conformity of products with them, and begins to cut through the "spaghetti bowl" of overlapping trade agreements by establishing a single set of ROO that allows inputs produced in any TPP member to count toward meeting ROO standards. The TPP also strengthens intellectual property (IP) rights and prescribes greater commitments toward enforcing them,[11] and it has more comprehensive and enforceable rules on labor and the environment than previous agreements.

In other areas the TPP breaks new ground with provisions that were absent from or tangentially addressed by prior agreements. It sets new standards for access to telecommunication networks, prohibits tariffs on

9. "Free Trade Agreements," Asian Development Bank (ADB) Asia Regional Integration Center, https://aric.adb.org/fta (accessed on December 26, 2015).
10. Rules of origin ensure that only goods primarily produced in an FTA zone are eligible for tariff preferences. A producer might have to prove, for example, that inputs in the production process that originate outside the zone fall below a percentage limit or consist of different products in terms of the customs classification.
11. Additional areas covered in the IP chapter include explicit coverage of state-owned enterprises so that they cannot evade IP rules, enhanced penalties for counterfeits that threaten public health and safety, and digital copyright policies. Data exclusivity for biologic products was set at five years, with additional measures to reach eight-year effective protection (but not 12 years, as US negotiators had sought).

Box 1 Differences between the TPP and KORUS

To calibrate NTB reductions, the 2012 study used scores estimated for the KORUS agreement to project how the TPP would affect barriers. The two agreements turned out to be similar, but, because the TPP includes diverse economies with higher barriers than those of Korea or the United States, its commitments often imply larger concessions for some members. Following are some specific differences.

In some areas the TPP has stronger rules than KORUS:

- In the TPP, 75 percent of nonzero tariff lines fall to zero immediately and 99 percent eventually vs. two-thirds and 96 percent under KORUS.
- Yarn-forward rules of origin for textiles and apparel are more flexible in the TPP.
- The TPP provides further commitments on technical barriers to trade and sanitary and phytosanitary regulations and new mechanisms to rapidly resolve emerging regulatory issues.
- The TPP Electronic Commerce chapter limits restrictions on data transfers.
- The TPP Intellectual Property Rights chapter requires criminal penalties for trade secret theft and unlawful exploitation of copyrighted work, and adds rules on data exclusivity for biologics.
- The TPP Environment chapter has more comprehensive coverage, including of fisheries and wildlife trafficking.

In other areas the TPP breaks new ground:

- New chapters on Trade Facilitation and Small and Medium-Sized Enterprises address issues that make it easier to exploit opportunities for trade.
- The Government Procurement chapter establishes obligations for seven members (Australia, Brunei, Chile, Malaysia, Mexico, Peru, and Vietnam) that are not parties to the WTO Government Procurement Agreement.
- A new State-Owned Enterprises chapter addresses distortions that SOEs can cause in markets.
- A new Regulatory Coherence chapter provides guidelines for streamlining and coordinating the regulatory processes of members.

These commitments are qualified, however, by lists of nonconforming measures with respect to the chapters on services, investment, financial services, and SOEs.

electronic commerce, limits restrictions on cross-border data transfers, and rules out data localization requirements. It also brings state-owned enterprises (SOEs) more clearly under international rules, ensuring that their purchases and sales are on a commercial basis, including their service exports and foreign investments. It has special chapters on trade facilitation and small and medium enterprises (SMEs) in order to improve access to online platforms and to make regulations simpler and easier to meet. Many of these provisions are enforceable under a new dispute settlement mechanism.

How do the TPP provisions affect the modeling results? In 2012, without a TPP agreement in hand, the template of the TPP was based on the conjecture that it would be similar to that of the Korea-US free trade agreement (KORUS). The KORUS template was then used to determine how extensively the TPP would reduce tariffs and NTBs in the several model sectors. In the event, the KORUS template is not far off the mark, but some TPP provisions have turned out to be more ambitious and others less so (see box 1). With respect to

NTBs, the KORUS template still serves as the starting point in this study,[12] but it is adjusted extensively to reflect differences between the published TPP and KORUS (see appendix B). Analysis of the TPP tariff schedule, however, is based entirely on information in the TPP agreement.

3. ASSESSMENT METHODOLOGY

A global computable general equilibrium (CGE) model is used to analyze the effects of the TPP (see appendix A). The model is similar to the one used in our 2012 study but, as appendix table A.1 shows, virtually all of its components have been updated with more recent data, new research results, and information on the agreement itself. Some changes increased estimated benefits, others decreased them. On the whole, the estimates presented here are larger than those previously published, and appendix B traces how specific changes in data and methodology explain these differences.

Estimating Framework

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 with 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 effects through changes in trade patterns and industry output levels. The assumption is used in most applied models of trade agreements.[14] It does not predict normal levels of unemployment and savings for 2030 or any other year; it simply says that inevitable deviations from normal values in the future are likely to be caused by unexpected macroeconomic shocks and not by trade policy changes.

CGE models not only help to assess long-term structural changes in the economy, but also offer insight into the adjustments that have to occur along the way. Labor market adjustments are of particular concern, since they may involve costly transitions and unemployment for some workers. These costs represent the downside of trade liberalization and are estimated in section 5. Since the estimates suggest that adjustments will be uneven across firms and individuals, efforts to facilitate them will require targeted policies to improve labor mobility, equip workers with new skills, and provide adjustment assistance where needed. To design these policies, even more detailed studies will be needed. But the present analysis does indicate that the benefits of the TPP to the US economy will greatly outweigh adjustment costs, and that economywide price and employment

12. Detailed expert analysis of the TPP text, comparable to that used for the KORUS text in order to develop scores for sectoral NTB reductions, is not yet available.
13. The nonpreferential liberalization effect was not included in our 2012 study but has been widely used in European studies (e.g., European Commission 2012), often with a higher spillover factor. The rationale is that some provisions of regional agreements—including disciplines on IP protection, transparency, good regulatory practices, regulatory convergence, SME development, and others—cannot be operationally restricted to apply to members alone and will improve market access for all partners.
14. Other work on the effects of TPP is reviewed in box 2 on page 22. Because trade policy models, including this one, generate wage increases, some researchers add endogenous labor supply growth that amplifies estimated income gains. This assumption may be justified in some circumstances. However, since labor supply elasticities are highly uncertain, this study conservatively assumes no such amplification of benefits.

consequences will be limited.[15] Despite some difficult transitions, the large majority of economic agents and markets are likely to see small, mostly expansionary wage and exchange rate changes during implementation.[16]

The results show that reductions in trade barriers under the TPP generate reallocations of labor and capital toward efficient firms and industries, enabling them to produce more of what they produce best. The model suggests that by 2030 some 796,000 jobs will have been added in US exporting activities—a number often described as jobs directly supported by exports—drawing workers from other firms. More detailed estimates of sectoral employment changes, showing jobs added and eliminated in various industries, will be used below to examine possible unemployment effects. Overall, as structural changes increase the productivity of the US economy, labor and capital will have more income to share and wages will rise. A widely noted indicator of the potential benefits is that export jobs already pay as much as 18 percent more than average jobs, and even more when compared to import-competing jobs (Bernard et al. 2007, Riker 2010).

How Far Will Barriers Fall?

The most important data points of the model include trade and investment barriers for each product on each exporter-importer link. These are difficult to estimate because some impediments are hard to pinpoint and because complex patterns of existing bilateral trade agreements affect much intra-TPP trade. Information on tariffs is reasonably complete and reliable, but data on NTBs, which are more significant, are measured less accurately and leave gaps to be filled. The estimates in this study are based on several major research efforts referenced in appendix A.

Using the best available data, table 1 reports trade barriers imposed by the United States on its imports and barriers imposed by TPP partners on US exports. The top half of the table shows tariffs; those for 2015 were estimated on the basis of the Global Trade Analysis Project (GTAP) database. Tariffs in both directions are already modest, in part because much US trade with TPP partners is covered under FTAs with Australia, Canada, Chile, Mexico, Peru, and Singapore. On average, the United States imposes lower tariffs than its partners, but tariffs are high in some sectors, such as US imports of textiles and apparel (up to 25 percent for some products in the broader categories) and US exports of food and beverage products.

The bottom half of the table shows NTBs, represented as tariffs that would have had the same protective effect (tariff equivalents). NTBs include quotas in agriculture and energy, standards and regulations that may be arbitrary, measures that explicitly or implicitly favor domestic producers, certification requirements that are unreasonably difficult to meet, lengthy or unpredictable customs procedures, and a host of other limitations on how companies are allowed to operate in foreign markets. NTBs have been widely recognized as the leading challenge to trade policy (UNCTAD 2010) and data suggest that their use has been rising (Evenett and Fritz 2015), perhaps to compensate for declining tariffs.

Some regulations that have legitimate, welfare-increasing objectives (for example, product safety standards) may be included in estimates of NTBs developed by other researchers, but they should not be counted

15. Paul Krugman (1993, 25) put it this way: "The level of employment is a macroeconomic issue, depending in the short run on aggregate demand and depending in the long run on the natural rate of unemployment, with microeconomic policies like tariffs having little net effect. Trade policy should be debated in terms of its impact on efficiency, not in terms of phony numbers about jobs created or lost." Predictions of large job losses in Europe and in the United States as a result of the TTIP and TPP agreements, respectively, have been recently circulated by Jeronim Capaldo (Capaldo 2014, Capaldo et al. 2016). These papers dismiss microeconomic analysis and use a macroeconomic model that has no equations or variables to handle trade policy, trade barriers or structural change. In their simulations, the TPP is represented with exogenous macroeconomic assumptions that are unrelated to the agreement's provisions, and simply *predetermine* job losses and a worsening of the income distribution. Serious concerns about the credibility of the European paper have been raised by Martin Wolf in the *Financial Times* (Wolf 2015), Bauer and Erixon (2015), and Erixon and Bauer (2015).

16. The wage changes projected by the model show US real wages rising 0.5 percent under the TPP, suggesting slight expansionary pressures during implementation. The change in the US real, trade-weighted exchange rate show slight contractionary effects, requiring a total depreciation of 0.1 percent over the 15-year period.

Table 1 Trade barriers between the United States and TPP partners (percent, including ad valorem equivalent percent for nontariff barriers)

	US barriers on imports				Foreign barriers on US exports			
	2015	2020	2025	2030	2015	2020	2025	2030
Sector	**Tariffs**							
Primary products								
Grains	0.0	0.0	0.0	0.0	4.8	0.3	0.3	0.3
Other agriculture	0.1	0.0	0.0	0.0	1.9	0.5	0.4	0.3
Mining	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing								
Food, beverages, tobacco	1.0	0.4	0.4	0.3	8.9	1.4	0.9	0.8
Textiles	3.8	1.7	0.9	0.3	0.6	0.1	0.1	0.1
Apparel and footwear	11.2	4.8	3.2	0.7	3.9	0.3	0.3	0.3
Chemicals	0.6	0.1	0.1	0.1	0.3	0.1	0.1	0.1
Metals	0.2	0.0	0.0	0.0	0.2	0.1	0.1	0.0
Computers and electronics	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Machinery	0.3	0.1	0.1	0.1	0.2	0.1	0.0	0.0
Transport equipment	0.2	0.1	0.1	0.1	0.3	0.1	0.1	0.1
Other manufacturing	0.2	0.0	0.0	0.0	0.4	0.2	0.1	0.1
Total (goods)	**0.6**	**0.2**	**0.2**	**0.1**	**1.0**	**0.2**	**0.1**	**0.1**
	Nontariff barriers							
Primary products								
Grains	10.6	10.0	9.5	9.0	22.5	20.1	18.1	17.0
Other agriculture	5.0	4.4	3.9	3.6	10.3	8.9	7.5	6.9
Mining	1.0	0.9	0.8	0.8	2.5	2.4	2.3	2.1
Manufacturing								
Food, beverages, tobacco	8.2	7.2	6.1	5.7	15.5	13.7	11.9	11.1
Textiles	17.9	14.1	10.7	9.6	5.8	5.4	4.5	3.5
Apparel and footwear	13.1	9.3	5.0	3.9	6.2	5.3	3.5	2.7
Chemicals	1.6	1.4	1.1	0.9	3.6	3.0	2.5	2.1
Metals	0.0	0.0	0.0	0.0	2.4	2.3	2.1	1.9
Computers and electronics	0.7	0.6	0.5	0.5	5.9	4.8	3.7	3.3
Machinery	3.4	2.9	2.4	2.2	5.4	4.7	4.1	3.7
Transport equipment	2.6	2.4	2.2	2.1	2.8	2.6	2.3	2.1
Other manufacturing	1.3	1.1	0.9	0.8	2.3	2.0	1.8	1.5
Services								
Utilities	1.3	1.3	1.2	1.1	1.2	1.2	1.1	1.0
Construction	55.5	46.5	36.8	33.6	20.5	17.2	13.7	12.5
Trade and transportation	23.5	20.9	17.9	15.9	25.7	22.3	18.5	16.4
Communications	11.0	9.7	8.2	7.3	17.5	15.7	13.4	11.9
Finance	26.3	23.2	20.1	18.7	21.6	19.2	16.2	14.3
Business services	20.2	17.9	14.9	13.2	23.2	18.8	13.8	12.2
Social services	4.8	4.2	3.5	3.3	20.3	17.9	15.5	14.4
Total (goods and services)	**4.1**	**3.6**	**3.0**	**2.7**	**7.9**	**6.9**	**5.8**	**5.3**

Sources: Authors' calculations and data sources listed in appendix A.

as barriers. To account for the exclusion of these components, only three-quarters of NTBs are considered barriers subject to reduction in the TPP. Like tariffs, the remaining NTBs are relatively low for goods, except for food products, textiles, and apparel. They are higher in service industries, which involve more regulated and less easily defined products. In addition to excluding legitimate regulations, the current analysis assumes that only 50 percent of the remaining NTBs in services and 75 percent of those in goods are "actionable," that is, subject to politically feasible reductions through trade policy.

Combining those assumptions, the actionable portion of initially estimated NTBs is calculated as 56.3 percent for goods and 37.5 percent for services. To simulate the effects of trade policy, these barriers are then reduced in proportion to scores (from 0 to 100) that represent the quality of the provisions of an agreement that address barriers in various goods and service sectors. The scoring methodology is explained in appendix A; it relies on textual analysis of trade agreements by the WTO and other experts. The scores for the TPP are based, in the first instance, on such a quantitative analysis of KORUS. Because similar analysis is not yet available for the TPP, KORUS scores were subjectively adjusted (typically slightly downward) to account for differences between the two agreements. These adjustments are reported in appendix B.

The resulting changes in barriers under the TPP are presented in the post-2015 columns of table 1, assuming that the agreement enters into force in 2017. Tariffs fall dramatically. As already noted, 75 percent of nonzero tariff lines are eliminated immediately as the TPP enters into force, and 99 percent are eliminated eventually. In the table, tariffs fall somewhat more slowly than in the published tariff schedules, because we assume that some trade is ineligible for preferences under the ROO (say, apparel made in Vietnam from Chinese fabrics; see Kimberly Ann Elliott's chapter in this Briefing). However, by 2030 nearly all tariffs among TPP members will be eliminated, and most products are assumed by then to have regional supply chains that make them eligible for preferences. (A few tariffs, like the 25 percent US tariff on trucks and SUVs, remain for as long as 30 years.) NTBs decline, but reductions often fail to reach the actionable upper bound. Barriers on FDI are projected using a similar methodology.

4. EFFECTS OF THE TPP

This section examines the effects of the TPP on the United States, first for the economy as a whole, second for its several industrial sectors, and third for employment, which is of obvious importance to the public and policymakers. Readers should bear in mind that sectoral details are central to the last two issues but more uncertain than aggregate results, in part because errors in detail often offset each other.

Incomes, Exports, and Foreign Investment

Table 2 shows, based on the current analysis, the principal measure of benefits, "real income gains." This term refers to the awkward technical definition of equivalent variations, the indicator economists prefer for assessing policy changes. It measures how much extra income a country would require, without the TPP, to undertake real expenditures as desirable as those feasible with the TPP. Expenditures normally depend on income earned from production, so real income gains are similar (but not identical) to gains in real GDP. Because both real GDP[17] and real incomes are expressed in constant prices, the relationship between them depends on relative prices. For example, if the TPP lowers output prices relative to consumer goods prices, then a given GDP increase will correspond to a smaller real income increase.

17. GDP changes are presented on our website www.asiapacifictrade.org. These results are similar to income gains, but are an inferior measure of overall economic benefits first because of the pricing effects noted in the text, and second because the GDP measure is based on trade effects only and does not include benefits from additional foreign direct investment.

Table 2 Real income effects of the TPP

	Baseline (billions of 2015 dollars)				Change with TPP (billions of 2015 dollars)			Percent change from baseline		
Country	**2015**	**2020**	**2025**	**2030**	**2020**	**2025**	**2030**	**2020**	**2025**	**2030**
Americas	**21,962**	**25,177**	**28,473**	**31,544**	**41**	**129**	**205**	**0.2**	**0.5**	**0.7**
Canada*	1,981	2,227	2,472	2,717	8	22	37	0.4	0.9	1.3
Chile*	269	329	397	463	0	2	4	0.1	0.5	0.9
Mexico*	1,339	1,598	1,868	2,169	3	11	22	0.2	0.6	1.0
Peru*	219	287	363	442	1	6	11	0.4	1.6	2.6
United States*	18,154	20,736	23,372	25,754	29	88	131	0.1	0.4	0.5
Asia	**22,806**	**29,752**	**38,179**	**47,386**	**52**	**135**	**203**	**0.2**	**0.4**	**0.4**
Brunei*	20	24	27	31	0	1	2	1.1	3.3	5.9
China	11,499	16,058	21,689	27,839	–1	–8	–18	0.0	0.0	–0.1
Hong Kong	300	358	412	461	2	4	6	0.5	1.0	1.2
India	2,210	3,086	4,197	5,487	0	–2	–5	0.0	–0.1	–0.1
Indonesia	927	1,240	1,687	2,192	0	–1	–2	0.0	–0.1	–0.1
Japan*	4,214	4,462	4,693	4,924	39	91	125	0.9	1.9	2.5
Korea	1,384	1,672	1,967	2,243	–1	–5	–8	–0.1	–0.2	–0.3
Malaysia*	349	444	553	675	7	28	52	1.6	5.0	7.6
Philippines	329	436	547	680	0	–1	–1	0.0	–0.1	–0.1
Singapore*	320	380	437	485	2	8	19	0.5	1.9	3.9
Taiwan	511	619	707	776	0	1	1	0.1	0.1	0.2
Thailand	411	516	656	812	–1	–4	–7	–0.2	–0.6	–0.8
Vietnam*	209	281	378	497	7	22	41	2.3	5.8	8.1
ASEAN nie	124	175	228	283	0	–1	–1	–0.1	–0.2	–0.4
Oceania	**1,896**	**2,203**	**2,533**	**2,854**	**2**	**12**	**21**	**0.1**	**0.5**	**0.7**
Australia*	1,704	1,986	2,292	2,590	1	8	15	0.0	0.4	0.6
New Zealand*	192	217	241	264	1	4	6	0.5	1.5	2.2
Rest of world	**34,371**	**39,492**	**45,506**	**52,017**	**16**	**44**	**62**	**0.0**	**0.1**	**0.1**
European Union	17,893	19,746	21,451	23,189	12	34	48	0.1	0.2	0.2
Russia	2,244	2,462	2,903	3,371	0	1	2	0.0	0.0	0.1
ROW	14,235	17,283	21,152	25,456	3	8	12	0.0	0.0	0.0
World	**81,035**	**96,623**	**114,690**	**133,801**	**111**	**319**	**492**	**0.1**	**0.3**	**0.4**
Memorandum										
TPP members	28,969	32,971	37,094	41,011	98	291	465	0.3	0.8	1.1
Non-members	52,066	63,652	77,596	92,790	13	28	27	0.0	0.0	0.0

ASEAN = Association of Southeast Asian Nations; nie = not included elsewhere; ROW = rest of world

Note: Asterisk denotes TPP member.

Source: Authors' simulations.

Annual income gains generated by the TPP by 2030 will be $131 billion for the United States and $492 billion for the world. US gains represent about 0.5 percent of baseline GDP. To put these benefits in context, all investments in a given year in the United States have been estimated to add 1 percent to US real incomes (Fernald 2014). US investment in 2014 was $2.9 trillion (Council of Economic Advisors 2015). Thus, a 0.5 percent income gain from the TPP can be thought of as the equivalent of $1.45 trillion in investment in 2014.

Large gains are also projected for Japan, Malaysia, and Vietnam. Large relative gains tend to accrue to economies that have high levels of protection to shed under the TPP. Japan benefits from improved market access throughout the TPP region, including early liberalization of auto imports in markets other than the United States, and from domestic reforms that reduce distortions in its protected service and investment sectors. Percentage gains are especially large for Vietnam and Malaysia, where the agreement should also stimulate domestic reforms and provide access to protected foreign markets. Other significant percentage gains are projected for the smaller economies of Brunei, Peru, Singapore, and New Zealand.

The TPP is not generally estimated to have large income effects on nonmembers.[18] Some gain and others lose, the latter to the extent that the TPP diverts trade from nonmembers to members or erodes previous preferences in TPP markets. Losses are tangible for China, India, and Thailand, which compete with TPP members for TPP markets, and for Korea, because the TPP will erode that country's advantage in US markets under KORUS. But except for Thailand, these losses are small compared with GDPs. Some nonmembers, including the European Union and Hong Kong, experience net gains, in part because of the assumption that TPP provisions liberalize some trade with nonmembers.

Table 3 reports the effects of the TPP on trade and foreign direct investment in 2030. Annual exports for the United States increase by $357 billion or 9.1 percent, and for all TPP countries together by $1,025 billion or 11.5 percent. The pattern of export increases is similar to that of income increases; in dollar values the United States, Japan, Vietnam, and Malaysia lead the list—Japanese, Vietnamese, and Malaysian exports each expand by 20 percent or more. Effects on nonmembers are mixed; some register export gains and others losses. Because import effects are similar to export effects under the normal trade balance assumption, they are not reported.

Inward investment stocks in all TPP countries expand by $446 billion or 3.5 percent over the 2030 baseline, and outward investment stocks by $305 billion or 2 percent. These effects are due partly to GDP growth in different regions, and partly to reductions in investment barriers. The largest recipients of inward FDI due to the TPP are the United States, Canada, Japan, and Malaysia, and the largest sources of outward FDI are the United States, Japan, and the European Union. TPP countries attract more inward investment stocks than they spend on outward investment stocks, reflecting net investments from the rest of the world due to an improved investment environment. In the analysis of benefits, these investments raise incomes in both investing and host countries.

Sectoral Trade and Output

Debate about the changing structure of the US economy typically focuses on manufacturing, but many dynamic changes today occur *within* sectors, as innovative and sometimes disruptive firms gain market share. Manufacturing as a whole declined in recent decades (Kehoe, Ruhl, and Steinberg 2013) as demand shifted toward services, technology reduced the demand for labor, and manufacturers abroad, especially in China, became more competitive. US manufacturing in 2014 was a modestly sized, capital-intensive sector accounting for 12 percent of GDP and 9 percent of employment, down from 13 and 11 percent, respectively, a decade

18. Early theories of free trade agreements emphasized trade diversion effects (Viner 1950, Lipsey 1960). Recent work recognizes, however, that economies with significant preagreement trade are "natural trading blocs" and their agreements are likely to lead to more trade creation than trade diversion (Frankel, Stein, and Wei 1995).

Table 3 Trade and investment effects of the TPP (billions of 2015 dollars)

	Exports				Inward FDI stocks				Outward FDI stocks			
	Baseline		TPP in 2030		Baseline		TPP in 2030		Baseline		TPP in 2030	
Country	2015	2030	Change	Percent	2015	2030	Change	Percent	2015	2030	Change	Percent
Americas	**3,274**	**5,693**	**469**	**8.2**	**5,792**	**9,348**	**250**	**2.7**	**7,028**	**11,768**	**169**	**1.4**
Canada*	560	835	58	7.0	934	1,487	107	7.2	851	1,383	16	1.2
Chile*	87	147	8	5.3	149	281	0	0.0	54	114	2	1.7
Mexico*	396	670	32	4.7	424	774	8	1.1	141	265	2	0.6
Peru*	46	135	14	10.3	49	117	7	5.8	2	5	0	3.9
United States*	2,184	3,906	357	9.1	4,236	6,690	128	1.9	5,980	10,002	149	1.5
Asia	**6,168**	**12,095**	**509**	**4.2**	**6,788**	**16,055**	**220**	**1.4**	**5,152**	**11,931**	**140**	**1.2**
Brunei*	10	16	1	9.0	0	0	0	11.3	7	18	1	3.3
China	2,339	4,976	9	0.2	3,078	8,153	19	0.2	750	2,064	8	0.4
Hong Kong	199	357	4	1.0	1,452	3,069	8	0.3	2,253	5,485	15	0.3
India	488	1,360	1	0.1	322	999	1	0.1	119	359	2	0.6
Indonesia	205	446	–4	–1.0	233	621	5	0.8	22	58	1	1.1
Japan*	849	1,190	276	23.2	222	310	92	29.8	983	1,575	63	4.0
Korea	623	1,089	–11	–1.0	177	327	1	0.2	277	628	2	0.3
Malaysia*	261	491	99	20.1	128	279	48	17.2	140	345	24	7.0
Philippines	74	184	–1	–0.4	60	145	1	0.5	13	38	0	0.3
Singapore*	304	470	35	7.5	847	1,555	28	1.8	450	1,018	23	2.2
Taiwan	348	506	4	0.8	41	69	0	0.7	69	155	1	0.7
Thailand	275	561	–9	–1.6	176	386	1	0.2	66	179	1	0.4
Vietnam*	161	357	107	30.1	40	108	16	14.4	2	4	0	7.2
ASEAN nie	31	93	–3	–2.8	11	33	0	0.1	2	6	0	0.7
Oceania	**349**	**673**	**38**	**5.6**	**699**	**1,194**	**12**	**1.0**	**443**	**802**	**24**	**3.0**
Australia*	296	589	29	4.9	609	1,049	10	0.9	414	751	23	3.0
New Zealand*	53	84	9	10.2	90	145	2	1.4	30	51	2	3.2
Rest of world	**11,784**	**17,689**	**91**	**0.5**	**23,745**	**37,846**	**65**	**0.2**	**24,401**	**39,942**	**213**	**0.5**
European Union	7,472	9,706	49	0.5	17,526	26,052	48	0.2	19,780	30,566	169	0.6
Russia	575	851	5	0.5	660	1,078	1	0.1	502	821	2	0.2
ROW	3,736	7,132	37	0.5	5,559	10,716	17	0.2	4,119	8,555	41	0.5
World	**21,575**	**36,149**	**1,106**	**3.1**	**37,025**	**64,443**	**547**	**0.8**	**37,025**	**64,443**	**547**	**0.8**
Memorandum												
TPP members	5,208	8,890	1,025	11.5	7,730	12,794	446	3.5	9,053	15,530	305	2.0
Nonmembers	16,366	27,260	81	0.3	29,295	51,649	101	0.2	27,972	48,913	242	0.5

ASEAN = Association of Southeast Asian Nations; FDI = foreign direct investment; nie = not included elsewhere; ROW = rest of world

Note: Asterisk denotes TPP member.

Source: Authors' simulations.

earlier.[19] This decline, at least relative to the rest of the economy, is expected to continue regardless of trade policy (Acemoglu et al. 2014).

Yet US manufacturing also contains dynamic subsectors and firms. Baseline projections show manufacturing value added growing by almost 2 percent annually between 2015 and 2030, only a little slower than US GDP. Reversing a long-established negative trend, baseline manufacturing employment also grows from 12.1 million in 2015 to 12.7 million workers in 2030,[20] although manufacturing's share of the labor force continues to decline from 9 to 8 percent. Advances in the service sector are more broadly based—from financial, computer, and internet services to logistics and entertainment—reflecting high productivity and wide-ranging comparative advantages in this sector in the United States.

Figure 1 presents the effects of the TPP on trade and output in different sectors of the US economy. These shifts describe structural reallocations that ultimately result in higher productivity. They depend, on one hand, on the comparative advantages of different US industries and, on the other hand, on reductions in trade barriers by the United States and its partners. On the export side, the United States has strong comparative advantages in primary goods, advanced manufacturing, and services. Among these industries, the largest reductions in barriers are likely to occur in service sectors. On the import side, foreign producers have comparative advantages in labor-intensive manufactures and in some services and will be able to increase sales as US barriers are gradually removed in sectors such as textiles and apparel.

Figure 1a shows that US exports will increase substantially in durable and nondurable manufacturing industries and in traded services. Export gains are smaller in primary (agricultural and mining) products because this sector is small in the first place and because its products are often exported in processed form as food, beverages, chemicals, and other raw-materials based products. There is even some growth in nontraded services, where exports are limited by natural barriers. Figure 1b shows that imports will expand in similar sectors, bringing more varied and affordable products to US markets. Imports rise more than exports in manufacturing, while exports rise more than imports in primary goods and services, but net trade effects are small compared to gross trade changes, implying substantial opportunities for productive firms in every sector of the economy.[21]

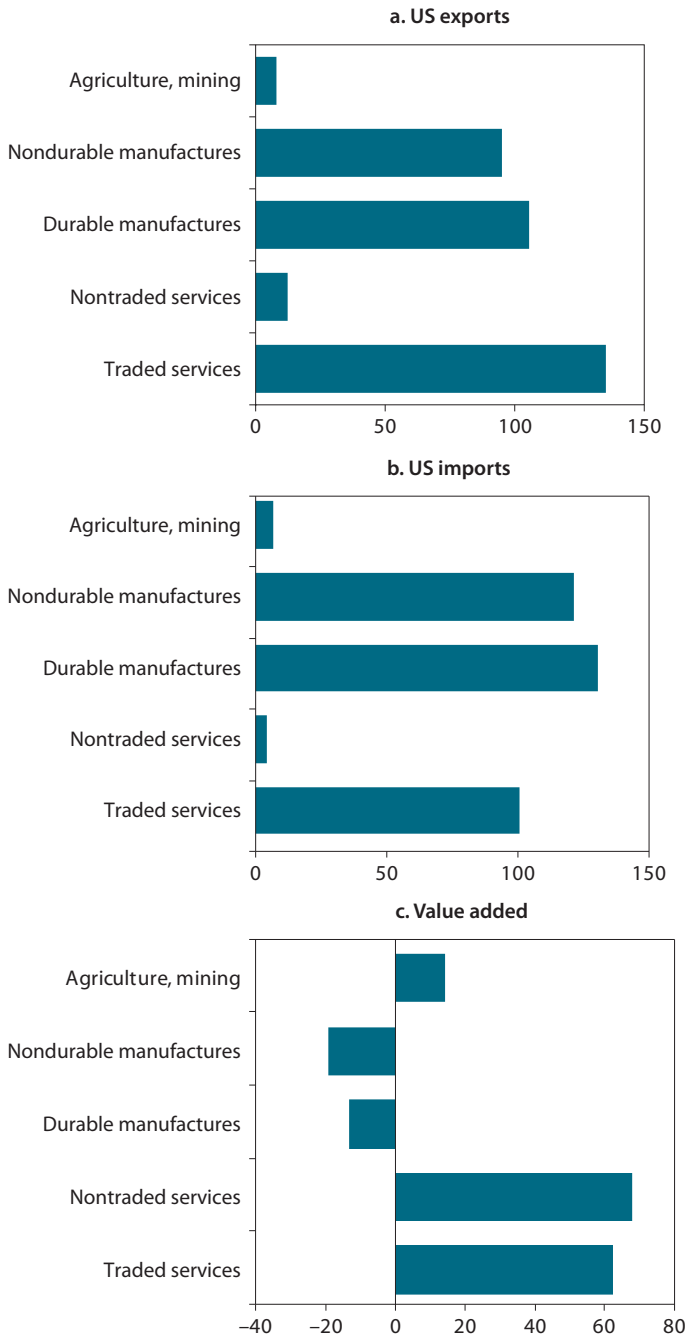
Large or small, export and import effects reverberate through the economy and cause changes in sectoral value added and employment. These effects include indirect channels activated by the demand for intermediate goods for trade as well as demand for products and services stimulated by higher incomes under the TPP. Figure 1c shows the net effects on value-added changes in different sectors. Value-added changes reflect trade effects, as well as the rise in nontraded services due to increased US incomes with the TPP. Since the baseline projects increases in value added in all sectors over time, the changes shown in figure 1c are *relative to the baseline*, not over time. Value added will grow also in manufacturing between 2015 and 2030, but at an annual rate that is slightly slower (1.79 percent vs. 1.85 percent) under the TPP than the baseline.

Employment

Employment shifts between sectors, and the resulting addition to labor market churn, are of particular interest. Estimates of these shifts are derived by the model from changes in production and the relative prices of different factors of production. The value added changes shown in figure 1c drive the overall demand by industry sectors for primary factors of production—skilled labor, unskilled labor, and capital. While total value

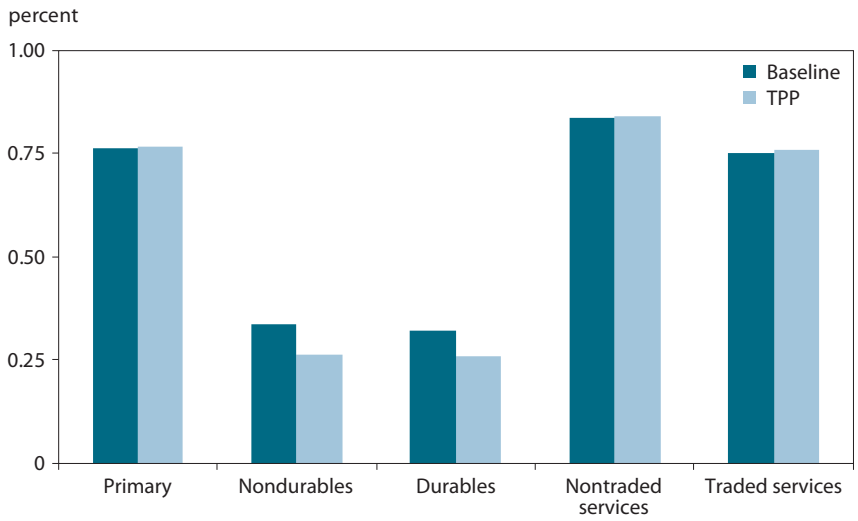
19. These estimates are based on Bureau of Economic Analysis data, www.bea.gov/iTable/iTable.cfm?ReqID=51&step=1#reqid=51&step=51&isuri=1&5101=1&5114=a&5113=22r&5112=1&5111=2000&5102=1 (accessed on December 20, 2015). The model's sectoral definitions indicate somewhat higher percentages for both value added and employment than BEA data.
20. Projections by the Bureau of Labor statistics assume somewhat higher labor productivity growth and therefore predict a slight decline. See www.bls.gov/emp/ep_table_207.htm.
21. The difference between total exports and imports is unchanged, but reported changes in total exports may not equal those in total imports because the trade balance is fixed in value terms while exports and imports are reported in constant prices.

Figure 1 US trade and output under the TPP: Changes relative to the baseline in 2030 (billions of 2015 dollars)



Source: Authors' simulations.

Figure 2 Employment growth rates with and without the TPP, by sector, 2015–30



Source: Authors' simulations.

added in the economy rises as the economy becomes more productive, total employment does not; the supply of labor is expected to be at normal, long-run levels with or without the TPP. Thus, higher productivity translates into greater demand for labor and drives wages higher.[22]

Figure 2 shows how the TPP will affect the allocation of total employment in the different sectors of the US economy, comparing the growth rate of employment from 2015 to 2030 under the baseline projection and under the TPP. Note first that employment in the primary goods and service sectors grows faster than in manufacturing with or without the TPP, because of trends mentioned earlier. These relatively fast-growing sectors are also the ones that benefit from the TPP, given the structural changes shown in figure 1. The service sectors are very large—they will employ 90 percent of US workers in 2030—so the impact of the TPP is barely visible in their growth rates.

The effects are more clearly discernible, however, in manufacturing. While in absolute terms, employment in manufacturing continues to grow irrespective of the TPP, the agreement dampens the growth rate of manufacturing employment by about one-fifth. In absolute numbers, the lower trajectory of employment growth in manufacturing equals increases in employment in the service and primary goods sectors. More detailed results show 121,000 fewer jobs created in the sector relative to the baseline by 2030.

Structural changes drive up the demand for factors of production that are used in expanding industries. In the case of the United States, the shifts under the TPP favor labor relative to capital, because service sectors are relatively skilled-labor intensive whereas import-competing manufacturing is generally capital and unskilled-labor intensive. As US resources shift from general manufacturing toward traded services and advanced manufacturing, the returns of skilled labor rise. While the TPP increases the returns of all three factors (skilled labor, unskilled labor, and capital) due to increases in productivity, it causes wages overall to rise more than returns on capital (0.53 percent vs. 0.39 percent), and the wages of skilled workers, who make up 60 percent of the labor compensation, to rise more than those of unskilled workers (0.63 percent vs. 0.37 percent).

Structural changes also imply labor market adjustments, and research warns that such adjustments can weigh heavily on some workers (Autor, Dorn, and Hanson 2014). The model's results can be used to estimate the number of jobs affected by the TPP. One approach for constructing this estimate is to count *jobs that are eliminated in one sector and added in another*. This yields an estimate of 189,000 required job shifts by 2030, or 18,900 jobs per year in the ten-year period between 2018 and 2028, when most policy changes associated with the TPP are implemented. This should be thought of as adding to the ongoing flow of employment changes in the US labor market, often described as job churn.

22. In short-term models wages are often assumed fixed and the supply of labor expands or contracts in response to changes in aggregated demand. In long-term models, such as this one, the labor force is fixed and wages rise or fall in response to demand changes.

A second approach is to count *all jobs directly displaced by imports.* This is an expansive and possibly unrealistic measure, since it assumes that jobs no longer required for imports will result in layoffs, even in sectors that have offsetting growth due to increased exports or domestic demand. This calculation yields 71,900 job shifts per year. A third approach is to count *all jobs directly and indirectly displaced* by imports, including in supplier firms. This yields 160,700 job shifts per year.[23] Using the second estimate (71,900) and subtracting 25.3 percent for voluntary and other separations (from 2014 US data) leaves 53,700 annual additional job changes that will be involuntary and attributable to the TPP during its implementation period. However, such churn takes place on a vast scale in the United States every year in the absence of any further trade liberalization. Given a flow of 55.5 million such job changes in 2014, a broadly typical number outside of a recession, this would be an addition to churn of less than 0.1 percent.

Under normal labor market conditions, most workers displaced by the TPP are, therefore, likely to find new jobs. As Lawrence (2014) notes, however, some may face greater challenges, perhaps because of age or location in an economically depressed area; the costs to those displaced workers could include significant periods of unemployment and/or wage reductions. He estimates those costs in a similar context and finds that they are overshadowed by the agreement's benefits. Lawrence and others (OECD, ILO, WTO, and World Bank 2010) have proposed targeted strategies to support workers who bear the costs; affordable policies to eliminate unfair adjustment burdens appear to be available.

Contributions of TPP Liberalization Components

Figure 3a divides the gains associated with the TPP into the separate effects of the liberalization of tariffs, NTBs, and FDI barriers. Each component includes gains from an economy's own policy actions as well as liberalization by partners. All components contribute positively in nearly all member economies.

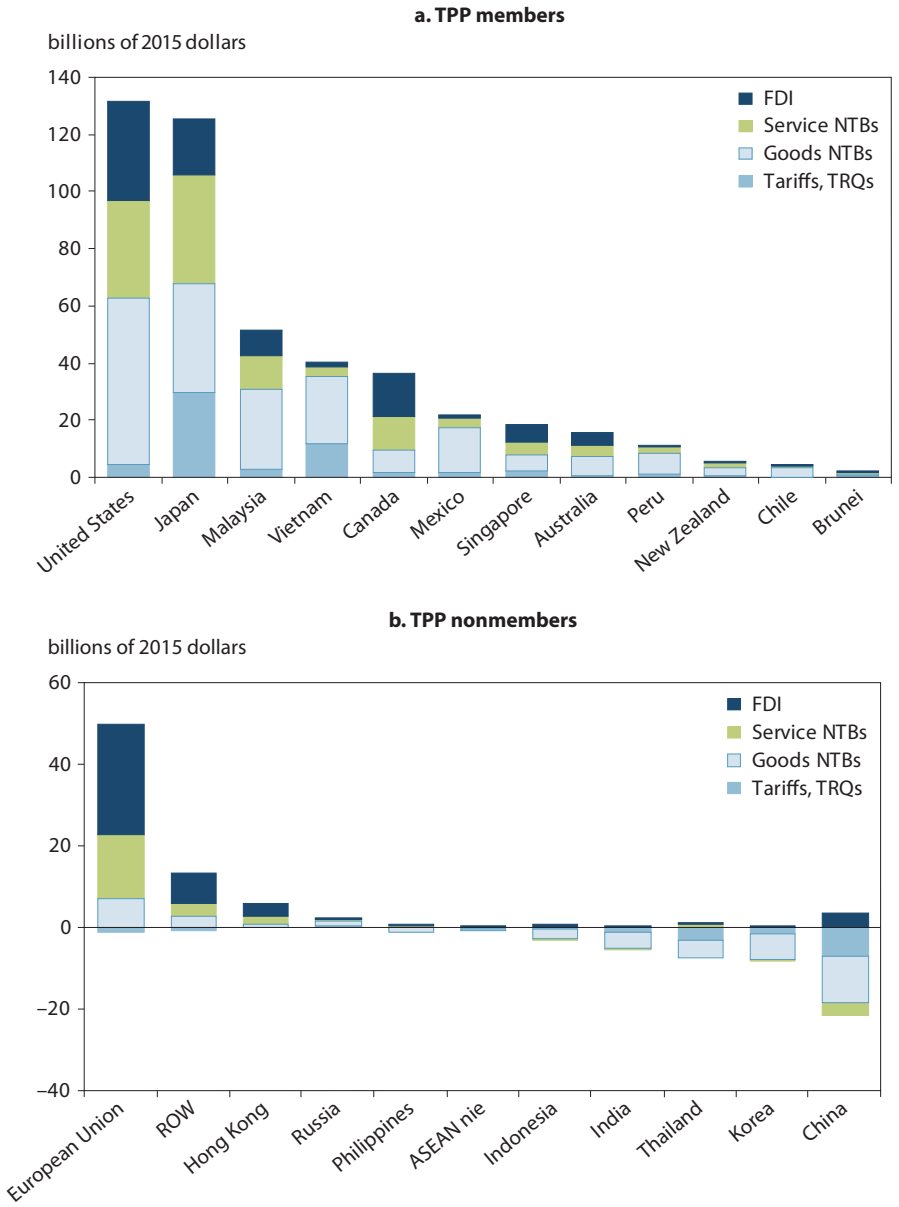
Despite the nearly complete elimination of tariffs, tariff liberalization accounts for only 12 percent of the benefits of all TPP members, and an even smaller share for the United States. The liberalization of goods NTBs makes the biggest contribution; goods trade is the key link among TPP economies and NTBs are higher than tariffs in most sectors. Goods liberalization is especially important for Japan, Malaysia, Mexico, and Vietnam. For some advanced economies the liberalization of service NTBs and FDI is also important, accounting for more than half of the gains in Australia, Canada, Singapore, and the United States, and nearly half for Japan.

Figure 3b focuses on nonmembers. Economies that lose from the TPP (on the right-hand side of the chart) do so mainly because of goods provisions, and those that benefit (on the left-hand side of the chart) do so because of service and FDI provisions. Nonmembers that compete in the goods sectors face a tough challenge, because many TPP members are also competitive in the goods sector. There is less international competition within the TPP in services (the United States is the only dominant exporter), and the nonpreferential portion of service liberalization by the United States thus favors external service exporters such as the European Union.

The sizes of components highlight the challenges of next-generation trade agreements. Given large reductions in tariffs in the past, even agreements that eliminate virtually all tariffs need to focus on other barriers to deliver meaningful benefits. The TPP appears to have done so, with 12 percent of the gains of all members derived from tariff reductions, 43 percent from reductions in goods NTBs, 25 percent from reductions in service NTBs, and 20 percent from reductions in investment barriers.

23. These estimates are based on results not reported in this chapter. They are derived using the input-output tables that form the core of the simulations model (and are derived from the GTAP 9 data system) to find displacements in industries that supply intermediate input to import-competing industries. The first calculation may underestimate the number of workers who leave jobs, while the last will almost certainly overestimate it. The low estimate does not include intrasectoral job shifts that may result in difficult transitions, while the high estimate also includes shifts that may have no effect other than changing the client to whom a given product or service is sold.

Figure 3 TPP income effects and their composition, 2030



ASEAN = Association of Southeast Asian Nations; FDI = foreign direct investment; nie = not included elsewhere; NTBs = nontariff barriers; ROW = rest of world; TRQs = tariff rate quotas

Source: Authors' simulations.

Box 2 Estimates of the effects of the TPP by other researchers

Since our 2012 study, several other estimates of the effects of the TPP have been published. Despite inevitable differences, the estimates are broadly similar.

Some studies examine the overall agreement. Inkyo Cheong and Jose Tongzon (2013) find that the TPP would have no significant effects, in contrast to significant gains in most other estimates. However, they model only tariff reductions and assume more prior tariff liberalization among members than is likely to have occurred. Hiro Lee and Ken Itakura (2014) represent the TPP with a 20 percent cut in service NTBs and estimate income gains of 0.8 percent for Australia, Canada, Japan, Mexico, and the United States vs. 0.9 percent in this study. Using a similar methodology, Kenichi Kawasaki (2014) estimates annual gains of 1.8 percent of GDP for TPP members vs. 1.1 percent in this study. His estimates assume that 50 percent of TPP liberalization is nonpreferential, rather than 20 percent in this study.

Other studies focus on individual TPP members. Mary Burfisher et al. (2014) focus on US agriculture and find that tariff reductions would not have significant macroeconomic effects. A study for Vietnam by the World Bank (forthcoming) estimates that the TPP will increase Vietnamese GDP by 8.1 percent by 2035 vs. 8.1 percent for 2030 in this study. Anna Strutt, Peter Minor, and Allan Rae (2015) analyze results for New Zealand and estimate a GDP increase of 1.4 percent vs. 2.2 percent in this study. PWC (2015) projects large benefits for Malaysia, as does this study, but does not report results that can be directly compared. Finally, Japan's Cabinet Secretariat projects a Japanese GDP increase of 2.6 percent vs. 2.5 percent in this study, albeit with a different mix of assumptions.[1]

1. See Japan's Cabinet Secretariat, www.cas.go.jp/jp/tpp/kouka/index.html.

5. ADDITIONAL ESTIMATES

Uncertainties are inevitable in modeling, but some assumptions have an especially significant impact on the results. This section explores the effects of critical assumptions, and box 2 compares our results with others that have appeared since our earlier publications.

High and Low Scenarios

Table 4 reports alternative scenarios with more pessimistic and optimistic assumptions about economic growth, the size of NTB reductions, and the percentage of tariff cuts that are utilized by firms. The low scenario lies further below the central scenario than the upside scenario lies above it; several parameters could fall well below expectations (for example, projected global growth rates are still above historical averages) but sharp improvements in the performance of the global economy or in policy are less likely. The low scenario estimates the income effects of all TPP members at 67 percent of the central estimate, and the high scenario at 113 percent of the central scenario. US results range from 70 to 109 percent, varying somewhat less than average. Countries with larger gains (Japan, Malaysia, and Vietnam) are exposed to greater variations. Effects on nonmembers vary most in percentage terms, but bracket smaller central estimates.

Nonpreferential Liberalization

Twenty percent of NTBs are assumed to be reduced on a nonpreferential basis increasing estimated gains for TPP members and especially nonmembers. Table B.1 (in appendix B) shows that, without this component, estimated gains from the TPP would be 30 percent lower for the United States and 21 percent lower for all

Table 4 Low and high estimates of the income effects of the TPP, 2030

	Baseline 2030 (billions of 2015 dollars)			TPP income effect 2030 (billions of 2015 dollars)			Percent change from baseline 2030		
Country	**Low**	**Central**	**High**	**Low**	**Central**	**High**	**Low**	**Central**	**High**
Americas	**29,355**	**31,544**	**32,697**	**139**	**205**	**218**	**0.5**	**0.7**	**0.7**
Canada*	2,552	2,717	2,804	25	37	37	1.0	1.3	1.3
Chile*	416	463	488	2	4	4	0.5	0.9	0.9
Mexico*	1,972	2,169	2,274	13	22	21	0.7	1.0	0.9
Peru*	385	442	473	6	11	13	1.6	2.6	2.7
United States*	24,030	25,754	26,658	92	131	143	0.4	0.5	0.5
Asia	**40,852**	**47,386**	**51,046**	**144**	**203**	**244**	**0.4**	**0.4**	**0.5**
Brunei*	28	31	33	1	2	2	4.4	5.9	6.2
China	23,425	27,839	30,326	–9	–18	–20	0.0	–0.1	–0.1
Hong Kong	423	461	481	4	6	6	1.1	1.2	1.2
India	4,595	5,487	5,991	–2	–5	–6	–0.1	–0.1	–0.1
Indonesia	1,853	2,192	2,383	–1	–2	–2	–0.1	–0.1	–0.1
Japan*	4,774	4,924	5,001	92	125	156	1.9	2.5	3.1
Korea	2,039	2,243	2,352	–4	–8	–9	–0.2	–0.3	–0.4
Malaysia*	593	675	720	31	52	57	5.2	7.6	7.9
Philippines	590	680	729	–1	–1	–1	–0.1	–0.1	–0.1
Singapore*	447	485	506	9	19	20	2.0	3.9	4.0
Taiwan	715	776	809	1	1	2	0.2	0.2	0.2
Thailand	710	812	868	–4	–7	–7	–0.6	–0.8	–0.8
Vietnam*	420	497	541	27	41	47	6.4	8.1	8.7
ASEAN nie	241	283	307	–1	–1	–1	–0.3	–0.4	–0.4
Oceania	**2,632**	**2,854**	**2,971**	**13**	**21**	**24**	**0.5**	**0.7**	**0.8**
Australia*	2,384	2,590	2,699	9	15	17	0.4	0.6	0.6
New Zealand*	248	264	273	4	6	8	1.5	2.2	2.8
Rest of world	**47,808**	**52,017**	**54,273**	**51**	**62**	**70**	**0.1**	**0.1**	**0.1**
European Union	22,025	23,189	23,793	39	48	54	0.2	0.2	0.2
Russia	3,110	3,371	3,509	2	2	2	0.1	0.1	0.1
ROW	22,673	25,456	26,972	10	12	13	0.0	0.0	0.0
World	**120,647**	**133,801**	**140,987**	**346**	**492**	**556**	**0.3**	**0.4**	**0.4**
Memorandum									
TPP members	38,248	41,011	42,468	312	465	525	0.8	1.1	1.2
Nonmembers	82,399	92,790	98,519	34	27	31	0.0	0.0	0.0

ASEAN = Association of Southeast Asian Nations; nie = not included elsewhere; ROW = rest of world

Note: Asterisk denotes TPP member. The central scenario is from table 2. The low scenario assumes 20 percent smaller growth rates, reductions in nontariff barriers, and use of tariff preferences. The high scenario assumes 10 percent higher growth rates and tariff use rates, and 2012 (preadjustment) assumptions for TPP provisions.

Source: Authors' simulations.

TPP members. For the United States, service liberalization is important in this context, because it stimulates additional trade with the European Union.

Evidence from past studies and conversations with business experts, academics and negotiators suggest that nonpreferential liberalization is an unavoidable and useful byproduct of next-generation trade agreements, although more research is needed to improve the measurement of its scope and the assessment of its impacts.

Delay of TPP Implementation

As the TPP awaits ratification, the timing of its implementation is uncertain. The central results assume EIF in 2017. In an alternative simulation, we repeat the TPP experiment but delay the launch of implementation—the start of staged reductions of trade barriers—to 2018, keeping other assumptions unchanged.

In the simulation of a one-year delay, the benefits in every future year are lower than in the central scenario with EIF in 2017. Given that gains consist of a stream of future benefits, the "value" of the agreement can be calculated as a present value, the discounted sum of future benefits. This is similar to the calculation a business would apply in determining the value of an investment project. Table 5 shows the present value of the TPP with several plausible discount rates, ranging from $961 billion to $2,316 billion for the United States if the TPP is implemented in 2017, and across lower values if it is delayed. A one-year delay thus results in permanent losses from $77 billion to $123 billion for the United States and $308 billion to $525 billion for the world.

Delaying the TPP could generate still further, unquantified risks for the conduct of US commercial diplomacy. Given political uncertainties in many TPP member economies, some that are prepared to ratify the TPP now may be unwilling to do so later, and in that case the benefits to be realized will shrink. The benefits might be also reduced if, while waiting, TPP members choose to advance alternative free trade arrangements to hedge their bets. And other trade and investment initiatives that the United States is or could be involved in—including high-valued negotiations with the European Union and on the enlargement of the TPP itself—would have to be delayed or possibly abandoned, with corresponding costs.

Table 5 Present value of the TPP in 2015 (billions of 2015 dollars)

	Discount rate		
	3 percent	**5 percent**	**7 percent**
For the United States			
Present value of TPP, EIF in 2017	2,316	1,423	961
Present value of TPP, EIF in 2018	2,193	1,328	884
Effect of delay	–123	–94	–77
For the world			
Present value of TPP, EIF in 2017	8,637	5,302	3,582
Present value of TPP, EIF in 2018	8,112	4,914	3,275
Effect of delay	–525	–388	–308

EIF = entry into force

Note: Based on real income gains calculated under the TPP. After 2030, real income gains are assumed to be 2030 gains, declining by 2 percent annually. This table, as other estimates of gains reported in this chapter, includes both trade- and foreign investment–related income gains.

Source: Authors' simulations.

6. CONCLUSIONS

The TPP appears to have met its two most important negotiating objectives. First, based on the concluded agreement and more recent data and assumptions, the TPP will substantially benefit its members, and in particular raise real incomes in the United States by $131 billion in 2030 and a similar amount in subsequent years. To be sure, the TPP will also generate adjustment costs; some workers may face difficult transitions as

less productive jobs are lost and more productive jobs are created. Policies to mitigate those effects are ethically compelling (Weisman 2016) and likely to be affordable.

Second, the TPP has developed comprehensive rules for economic integration in areas of commerce that have raced far ahead of the WTO rulebook, including services, investment, telecommunications, the digital economy, and other critical industries. If the TPP is ratified and implemented smoothly, these rules will renew progress—now stalled for more than two decades—in strengthening the world trading system.

The estimates presented here for the United States are 35 percent higher than those reported in Petri, Plummer, and Zhai (2012). "News" from the concluded agreement is not the main cause of this difference; while the agreement's tariff reductions are more ambitious than the earlier study anticipated, provisions that affect NTBs are weaker, so taking the concluded agreement into account reduces benefits slightly. There are two reasons the results are higher than projected in 2012: first, data on nontariff barriers (based on work by other researchers) are higher than those we used in 2012, perhaps because NTBs are rising or because estimates are becoming more accurate, and second, the present study takes into account the effect of nonpreferential provisions in the TPP agreement. Both effects enhance the value of reducing trade barriers via the TPP.

Once in place, the TPP is likely to promote additional integration in the Asia-Pacific region and beyond, with larger attendant gains. It is potentially a pathway to the Free Trade Area of the Asia-Pacific (FTAAP), which could include all APEC members and, based on our earlier studies, more than double the gains for the United States. The Transatlantic Trade and Investment Partnership, in negotiation since 2013, would also have large effects. And broader global negotiations may pick up steam. These and other initiatives would benefit from competitive pressure from the TPP.

This study, like the earlier work, addresses only economic issues, although of course geopolitical factors are also at stake. The TPP is a key element of the US rebalancing strategy toward the Asia Pacific. The United States has had close economic and political relations with this region, for 70 years or more with some countries, and deeper economic ties and political stability in the Asia Pacific are among its core interests.

Given the scope and complexity of topics addressed, the diversity of the negotiating parties, and the backdrop of inaction on urgent trade issues, the TPP is a notable accomplishment. It is a substantial positive response to slowing world trade growth and rising trade barriers, and a major contribution toward a rules-based global economy.

THE COMPUTABLE GENERAL EQUILIBRIUM MODEL

Computable general equilibrium (CGE) analysis of the TPP accounts for interactions among firms, households, and governments in multiple product markets in several regions of the world economy. Firms and consumers are assumed to maximize profits and welfare subject to prices. The model, built from the GTAP 9 database and other data sources and calibrated to yield an initial solution that matches 2015 data, calculates prices that equate supply and demand for each product and factor of production in every market. As with most CGE models, it represents medium- and long-term changes and assumes normal employment; it does not incorporate features to analyze macroeconomic fluctuations. Table A.1 summarizes data sources and also reports on changes since the 2012 study.

Table A.1 Data sources of the Asia-Pacific trade model

Type of parameter	Data sources, 2015
Model dimensions	19 sectors, 29 regions
Population growth	Exogenous. IIASA scenario for 2015-30. Replaced 2010 CEPII projections
Baseline GDP growth	Exogenous. World Bank, Global Economic Prospects projections to 2017, SSP2 scenario from 2020-30, interpolated rates 2018-19. Additional World Bank projections for China and Vietnam. Replaced 2010 CEPII projections
Baseline investment/GDP rates	Exogenous in baseline, endogenous in simulations. World Bank Global Economic Prospects to 2017; difference between country rates and global average reduced 5 percent annually after 2017. Replaced 2010 CEPII projections
Labor force growth (skilled and unskilled)	Exogenously determined. Growth rates of IIASA population scenario multiplied by CEPII rates of economically active population. Replaced 2010 CEPII projections
Trade balance projections	Exogenous. Global Economic Prospects current account projections to 2017 less nontrade balances from IMF balance of payments projections (BOP), reduced 5 percent annually after 2017. Replaced assumption of fixed 2010 imbalances
Bilateral FDI stocks	Base year data from IMF Coordinated Direct Investment Survey, 2013 (CDIS), updated from 2010. Endogenously determined in simulations
CGE parameters	From GTAP 9, 2011 base year Social Accounting Matrix and related parameters. Replaced GTAP 8, 2007 dataset
Heterogenous firms parameters	Zhai (2008)
Tariff barriers	Baseline from GTAP 9, projected forward for concluded but incompletely implemented trade agreements. For TPP, schedule from the agreement provided by Sarah Oliver, Peterson Institute, November 25, 2015
Nontariff barriers, goods	From Kee, Nicita, and Olarreaga HS6-level online data updated in 2012. Replaced Kee, Nicita, and Olarreaga (2008) 3-sector aggregates. Future values projected for TPP using methods described in text
Nontariff barriers, services	From Fontagne, Guillin, and Mitaritonna (2011). Replaced 2010 estimates by Hufbauer, Schott, and Wong (2010). Future values projected for TPP using methods described in text
FDI barriers	Econometric estimates as described in Petri, Plummer, and Zhai (2012, appendix E) substantially updated. Future values projected for TPP using methods described in text
Structure of trade agreements	Explained in the text, updating Petri, Plummer, and Zhai (2012, appendix D)

CGE = computable general equilibrium model; FDI = foreign direct investment; CEPII = Centre d'Etudes Prospectives et d'Informations Internationales; IIASA = International Institute for Applied Systems Analysis

Data sources referenced: CEPII, www.cepii.fr/CEPII/en/bdd_modele/download.asp?id=11; World Bank, Global Economic Prospects, May 19, 2015; Global Trade Analysis Project (GTAP) 9, www.gtap.agecon.purdue.edu/databases/v9/default.asp; IMF Balance of Payments Statistics, http://data.imf.org/?sk=7A51304B-6426-40C0-83DD-CA473CA1FD52; IMF Coordinated Direct Investment Survey, www.imf.org/external/np/sec/pr/2014/pr14588.htm; Kee, Nicita, and Olarreaga (2008), updated in 2012, http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:22574446~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html; IIASA, https://secure.iiasa.ac.at/web-apps/ene/SspDb/dsd?Action=htmlpage&page=about.

The CGE model used for this analysis has 19 sectors and 29 regions and is based on the theoretical specification of Fan Zhai (2008). Zhai's approach draws on Melitz (2003) and other work that recognizes heterogeneity in firms' productivity within sectors. Exports require additional fixed costs, which only the most productive firms can cover. Trade liberalization not only affects intersectoral specialization but also shifts the distribution of firms within sectors toward those that are most productive, raising sectoral productivity. This specification generates more trade than conventional CGE analysis and helps to remedy a source of underestimation in earlier CGE studies.

Simulations track changes in saving rates and capital accumulation over time. However, the model does not include other dynamic features proposed in the literature, such as endogenous productivity growth from the accumulation of knowledge, induced inflows of foreign technology and capital, and follow-up trade liberalization from further agreements. Such effects could sharply raise estimated benefits (Todo 2013). The model is described in Petri, Plummer, and Zhai (2012) and at www.asiapacifictrade.org.

Trade agreements are represented in unusual detail. A template is specified for each agreement, consisting of 0–100 scores in 21 issue areas to represent how fully the agreement addresses each. These scores are based on WTO and APEC data, the latter of which break past agreements into 1,500 possible provisions. Template scores are mapped into changes in trade barriers in each sector. The same method is used to predict the effects of both new and past agreements incorporated into the baseline. As table A.1 shows, tariff liberalization schedules are available from the TPP agreement. The model recognizes that free trade agreements, particularly smaller ones, are not completely utilized by firms (based on a formula that relates use rates to preference margins, the restrictiveness of ROO, and the size of the agreement) and includes estimates for extra production costs as firms adjust sourcing patterns to meet ROO requirements.

Nontariff barriers are adjusted by four factors before the simulations. First, only three-quarters of measured barriers are considered actual trade barriers (the rest are assumed to represent quality-increasing regulations). Second, half of remaining barriers are considered actionable in the case of services and three-quarters in the case of goods (the rest are assumed to be beyond the reach of politically viable trade policies). Third, a share of actionable barriers is eliminated in each sector based on an agreement's template. Fourth, 20 percent of reductions in NTBs and investment barriers are applied to trade partners that are not members of the agreement. All NTBs are assumed to result equally from tariff-like mechanisms that create rents and cost-increasing requirements that create inefficiencies. Foreign direct investment barriers are handled using a similar methodology.

COMPARISON OF RESULTS TO 2012 ESTIMATES

Table B.1 Differences between the 2012 and current results (billions of 2015 dollars)

	A	B	C	D	E	F	G	H
Country	**2012 estimate for 2025**	**Scaled 2012 estimate for 2030**	**Data changes**	**New NTB approach**	**Realized NTB cuts**	**Realized tariff cuts**	**Adding nonpreferential element**	**2015 estimate for 2030**
Americas	**102**	**129**	**69**	**–61**	**–2**	**3**	**67**	**205**
Canada*	9	12	19	–10	1	1	14	37
Chile*	2	4	–1	0	0	0	1	4
Mexico*	10	11	3	–3	1	1	9	22
Peru*	4	5	4	–1	0	1	3	11
United States*	77	97	44	–47	–4	1	40	131
Asia	**125**	**123**	**112**	**–74**	**–29**	**13**	**58**	**203**
Brunei*	0	0	2	–1	0	0	0	2
China	–35	–56	22	0	1	–3	17	–18
Hong Kong	–1	–1	–1	0	0	0	7	6
India	–3	–3	–5	0	1	–1	2	–5
Indonesia	–2	–3	1	0	0	0	0	–2
Japan*	105	97	78	–51	–25	13	14	125
Korea	–3	–3	–7	2	1	–1	1	–8
Malaysia*	24	38	22	–14	–2	1	7	52
Philippines	–1	–2	1	0	0	0	0	–1
Singapore*	8	9	6	–3	–1	2	5	19
Taiwan	–1	–1	0	0	0	0	3	1
Thailand	–2	–4	–1	–1	0	–2	0	–7
Vietnam*	36	52	–7	–6	–4	4	0	41
ASEAN nie	0	–1	0	0	0	0	0	–1
Oceania	**11**	**17**	**7**	**–7**	**–2**	**0**	**6**	**21**
Australia*	7	12	2	–3	0	0	5	15
New Zealand*	4	5	5	–3	–2	0	0	6
Rest of world	**–14**	**–20**	**2**	**2**	**1**	**–1**	**79**	**62**
European Union	–4	–4	–8	3	0	–1	58	48
Russia	–1	–2	2	0	0	0	2	2
ROW	–9	–14	8	–1	1	–1	19	12
World	**223**	**251**	**190**	**–139**	**–33**	**14**	**209**	**492**
Memorandum								
TPP members	285	343	178	–142	–37	23	99	465
Nonmembers	–62	–92	12	3	4	–9	110	27

ASEAN = Association of Southeast Asian Nations; nie = not included elsewhere; NTB = nontariff barrier; ROW = rest of world

Note: Asterisk denotes TPP members. Column A shows 2012 estimates. B scales 2012 estimates for the shift to 2015 prices and the 2030 endpoint. Each country's estimate is multiplied by the ratio of its currently estimated GDP in 2030 in 2015 prices to its previously estimated GDP in 2025 in 2007 prices. C shows the effects of new data (listed in table A.1), including higher NTBs in services. D shows the effect of the more conservative approach to modeling NTBs now used (see appendix A). E shows effects of realized TPP NTB provisions relative to those conjectured (see table B.2). F shows effects of realized TPP tariffs relative to those conjectured. G shows nonpreferential liberalization effects absent from the 2012 estimates. H shows current estimates.

Source: Authors' simulations.

Table B.2 Adjustments in NTB liberalization from 2012 assumptions

Sector	Adjustments from 2012 assumptions
Agriculture	More limited scope than expected. For grains, reduced liberalization by Japan by 80 percent. For other agricultural products, reduced liberalization by Japan by 70 percent, by Canada by 50 percent, and by the United States by 20 percent.
Food, beverages, tobacco	More limited scope than expected. Reduced liberalization by Japan by 70 percent, by Canada by 40 percent, and by the United States by 20 percent.
Automobiles	More limited scope than expected in US auto and truck liberalization. Reduced NTB liberalization by the United States by 70 percent. Given large tariff cuts, eliminated liberalization of NTB in Malaysia.
Textiles	Due to sustained restrictive rules of origin, reduced liberalization in the United States by 15 percent.
Service sectors	Service NTBs for New Zealand were probably overestimated due to unusual natural barriers related to distance and size of the market, therefore reduced liberalization in New Zealand by 25 percent. Due to the complexity of the US financial system and its state-level regulations, reduced NTB liberalization in financial services in the United States by 25 percent.
Foreign direct investment	Due to high frequency of nonconforming measures in annexes, reduced FDI liberalization by Brunei, Japan, Malaysia, and Singapore by 10 percent.

FDI = foreign direct investment; NTBs = nontariff barriers

Source: Authors' judgments based on TPP text and annexes.

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CHAPTER 2

TARIFF LIBERALIZATION

CAROLINE FREUND, TYLER MORAN, AND SARAH OLIVER

Liberalization of tariffs on trade in goods is the most traditional component of the Trans-Pacific Partnership (TPP). While tariffs are already low on average, there is still substantial room for liberalization of trade in goods in Malaysia, Mexico, Peru, and Vietnam, and for liberalization of some sensitive products, especially in the agricultural sector, in all countries.

Upon implementation of the TPP, nearly three-quarters of nonzero tariffs will be removed, and in the long run 99 percent of goods trade will be liberalized. The agreement brings about significant liberalization of trade in the most restrictive countries; for example, Vietnam's simple average applied tariff will fall from 10.6 percent to 6.1 percent immediately, and to 0.4 percent after a decade. For the most sensitive products in Japan and the United States, there will also be relatively deep liberalization, though on a number of products it is delayed for a decade or longer. Tariff liberalization will be nearly complete after 16 years, and fully complete only after 30 years.

One peculiar feature of the agreement is differentiated tariff reduction schedules across partners, especially by the United States and Japan, the two biggest economies. Because the agreement is between countries of various sizes and stages of development, trade sensitivities are partner specific. To address these sensitivities, the United States and Japan accelerate liberalization for small exporters relative to large exporters. Differentiated gradualism gives time for industries to adjust, allowing liberalization to go deeper, but it could become a dangerous precedent in multicountry trade agreements if it leads to country-specific tariffs for long periods.

This chapter analyzes the changes in tariff rates for TPP members overall and for individual countries, separating the countries into three groups: open economies, advanced economies with sensitive sectors, and liberalizing emerging markets.

CURRENT TARIFFS

The extent of liberalization between two members depends on current applied tariff rates and on existing free trade agreements (FTAs), such as the North American Free Trade Agreement (NAFTA) for the United States, Canada, and Mexico. TPP members outside existing FTAs face the applied most favored nation (MFN) tariff in each other's markets. In contrast, TPP countries in FTAs will continue to receive existing preferences as the TPP is phased in. For example, a Canadian exporter will remain entitled to the US tariff rates scheduled in NAFTA when the latter are lower than those of the TPP. As a result, Canadian and Japanese exports might face different US tariffs even when the US TPP schedule does not indicate differentiated treatment.

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For this analysis, pre-TPP tariffs are based on current applied bilateral tariffs at the Harmonized System (HS) 6-digit level (merchandise trade is classified under HS codes set by the World Customs Organization). Under the HS, products can be sorted into categories defined by as few as 2 digits (least specific) up to 10 digits (most specific). For example, HS code 04 refers to all dairy products, 0406 refers to cheese, and 8- and 10-digit codes beginning with 0406 detail tariffs on specific types of cheeses such as 0406.10.18, which is cheddar cheese in the US system. The codes are not perfectly harmonized across countries, so the system does not quite live up to its name. However, all countries use the same scheme up to the 6-digit level, so this level is the most useful for international comparisons. Most TPP schedules cover products at the 8-digit level.

Under current conditions, the impact of the tariffs of each TPP member on other members varies based on MFN tariffs and existing FTAs and on the types of goods imported and exported. The goal of the new tariff rates negotiated under the TPP is to move them toward zero, which in turn will reduce differences in tariff rates across members.

Table 1 reports the bilateral export-weighted applied HS 6-digit tariffs among the TPP countries, taking into account preexisting trade agreements. The table is sorted by simple average tariff and shows the average tariff rate applied by each importer (row) on each exporting country (column). Tariffs are weighted by total exports of the exporter in each type of product; products that make up a larger share of exports are considered more important when calculating the average tariff. Total exports are used to avoid a prohibitive tariff in an importing country being given a zero weight and high tariffs being given very low weights. The tariff reported reflects the magnitude of the tariff burden in a specific importing country on the most important trade products from the exporting country. The table shows that tariffs are overall relatively low, but Mexico's and Vietnam's tariffs average more than 5 percent, and for some members exceed 10 percent. Mexico, New Zealand, and Vietnam face the highest tariffs, in part because they export significant shares of agricultural goods. Import-weighted tariffs show similar patterns but are generally lower, because imports tend to be low in high-tariff products (see table A.1 in the appendix).

TPP TARIFF REDUCTION OVERVIEW

Table 2 shows the simple average of MFN tariff rates for each TPP member, the share of these tariffs that are eliminated immediately and once the TPP is fully implemented, and the average maximum number of years until tariffs are eliminated. (The simple average tariffs shown in table 2 are higher than the export-weighted tariffs in table 1 because many of the high tariffs are on small trade volume products.) For all partner countries the TPP will entail liberalization of at least 95 percent of all tariff lines, though some countries have separate quota systems for certain products (Japan in agriculture) or maintain low (rather than eliminated) tariffs (Mexico in automobiles).

There are two types of incremental tariff reductions in the TPP. The B schedules, which are consistent across TPP member countries, call for an equal reduction of tariff rates in each year until they are completely eliminated, based on a formula applied to the current rate. In addition to these TPP-wide schedules, each country has its own tariff elimination schedules for its sensitive industries. In these schedules, countries can (1) keep current tariffs in place for a specified number of years before reducing them gradually, (2) keep tariffs at current levels until the year they expire, or (3) reduce tariffs to specific percentages for individual products. Some TPP member countries, especially those with few existing trade agreements, have tariff schedules that apply to all other TPP members, while others, most notably Japan and the United States, provide differentiated treatment for certain partners and products.

Figure 1 plots the 6-digit HS tariff rates for TPP members over time, including all products that are liberalized against the years following implementation of the TPP, where year zero is the year the agreement goes into force. For products with differentiation across TPP partners, such as US autos, there are separate points

Table 1 Pre-TPP export-weighted bilateral tariff rates, latest available year (percent)

		Exporter												
		Australia	Brunei	Canada	Chile	Japan	Malaysia	Mexico	New Zealand	Peru	Singapore	Vietnam	United States	Average applied tariff rate
Importer	Australia		0.0	1.2	0.0	3.0	0.0	3.3	0.0	2.9	0.0	0.7	0.0	**1.0**
	Brunei	0.7		4.5	0.1	0.2	0.0	5.1	0.5	0.0	0.0	0.0	2.6	**1.2**
	Canada	0.9	0.6		0.2	2.1	1.3	0.1	5.0	0.1	0.8	4.9	0.4	**1.5**
	Chile	3.1	6.0	3.3		4.5	6.0	3.7	4.0	1.7	4.0	6.0	1.4	**4.0**
	Japan	4.1	0.0	3.6	0.7		0.5	0.3	5.0	0.3	0.4	8.0	2.7	**2.3**
	Malaysia	2.2	1.2	3.7	0.2	8.5		9.2	3.4	0.1	1.9	4.2	5.4	**3.6**
	Mexico	3.2	14.5	0.0	0.1	3.5	5.3		9.5	5.7	3.2	13.2	0.2	**5.3**
	New Zealand	0.0	0.0	0.2	0.0	2.9	0.3	3.1		4.5	0.0	2.8	2.1	**1.4**
	Peru	1.5	11.0	2.6	0.0	1.8	1.2	0.5	2.2		0.5	4.3	1.7	**2.5**
	Singapore	0.0	0.0	0.3	0.0	0.0	0.0	4.2	0.0	0.0		0.0	0.0	**0.4**
	Vietnam	1.7	1.0	14.9	4.7	8.4	1.6	9.7	8.8	6.4	2.2		8.7	**6.2**
	United States	0.2	2.6	0.1	0.1	1.5	1.5	0.0	2.3	0.1	0.0	4.4		**1.2**
	Average import tariff	**1.6**	**3.4**	**3.1**	**0.6**	**3.3**	**1.6**	**3.6**	**3.7**	**2.0**	**1.2**	**4.4**	**2.3**	**2.6**

Note: Bilateral tariffs are calculated using export weights at the 6-digit HS product level. Most recent available year ranges from 2014 to 2009.

Source: World Bank, World Integrated Trade Solutions (WITS) database.

Table 2 Summary of existing MFN rates and tariff expiration schedules in the TPP (percent)

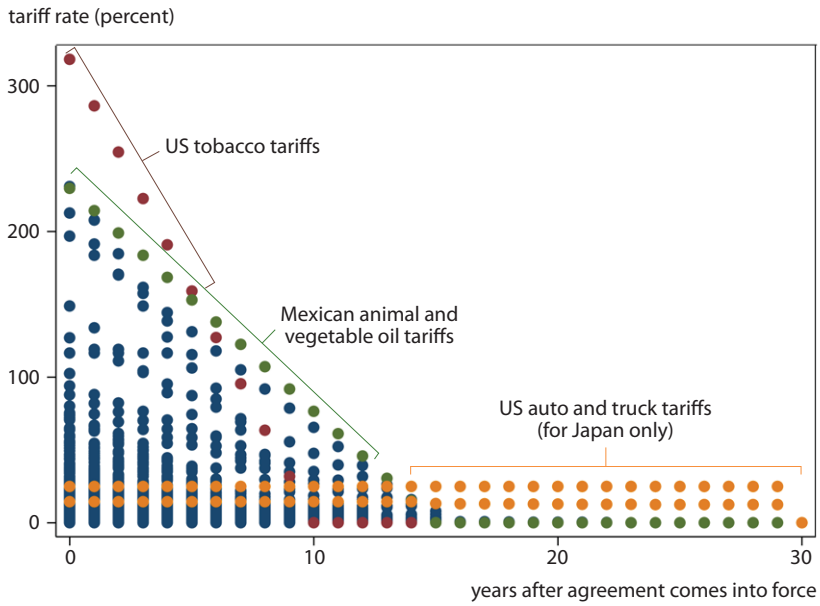
Country	Share of tariff lines already at zero under MFN rates	Simple average MFN tariff rate	Simple average nonzero MFN tariff rate[a]	Maximum MFN tariff rate	TPP: Share of non-zero tariffs eliminated immediately under TPP	TPP: Share of nonzero tariffs eliminated at full implementation	TPP: Average years until tariff is eliminated	TPP: Maximum years until tariff is eliminated
Vietnam	33.1	10.6	15.8	135	47	97	3.1	16
Mexico	56.1	6.9	15.7	254	48	99	5.0	16
Chile	0.5	6.0	6.0	9	95	100	0.3	8
Peru	53.4	5.1	10.9	17	59	100	4.8	16
Japan	41.9	4.6	7.9	62	77	95	1.9	16
United States	36.4	4.6	7.2	350	85	99	1.2	30
Canada	53.7	3.9	8.5	238	89	97	0.6	12
Malaysia	60.6	3.6	9.2	60	61	100	3.0	16
Australia	46.2	2.9	5.3	10	87	100	0.4	4
New Zealand	57.8	2.4	5.6	10	88	100	0.7	7
Brunei	75.4	0.3	1.4	30	68	100	2.1	11
Singapore	100.0	0.0	0.0	0	100	100	0.0	0
Average	51.3	4.2	7.8	98	75	99	1.9	13

MFN = most favored nation

a. The average nonzero MFN rate excludes all duty-free products.

Source: TPP tariff schedules, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

Figure 1 TPP member tariff rates from the year TPP comes into force until year 30



Note: Data exclude HS 6-digit codes where tariffs have not been eliminated in one or more subcategories of products, or cases where quotas are in place for products rather than tariffs (about 1 percent of observations).

Source: Authors' calculations using data from the TPP tariff schedules, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

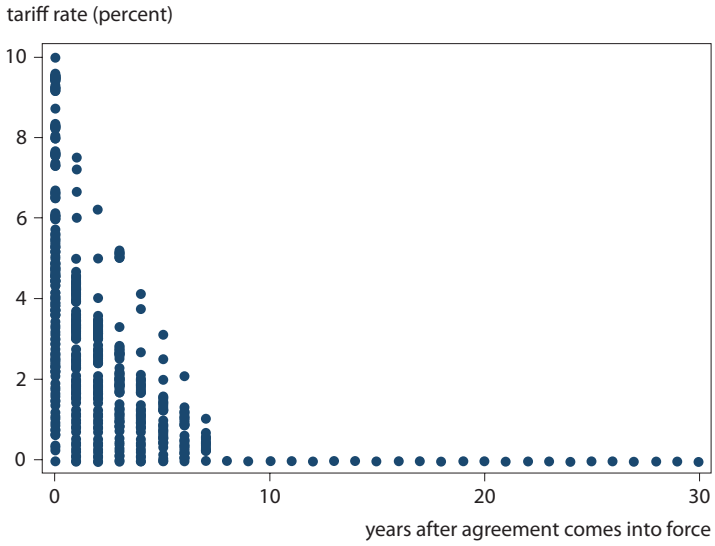
for each exporting country. This graph gives a sense of the spread of tariff rates for all TPP partners from the time the agreement enters into force until it is fully implemented in year 30 with the expiration of US auto tariffs for Japan. Almost all tariffs, even initially high ones like the 350 percent US tariff on tobacco products, converge to zero by the 16th year. After year 16, of the remaining products with tariffs that will be eliminated, only two, US tariffs on cars and trucks from Japan, remain above zero at their MFN rates until year 30. Medium and large cars, both of which face a 2.5 percent tariff, are the two largest tariff line items in Japans exports. Although the 2.5 percent tariff is small, given current large trade volumes it still accrues roughly $1 billion in annual tariff revenue. The high tariff on trucks—25 percent—is more distortionary, adjusting production patterns across manufacturers and, for consumers, raising prices and lowering varieties (see chapter by Sarah Oliver on liberalization in automobiles).

TPP members can be broadly categorized in three groups: liberalized economies, advanced countries with sensitive sectors, and liberalizing emerging markets. The following sections examine each group in more detail.

OPEN ECONOMIES: AUSTRALIA, CHILE, NEW ZEALAND, AND SINGAPORE

Australia, Chile, New Zealand, and Singapore have very low tariffs going into the TPP. In fact, Singapore's MFN tariffs are nearly all zero.[1] For Australia and New Zealand, over 90 percent of their tariffs are 5 percent or less, and 99 percent of Chile's MFN rates are at 6 percent. No country in this group imposes an ad valorem tariff above 10 percent.

Figure 2 Tariff rates from the year TPP enters into force until year 30: Australia, Chile, and New Zealand



Source: TPP tariff schedules, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

Once the TPP enters into force, the vast majority of Chile's, Australia's, and New Zealand's tariffs facing TPP exporters will be eliminated immediately, leaving less than 10 percent of products with tariffs after the first year. The tariffs that stay in place in these countries will shield some important industries, such as wool in New Zealand, but the longest phaseout periods until they expire are 7 years for New Zealand and only 4 years for Australia. With one-third of Australia's total exports and almost 40 percent of New Zealand's total exports going to other TPP members, they stand to benefit from increased preferential market access abroad as well as the new rules-based trade system that TPP provides.

Although very few of Chile's MFN tariffs are set at zero, the country already has FTAs with all other TPP members.[2] Chile will eliminate 95 percent of its tariffs immediately, and the remainder will expire in year 8. Figure 2 condenses the tariff schedules of Chile, Australia, and New Zealand over time to show how rapidly

1. Singapore has six nonzero MFN tariffs, all of which are set to zero upon entry into force of the TPP.
2. Chile has bilateral agreements with Canada (signed in 1996), Mexico (1998), the United States (2003), Peru (2006), Japan (2007), Australia (2008), Malaysia (2010), and Vietnam (2011). Brunei, Singapore, and New Zealand receive preferential access under the Trans-Pacific Strategic Economic Partnership Agreement (the original basis for the TPP), which was signed in 2005. See "Chile: Trade Agreements in Force," Foreign Trade Information System, Organization of American States, www.sice.oas.org/ctyindex/CHL/CHLagreements_e.asp (accessed on December 8, 2015).

their tariffs will expire. The very low initial rates coupled with the rapid tariff expiration contrast sharply with those shown in figure 1.

ADVANCED ECONOMIES WITH SENSITIVE SECTORS: CANADA, JAPAN, AND THE UNITED STATES

Canada, Japan, and the United States are relatively open to trade, with about 60 percent of tariffs below 5 percent, but unlike the previous group of countries all three maintain high tariffs on sensitive products subject to long expiration periods. The most protective barriers are in large part aimed at restricting access for other members of this group.

Since Canada and the United States are already part of an existing FTA, their bilateral tariffs tend to be lower than MFN rates already, and thus both are more liberalized toward each other than toward Japan. Of the more restrictive tariffs (including all tariffs above 5 percent as well as specific tariffs—payments expressed per quantity instead of as a share of value), Japan and the United States will each eliminate about two-thirds as soon as the agreement goes into force. For the United States, most of the higher tariffs to be eliminated immediately are in agriculture (such as vegetables and beans), chemicals, and apparel; for Japan, textiles make up most of the tariffs to be eliminated immediately. Among the three countries, Canada is the fastest to liberalize, with 86 percent of tariffs above 5 percent expiring when the agreement goes into force.

While both the United States and Japan differentiate trade across partners, the United States does so more extensively. Using Vietnam and New Zealand as points of comparison, as the US does not have FTAs with either, there are about 800 lines where the United States treats Japanese imports differently than those from Vietnam and New Zealand. Of these 800, about 125 tariffs on Japanese goods[3] are set to zero at entry into force—so Japan will get better treatment than at least one of the other two. But for 675 lines Japan will face more protection than the other two in the US market. Most of these products are in agriculture; there are only about 50 machinery/auto tariffs where Japan is singled out. On the Japanese side, the United States gets different treatment than New Zealand for only about 45 lines, almost entirely in agriculture, with just a handful of manufacturing products. (See also chapter on agricultural liberalization by Cullen Hendrix and Barbara Kotschwar.)

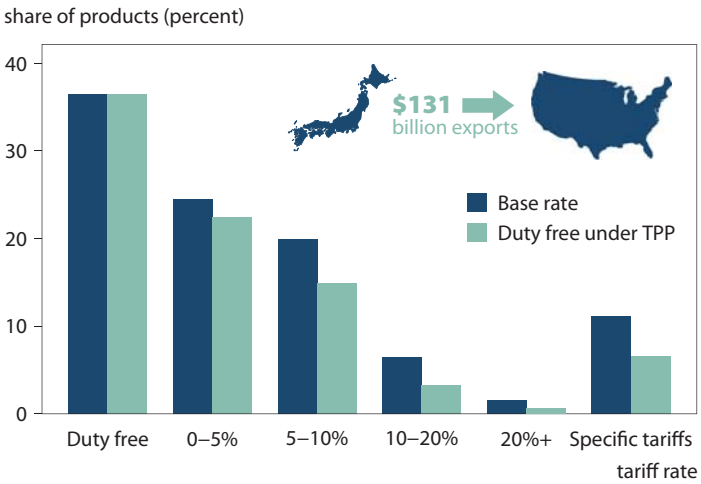
In terms of the most distortionary tariffs—those involving the most sensitive products—the United States has a greater share of specific tariffs, while Japan has a higher share of tariffs of 20 percent or more. Both countries delay liberalization for some of these highly protected products, including tariffs on Japanese imports of beef products, which expire after 16 years; US dairy import tariffs, which expire after 20 years; and US truck imports tariffs, which have the longest expiration period of either country at 30 years. About 6 percent of product lines will maintain tariffs of 20 or more or specific tariffs in both Japan and the United States in the early years of the TPP. Most of the tariffs that are not eliminated immediately will be reduced over a timetable of between 4 and 30 years, until eventually almost all US and Japanese tariffs are eliminated. For Japan, 95 percent of tariffs will be eliminated over 16 years; for the United States, 99 percent of tariffs will be eliminated after 30 years.

Figure 3 shows the share of tariffs eliminated between the United States and Japan once the TPP is implemented, disaggregated by the size of the original MFN rate. Although most of the Japanese and US protective policies on goods imports will eventually expire, 3 percent of tariff lines for Japan and 0.3 percent of US tariff lines are only reduced under the TPP but not eliminated. For Japan, many of the tariffs or quotas that will not expire are in agricultural goods such as meat, dairy, wheat, and rice. For example, for butter imports, Japan imposes a quota of 45,898 metric tons with an in-quota tariff of 35 percent. Even so, there is some liberalization with the quota size increasing each year to reach this level and the additional yen/kg tax is eliminated in year

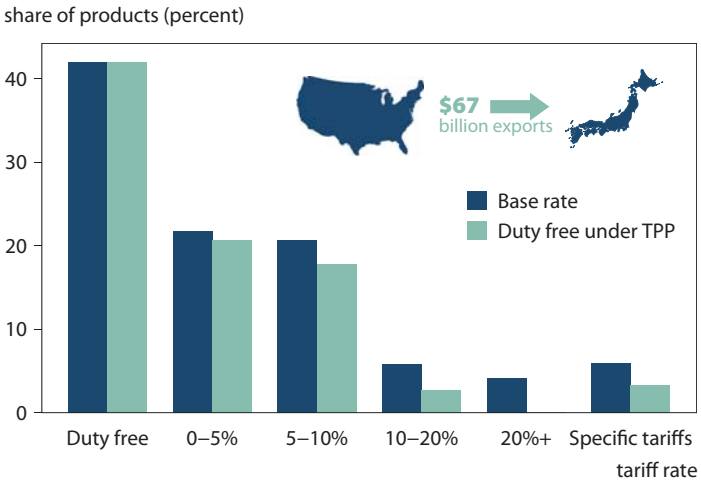
3. Most of the 125 products are organic chemicals.

Figure 3 US-Japan bilateral tariffs that expire immediately under the TPP

a. US tariffs eliminated immediately for Japan



b. Japanese tariffs eliminated immediately for the United States



Note: The United States and Japan have different tariff schedules for each TPP member, so these graphs reflect only US-Japan bilateral tariff schedules. Bilateral export values are for 2014.

Sources: TPP tariff schedules, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text; trade data from UN Comtrade database, http://comtrade.un.org/data/.

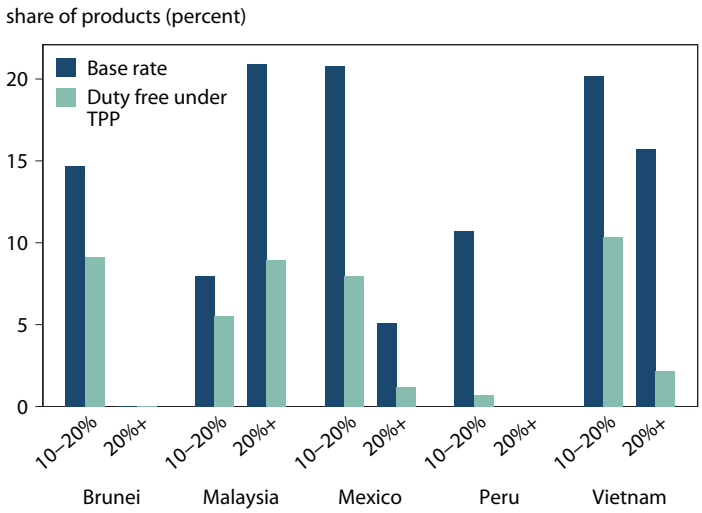
11 of the agreement (TRQ-9, Article 2-D, Japan Appendix A in the TPP text[4]). The United States has similar policies in place for products such as Japanese beef and sugar and New Zealand dairy, expanding quotas for tariff-free imports without lowering the tariff rates beyond these quotas (Article 2-D, US Appendix A[5]).

Similar to the United States, to the extent that Canadian tariff schedules are differentiated among TPP members, they also tend to be more restrictive toward Japan than toward other TPP members. However, as noted earlier, of the three less liberalized advanced economies, Canadian tariffs tend to be lower and expire faster.

LIBERALIZING EMERGING MARKETS: BRUNEI, MALAYSIA, MEXICO, PERU, AND VIETNAM

The final category of TPP members encompasses countries that are less developed than those in the previous two categories and tend to have higher MFN tariffs going into the TPP. Vietnam in particular has over one-third of its tariff lines at high levels (8 to 15 percent). More than 15 percent of Vietnam's tariff lines are very high (20 percent or higher), a rate eclipsed only by Malaysian tariffs, of which about 20 percent are very high. Figure 4 compares the share of tariffs that are at least 10 percent in these five countries with the share of these high tariffs that will be eliminated once the TPP comes into force.

Figure 4 Tariff rates above 10 percent that expire immediately under the TPP: Brunei, Malaysia, Mexico, Peru, and Vietnam



Source: TPP tariff schedules, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

The greater tariff coverage among these emerging markets provides more opportunities to gain from the TPP, but also some risks. To the extent that domestic consumers switch from high-cost domestic producers to low-cost TPP producers, there will be trade creation, which will benefit consumers with lower prices and steer resources to their most productive uses. But to the extent that tariff preferences cause TPP imports to displace imports from outside the TPP, the gains from trade will be mitigated. In addition to hurting exports from nonmember countries, this trade diversion could hurt these emerging-market countries because tariff revenue disappears but consumer prices do not fall. In practice, this is likely to be of greatest concern for Malaysia. Mexico and Peru have already extended preferences to most of their trading partners and Vietnam is negotiating an FTA with the European Union, so these countries will be less prone to extensive diversion.

The best response to ensure trade creation would be to reduce external tariffs on a most favored nation basis and thus compress preferences and the potential for trade diversion. While these five countries stand to gain a lot from the TPP, they will reap greater benefits if MFN applied tariffs are reduced.

4. Office of the United States Trade Representative, Full Text of the Trans-Pacific Partnership, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.
5. Ibid.

CONCLUSION

The TPP provides an opportunity for its members to liberalize trade and harmonize and enhance existing trade agreements. Most tariffs will be quickly eliminated, and the rest of trade liberalized over time—albeit in some cases with significant delays. The low level of existing tariffs in many of the TPP countries implies that gains via tariff liberalization are relatively small. The emerging markets will achieve substantial liberalization and therefore stand to gain the most from tariff liberalization.

The agreement includes differentiated and sometimes long tariff phaseout schedules across member countries, most notably between the two largest economies, the United States and Japan. The long delays address political constraints to trade liberalization in sensitive products, allowing the members to achieve nearly complete liberalization over time. The long and country-specific delays, however also raise some concerns. In particular, they flout Article 24 of the GATT, which restricts preferential trade treatment. The article mandates that FTAs liberalize tariffs on "substantially all the trade" between member countries "in a reasonable length of time." The motivation is to prevent countries from using trade agreements to discriminate across countries and partners, which would be both distortionary and opaque. Large trade agreements with significant internal differentiation could become a worrisome trend, and the WTO would do well to consider limiting the period of tariff liberalization under preferential trade agreements to a decade.

Table A.1 Pre-TPP import-weighted bilateral tariff rates, latest available year (percent)

		Exporter												
		Australia	**Brunei**	**Canada**	**Chile**	**Japan**	**Malaysia**	**Mexico**	**New Zealand**	**Peru**	**Singapore**	**Vietnam**	**United States**	**Average applied tariff rate**
Importer	Australia		0.0	1.7	0.0	3.4	0.0	2.3	0.0	1.6	0.0	0.2	0.1	**0.8**
	Brunei	0.1		0.7	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.9	**0.3**
	Canada	1.9	0.4		0.0	2.1	1.2	0.0	2.5	0.0	1.7	6.4	0.0	**1.5**
	Chile	1.6	5.6	2.1		2.7	6.0	2.8	2.9	2.0	2.5	4.3	0.8	**3.0**
	Japan	1.6	0.0	1.2	0.5		0.3	1.2	7.6	0.3	1.7	0.7	1.9	**1.5**
	Malaysia	1.4	0.4	1.2	0.3	7.1		5.1	1.5	0.1	1.6	4.7	2.1	**2.3**
	Mexico	3.0	28.6	0.2	1.0	2.4	1.9		21.3	3.7	1.9	18.7	0.2	**7.5**
	New Zealand	0.0	0.0	0.1	0.0	4.3	0.1	2.3		1.4	0.0	1.8	1.8	**1.1**
	Peru	0.4	11.0	2.1	0.0	2.0	3.1	0.6	0.2		1.0	5.2	1.1	**2.4**
	Singapore	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	**0.0**
	Vietnam	1.8	1.0	2.1	2.4	2.7	1.9	3.3	3.7	1.1	4.6		3.2	**2.5**
	United States	1.5	4.3	0.0	0.0	1.2	0.8	0.0	5.2	0.0	0.0	6.2		**1.7**
	Average import tariff	**1.2**	**4.7**	**1.0**	**0.4**	**2.5**	**1.4**	**1.7**	**4.1**	**0.9**	**1.4**	**4.4**	**1.2**	**2.1**

Source: World Bank, World Integrated Trade Solutions (WITS) Database.

CHAPTER 3

AGRICULTURE

CULLEN HENDRIX AND BARBARA KOTSCHWAR

Agriculture is associated with some of the most contentious arguments in negotiations to reduce trade barriers. A main reason for the difficulty is that farmers in advanced and developing countries alike wield political clout well in excess of their numbers. By overcoming at least some of these political sensitivities, however, negotiators for the Trans-Pacific Partnership (TPP) were able to liberalize a host of agricultural products, in many instances approaching the prenegotiation target of eliminating tariffs for 99 percent of all agricultural products, from live animals like cows or swine to vegetables to meat, dairy, and beverages. Each of these products makes up one of the more than 2,000 agricultural "tariff lines" for an individual product or class of products that were the subject of the negotiations.[1]

When the TPP is ratified and begins to take effect nearly 32 percent of tariff lines in Japan, 31 percent in Vietnam, 92 percent in Malaysia, all but one tariff line in Australia, and 99 percent in New Zealand will be eliminated, and further market liberalization will be phased in over periods of 15 to 20 years.[2] These openings of market access far surpass the record established by past free trade agreements (FTAs).

The TPP lowers barriers among its signatories in many politically sensitive agricultural goods. For example, rice exporters (and consumers) have cause to celebrate the agreement (though perhaps not with the most expensive champagne, because many quotas and other restrictions remain, as discussed below). Vietnam's 40 percent tariff on rice will be eliminated upon entry into force of the agreement; Mexico's 20 percent tariff on long-grain rice will be gone in a decade; and a year later Malaysia will lift its 40 percent duty on all rice. But Japan, which has long been notorious for maintaining barriers to rice imports on the grounds that rice has an almost sacred status in the country's politics, will maintain high tariffs in this area. Japan has committed, however, to doubling its quotas (the amount of imported rice it allows into its market) for Australia and the United States, two of its top three suppliers (along with Thailand) of imported rice.

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1. For the liberalization of trade in goods, trade negotiators specify the reduction of tariffs or the elimination or increase of quotas for particular products. Each product is narrowly defined (by its product description) and assigned a particular tariff code (also referred to as a tariff line). Most countries' tariff schedules include more than 6,000 tariff lines. In the Harmonized System, the classification system used to negotiate the reduction of duties in the World Trade Organization (WTO) and in most free trade agreements, 100610, for example, is the tariff code for rice in the husk, and if the rice is husked the code is 100620: they are represented by different tariff lines, and both were subject to tariff reduction in the TPP.
2. "Opening markets for agricultural and agri-food products," Government of Canada, October 5, 2015, www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/tpp-ptp/benefits-avantages/sectors-secteurs/01-AgriSector.aspx?lang=eng (accessed on January 5, 2016).

In addition, Japan, Mexico, Peru, and Vietnam committed to significantly liberalize their access to beef and pork producers from the other TPP countries. Results in specific products are discussed in more depth below.

These specific agreements under the TPP constitute a major step forward in the cause of more open trade. But with respect to many of these and other sensitive agricultural products, calling the TPP a "free trade" agreement is an overstatement.

OVERVIEW

When it comes to agricultural goods, the TPP encompasses a patchwork quilt of separate agreements among two or more of the signatories, falling far short of a uniform across-the-board reduction in barriers. Agriculture often remains protected by tariff-rate quotas (TRQs) as well as ad valorem tariffs, making the overall economic impact more difficult to measure.[3] The accord maintains, for example, relatively limited bilateral market access on several "taboo" products.

On the one hand, trade among TPP countries will increase in several contentious and lucrative commodities—not only rice but also beef and pork, sugar, dairy, and tobacco. TPP countries account for roughly 40 percent of global GDP but only 24 percent of global agricultural trade (crops and livestock products) as of 2012.[4] Even without the TPP, that share was bound to climb as increasing affluence in land-constrained East and Southeast Asia drives up demand for imported agricultural goods, which are by nature land-intensive. The TPP will accelerate that process, particularly for the most land-intensive and high-value goods (meats and dairy).

On the other hand, on the downside, several key sectors in partner-country agricultural markets will remain distorted because of heavy domestic supply management rules and subsidies constituting tariff and nontariff barrier (NTB) mechanisms.[5] A USDA report (Burfisher et al. 2014) estimated that total gains to intra-TPP agricultural trade under a zero quota/zero TRQ scenario would be 6 percent above baseline (i.e., extant rules) by 2025. But the real gains will likely be significantly smaller: Peter Petri and Michael Plummer estimate more modest gains for the United States, for which the TPP is forecast to boost total US primary exports by 1.4 percent relative to baseline by 2030 (0.4 percent for grains, 1.9 percent for other agriculture), though trade in finished foods, beverages, and tobacco is forecast to grow by 13.9 percent.[6] To the extent that the latter finished products source US agricultural inputs, the domestic knock-on effects should be large and not otherwise accounted for in the raw trade numbers.

The potential gains from the TPP were significant enough that the majority opinion of the US Trade Representative's Agricultural Policy Advisory Committee for Trade (APAC) is that "American agriculture is better served through the ratification of the TPP than if this agreement were not to be approved," though some dissent was noted (APAC 2015). Yet despite market liberalization, significant market access barriers remain: Canada, Japan, and the United States, for example, mutually agreed to back off of major dairy sector reforms in favor of domestic support programs (for more on Japanese and US dairy policies, see Sumner, Balagtas, and Findlay 2014).

The TPP also contains some significant provisions on the subjects of genetically modified organisms (GMOs) and export restrictions (also called bans), two extremely contentious 21st century issues. By excluding GMO discussion from the chapter on sanitary and phytosanitary standards (SPS) and treating it as an intellectual property issue, the TPP effectively sidelines any health-related discussion of GMOs—a scientifically justifiable, if not uncontroversial, position. The provisions regarding export bans—which require prior consultation

3. Tariff-rate quotas allow a specified quantity of imports to enter the market at a reduced tariff rate, with higher rates for imports that exceed the quota.
4. UN Food and Agriculture Organization Statistics Division (FAOSTAT), http://faostat3.fao.org/download/T/TP/E (accessed on November 29, 2015).
5. Supply management policies use quotas or prohibitive tariffs to keep imports to a certain level in order to ensure domestic suppliers a particular price or price range or to lock in a specific production quantity for the home market.
6. Sectoral data obtained directly from Petri and Plummer; not shown in chapter 1.

with importing TPP-member countries—are a half measure but at least head in the direction of better practices as outlined by many intergovernmental agencies.

TRADE NEGOTIATIONS IN CONTEXT

While significant market access barriers have come down, accomplishments were relatively limited in some important areas, and the wrangling over these issues seemed completely outsized relative to their economic impact. Why? Trade policy is not created in a vacuum, but rather results from the complex interplay between international markets and domestic political considerations.

In this instance, the timing was also not fortuitous, as price spikes for many agricultural commodities in 2007–08 and 2010–11 led to renewed interest in food self-sufficiency, and protectionist policies intended to make countries more self-sufficient in the production of basic staple foods. Malaysia and the Philippines, two of Asia's largest rice importers and TPP parties, either renewed or developed plans to become self-sufficient in rice following the spikes, even at large domestic costs (Clarete 2012). Brunei, which is highly import dependent—imports constitute the vast majority of its food supply—but imports small absolute quantities (its population is less than 500,000), followed suit.

Further agricultural market integration is necessary to feed the world's growing and increasingly affluent population, and the TPP, in its current form, is only a small step in the right direction. Negotiations over some of the thorniest issues—rice in Japan, dairy in Canada—were less about market fundamentals than maintaining political economies with roots extending back more than a century, even at the expense of maintaining higher prices for consumers. The United States was in no particular position to complain, either: Significant lobbying from myriad US producer lobbies, especially sugar and dairy, meant the United States entered negotiations unwilling to make significant changes in US import restrictions affecting these products. Agricultural trade policy, especially among the more developed TPP members, remains highly producer-friendly and managed.

THE BASELINE: AGRICULTURAL TRADE IN THE TPP

As of 2012,[7] TPP countries accounted for 25.6 percent of global agricultural exports and 22 percent of imports. Table 1 presents summary agricultural trade data for the 12 TPP parties, which constitute a diverse group in terms of relevant factor endowments, populations, and levels of development.

The United States is the largest agricultural trader in absolute terms (39.1 percent of TPP-member agricultural trade), but in per capita terms it is middle of the road: Australia, Canada, Chile, Malaysia, New Zealand, and Singapore have much more trade-intensive agricultural sectors. New Zealand and Australia run massive agricultural trade surpluses ($3,693 and $1,117 per capita, respectively). Unsurprisingly, the three land-constrained upper-income countries (Brunei, Japan, and Singapore) all run large trade deficits. Malaysia is an outlier with a large agricultural trade surplus derived mostly from exports of palm oil and cocoa—both are produced in only nominal amounts in other TPP countries, meaning that Malaysia's exports did not experience significant domestic producer competition (and thus opposition) abroad.

In terms of trade in meats, grains, sugar, and dairy, all are widely produced in TPP countries (save for Singapore and Brunei) and are associated with complex political economies that often trump considerations of comparative advantage or cost to local consumers. The TPP parties are a diverse group, but virtually all have domestic producers with political clout.

7. The most recent year for which comprehensive data are available.

Table 1 Agricultural trade values and export-import balances in TPP countries, 2012

TPP country	Population	Total agricultural trade (exports + imports) (thousands of US dollars)	Agricultural trade (percent share of TPP countries)	Agricultural exports (thousands of US dollars)	Agricultural imports (thousands of US dollars)	Exports per capita (US dollars)	Imports per capita (US dollars)	Agricultural trade surplus per capita (US dollars)
Australia	22,728,254	49,951,666	7.8	37,672,837	12,278,829	1,658	540	1,117
Brunei	405,512	446,039	0.1	2,440	443,599	6	1,094	–1,088
Canada	34,754,312	76,399,395	11.9	43,978,254	32,421,141	1,265	933	333
Chile	17,388,437	16,305,702	2.5	10,598,793	5,706,909	610	328	281
Japan	127,561,489	69,772,750	10.9	3,286,981	66,485,769	26	521	–495
Malaysia	29,021,940	49,716,467	7.7	30,875,159	18,841,308	1,064	649	415
Mexico	122,070,963	48,304,578	7.5	21,656,035	26,648,543	177	218	–41
New Zealand	4,408,100	24,342,008	3.8	20,310,597	4,031,411	4,608	915	3,693
Peru	30,158,768	8,552,680	1.3	4,203,358	4,349,322	139	144	–5
Singapore	5,312,400	20,008,602	3.1	8,482,359	11,526,243	1,597	2,170	–573
United States	314,112,078	250,918,978	39.1	144,889,596	106,029,382	461	338	124
Vietnam	88,772,900	27,016,066	4.2	14,728,767	12,287,299	166	138	28

Sources: FAOSTAT, 2015, http://faostat3.fao.org/download/T/TP/E; World Bank, *World Development Indicators* database, http://data.worldbank.org/indicator; and authors' calculations.

Although farm products[8] account for relatively modest shares (10–13 percent) of exports for all except New Zealand, where they account for 60 percent, wrangling over them was particularly contentious. Going into the TPP negotiations, major exporting countries, especially Australia, Canada, New Zealand, and the United States, were set to push hard for expanded market access while, at the same time, the United States and Canada wanted to shield their own domestic producers from lower marginal-cost producers abroad (US sugar and dairy, Canadian dairy). For instance, US Trade Representative Michael Froman promised that whatever the outcome of the TPP negotiations, "whatever we do in that area won't undermine the sugar program," referring to one of the most heavily subsidized and comparatively geographically concentrated US agricultural sectors.[9] Canadian representatives expressed similar sentiments about dairy, one of that country's most heavily managed agricultural products.

Nonetheless, on a product-by-product basis, some meaningful changes were achieved. Where the status quo held, consumer benefits were sacrificed on the altar of preserving beneficial protectionism for influential special interests. Given the asymmetric skin in the game of producers, for whom subsidies, import quotas, and other NTBs are a (if not the) most significant determinant of financial viability, and consumers, for whom the benefits of freer trade amount to fractions of pennies (if that) on the dollar (save, perhaps, for Japan), it is unsurprising that protectionist interests were largely able to win the day.

LIVESTOCK AND MEATS

One area in which the "free trade" designation seems most appropriate is livestock and meat trade. Japan, Mexico, Peru, and Vietnam committed to massive reductions or complete phaseouts of tariffs on a host of meat products, most notably beef and pork. Ranchers and swineherds in Australia, Canada, New Zealand, and the United States—four of the world's five largest exporters of beef and related meat products—are poised to make significant gains, especially as the Asia-Pacific region, with its many comparatively land-constrained countries, sees significant growth in its middle-class consumer base.

Although it is the world's third largest beef importer, Japan maintains high tariffs on imported beef products and has often curtailed market access through sanitary measures (see section on Sanitary and Phytosanitary Standards). Under the TPP, Japan will reduce tariffs on both chilled and frozen beef from the current 38 percent to 9 percent over the next 15 years, with tariffs to be phased out completely for processed red meats, live cattle, and offal (organ meats, such as liver, tongue, kidney). Accompanying these cuts is a 10-year phaseout of tariffs on pork products. Given that Japanese meat imports totaled nearly $8.7 billion in 2013,[10] of which $4 billion were in pork alone, these phaseouts promise to boost already substantial trade volumes. Indeed, Japan made large concessions across many agricultural products (see box 1).

Mexico agreed to eliminate its tariffs of 20–25 percent on beef and 10 percent on sheep and goat meat over the next 8–10 years and lift its 10–15 percent tariff on livestock imports immediately upon ratification. While this sounds generous, these reductions reflect the highly competitive nature of Mexican beef exports, which

8. For our purposes, farm products include animal and animal products, foodstuffs, and vegetable products. See "The Atlas of Economic Complexity," Center for International Development, Harvard University, http://atlas.cid.harvard.edu/ (accessed on December 8, 2015).
9. As quoted by Daniel R. Pearson, "Sugar and the TPP," Cato at Liberty, www.cato.org/blog/sugar-tpp (accessed on October 15, 2015). US cane and beet sugar production is concentrated in just 16 electoral districts—Louisiana 1st, 2nd, 3rd, and 6th; Florida 18th and 20th; Texas 15th and 34th; California 51st; Minnesota 7th; Michigan 10th; North Dakota 1st; Montana 1st; Wyoming 1st; Idaho 1st and 2nd. For comparison, 36 congressional districts plant more acres of corn than the district with the most planted sugar beet (Minnesota 7th) plants sugar. See "2012 Ranking of Congressional Districts," www.agcensus.usda.gov/Publications/2012/Online_Resources/Congressional_District_Rankings/ (accessed on December 17, 2015).
10. "Atlas of Economic Complexity," Harvard University Center for International Development, http://atlas.cid.harvard.edu/ (accessed on December 8, 2015).

Box 1 Summary of Japan's agriculture commitments in the TPP

Negotiating agricultural market access in Japan was a major bottleneck during the TPP talks. The country resisted full tariff liberalization of sensitive agricultural imports such as rice, beef and pork, dairy, wheat and barley, and sugar, but ultimately agreed to liberalize these products to some extent.

Japan's average MFN applied tariff for agricultural products is 14.3 percent, but peak tariffs can exceed 700 percent.[1] This is a big deal as the United States is the top source of agricultural imports for Japan, accounting for a quarter of Japan's total farm imports, and for the United States Japan is the fourth largest agricultural export market (after China, Canada, and Mexico). Among other TPP members, Australia, Canada, and New Zealand all needed some meaningful improvement in agricultural market access in Japan—the world's third largest importer of agricultural products ($43.6 billion in 2013)—to obtain the requisite domestic political support for the overall TPP deal.[2]

Compared with Korea's concessions in the Korea-US FTA (KORUS), Japan made important concessions in some areas and less in others. Table B1.1 compares the commitments in terms of tariff liberalization and the expansion of tariff-rate quotas (TRQs) for both countries.

For beef and pork, Japan agreed to liberalize 74 percent (beef) and about 80 percent (pork) of products, with the rest subject to some tariff reduction. This was less ambitious than Korea, which agreed to liberalize all products in 15 years, but still translates to important liberalization. Japanese tariffs on fresh, chilled, and frozen beef will be reduced to 9 percent within 16 years but not eliminated; tariffs on processed red meats, live cattle, and offal will be fully eliminated within the same time frame; and tariffs on fresh, chilled, and frozen pork will be eliminated in 10 years, along with a substantial reduction in the maximum markup price applied to pork cuts through the country's gate price system.[3]

Japan agreed to liberalize a number of dairy products, including key US exports such as whey and certain types of cheeses, but it agreed to only small increases in TRQs for skim milk powder and butter, which are key New Zealand exports.[4] Korea made similarly small TRQ concessions in KORUS for milk powders and butter. Japan will also reduce tariffs that range as high as 40 percent on cheeses, whole milk products (ice cream, yogurt, whipped cream), and various dairy- and cocoa-containing food preparations, over 6–11 years. Compared with Korea, Japan had higher baseline tariff rates in these areas. The US dairy industry was disappointed with the slow reductions of protections on cheese and ice cream in particular.[5]

For rice, unlike Korea, which secured an exemption in the KORUS, Japan agreed to a 50,000 metric ton (MT) TRQ increase for the United States, in addition to a TRQ of 6,000 MT for Australia. These will expand to 70,000 and 8,400 MT, respectively, in or after the 13th year. Japan also agreed to new access for animal feeds containing rice and a TRQ allocation specifically for medium grain rice. As discussed, although this was a relatively small concession by Japan, it was important given the complete exclusion of rice from KORUS and the domestic political sensitivity of rice.

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1. WTO Tariff Profiles: Japan, 2014, http://stat.wto.org/TariffProfile/WSDBTariffPFView.aspx?Language=E&Country=JP (accessed on December 18, 2015).

2. FAOSTAT, http://faostat3.fao.org/browse/T/*/E (accessed on December 17, 2015).

3. The "gate price system" means that a specific duty is charged on imports below a specified threshold, with the intention of bringing the price of Japan's imports up to the higher domestic price. The "markup" is subject to setting a minimum selling price.

4. "Japan to Eliminate Tariffs on Key U.S. Dairy Exports; Set TRQs on Butter," *Inside U.S. Trade,* October 22, 2015, www.insidetrade.com (accessed on December 16, 2015).

5. U.S. Dairy Industry Remains Neutral on TPP, But Downbeat on Access Outcome," *Inside U.S. Trade*, December 10, 2015, www.insidetrade.com (accessed on December 16, 2015).

Table B1.1 Comparison of Korean and Japanese FTA commitments to agricultural liberalization

	Korea's commitments in the Korea-US FTA	Japan's commitments in the TPP
BEEF[a]	**Tariff liberalization**	**Tariff liberalization**
Overall	Tariffs on 100 percent of beef and beef products imports eliminated within 15 years	Tariffs on 74 percent of beef and beef products eliminated within 16 years, with tariff cuts for the remaining 26 percent of products
Fresh, chilled, and frozen beef	40 percent tariff to phase out in 15 years	38.5 percent tariff lowered to 9 percent within 16 years
Beef offal	18 percent tariff to phase out in 15 years	Tariffs as high as 21.3 percent to phase out within 6–16 years
Processed beef products	Tariffs as high as 72 percent to phase out in 15 years	Tariffs as high as 50 percent to phase out within 6–16 years
PORK[a]	**Tariff liberalization**	**Tariff liberalization**
Overall	Tariffs on 100 percent of pork and pork products imports eliminated within 15 years	Tariffs on 65 percent of pork and pork products will be eliminated within 11 years and nearly 80 percent of tariff lines eliminated within 16 years
Fresh, chilled, and frozen pork	22.5 percent tariff on fresh and chilled pork to phase out in 10 years; 25 percent tariff on frozen pork eliminated on January 1, 2016	4.3 percent tariff immediately reduced by 50 percent, with residual duty eliminated in 10 years Gate price system[b]: ¥482/kg maximum specific duty applied to pork cuts immediately reduced to ¥125/kg and then to ¥50/kg after the 10th year
Processed pork products	27–30 percent tariffs eliminated on January 1, 2014	20 percent tariff to phase out in 6 years (ground seasoned pork)
Sausages	18 percent tariff to phase out in 5 years	10 percent tariff to phase out in 6 years
SUGAR	**Tariff liberalization**	**Tariff-rate quotas (TRQs)**
	50 percent tariff to phase out in 15 years	¥71.80/kg MFN specific tariff Quota of 500 MT
DAIRY	**Tariff liberalization and TRQs**	**Tariff liberalization and TRQs**
Cheese	Tariffs as high as 36 percent to phase out in 10–15 years; duty-free TRQ of 7,000 MT (1st year) to expand to 10,280 MT (14th year)	Tariffs of 22–40 percent to phase out in 16 years (e.g., lower-fat cream cheese, pizza cheese, grated cheese like Parmesan, ripened cheese like cheddar); selected tariffs reduced by 50 percent (e.g., blue-vein cheese); selected tariffs maintained (e.g., 29.8 tariff on mozzarella and 40 percent on processed cheese)
Whey[c]	Tariffs as high as 49.5 percent to phase out in 10 years; duty-free TRQ of 3,000 MT (1st year) to expand to 3,800 MT (9th year)	Tariffs as high as 660 percent on whey for food use to phase out in 21 years or less; combined CSQ for mineral concentrated whey, infant formula, and whey permeate of 5,000 MT (1st year) to expand to 9,000 MT (11th year and onward)

(box continues)

Table B1.1 Comparison of Korean and Japanese FTA commitments to agricultural liberalization *(continued)*

	Korea's commitments in the Korea-US FTA	Japan's commitments in the TPP
DAIRY	**Tariff liberalization and TRQs**	**Tariff liberalization and TRQs**
Lactose and lactose syrup	49.5 percent and 20 percent tariffs to phase out in 5 and 10 years	8.5 percent tariff eliminated immediately
Various dairy- and cocoa-containing food preparations (e.g., whipped cream and frozen yogurt)	8 percent tariff to phase out in 5 years	Tariffs as high as 29.8 percent to phase out in 6–11 years
Whole milk powder and other products	176 percent tariff with no phaseout (whole milk powder); duty-free TRQ of 5,000 MT (1st year) to expand to 5,628 MT (5th year) with annual increase of 3 percent after 6th year	Tariffs as high as 35 percent to be reduced to 3–10 percent within 6–11 years (e.g., ice cream, yogurt, blue cheese, and whole milk powder)
Skimmed milk powder	176 percent tariff with no phaseout; included in same TRQ as milk powder	In-quota rate of 25–35 percent tariffs plus ¥130/kg specific duty markup applied in 1st year, with specific duty reduced annually to zero by 11th year; duty-free TRQ of 3,188 MT (1st year) to expand to 3,719 MT (6th year and onward)
Evaporated milk	89 percent tariff with no phaseout; included in same TRQ as milk powder	Duty-free TRQ of 1,500 MT (1st year) to expand to 4,750 MT (6th year and onward)
Butter	89 percent tariff to phase out in 10 years; duty-free TRQ of 200 MT (1st year) to expand to 253 MT (9th year)	In-quota rate of 35 percent tariff plus ¥290/kg specific duty markup applied in 1st year, with specific duty reduced annually to zero by 11th year; duty-free TRQ of 3,188 MT (1st year) to expand to 3,719 MT (5th year)
WHEAT[c]	**Tariff liberalization and TRQs**	**Tariff liberalization and CSQ for the United States**
Overall	3 percent tariffs on wheat eliminated immediately	Duty-free CSQ of 114,000 MT (1st year) to expand to 150,000 MT (7th year); out-of-quota duty of ¥55/kg (up to 250 percent ad valorem equivalent) Maximum import markup price of ¥17/kg to be reduced by 45 percent to ¥9.4/kg (9th year) (price change equivalent to US$150/ton to US$83/ton)
Processed wheat products including biscuits, cookies, cakes, and other bread products	8 percent tariffs to phase out in 5–10 years	Tariffs as high as 26 percent to phase out in 6 years; duty-free CSQ of 10,500 MT (1st year) to expand to 12,000 MT (6th year and onward)
Dry spaghetti and macaroni	8 percent tariffs to phase out in 5 years	30 percent tariff to be reduced to 12 percent (9th year)

(box continues)

Table B1.1 Comparison of Korean and Japanese FTA commitments to agricultural liberalization *(continued)*

	Korea's commitments in the Korea-US FTA	Japan's commitments in the TPP
RICE[c]	Exempted from tariff schedule	Tariff liberalization and CSQ for the United States
Overall	Minimum access quota of 409,000 tons as established under WTO, subject to an in-quota tariff rate of 5 percent and an overquota tariff of 513 percent	Duty-free CSQ increase of 50,000 MT (1st year) will rise to 70,000 MT (13th year and onward)
Animal feeds containing rice	n.a.	12.7 percent tariffs to be eliminated immediately
Medium grain rice	n.a.	Redesignate 60,000 tons under Japan's WTO TRQ

CSQ = country-specific quota; FTA = free trade agreement; MFN = most favored nation; MT = metric ton; n.a. = not applicable; WTO = World Trade Organization

Note: Japan's tariff liberalization is based on its bilateral schedule for the United States.

a. Similar to Korea, Japan also negotiated "agricultural safeguard measures" that apply to beef and pork products, allowing a higher tariff on specified goods to be applied if the aggregated volume of imports from the United States exceeds a specified "trigger" level. The tariff rate should be less than the MFN rate. In addition, other safeguards were negotiated for selected dairy products, such as whey protein concentrate.
b. The "gate price system" means that a specific duty is charged on imports below a specified threshold, with the intention of bringing the price of Japan's imports up to the higher domestic price. The "markup" is subject to setting a minimum selling price.
c. CSQs indicate Japanese quota concessions that apply only to the United States. Other TRQs listed in this table for Japan are TPP-wide.

Sources: KORUS FTA text, https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text; TPP text, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

totaled nearly $1 billion in 2015 and are the only animal protein for which Mexico enjoys a trade surplus with the United States, its largest trading partner.[11]

In Vietnam, the TPP will not significantly affect most imports of animal feed and industrial inputs, as the country's tariff rates on these products are already comparatively low (by virtue of multiple overlapping bilateral FTAs with TPP members), but it may have positive effects for US purveyors of high-value human food products, including meat (Arita and Dyck 2014). With MFN tariffs of up to 40 percent on meat and meat products, Vietnam represents a significant untapped market.

The United States and Canada, large beef importers, largely resisted further market liberalization. This reflects both market segmentation and specialization—most US and Canadian beef exports are grain-finished and marketed as high-value cuts, whereas most beef imports are lower grade and marketed as ground beef—as well as the fact that the lion's share of US and Canadian beef imports are from countries with which already they have free trade agreements. However, the United States has agreed to phase out tariffs on Japanese wagyu beef, a high-price delicacy whose exports more than quintupled (from 28 metric tons [MT] to 153 MT) from 2012 to 2014.[12]

More open markets for livestock and meat products will have significant second-order effects for corn and soybean farmers, as increased demand for meat translates into increased demand for feed, both domestically and abroad. Soybeans are already the United States' single largest bulk export commodity. The growing demand for both crops should help make the deal more palatable to constituencies in the US Great Plains and Midwest.

11. Data from "Mexican Beef," http://mexicanbeef.org (accessed on December 8, 2015).
12. Yukihiro Sakaguchi, "US to gradually remove tariff on Japanese beef," *Nikkei Asian Review,* July 30, 2015, http://asia.nikkei.com/Politics-Economy/International-Relations/US-to-gradually-remove-tariff-on-Japanese-beef (accessed on October 20, 2015).

RICE

The United States and Australia pushed hard for expanded access to Japan's rice market but gained only humble concessions: a 50,000 MT TRQ increase for the United States and 6,000 MT for Australia, although these will expand to 70,000 and 8,400 MT in or after the 13th year of the deal, reflecting a roughly 20 percent eventual increase in tariff-free US rice imports. Vietnam, a rice-exporting giant with significant proximity advantages to the Japanese market, is poised to see smaller gains, as the long-grain varieties grown there are less favored by Japanese consumers than the higher-end short-grain varieties produced in the United States and Australia.[13] Japan will maintain a ¥341/kg ($2.84/kg) tariff on rice imported outside the quota system, maintaining a tightly managed market. These concessions are small, but they are a win relative to the terms negotiated in the KORUS FTA, where Korea—another country where rice forms the backbone of the country's food self-sufficiency ambitions and rural political economy—was successful in keeping rice off the table. Should Korea move to join the TPP in the future, the Japanese precedent will undoubtedly be applied to it.

The modest Japanese concessions on rice are the most the United States and Australia could have hoped for; rice will never be as economically, socially, and politically important to the United States and Australia as it is to Japan. The differences become apparent in the three countries' approaches to production. US rice production is concentrated in roughly 6,000 farms in seven electoral districts across four states, with average farms planting 619 acres; Australia's is even more concentrated, with 1,500 highly regulated farms in New South Wales and Victoria producing all of the country's exportable rice. Although these industries are globally competitive, they are, by definition, highly specialized interests. In contrast, rice farms in Japan are tiny (3.7 acres, on average) and ownership is both more diversified (716,300 farms) and geographically diffuse—29 of 47 prefectures produce more than 100,000 MT per year.[14]

But fewer young Japanese are interested in farming—in 2010 the average age of Japanese farmers was 70, and many of them engage only in part-time farming. Moreover, the 1946 land reform and rapid postwar urbanization have left many rural areas depopulated. The sector is in need of new blood or consolidation into fewer larger, more capitalized farms, but Japan's land tenure laws—a holdover from the 1946 land reform that was considered central to facilitating Japan's post-World War II democratic transition—are designed to prevent consolidation in the sector.

Over the long term, demographic realities will force some reform of the Japanese rice sector and land tenancy laws more generally. But rice remains an intensely national issue, and the political clout of the farm cooperatives militates against reform. Ultimately, Japan can pursue a globally competitive rice sector or it can maintain a highly atomized but politically powerful small farm system, but it will not be able to do both.

SUGAR

More than rice, the wrangling over market access for sugar reflected competition between narrow interests. The three major TPP producers are Australia, Mexico, and the United States, which together account for 80 percent of sugar exports from TPP countries. Unlike rice, beef and pork, and dairy, sugar is not a staple foodstuff with a long history of cultivation on small farms. Sugar production—especially cane sugar—enjoys significant economies of scale, resulting in a small number of large producers: roughly 700 farms averaging 1,224 planted acres in the United States and 4,000 averaging 212 acres in Australia.[15] Mexico is an outlier in this regard, with much smaller (11.6 acres on average), more numerous, and more geographically dispersed cane farms, a legacy

13. Total Vietnamese agricultural exports to Japan amounted to just $15 million in 2012 (Arita and Dyck 2014).
14. Data from "The 89th Statistical Yearbook of Ministry of Agriculture, Forestry and Fisheries (2013–2014)," www.maff.go.jp/e/tokei/kikaku/nenji_e/89nenji/index.html.
15. "U.S. Sugar Production," USDA, www.ers.usda.gov/topics/crops/sugar-sweeteners/background.aspx (accessed on October 5, 2015); "Australian Sugarcane Industry Overview," Australian Sugar Milling Council, http://asmc.com.au/industry-overview/ (accessed on October 5, 2015).

of the 1917 land reform that followed the Mexican Revolution. There are 20 times as many sugar cane farms (nearly 166,000) in Mexico as total sugar farms (cane and beets) in Australia and the United States combined.

In the TPP, Australian sugar producers made significant gains in the United States, earning an additional 65,000 MT TRQ—a 60 percent increase over their allotment in FY2015 (109,141 MT) but well below the 750,000 MT TRQ increase the Australian government had sought.[16] Australia will also receive 23 percent of additional allocations that are set according to production levels in the United States, and it will maintain the third largest TRQ allotment (behind Brazil and the Dominican Republic). But it will remain far behind the 1.0 million to 1.5 million MT of US sugar imports from Mexico, which became the residual supplier to the US market as a result of the North American Free Trade Agreement (NAFTA) over 20 years ago. As of now, it is unclear whether the increased allotment for Australia will be offset by reduced imports from Mexico or reduced domestic production caps under the US Overall Allotment Quantity, which establishes production limits for US producers.[17] Mexican producers, who wield significant political clout, especially in the states of Jalisco, San Luis Potosí, and Veracruz, would obviously not welcome the former.

Liberalization of the sugar market among TPP members has posed challenges in the past. Sugar was excluded from the US-Australia FTA, and it has often soured relations among NAFTA members, starting with the last-minute side letter that effectively constrained Mexico's access to the US market. Most recently, in the same month that the TPP agreement was concluded, the US International Trade Commission (USITC) sided with US sugar producers in an antidumping (AD) and countervailing duties (CVD) case against Mexico that reaffirmed a deal effectively suspending NAFTA-negotiated sugar tariffs and replacing them with minimum prices and import quotas (see box 2).

DAIRY

Japan was the most consequential mover on dairy, although it maintains significant market access barriers in the form of TRQs for butter and milk (table B1.1). Historically, Japan has levied relatively high tariffs on many cheeses and other assorted dairy products (yogurts, whey, ice cream, etc.) and excluded dairy from its previous bilateral FTAs (with the exception of a recent agreement with Australia).

With the TPP Japan has committed to relatively long phaseouts, up to 16 or 21 years, of tariffs on a variety of cheeses and milk products. For butter and milk, the country agreed to two TPP-wide TRQs of 3,188 MT each (expanding to 3,719 MT after five years). For butter, the concession is more meaningful: Japan consumed 77,000 MT in 2013. For milk, this is a nominal concession: Fluid milk consumption amounted to roughly 4 million MT in 2013 (USDA 2013). Evaporated milk will get a 1,500 MT, duty-free TRQ (4,750 MT after six years) and condensed milk half that amount (750 MT).[18] These TRQs are "open access" and thus not tied to specific TPP partners. While US and New Zealand dairy producers would have liked more, the deal is a significant improvement over previous market access conditions, although US and New Zealand milk remain highly restricted.

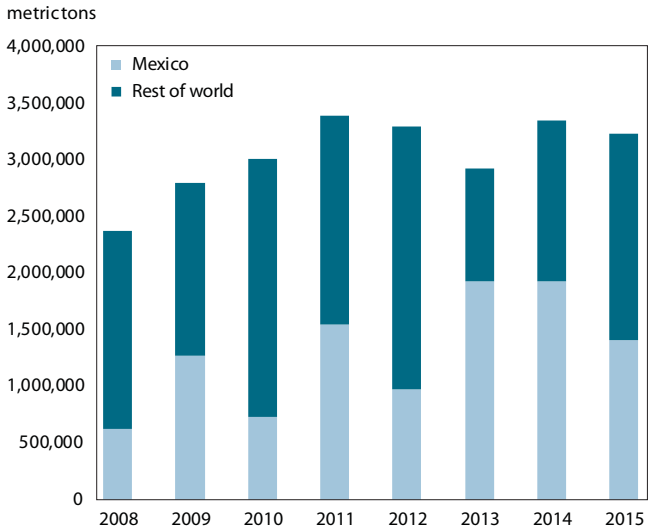
US and Canadian policies protecting dairy and poultry became a major sticking point in the TPP negotiations. Canada has long been reluctant to consider full trade liberalization of its dairy and poultry sectors, which were left untouched by NAFTA negotiations and are governed by supply management and protected by

16. Daniel R. Pearson, "Sugar and the TPP," Cato at Liberty Blog, August 13, 2015, www.cato.org/blog/sugar-tpp (accessed on October 14, 2015).
17. Ibid.
18. "Fact Sheet: Trans Pacific Partnership and Japan: Key Outcomes for Agriculture," Release No. 0322.15, US Department of Agriculture, www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2015/11/0322.xml (accessed on December 17, 2015).

Box 2 Mexico, sugar, and the TPP

US restrictions on Mexican sugar were slowly reduced starting in 1994, and as of January 1, 2008, NAFTA gave Mexican sugar exporters a unique position in the US sugar market as the only exporter with unlimited, duty-free access. Mexico became the largest supplier—up to 70 percent in 2013—of US sugar imports; figure B2.1 shows the evolution of Mexico's position in the US market since 2008. Sugar became a contentious issue when high prices particularly in the period 2008–11, induced Mexican farmers to ramp up production, driving up the supply of sugar in the US market and bringing down prices for US sugar producers.

Figure B2.1 US sugar imports from Mexico and the rest of the world, 2008–15



Source: US Department of Agriculture, Economic Research Service, "Sugar and Sweeteners Yearbook Tables," www.ers.usda.gov/data-products/sugar-and-sweeteners-yearbook-tables.aspx#.U_zEmPldV8E (accessed on January 25, 2016).

In 2014 the United States launched AD and CVD investigations at the behest of US producers who accused Mexico of unfairly selling subsidized sugar in the US market. This resulted in two suspension agreements that set a limit on Mexican sugar exports to the United States and minimum price levels for Mexican sugar, effectively ending Mexico's free trade in sugar under NAFTA.[1] The agreements also sent a strong signal about the potential for agricultural liberalization in the TPP, underscoring the precedence of domestic agricultural interests. Other TPP countries—for example, Canada, which was under pressure by other TPP countries to reform its dairy sector—could not be blamed for calculating that they would be able to join the TPP with little actual change to domestic support programs.

In the TPP, the United States has promised Australia a greater sugar quota allowance—quite likely at the expense of Mexico. Is this a loss for Mexico? Mexican sugar producers think so. On balance, however, the TPP will provide Mexican agricultural exporters with greater access to currently untapped markets and an impetus for further domestic reform.

1. In September 2015 the USITC voted unanimously in favor of the suspension agreements. This was good news for domestic US sugar producers, less so for US industries that use sugar as a sweetener, such as the candy industry: Kraft Foods, Inc., maker of the iconic Life Savers, famously relocated production of the candy to Canada in 2003 because of high US sugar prices.

high overquota tariffs.[19] The country's supply management policies, which date back to 1970, control the domestic price of milk, cheese, eggs, and poultry through the use of marketing boards that set production quotas and limit imports through the use of TRQs. These policies are controversial even domestically; the *Globe and Mail* estimates that they increase the cost to the consumer by 38–300 percent compared with other countries,[20] or $276 per family per year more (Findlay 2012).

Despite strong pressure during the TPP negotiations to reform its dairy regime, including calls from domestic industry groups, Canada made relatively few changes to its remaining agricultural restrictions. It committed to increase quotas over five years, equivalent to an additional 3.25 percent of its current production of dairy products (mainly affecting imports from Australia, New Zealand, and the United States as well as other land-abundant countries with large cattle and dairy industries), and lesser amounts for eggs and poultry. Canadian farmers will be compensated through import guarantee programs that provide support for 10 years after entry into force of the TPP, also prompted by the Canada-EU Free Trade Agreement (CETA), which opened Canada's cheese market by about 2 percent additional EU imports, through a $4.3 billion fund to be disbursed over 15 years.

As with Japanese rice and Mexican sugar, Canadian reluctance to move much on dairy reflects political considerations that extend beyond simple interest group politics. Canada's dairy industry is relatively small—about 13,000 dairy farmers, 3,000 poultry farmers, and fewer than 1,000 egg farmers[21]—but these farms are largely concentrated in the politically powerful provinces of Ontario (3,834 farms) and, even more so, Québec (5,766 farms). Due to both the size and electoral volatility of these two provinces—Ontarian and Québécois voters tend to dictate national results and neither province is dominated by partisan strongholds or "safe districts"—supply management is something of a "third rail" issue in Canadian politics. The voltage of that rail may be tested by the new Labour government, which has pledged to revisit the $4.3 billion in compensatory funds.[22] The Harper cabinet had promised the funds in the run-up to the 2015 election, which helped its members carry Ontario farm country (20 of 25 ridings), albeit by slim margins, and double their seat count in Québec.[23]

Much has been made of Canada's protection of dairy, but Mexico also maintains significant barriers to trade in this sector. As seen in table 2, Mexico has high tariffs on various milk, yogurt, and cheese product lines. Not unexpectedly, NAFTA partners and even Chile, which enjoy tariff-free entry, have a much higher share of the Mexican market than they do in the world market. This should be of interest to TPP dairy powerhouses New Zealand and Australia.

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19. New Zealand, a member of the original Trans-Pacific Strategic Economic Partnership that reluctantly agreed to allow Canada into the negotiations, was particularly vocal about its insistence that Canada reform its regimes, particularly for dairy. Prime Minister John Key told the *New Zealand Herald* that "Canada wants to exclude dairy, and that would be unacceptable to us." Audrey Young, "Key at odds with Canada over trade protectionism," *New Zealand Herald,* April 16, 2010, www.nzherald.co.nz/politics/news/article.cfm?c_id=280&objectid=10638697 (accessed on December 1, 2015).
20. "The price of eggs and the Throne Speech," *Globe and Mail*, October 15, 2013, www.theglobeandmail.com/globe-debate/editorials/the-price-of-eggs-and-the-throne-speech/article14878907/ (accessed on October 15, 2015).
21. "2011 Census of Agriculture Maps," Ontario Ministry of Agriculture, Food and Rural Affairs www.omafra.gov.on.ca/english/landuse/gis/census_ft.htm (accessed on October 24, 2015); "Number of Farms, Dairy Cows, and Heifers," Canadian Dairy Information Centre, www.dairyinfo.gc.ca/index_e.php?s1=dff-fcil&s2=farm-ferme&s3=nb (accessed on October 24, 2015).
22. "$4.3B TPP compensation for dairy industry under review: Freeland," *The Canadian Press*, November 18, 2015.
23. "Election Results: Conservatives sweep Ontario farm country winning 20 of 25 ridings," *Farmers Forum*, October 20, 2015, http://farmersforum.com/election-results-ontarios-farm-country-votes-conservative-but-weaker-with-three-seats-lost/ (accessed on December 17, 2015); "Conservatives more than double seat count in Quebec," *CBC News*, October 19, 2015.

Table 2 Mexico's imports and tariffs on selected milk and cheese products from TPP partners, 2013

	HS 040210 Milk and cream in powder, granules or other solid forms			HS 040690 Cheese and cheese curd, other			HS 040221 Milk and cream in powder, granules or other solid forms, not containing added sugar			HS 040620 Grated or powdered cheese, all kinds		
Partner	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)
Australia	1	0	6	0	0	2	3	6	4	0	0	2
Canada	13	2	1	0	0	0	0	0	0	0	0	0
Chile	0	0	0	26	9	0	0	0	0	0	0	0
New Zealand	8	1	20	17	6	4	30	67	44	0	0	5
United States	728	95	24	194	64	3	11	24	1	118	100	17
TPP total	751			238						118		
World total	769			303			45			118		
Addendum												
MFN tariff (percent)	63			55			36.5			20		

(table continues)

Table 2 Mexico's imports and tariffs on selected milk and cheese products from TPP partners, 2013 *(continued)*

	HS 040490 Whey, other			HS 040610 Fresh (unripened or uncured) cheese			HS 40630 Processed cheese, not grated or powdered		
Partner	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)	**Millions of US dollars**	**Share of Mexico's imports** (percent)	**Share of world imports** (percent)
Australia	0	0	1	0	0	5	0	0	5
Canada	0	0	1	0	0	0	0	0	0
Chile	0	0	0	0	0	0	0	0	0
New Zealand	6	9	26	0	0	4	0	0	4
United States	56	90	18	51	100	5	2	46	3
TPP total	62			51			2		
World total	62			51			4		
Addendum									
MFN tariff (percent)	20			100			100		

HS = harmonized system; MFN = most favored nation

Note: This table lists TPP members that exported to Mexico in HS product categories 0402-0406 in 2013. Blue shading denotes a country that has a free trade agreement with Mexico and pays zero tariffs. The other countries pay the MFN rate.

Source: UN TRAINS data through the World Bank's World Integrated Trade Solutions (WITS) database.

TOBACCO

TPP countries account for roughly a quarter of US tobacco exports, and US producers eyed new market access in Japan, Malaysia, and Vietnam in particular. But they will liberalize tariffs over a longer phaseout period: Japan agreed to liberalize tariffs as high as 30 percent in 11 years,[24] and Malaysia and Vietnam will eliminate their tariffs within 16 years. For its part, the United States will eliminate tariffs as high as 350 percent in 10 years. The smaller countries of New Zealand and Brunei will eliminate their tobacco tariffs immediately.

The TPP includes an important provision with obvious bearing on public health: the so-called tobacco carveout. Because of the noxious public health effects of tobacco, the TPP (Article 29.5) allows members to exclude tobacco-related claims brought by investors, though not member states themselves, from adjudication via arbitrators through investor-state dispute settlement (ISDS). The ISDS procedures are designed to reduce the perceived home bias of a country's judicial systems (see chapter on ISDS by Gary Hufbauer for an overview), but have been criticized by APAC for subverting normal regulatory processes. Tobacco giant Philip Morris recently used ISDS to challenge tobacco controls such as Australia's plain packaging law, arguing that such laws violate protections for intellectual property and fair and equitable treatment.[25] Under the TPP tobacco products are excluded from ISDS claims; instead, a member state's tobacco control measures can be challenged only through standard channels. This represents a win for public health but a significant—and rare—defeat for US tobacco interests.

GEOGRAPHICAL INDICATIONS

Geographical indications (GIs)—signs or names associated with specific products based on their geographic origin, such as Champagne or Asiago—were another thorny issue in the TPP negotiations. Provisions on GIs are covered under the TPP chapter on intellectual property rights, but in practice the terms affect market access for certain agricultural goods.

The United States protects GIs under its trademark regime, but elsewhere (e.g., the European Union) they are protected under a sui generis system that is more comprehensive. There has been some consensus at the multilateral level on expanding GI protections for wines and spirits, but less so for agricultural goods, such as cheeses and meats. The primary source of contention is that many protective GI designations are considered to be common names or "generic" in domestic markets. Put simply, US interest in the TPP was to protect the right to continue producing and exporting these products. Because several TPP members have also extended GI protections via other agreements, US producers of GI-competing products had defensive interests to ensure that they aren't locked out of foreign markets.

Indeed, given the United States' roots as both an agricultural and immigrant society (and the market premiums that higher-end agricultural products command), US producers have long produced agricultural goods that are recognized and protected as GIs in other countries: feta, Gouda, and Gorgonzola cheeses, for instance. The European Union, home to many if not most GIs, has sought to expand GI protections via its bilateral trade agreements, several of which include TPP countries (Canada, Vietnam). For example, under CETA (yet to be ratified) the European Union achieved substantial GI protections beyond Canada's existing protections for wine and spirits, though a compromise was reached on several sensitive products that are to be grandfathered in and/or will still be sold in the Canadian market with modifiers like "style" or "imitation" appended or in a translated language.

24. "Trans-Pacific Partnership: Benefits to U.S. Agriculture: Tobacco," US Department of Agriculture, October 16, 2015, www.fas.usda.gov/sites/default/files/2015-10/tpp_details_tobacco_10-16-15_0.pdf (accessed on December 18, 2015).
25. Plain packaging requires tobacco product manufacturers to remove all branding from packaging. The law was enacted in 2012. See Wendy Parment, "Trade, Health, and Tobacco Exceptionalism: The TPP Tobacco Carve-Out," Health Affairs Blog, November 10, 2015.

The TPP provisions include some safeguards for the rights of owners of preexisting trademarks for GI terms (Article 18.20), set guidelines for determining whether a product is considered generic (Article 18.33), and require member countries to have domestic procedures that allow for opposition to the designation of a GI and cancellation of GI protection in certain cases, such as a term that is considered a generic name in the market (Article 18.32).[26] These provisions are largely similar to those in the Korea-US FTA, except that the TPP includes a GI section that is distinct from trademarks.

Unlike other US FTAs, the TPP requires that the grounds for opposing and canceling GI protections also be applied to agreements that a member joins after the TPP's entry into force (Article 18.36). GI protections under existing agreements with third parties are not affected,[27] but such agreements must meet certain transparency obligations and at least allow for comment regarding the recognition of new GIs (Articles 18.36.2 and 18.36.6). To that end, the United States was able to somewhat influence the expansion of GI protections, but, to be sure, a much bigger debate will continue under its trade negotiations with the European Union.

SANITARY AND PHYTOSANITARY STANDARDS

Sanitary and phytosanitary standards (SPS) refer to health-based restrictions on trade in certain goods and are intended to ensure product and consumer safety and the commensurability of goods across borders (e.g., that there is no demonstrable health risk to consuming chicken from country A relative to chicken from country B).

The United States has pushed hard for reductions in what it considers politically motivated SPS-based trade restrictions, especially regarding: (1) US beef, chicken, and pork over concerns about bovine spongiform encephalopathy (BSE, or mad cow disease), avian influenza, and porcine reproductive and respiratory syndrome, respectively, and (2) GMOs. The US government has consistently challenged the former on the grounds that while there have been problems in the past, since the World Organization for Animal Health (OIE) gave US producers the "all-clear" the restrictions should be lifted. On the second, the United States has argued that anti-GMO policies are politically rather than scientifically motivated, while other countries counter that GMO technology is sufficiently new that longer time series–based evidence is required to establish safety and that US stances on these issues reflect interest group capture (in this case, the relevant industries) of the regulatory and scientific process.

In fact, the SPS chapter of the TPP obligates member countries to use science-based risk analysis for evaluating SPS threats, effectively harmonizing these procedures to those of the United States. It establishes a rapid reporting system for all SPS-related detained shipments, a cooperative technical consultation (CTC) system for member countries to consult regarding SPS issues, and a dispute resolution mechanism for SPS-related issues. In these ways, it should help smooth intra-TPP agricultural trade and help harmonize food safety standards across member countries.

The SPS chapter is perhaps more significant for what it omits: discussion of GMOs and related biotechnological goods. Instead, discussion of these goods is in chapter 2, which addresses the more basic issues of national treatment and market access. TPP Article 7.9 requires that SPS measures conform to relevant international standards—the *Codex Alimentarius* and WTO SPS agreement—and that deviations from these be undertaken only on the basis of "documented and objective scientific evidence" (Article 7.9.2). This represents a win for purveyors of GMOs and biotechnology, as the World Health Organization, US American Medical Association, and EU Directorate-General for Research and Innovation have all indicated that GMOs are no more

26. These cases include when the GI would cause confusion with trademark pending application or registration, a pre-existing trademark, if the GI is a term "customary in common language as the common name."
27. This is only the case provided that the agreement "(a) was concluded, or agreed in principle, prior to the date of conclusion, or agreement in principle, of this Agreement; (b) was ratified by a Party prior to the date of ratification of this Agreement by that Party; or (c) entered into force for a Party prior to the date of entry into force of this Agreement for that Party."

risky per se than conventionally bred organisms.[28] Although consumer sentiment in many TPP member states is decidedly mixed on the topic of GMOs, the scientific consensus is generally positive, with large upsides associated with increased yield potential and drought and pest resistance.

But what constitutes "documented and objective scientific evidence"? One might suppose the standard would be findings reported in peer-reviewed scientific journals, but the TPP includes provisions that would make scientific consultations confidential except in cases where the consulting parties agree to public disclosure (Article 7.17). Under these circumstances, it is not entirely clear what evidentiary basis would be used to determine food safety. While industry research may form an important pillar of food safety assessment, critics are right to caution that overreliance on industry sources may pose a threat to the public interest.

EXPORT RESTRICTIONS AND INTRA-TPP CONSULTATION

An important though less lauded provision in the TPP regards export restrictions (or bans), a common tool by which the governments of food-exporting countries have sought to shield local consumers from dynamics in global markets. Export bans were both a result of and contributor to the 2007–08 and 2010–11 food price spikes. Export restrictions may have contributed as much as 35 percent to world rice prices and 25 percent to wheat prices during the 2007–08 crisis, and Vietnam's export ban was particularly influential (Martin and Anderson 2011). The 2010–11 crisis was precipitated not only by Russia's drought and wildfires but by the Russian government's subsequent grain export ban (Welton 2011).

Export restrictions may increase domestic food supplies, but they do so at a variety of costs. In the domestic arena, producers do not get accurate demand signals, nor do they benefit from higher prices. This distorts incentives to invest in expanding agricultural production and productivity, which are necessary to increase supplies in the long run. Moreover, these restrictions are a crude means of addressing acute food insecurity, as they subsidize consumption by comparatively well-off households, not just by the poor. Finally, export restrictions are classic beggar-thy-neighbor policies, throwing costs of adjustment onto importing countries. Especially when imposed without consultation or warning, export bans can be highly destabilizing: Russia's export ban negatively impacted Turkey and Iran, but forced Egypt—the world's largest wheat importer—into inflated spot markets at a crucial moment, ballooning government expenditures and fueling public grievances during a highly volatile period.

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28. WHO: "GM foods currently available on the international market have passed safety assessments and are not likely to present risks for human health. In addition, no effects on human health have been shown as a result of the consumption of such foods by the general population in the countries where they have been approved. Continuous application of safety assessments based on the Codex Alimentarius principles and, where appropriate, adequate post market monitoring, should form the basis for ensuring the safety of GM foods." See "Frequently asked questions on genetically modified foods," www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/en/ (accessed on October 28, 2015). American Medical Association: "AMA recognizes the continuing validity of the three major conclusions contained in the 1987 National Academy of Sciences white paper 'Introduction of Recombinant DNA-Engineered Organisms into the Environment': (1) There is no evidence that unique hazards exist either in the use of rDNA techniques or in the movement of genes between unrelated organisms; (2) The risks associated with the introduction of rDNA-engineered organisms are the same in kind as those associated with the introduction of unmodified organisms and organisms modified by other methods; (3) Assessment of the risk of introducing rDNA-engineered organisms into the environment should be based on the nature of the organism and the environment into which it is introduced, not on the method by which it was produced." See "H-480.958 Bioengineered (Genetically Engineered) Crops and Foods," www.ama-assn.org/ssl3/ecomm/PolicyFinderForm.pl? site=www.ama-assn.org&uri=/resources/html/PolicyFinder/policyfiles/HnE/H-480.958.HTM (accessed on October 28, 2015). EU Directorate-General for Research and Innovation: "The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are not per se more risky than e.g. conventional plant breeding technologies." See "A decade of EU-funded GMO research," https://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf (accessed on October 28, 2015).

Provisions in TPP Article 26.2 are designed to address these negative impacts. While recognizing the right of governments to enact export restrictions in order to prevent critical shortages, it requires prior notification of TPP-member importing countries and consultation if export bans remain in place more than 12 months. Prior notification should smooth market responses—thus providing positive spillovers for non-TPP countries in the form of less volatile markets—and allow TPP importing countries time to seek alternative sources of supply. Though this falls short of the "first best option" of doing away completely with export bans, as called for by a G-20-commissioned report on food price volatility in 2011,[29] it is a useful step in the right direction.

SUMMING UP

The Trans-Pacific Partnership makes significant strides in liberalizing intra-TPP trade in agricultural products. However, its agricultural provisions fall short of delivering "free trade" on some sensitive agricultural commodities, though in some instances—particularly meat—barriers have come down substantially. Where barriers have remained, they reflect complex and often long-standing political economies that, were they to be undone, would threaten the viability of the agreement as a whole. Agriculture in the TPP reflects the broader trend of privileging producers over consumers in developed and middle-income country agricultural policy.

On the issues of geographical indications and sanitary and phytosanitary standards, US agricultural interests were largely successful in ensuring market access for US GI-competing products and establishing scientific standards for assessing food safety, though this particular interpretation of "scientific" is perhaps overly industry-friendly. Finally, TPP members negotiated some sensible policies regarding export bans in times of high food prices. Thus, the TPP reflects efforts to address food security as a component of human security as well as national security, national economic interests, and domestic political power.

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CHAPTER 4

AUTO SECTOR LIBERALIZATION

SARAH OLIVER

The 12-member Trans-Pacific Partnership (TPP) brings together two of the world's largest automakers, the United States and Japan, two countries that have historically sought to limit each other's ability to sell in domestic markets, particularly in the United States. For example, the United States persuaded Japanese leaders to accept "voluntary export restraints" in 1981 as an alternative to higher tariff barriers, which prompted Japanese automakers to shift production of automobiles from Japan to the United States to sell in the US market.[1] In spite of this context, the TPP does lower tariffs and begins the process of mutual recognition of safety and emissions standards. Outside the United States, the TPP requires Vietnam, Malaysia, and other signatories to lower their high auto tariffs, opening their markets to US and Japanese automakers at a time when demand for cars is growing. However, the agreement also reflects continuing unwillingness by the United States to open up its auto sector to Japan.

The TPP also seeks to dismantle nontariff barriers (NTBs). There are two main types of NTBs in the context of the auto sector. The first are explicitly designed to limit imports and sales of foreign automobiles and include measures like tax breaks for buying domestic cars and local content requirements for vehicles and vehicle parts. While the TPP seeks to dismantle government-related support of domestic automakers, the TPP actually introduces a trade barrier through its rules of origin requirements. In order to qualify for zero-tariff rates, finished automobiles must have at least 45 of their content sourced from TPP members. These rules of origin requirements both divert production from countries outside the TPP and limit exports of final products that do not meet rules of origin requirements within the TPP.

In the second case, NTBs are legitimately aimed at safety and environmental protections but end up limiting trade because of a lack of coordination of these regulations across countries. In the auto sector specifically, the United States and Japan follow different safety regulations and emissions standards, which in the absence of mutual recognition of these regulations, require companies to produce two versions of each model in order to sell in both markets. Removing NTBs requires increased cooperation, but both sides of an agreement benefit from increasing production efficiency and variety for consumers.

AUTO SECTOR IN THE UNITED STATES AND JAPAN

Overall, the US market for motor vehicles is bigger than Japan's, with 16.5 million new passenger vehicles on the road in 2014, compared with only 5.6 million in Japan in the same year. The big three US automak-

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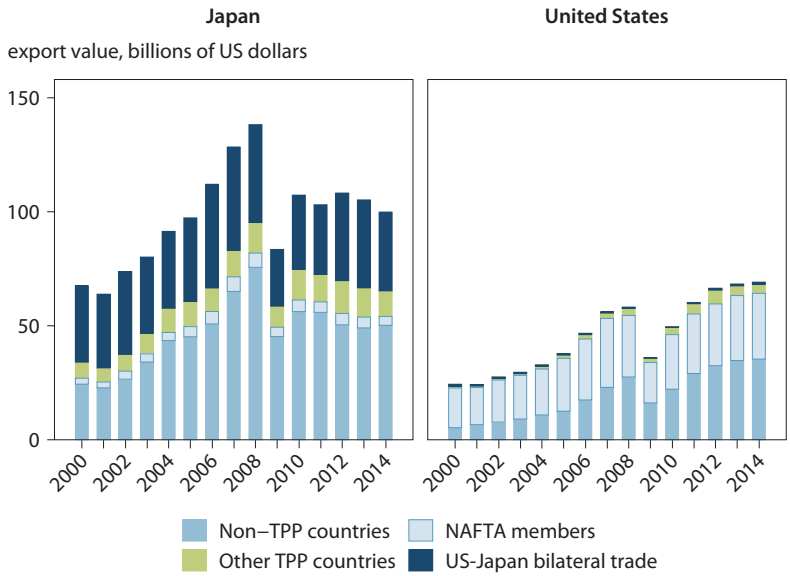
1. James Healy, "Transplant Auto Factories in USA turn 30 this Year," *USA Today*, April 3, 2012 (accessed on November 17, 2015).

ers (Chrysler, General Motors, and Ford) together accounted for about 7 million of these new car sales.[2] The Japanese auto sector exports more than the US sector because domestic demand in Japan is lower than US domestic demand for cars.

Figure 1 shows total motor vehicle exports by the United States and Japan since 2000, broken into three categories: non-TPP member countries, NAFTA members (Canada and Mexico), other TPP countries (excluding Japan and NAFTA partners), and US-Japan bilateral trade. The figure has three notable features. First, overall Japan exports more motor vehicles than the United States, as the larger domestic market in the United States makes exporting by US automakers less essential for profits. Second, US-Japan bilateral trade skews heavily toward Japanese exports to the United States, with relatively low levels of US car exports to Japan. Finally, the United States actually exports more finished vehicles to TPP members than Japan does, and not surprisingly given the integration of the markets, the vast majority of these exports are to NAFTA partners Canada and Mexico. Reductions of Canadian and Mexican tariffs on Japanese autos could present a new opportunity for Japan to compete against US automakers in these markets.

Figure 1 US and Japanese motor vehicle exports, by destination, 2000–14



Note: Motor vehicles based on HS codes 8703-8704.
Source: UN Comtrade database.

What are Japan and the United States looking to achieve in the TPP? Japanese exports to the United States are already high, but trade barriers such as tariffs and rules of origin make these exports more costly. On the other hand, the United States has not been able to break into the Japanese market the way Japan has in the US market.

Additionally, since both countries already export to other TPP members, they should benefit from increased market access in countries like Vietnam, Malaysia, Australia, and New Zealand. However, with lower tariff barriers in Canada and Mexico, Japanese competition may hurt US auto exports to its NAFTA partners as Japanese cars become less expensive.

TARIFF LIBERALIZATION

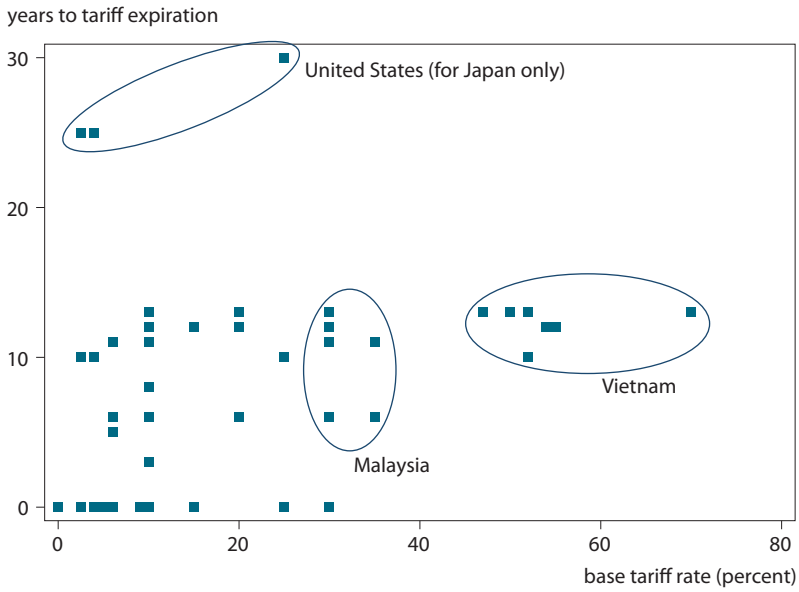
High most-favored nation (MFN) tariffs on imports are the most obvious barrier to auto trade among TPP members. For some TPP members, like Malaysia, lowering tariffs represents a significant opening up to foreign competition. Malaysia's Proton auto company, created in the 1980s by the former prime minister Mahathir Mohamad, has been historically subsidized by the Malaysian government and protected by high tariffs of 30 to 40 percent.[3] Proton may struggle after Malaysia's tariffs expire, but in the long run, national companies will be

2. Aaron Kessler, "2014 Auto Sales Jump in U.S., Even With Recalls," *New York Times*, January 5, 2015 (accessed on November 17, 2015); Motor Vehicle Statistics of Japan, Japan Automobile Manufacturers Association, 2015.
3. "Proton Bomb: Malaysia's Creaky National Car Company Faces an Uncertain Future," *Economist*, May 6, 2004.

forced to upgrade the quality of their cars to compete on the Malaysian market, ultimately benefiting Malaysian consumers. Auto sales in Malaysia have more than doubled in the past two decades, from 280,000 new vehicles registered in 1995 to 660,000 new vehicles in 2014.[4] Additionally, demand in Vietnam, another high auto tariff country (up to 70 percent), has been growing more rapidly than any other country in Southeast Asia, with foreign cars making up 40 percent of new purchases.[5]

At the same time, the TPP lets the United States maintain high tariffs on trucks for 30 years even though Japan has already lowered tariffs on American trucks to zero. For the same trucks, Brunei, Malaysia, New Zealand, and Vietnam will enjoy zero tariff rates after 11 years, and tariffs for the remaining members expire immediately. Mexico's tariffs on trucks, at 30 percent, are also designed to block some Japanese exports of trucks. They will expire immediately for all TPP members, but for Japanese mid-size and large truck tariffs they will be reduced to 7.5 percent over 10 years. However, all of Mexico's car tariffs, and tariffs on the two smallest classes of trucks, also set at 30 percent MFN rates, expire immediately for all countries (the other NAFTA partner, Canada, maintains 6.1 percent tariff rates, all of which expire immediately for all countries). While some protection remains on the Mexican side, following implementation of the TPP, Japan will gain better access to these auto markets and, will likely increase competition in these US-dominated markets.

Figure 2 Motor vehicle tariff expiration schedules under TPP



Note: HS codes 8703-8704.
Source: TPP tariff schedules at USTR (2015).

Figure 2 shows the distribution of initial MFN tariff rates for all TPP members for motor vehicles, compared with the number of years before these tariffs expire under the TPP. The vast majority of existing tariffs fall between 2 and 10 percent, with outliers being Malaysia, Vietnam, and the United States (Singapore is also an outlier but for the opposite reason, all of its baseline tariffs were zero before it entered the TPP). With the exception of US auto tariffs on Japan, 12 years is the longest delay in liberalization.

RULES OF ORIGIN

Rules of origin requirements are a nontariff barrier designed to ensure that a share of the production of a finished automobile is captured by countries within the free trade area, rather than from outside the area. The aim of this NTB is to incentivize US and Japanese automakers to source parts and labor from countries

4. Sheridan Mahavera, "Proton, Perodua Will have to Buck up or Lose Out under TPPA says Putrajaya," *The Malaysian Insider,* November 13, 2015; "Summary of Sales & Production data," Malaysian Automotive Association, September 2015.
5. David Robinson, "Car Sales Accelerating in Vietnam," *Financial Times,* September 17, 2015 (accessed on November 18, 2015).

like Vietnam and Mexico, which are part of the agreement, rather than a country like Thailand, which is not. While much of the auto sector negotiations focused on US-Japan bilateral trade, rules of origins negotiations show that other TPP members, particularly Canada and Mexico, also have a stake in trying to limit liberalization of rules of origin requirements. Indeed, the rules of origin debate was a major issue that held up the conclusion of the TPP talks earlier in 2015.

The United States, Canada, and Mexico already have strict rules of origin requirements in NAFTA, which can be used as a starting point to understand the resulting TPP requirements. NAFTA calls for 62.5 percent of content for finished vehicles to be manufactured in the United States, Canada, or Mexico in order to fall under NAFTA auto tariff schedules. NAFTA also requires producers to use the net cost method,[6] which starts with the total cost of manufacturing an automobile then subtracts the costs of promotion, marketing, post sales service, royalties, shipping, and interest. The share of regional content is then calculated by subtracting the value of all parts that originate outside the trade agreement, as shown below:

$$\textit{regional value} = \frac{\textit{cost of vehicle production} - \textit{value of nonoriginating parts}}{\textit{cost of vehicle production}} \times 100$$

In previous agreements Japan has instead used the build-down method to calculate the share of regional value content, which does not subtract the costs of shipping and marketing from the cost of vehicle production before making the regional value calculation. This difference in methods means that cars measured under the build-down method will be marked as having a higher share of regional content than cars measured using the net cost method.

The TPP represents a compromise between these two preferred calculation methods and calls for finished vehicles to have 45 percent within-TPP content using the net cost method, or 55 percent within-TPP content using the build-down method (Article 3.9).

In addition to the rules of origin requirements for finished vehicles, the TPP outlines rules of origin for individual auto parts, such as engines and transmissions. The requirements for auto parts range from 35 to 45 percent of parts originating within the TPP, with an additional list of parts that can be considered as "wholly originating" given certain conditions. These components may be imported from any country but must be somehow substantially modified in a TPP member country, through processes such as welding, heat treatment, or complex assembly, to be considered as originating in the TPP member country. These automatically originating parts, once built into another automotive part, such as an engine, can count towards only 5 to 10 percent of the total regional content value. For example, if Japan imported engine parts from outside the TPP and assembled them using specialized skills and machines (so-called complex assembly), these nonoriginating parts could count for up to 10 percent of the 45 percent regional content required for duty-free engines (TPP agreement, Appendix 1 to Annex 3-D).

In US-Japan bilateral negotiations, rules of origin for auto parts were less stringent, with only a 30 percent regional content requirement for parts as well as a longer list of parts that could be considered wholly originating, and no requirement that these parts be modified once entering the TPP trade area. However, Mexico and Canada refused to accept the US-Japan deal in July 2015 and renegotiated the final, more restrictive provision.[7]

6. "Automotive Products: Rules of Origin," US Customs and Border Protection, www.cbp.gov/trade/nafta/guide-customs-procedures/provisions-specific-sectors/automotive-products (accessed on November 19, 2015).
7. "TPP Rule of Origin is 45% for Vehicles, with Caveats; 35-45% for Auto Parts," *Inside US Trade*, October 8, 2015, www.insidetrade.com (accessed on November 18, 2015).

Table 1 Top auto engine exporters in the TPP, 2014 (millions of US dollars)

Exporter	Total exports	Total exports to other TPP members	Total exports to the United States
United States	4,315	4,011	n.a.
Mexico	3,427	3,268	2,820
Canada	2,525	2,522	2,458
Japan	2,662	905	858
Australia	138	8	0.7
Malaysia	9	1.5	1.2

n.a. = not applicable

Note: New Zealand, Vietnam, Singapore, Chile, Peru, and Brunei each exported less than $1 million of auto engines in 2014. Trade data based on HS codes 840733-34.

Source: UN Comtrade database.

To understand the rationale of this renegotiation, table 1 shows the value of auto engine exports as an example of one of the products that Mexico and Canada renegotiated to 45 percent regional content.

The United States is the largest engine exporter in the TPP, followed by Mexico, Japan, and Canada. Canada and Mexico export more engines to the United States than Japan does. Since NAFTA requires Canada and Mexico to have 62.5 percent regional content, their supply chains have been constructed to reflect this higher requirement. Japan's supply chain, on the other hand, faces a lower threshold and thus has not had to adjust away from lower-cost countries. Additionally, on the domestic side, a higher regional content requirement is seen as a positive outcome for constituents afraid of offshoring in the sector.

US-JAPAN BILATERAL NONTARIFF MEASURES

While local content requirements represent the bulk of nontariff reforms in the auto sector under the TPP, the agreement also includes US-Japan bilateral agreements on safety regulations and dispute settlement.

One of the challenges for US auto companies seeking to export to Japan is that Japanese and US regulations for motor vehicles differ in both safety and environmental protections in terms of structure but not necessarily in terms of effectiveness or environmental and consumer protection. For example, while the United States has its own system of auto regulation (the Federal Motor Vehicle Safety Standards, FMVSS), testing, and enforcement based on automakers' self-certification of safety standards, Japan is part of the UN Economic Commission for Europe's 1958 agreement on automobiles, which covers safety regulations and calls on government agencies to determine the safety of vehicles.[8]

The United States faced a similar problem in the Korea-US FTA, but was able to negotiate a solution: Korea agreed to recognize US safety standards as being equivalent to Korean standards for up to 25,000 vehicles per year, effectively granting mutual recognition since annual US vehicle exports to Korea were 5,000 to 7,000 vehicles per year from all manufacturers before the agreement (Schott 2010). Japan already has a similar mechanism in place, wherein US auto companies can export 2,000 vehicles per model each year under its Preferential Handling Procedure (PHP), which allows US auto exporters to have their models approved, rather than retested in Japan. While the PHP doesn't change in size under the TPP, Japan grants two concessions: First, in a side letter Japan officially recognizes seven US FMVSS regulations, including crash test standards, as equivalent to Japanese regulations.[9] This is not particularly significant in scope since there are over 80 FMVSS regulations, but it represents a commitment to move towards mutual recognition in the sector.[10] Second, under the TPP cars imported via the PHP are not excluded from financial incentives granted by the Japanese government, such as tax incentives. Both these concessions are aimed at improving market access in Japan, where US exports remain low despite low tariff barriers.[11]

8. For more detail on the differences between these regulatory systems, see Freund and Oliver (2015).
9. Although Japan did not increase the number of models that could be imported through PHP, since the existing regulation is on a per model basis, in practice Japan effectively recognizes all US car exports to Japan as meeting Japanese safety and environmental regulations under the PHP.
10. "U.S.-Japan Letter On Safety Regulations for Motor Vehicles," November, 2015, http://insidetrade.com/sites/insidetrade.com/files/documents/nov2015/wto2015_3422_156.pdf.
11. "U.S.-Japan Letters Related to The PHP," November, 2015, http://insidetrade.com/sites/insidetrade.com/files/documents/nov2015/wto2015_3422_160.pdf.

On the environmental standards side, Japan and the United States agreed to cooperate bilaterally to harmonize standards on environmental performance but have not released any documentation similar to the side letter recognizing the FMVSS safety regulations (TPP, Appendix D, Annex 2-D, Article 3.1).

Finally, the TPP dispute settlement mechanism for the auto sector is one last barrier to US liberalization, again aimed at restricting Japanese exports to the United States in certain cases and is also tied to the US perception that there is limited market access for US auto companies in Japan.[12] Specifically, if a dispute settlement panel finds that Japan has imposed an NTB, the United States is allowed to either "snap-back" its auto and truck tariffs to MFN levels or use the tariff delay mechanism to postpone phaseout of its auto and truck tariffs. Since these US tariffs don't expire for at least 25 years in Japan's case (25 years for cars, 30 for trucks), they are effectively never liberalized anyway, so the tariff delay mechanism is more symbolic than anything else. More substantially, each party can amplify its retaliation based on which country has a deficit in auto trade relative to the other member (as is the case of the United States currently). However, this dispute settlement mechanism also has reciprocal provisions that help Japan: If the United States is found to have NTBs limiting Japanese auto exports, Japan may snap back or delay liberalization in any other sector, including agriculture (TPP, Appendix D, Annex 2-D, Article 6).

CONCLUSION

While the TPP does contribute to the liberalization of the auto sector in many TPP member countries, particularly Vietnam and Malaysia, for large auto and auto parts producers (particularly the United States, Mexico, and Canada) much of the agreement is focused on protecting the domestic industry through regional content requirements and long tariff expiration periods.

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12. Daniel Bases, "U.S., Japan have 'Significant Gaps' on Auto Market Access: U.S. Official," Reuters, March 30,2015.

CHAPTER 5

RULES OF ORIGIN IN TEXTILES AND APPAREL

KIMBERLY ANN ELLIOTT

Among the parties to the Trans-Pacific Partnership (TPP), Vietnam is by far the largest exporter of apparel to the United States, supplying mostly knit cotton pullovers, khakis, jeans, cotton shorts, and men's cotton dress shirts to the US market, all of which are among the most highly protected items in the US tariff schedule. The textiles and apparel sector accounts for almost a third of Vietnam's total exports to the United States, so Vietnam would expect to realize some of its largest export gains as a result of the TPP—*if* the sector were fully liberalized. The United States agreed to eliminate its tariffs on textiles and apparel for TPP members, but slowly. With the exception of the tariff on cotton dress shirts, which will be eliminated when the TPP enters into force, the tariffs on most of Vietnam's other major apparel exports will be reduced by a third initially and not go to zero for 10 to 12 years.

Some other TPP members, such as Japan, will eliminate their duties on apparel immediately, but Vietnam will still have to comply with rules of origin to take advantage. And that is likely to be a problem, at least at the outset. With a few exceptions, only apparel made from fabric and other inputs produced by TPP partners is eligible for tariff reductions. Vietnam, however, imports most of the inputs for its clothing exports from non-TPP countries, so unless it can develop the capacity to produce upstream textile products, or another major textile producer such as Korea joins the TPP, it will struggle to realize benefits from the TPP for its apparel exports.

Preferential trade arrangements (PTAs) typically include rules of origin to protect against the possibility of "trade deflection," the practice of nonpartner countries transhipping goods through beneficiary countries in order to qualify for preferential market access. The rules are often more complex and onerous than they need to be, however, particularly as applied to sensitive, import-competing products such as textiles and apparel.

This chapter begins by discussing the apparel sector's key role in the Vietnamese economy. It then briefly explains the types and impacts of rules of origin, before reviewing the protectionist US approach to rules of origin for textiles and apparel in general and in the TPP. The implications of these rules for Vietnam will depend on whether it is able to attract investment and develop significantly more capacity in the upstream textile inputs sector. If that does not happen, Vietnam will not be able to meet the rule and will get little benefit from the TPP's elimination of apparel tariffs.

Finally, the chapter considers potential implications for poor developing countries that are not parties to the TPP. PTAs inevitably create trade diversion, and preferential access for Vietnam could be at the expense of some of the poorest countries in the world if the United States does not take steps to mitigate this impact.

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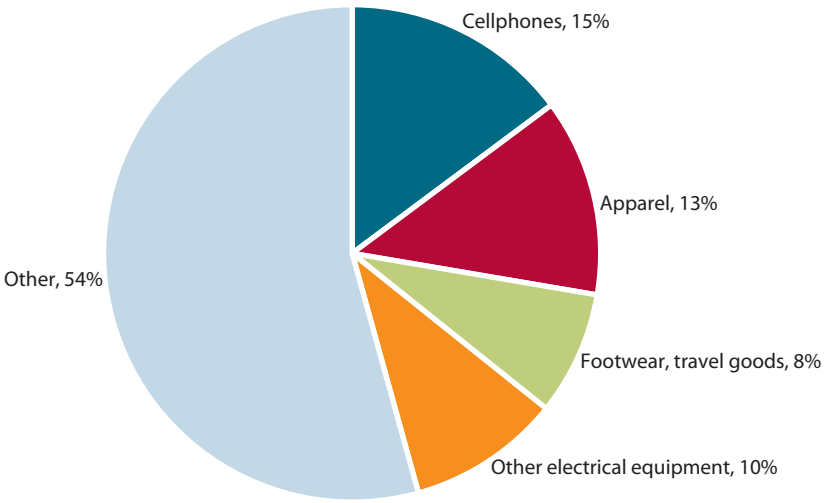
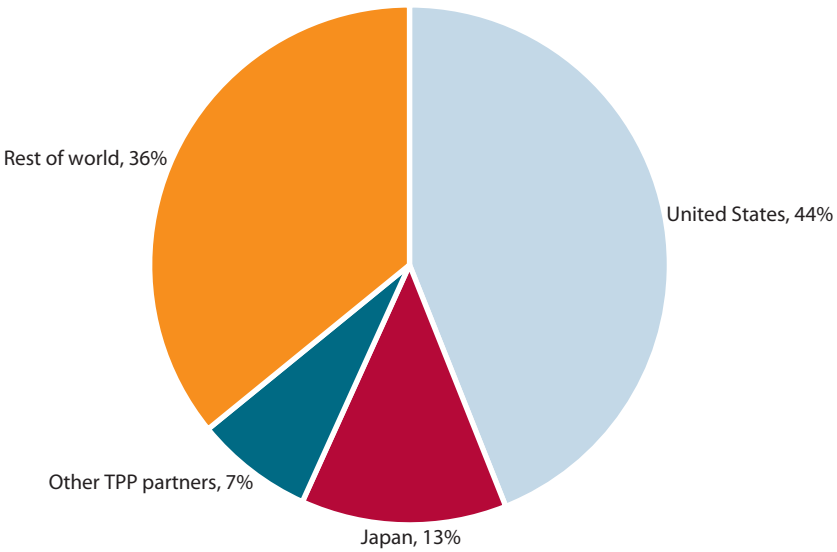
Figure 1a Vietnamese exports by product, 2013
(percent of total exports)



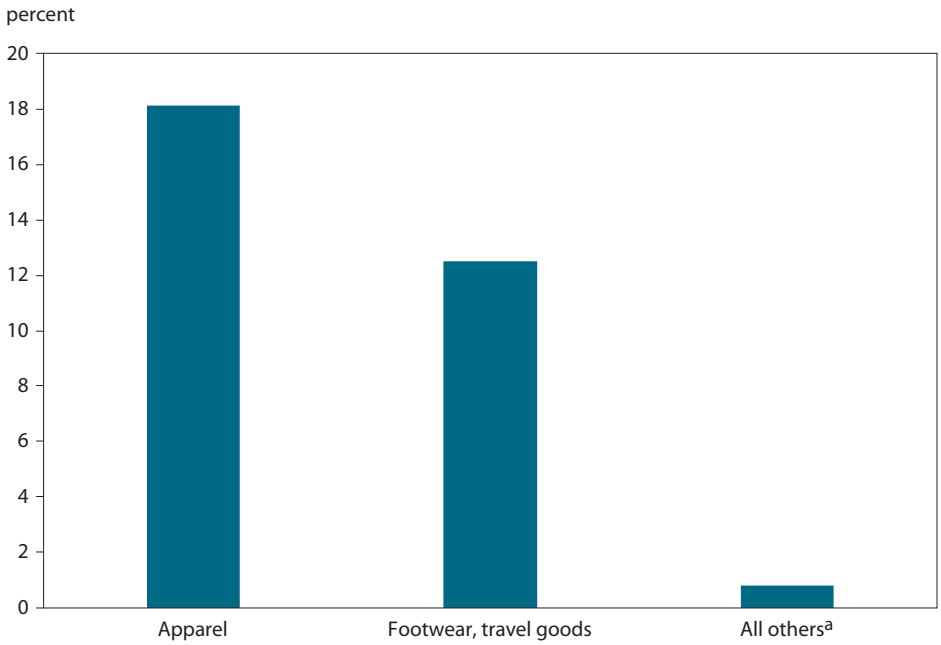
Note: Travel goods include suitcases, sports bags, and handbags.
Source: UN Comtrade database, http://comtrade.un.org/.

Figure 1b Vietnamese apparel exports by destination, 2013
(percent of total apparel exports)



Source: UN Comtrade database, http://comtrade.un.org/.

Figure 2 US average tariff rates on imports from Vietnam, 2014



a. Includes products with zero duties.

Source: US International Trade Commission Trade Dataweb.

APPAREL SECTOR IN VIETNAM

Vietnam, the poorest country joining the TPP, exports a lot of apparel. It is the country's second largest export globally (just behind cellphones[1]; figure 1a) and almost half of those apparel exports go to the United States, where they face some of the highest duties in the US tariff schedule (figures 1b and 2). US Customs collects $2.4 billion in duties on all Vietnamese products, $1.7 billion of which is on apparel; the balance is mostly collected on footwear and travel goods imports (figure 2). This makes Vietnam, whose GDP represents just 0.3 percent of the global economy, the second largest source of US import duties, behind China and ahead of Japan and Germany. Increased apparel exports are thus one of the most important potential gains for Vietnam from joining the TPP.

As with other US PTAs, however, the US textile industry was more successful in protecting itself from new import competition than US trade partners were in gaining new access. It will take a decade or more for the United States to phase out most apparel tariffs. And even then, rules of origin for determining which products are eligible for TPP benefits will continue to distort trade and investment flows and reduce the benefits to Vietnam and other apparel exporters.

1. Cellphones are also one of Vietnam's fastest growing exports, but they are already duty-free in most TPP markets, including the United States. Unless otherwise specified, data in this chapter are from either the US International Trade Commission's Trade Dataweb (https://dataweb.usitc.gov/scripts/user_set.asp) or UN Comtrade database (http://comtrade.un.org/).

Box 1 Types of rules of origin

There are three main approaches to determining origin in PTAs.[1] Each can be made more or less liberal depending on agreement-specific definitions.

- *Tariff shift:* This approach, sometimes known as change in tariff classification, usually defines the change that conveys eligibility at the chapter (2-digit), heading (4-digit), or subheading (6-digit) level. In many ways this is the simplest approach and if the rule is set at the heading or subheading level, it is also fairly flexible.
- *Value content:* These rules can be defined as either a minimum proportion of local content or a maximum share of imported content that will confer origin on the beneficiary country. Local content rules set at very high levels can be difficult for smaller or poorer countries with undeveloped manufacturing sectors.
- *Technical process:* Many countries define specific processes for specific products that must be conducted in the beneficiary country for the final product to be eligible. Negotiators often design product-specific rules to make eligibility more difficult to achieve and thus reduce potential gains in market access. This approach is often used for textiles and apparel.

1. Estevadeordal and Suominen (2008) provide a comprehensive description and analysis of the different types of rules of origin in regional trade agreements around the world; see also Abreu (2013, 6–8).

USE AND ABUSE OF RULES OF ORIGIN IN TRADE AGREEMENTS

To prevent outsiders from exploiting PTA benefits through transhipment, rules of origin usually require that imported inputs used in the production of the good that receives preferences be "substantially transformed" in the member country. The problem is that preference-giving countries define that phrase in a variety of ways with varying degrees of transparency and complexity (Committee on Rules of Origin 2014). Box 1 defines the main types of rules of origin, which in practice are often more complicated and restrictive than they need to be to prevent trade deflection (Estevadeordal and Suominen 2008, Cadot and de Melo 2007).

An analysis of the potential gains of a free trade agreement between the Association of Southeast Asian Nations and the European Union, for example, found that the rules of origin were usually more restrictive for products with higher tariffs (Carrère, de Melo, and Tumurchudur 2008). In addition, rules of origin are often so complex that the administrative burden of figuring them out, documenting compliance with all the provisions, and then demonstrating compliance to customs officials can be quite costly. The complexity is mind-numbingly illustrated in a 55-page manual compiled by students at New York's Fashion Institute of Technology on how to import cotton apparel under the Central American Free Trade Agreement–Dominican Republic (Horowitz, Lorden, and Miyashiro 2013).

The result is that, what PTAs give with one hand, rules of origin frequently take back with the other. In addition to the other studies cited in this section, an analysis of unilateral preference programs in the European Union found that only a third of potentially eligible imports were actually receiving preferential treatment (Brenton and Manchin 2002). The authors attributed this outcome to overly restrictive and complex rules of origin, particularly for apparel, that raised the cost of exporting more than the value of the tariff reduction.

US APPROACH TO RULES OF ORIGIN FOR TEXTILES AND APPAREL

The rules of origin governing apparel imports under most US preferential arrangements evolved from the US textile industry's strategy for survival after the Uruguay Round of multilateral negotiations liberalized trade in textiles and apparel. The American apparel industry adapted by focusing on upstream design functions and downstream marketing activities and mostly leaving the labor-intensive production process to low-wage developing countries. Parts of the textile industry, which is more capital intensive than the apparel industry, were able to adjust by moving into the production of more technologically sophisticated goods, such as protective gear for fire fighters.

Firms in the textile industry that had previously supplied fabrics and other inputs to the American apparel industry opted to try to generate new demand for their products by manipulating the rules of origin in US bilateral and regional trade agreements (Cadot et al. 2005). Thus according to the yarn forward rule for apparel in most US trade agreements (and preference programs), clothing items must be produced from fabric that is produced in the beneficiary country or in the United States using either local or US yarn, and then cut and assembled in the beneficiary country. In some regional agreements a cumulation rule authorizes inputs produced by any party to the PTA, which may help to reduce the cost of restrictive rules.

Many smaller or poorer countries, such as those in Central America, do not have vertically integrated supply chains and typically import fabric and other inputs, often from China or elsewhere in Asia. Having to source these inputs from more expensive US suppliers raises production costs and erodes the benefit of reduced or even eliminated import duties on the final product. Even in Mexico, which has some upstream capacity in textile production, the rule of origin under the North American Free Trade Agreement (NAFTA) deprived producers of much of the benefit of reduced apparel tariffs in the US market by raising the costs of inputs (Cadot et al. 2005).

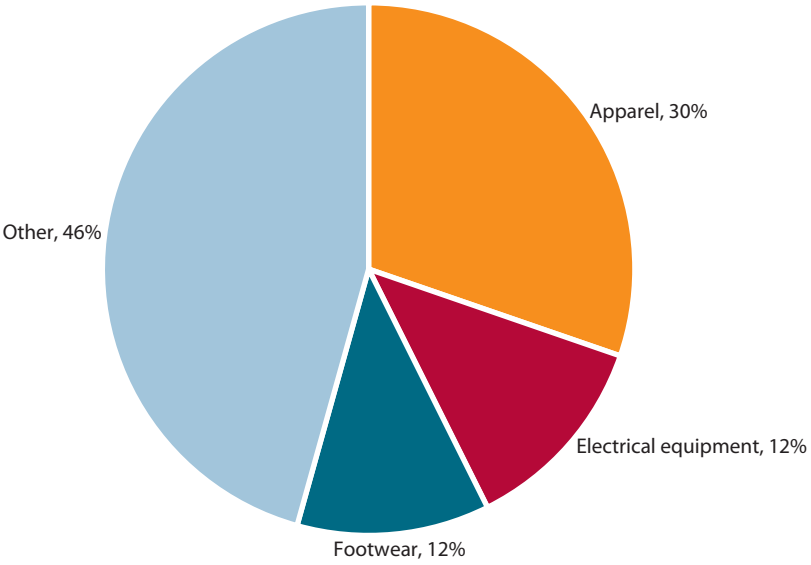
To partially offset the higher costs associated with rules of origin, most US PTAs incorporate exceptions such as tariff preference limits (TPLs), short supply provisions, or earned import allowance provisions. TPLs allow trading partners to claim PTA benefits for a set amount of specified apparel exports that use inputs from non-PTA countries. Short supply lists identify textile inputs that are not available in sufficient quantity from PTA parties and may therefore be imported from nonbeneficiaries. In some cases parties may also "earn" the right to import inputs from nonbeneficiaries if they first buy a designated quantity of the same input from US producers. In addition to these formalized exceptions, the United States sometimes designates specific items as eligible for a single transformation or "cut and sew" rule under which the final apparel item maybe assembled in the region using imported inputs and still be eligible for preferential treatment.

TPP RULES AND IMPACT ON VIETNAM

Despite the distance between the United States and Southeast Asia, which adds to the cost of shipping items across the Pacific, the TPP rule of origin for apparel is yarn forward. Moreover, there is less flexibility to depart from the rule in this agreement than in some others that the United States has signed. There are no TPLs, though a few items—none of them significant for Vietnam—are subject to a single transformation rule (e.g., synthetic baby clothes, bras). The TPP's short supply list includes woven fabric for cotton dress shirts, and a complicated earned import allowance program could allow some duty-free exports of cotton pants ahead of the 12-year tariff phaseout. Finally, the agreement allows for regional cumulation, meaning that garments made with inputs from any TPP member are eligible for TPP benefits.

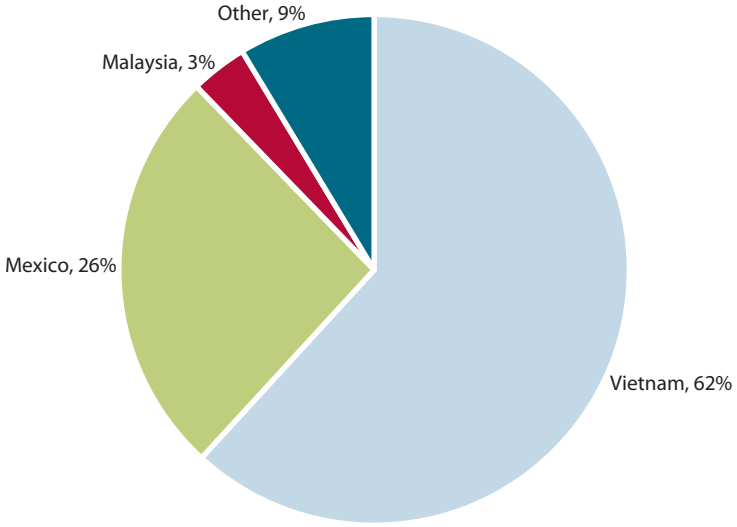
The modest flexibility in the rules will help a bit. Vietnam exported $250 million in men's or boys' cotton dress shirts in 2014, so having the fabric for those items on the short supply list is of value. It seems doubtful, however, that the earned import allowance for certain jeans and khaki pants will be of much help. The addition-

Figure 3a Vietnamese exports to the United States, 2014
(percent of total exports)



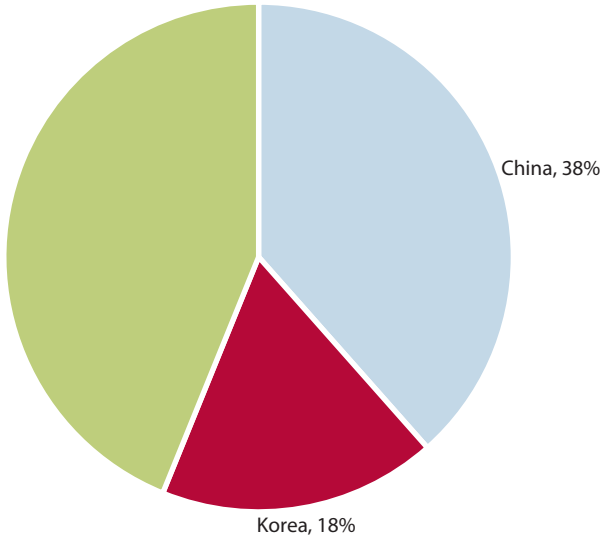
Source: US International Trade Commission Trade Dataweb.

Figure 3b US imports of apparel from TPP partners, 2014
(percent of total apparel imports)



Source: US International Trade Commission Trade Dataweb.

Figure 4 Vietnamese imports of textile inputs, 2013
(percent of total imports of textile inputs)



Source: UN Comtrade database, http://comtrade.un.org/.

al time and costs associated with Vietnam's importing more expensive US fabric, assembling it, and then shipping the pants back across the Pacific are likely to be greater than the tariff savings. The cumulation rule would become a more important source of flexibility and benefits for Vietnam if Korea or Taiwan joined the TPP.

Vietnamese apparel exports to the United States were worth just over $9 billion in 2014 and accounted for almost a third of Vietnam's total exports to the United States (figure 3a). Vietnam is also responsible for 62 percent of US imports of apparel from TPP countries and is the second largest source of apparel imports (after China) among all US trading partners. Among other TPP members, Mexico, which already has access under NAFTA, is the second largest source with 26 percent and Malaysia accounts for just 3 percent (figure 3b). In 2014, US Customs authorities collected an average duty of 20 percent on $5.4 billion in Vietnamese exports of knitted or crocheted apparel and 16 percent on $3.8 billion in exports of woven garments. Under the TPP, the United States will reduce the tariff by 35 percent upon entry into force for many of these products, but most tariffs will not be eliminated or further reduced for 10 to 12 years.

Even after the United States finally eliminates the tariffs on apparel, the rules of origin defining eligible products will remain. Vietnam currently imports most textile inputs used by its apparel sector, primarily from China.[2] Korea and Taiwan are other important textile producers (figure 4). If those countries join the TPP in the next few years, the costs of the TPP rules of origin for Vietnam will decline—as will the risk to Korea and Taiwan of Vietnam diverting investment from their textile industries.

2. Sarah C. Thomasson, "Country Profiles: Vietnam on the Move," *Textile World Asia*, May 21, 2014, www.textileworldasia.com/Issues/2014/April-May-June/Features/Vietnam_on_the_Move (accessed on December 10, 2015).

Vietnam could capture more TPP benefits, and improve its trade balance, by developing its own textile industry and producing more apparel inputs domestically. With wages and other costs rising, anecdotal evidence indicates that textile and apparel investments previously going to China are increasingly going to Vietnam instead.[3] TPP tariff cuts could accelerate the process.

POTENTIAL IMPLICATIONS FOR LOW-INCOME COUNTRIES OUTSIDE THE TPP

New preferential arrangements always create some degree of trade diversion at the expense of nonparties. Trade creation is generally larger so that the net gains from preferential trade agreements are usually positive (Petri, Plummer, and Zhai 2012, 60–61), but there will be losers. In the case of the TPP, concerns arise from the fact that labor-intensive apparel production is a particularly important export for many low-income countries, and relatively high normal tariffs on apparel make preferential access especially valuable. Thus, new preferential access for Vietnam poses risks to countries such as Bangladesh and Cambodia that are relatively dependent on apparel exports and must pay the high normal tariff. Together these two countries exported more than $6 billion in apparel to the United States in 2014 (CGD 2010, Elliott 2015). The duty bill on those exports was over $1 billion.

In the short to medium run, the combination of extended tariff phaseout periods and restrictive rules of origin will mitigate those risks, albeit by limiting the immediate export gains for Vietnam and other TPP apparel exporters. Nevertheless, it is long past time for the United States to do what all the other high-income parties to the TPP have done and extend some version of duty-free, quota-free market access to all least developed countries, not just Haiti and those in Africa. This would level the playing field for Bangladesh and Cambodia.

CONCLUSION

The impact of the TPP for the textile and apparel sectors will be trade that is managed rather than free. Derek Scissors (2015, 5) noted the incongruity that in the TPP, "a 19th-century industry remains elaborately sheltered in a '21st century trade agreement.'" Though TPP participants will (eventually) eliminate all tariffs on textile and apparel products, the United States will do so only after 12–15 years, and even then the rules of origin will continue to distort trade and investment flows.

If Vietnam can attract investment in the upstream textile sectors, it will be better able to take advantage of the tariff reductions. Unless and until it does, Vietnamese exporters may still find themselves bearing the cost of billions of dollars in US import duties, just as they are now.

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CHAPTER 6

GOVERNMENT PROCUREMENT

TYLER MORAN

Government procurement has been an object of international negotiations for the past 35 years, and for good reason. Many countries that are relatively open to international trade require government bodies at all levels to buy from domestic suppliers. Regulations requiring federal, state, and local governments in the United States to "buy American" have counterparts in other countries. The problem of governments favoring home-grown procurement became especially acute during the economic crisis of 2007–08, when political leaders authorized major government stimulus programs but attached requirements to procure goods locally.

The Trans-Pacific Partnership (TPP) represents the first major procurement liberalization for some of the 12 countries that have signed the pact. It also improves existing commitments for the countries that have already agreed to open government procurement. The agreement did not satisfactorily resolve all issues, particularly with respect to US subfederal procurement. It is also riddled with exceptions, transitional measures, and differential treatment among members. Even so, the TPP provides a foundation for more ambitious commitments in future talks among the parties and paves the way for more progress once other countries agree to join it. In all, the TPP procurement chapter is a valuable component of the agreement.

In large TPP countries, government procurement accounted for 10 to 15 percent of GDP in 2013.[1] Such spending often makes up more than a third of total government outlays. Ensuring that such a large slice of the economic pie is managed in an efficient and transparent manner carries obvious benefits. The goal of the TPP procurement negotiations was to enable more effective use of public funds and open up new markets abroad for domestic suppliers.

This chapter assesses TPP's contribution towards the goal of opening government procurement to free and fair bidding beyond a country's shores. That goal has been pursued on and off for nearly four decades.

The first major agreement was the Tokyo Round Code on Government Procurement, signed in 1979. The code eventually formed the basis of the World Trade Organization's Agreement on Government Procurement (GPA) in 1994, a plurilateral arrangement, meaning that it involves some but not all countries. It now covers 45 WTO members, including the United States and several other TPP members.

In addition to these plurilateral agreements, the United States has included procurement commitments in virtually all its trade agreements since the North American Free Trade Agreement (NAFTA) of 1993.[2] Like prior FTA procurement chapters, the TPP commits the parties to award government contracts in a fair and transparent manner.

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1. See Organization for Economic Cooperation and Development, *Government at a Glance*.
2. For an overview of US practice surrounding government procurement in FTAs, see Hufbauer and Moran (2015).

SUBSTANCE OF THE AGREEMENT

For most parties, the TPP's procurement chapter updates existing agreements. Canada, Japan, and Singapore, along with the United States, acceded to the GPA in 1996 or shortly thereafter. Those countries, and almost all other signatories, implemented the revised GPA negotiated in 2012, which included additional commitments from members and added new provisions, particularly with respect to electronic procurement.

New Zealand joined the GPA in August 2015, but the remaining seven TPP countries are not GPA members. Of these countries, four (Australia, Chile, Mexico, and Peru) have already negotiated procurement commitments with the United States in their bilateral FTAs. Brunei has negotiated procurement commitments with Japan and with the members of the Trans-Pacific Strategic Economic Partnership (TPSEP), but not with the United States. Vietnam and Malaysia had not previously committed to any government procurement disciplines in an international agreement, so the TPP breaks new ground for them.[3]

Central Government Procurement

Procurement liberalization requires signatories to waive discriminatory provisions of covered contracts to enable bids from suppliers of other parties to the agreement in question. Whether or not the TPP chapter covers a given contract is determined by the monetary value of the contract, the procuring agency, and the type of contract.

As for contract value, agreements typically set similar thresholds for all parties involved. The TPP breaks from this pattern, perhaps reflecting the great differences in levels of development among the parties. The thresholds vary substantially, and some commitments apply only after lengthy transition periods. These thresholds, and the conditions under which they apply, are scheduled in Section A of each TPP party's annex to Chapter 15 Government Procurement.

For central government entities, most TPP countries apply thresholds that are similar to those of the GPA: 130,000 Special Drawing Rights (SDR)[4] (about $180,000) for goods and services and SDR 5 million (about $7 million) for construction contracts.[5] Malaysia, Vietnam, and Brunei scheduled higher thresholds. After three years, Brunei's thresholds will be equivalent to those of the GPA. Malaysia and Vietnam will also apply equivalent thresholds for goods and services, but only after 10 and 26 years, respectively. For construction, Malaysia will move from a SDR 63 million threshold to a SDR 14 million threshold over 21 years, while Vietnam will move from a SDR 65.2 million threshold to a SDR 8.5 million threshold over 16 years.

As mentioned, only those entities listed in a party's annex to TPP Chapter 15 are required to apply the scheduled thresholds. All other entities can reserve their government purchases to domestic suppliers. For Japan, New Zealand, and Singapore, the number of covered central government entities is unchanged from their GPA schedules. Canada expands the list substantially, from 78 to 95 entities. The United States covers the same entities as in the GPA, plus the Denali Commission, a small economic development agency in Alaska. See table 1 for a broad summary.[6]

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3. As a transitional measure, these two countries will be sheltered from dispute resolution over their procurement obligations for five years after TPP's entry into force.
4. Special Drawing Rights are an IMF unit of account, composed of a basket of currencies. In November 2015, one SDR was worth about $1.40.
5. Japan, Chile, and Peru apply lower thresholds for various contracts. Mexico will continue to apply its thresholds from NAFTA ($80,000 for goods and services and $10.3 million for construction).
6. The number of covered entities is provided as items of interest, but note that these are not a reliable measure of the strength of procurement commitments. Differences in how governments are organized can be particularly confounding. For example, the number of entities covered in section A of Japan's annex might seem small (25), while the number in section C (119) might seem large. However, section A covers all of Japan's relevant agencies, while section C could be expanded further.

Table 1 Government procurement in the TPP

TPP member	Public procurement (percent of GDP)[a]	GPA status	Entities listed in the TPP		
			Central	Subcentral	Other
Australia	12	Acceding	67	8	25
Brunei	4	None	12	0	0
Canada	13	Party	95	13	22
Chile	6	Observer	23	15	11
Japan	16	Party	25	47	119
Malaysia	13	Observer	25	0	4
Mexico	5	None	22	0	36
New Zealand	15	Party	31	0	10
Peru	10	None	32	25	20
Singapore	8	Party	23	0	32
United States	10	Party	86	0	7
Vietnam	22	Observer	21	0	38

GPA = Government Procurement Agreement

a. Values refer to the latest year available: 2006 for Brunei, 2008 for Chile, 2009 for Vietnam, 2011 for Peru, Malaysia, and Singapore, and 2013 for other countries.

Sources: Data for Brunei, Malaysia, and Singapore are drawn from WTO Trade Policy Reviews, www.wto.org/english/tratop_e/tpr_e/tpr_e.htm; data for Vietnam are from a 2011 APEC report, *APEC Procurement Transparency Standards in Vietnam*, available at www.cipe.org/sites/default/files/publication-docs/TI-Report-Vietnam.pdf; and data for remaining countries from OECD country fact sheets and statistics, stats.oecd.org.

Negative List Schedules

For the types of contracts covered, parties follow a "negative list" approach. In other words, their commitments will apply to all procurement of goods *except* items scheduled in their annexes to TPP Chapter 15. This contrasts with a "positive list" approach, whereby parties extend coverage only to the items listed. As for services, the approach varies from country to country. Some countries, including the United States and Australia, cover services on a negative list approach. Other countries, including Canada and Japan, cover services using a positive list.[7]

A notable improvement over the GPA is the extension of coverage to build-operate-transfer and public works concession contracts.[8] Such contracts are common examples of public-private partnerships (PPPs), an increasingly prominent method of fulfilling national infrastructure investment needs. Adding these arrangements to procurement commitments is consistent with recent US FTAs, including the Korea-US and Australia-US FTAs.

Subcentral and Other Entities

In general, the coverage of central government entities is far more expansive than subcentral coverage. TPP countries took different approaches to subcentral procurement, set forth in Section B of their annexes to Chapter 15. Brunei and Singapore do not have any subcentral entities, so for them the issue is moot. Of the

7. Canada and Japan also followed a positive list approach in their GPA commitments for services.
8. Some parties opt not to cover these contracts, including Malaysia and Vietnam.

remaining 10 countries, Australia, Canada, Chile, Japan, and Peru included some degree of coverage for subcentral entities. These commitments generally do not extend to the other five TPP countries that do not offer comparable coverage for their subcentral entities.[9] The TPP parties that do make commitments for their subcentral governments largely list all of their state or provincial entities.

The United States was not entirely on the sidelines with respect to subcentral procurement in past agreements. In the GPA and past FTAs, the US Trade Representative (USTR) solicited voluntary commitments from state governments. This method was most successful in the GPA, where 37 states made varying degrees of commitments. Interest from state governments was far more subdued in subsequent FTAs, however, and it seems that few if any states were willing to sign on to TPP commitments. Hence the United States does not cover subcentral government procurement.[10]

Procurement commitments do extend to "other entities" listed in Section C of Chapter 15, which are largely utilities and similar enterprises. In the case of the United States these include the Tennessee Valley Authority and the four power marketing administrations within the Department of Energy, among others. In a new development, the United States will grant Canadian suppliers access to procurement by these entities. These entities were already covered in US GPA commitments, but Canada had been excluded since it failed to cover its own comparable entities. Canada still does not cover these entities in the TPP, but it did still expand its coverage of central government entities as noted earlier. This exchange illustrates the "horse trading" that characterized negotiations over the TPP government procurement chapter.

Exceptions

As with previous procurement agreements, the TPP parties take a lot off the table. National security exclusions are ubiquitous for the larger countries—anyone hoping for liberalized purchases of warships and nuclear armaments will be disappointed. Other exceptions are confined to specific TPP parties because their offers were not viewed as satisfactory. The treatment of subcentral procurement, discussed earlier, is one example. Along those lines, the United States does not extend commitments for NASA's procurement to Japanese suppliers, an exception that was carried over from the GPA, while New Zealand does not grant Mexican suppliers access to its entities listed in Section C.[11]

A broader class of exceptions relates to preference programs, instances where governments give an advantage to certain suppliers as a matter of social policy. The United States has consistently avoided making commitments for contracts that are set aside for small and minority-owned businesses. Canada and Australia make similar exceptions. Countries with long track records of procurement liberalization were largely able to reapply their existing regimes without much controversy.

For Malaysia, however, the debate was more contentious. While most of the government procurement chapter was completed well before the negotiations concluded, questions about Malaysian policy remained active into the summer of 2015.[12] The core complaints revolved around Malaysia's preferential Bumiputera[13] policies, which were designed to discriminate against Malaysian citizens of Chinese origin but also exclude foreign suppliers. As mentioned, maintaining some level of social preference is fairly standard. But the debate was about what reforms Malaysia would have to adopt with respect to foreign suppliers.

9. The parties differ on whether or not they extend subcentral procurement coverage to Brunei and Singapore.
10. This does not mean the United States is rolling back existing commitments; in other words, TPP countries that are also GPA members will still get the GPA coverage, but nothing new under the TPP.
11. Japan does not include its space agency (JAXA) in its commitments, so the United States excluding them from NASA procurement is probably meant as a reciprocal measure.
12. Former House Ways and Means Committee Chair Paul Ryan referenced Bumiputera policies as an outstanding issue in a July 2015 event. See the following remarks from C-Span, just before the 28-minute mark: "Politico Morning Money Breakfast with Representative Paul Ryan," July 9, 2015, www.c-span.org/video/?327014-1/politico-conversation-trade-representative-paul-ryan-rwi.
13. "Bumiputera" is a term for the Muslim ethnic majority in Malaysia.

TPP's reforms do not restrict the scope of Bumiputera preferences—for all covered procurement, suppliers designated as Bumiputera will receive price preferences. TPP's contribution is to cap and standardize these preferences. For goods contracts, the greatest preference that a Bumiputera might receive over another TPP supplier is 8.5 percent.[14] For larger contracts, the preferences are capped at 3 percent.

ASSESSMENT

The major, if not expected, TPP shortcomings in procurement find their origin in Washington. On one hand, the US government is under increasing pressure from its trading partners to improve its procurement commitments to them, particularly at the state and local levels. But political opposition to liberalization has proved insurmountable. It's useful to give an overview of these obstacles.

Still Not Buying, Buy America

The United States has a long history of enacting federal "Buy America" statutes, and the states have their own clone legislation.[15] These provisions act as a drag on public infrastructure projects, which are essential to economic efficiency. For example, the Texas Central Railway, a private company, has an ambitious plan to build a high-speed train that would travel from Dallas to Houston in less than one hour by 2020. It is hard to imagine this project succeeding without two key ingredients: federal funds and Japanese expertise. Yet existing and foreseeable "Buy America" provisions drive a wedge between these two ingredients by requiring that any federal funds towards such a project be spent on US parts, equipment, and expertise.

The TPP negotiations presented the United States with an opportunity to remove a self-inflicted cost, while being "paid" by the other parties in the form of greater access to their own procurement markets. However, the politics of deeper procurement liberalization did not align with the economics. In a July 2014 letter, 123 members of Congress sent a letter strongly encouraging USTR to avoid all "national treatment" obligations with respect to government procurement.[16] Not satisfied with this line in the sand, some lawmakers sought to dig a trench. An appropriations bill passed by the House included an amendment stating, "None of the funds made available by this Act may be used to negotiate an agreement that includes a waiver of the 'Buy American Act.'"[17] The language never made it to White House, but it was crystal clear that Congress would be hostile toward any TPP agreement that included extensive procurement liberalization.

State and Local Procurement

While the TPP made some progress in liberalizing federal procurement, it made none in liberalizing state government procurement. As mentioned previously, USTR has had some success with state governments in the past. In 1994, 37 states agreed to open varying shares of their procurement to signatories of the WTO GPA, but 13 states have still not signed on.[18] Moreover, while the 2014 revision to the GPA improved subfederal procurement commitments, services remain largely exempt.

14. This preference would apply to contracts valued between 5 million ringgit and 10 million ringgit, where the Bumiputera competitor manufactures goods in Malaysia. For such contracts, non-Bumiputera TPP suppliers receive a preference margin of 1.5 percent, while Bumiputera suppliers receive a margin of 10 percent, for a net preference of 8.5 percent.
15. See Hufbauer and Schott (2009) and Hufbauer et al. (2013).
16. See "Edwards, DeLauro Lead 121 Members of Congress to Urge President Obama to Protect Buy American Policies in TPP," Press Release, July 30, 2014 (accessed on November 20, 2015).
17. The language was included in HR 4660, but not HR 83, the consolidated appropriations bill, which later became law. Note that the "Buy American Act," which covers federal procurement, is distinct from the similarly named "Buy America Act," which covers federally funded state procurement.
18. The US states that are bound by the GPA are Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, Wisconsin, and Wyoming.

As mentioned, the USTR did not offer any procurement commitments on behalf of the states in the TPP. As a consequence, US firms will not benefit from subcentral procurement liberalization by the five TPP parties that did provide such commitments. Matching the level of commitments provided by those five TPP parties would require deep commitments from most states, if not all. Given the limited interest from states in recent FTAs, it seems unlikely that the United States will accomplish subcentral liberalization without a great political effort.

CONCLUSION

The TPP can claim progress with respect to procurement liberalization. In particular, the application of transparency and anticorruption provisions to Malaysia and Vietnam, once implemented, will encourage beneficial reforms to governance in those countries. The limited expansion of coverage for the United States and other parties may not warrant headline coverage but does represent progress for those agencies involved.

Going forward, it seems clear that the US resistance to procurement liberalization will continue to both hinder US trade negotiators and raise the costs of public projects. Canada's calls for access to federally funded state projects echo those of the European Union in the context of the Transatlantic Trade and Investment Partnership (TTIP). Broader access to state government procurement in general will be even thornier. Whether the United States will respond to these demands cannot be known for certain. But if the TPP is an indication, then future US negotiators will have a difficult time balancing the interests of trade partners and the politics of Washington.

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CHAPTER 7

LIBERALIZATION OF SERVICES TRADE

GARY CLYDE HUFBAUER

For obvious reasons, manufactures and agriculture dominate much of the debate about trade liberalization. Cross-border flows of manufactured products are easy to quantify and origins are relatively easy to track even when nested in global value chains. By contrast, service sector products are diffuse and difficult to pin down. Services are often wrongly thought of as "nontradable." How, after all, can you export a haircut?

But a great many services are in fact "tradable," carried in the heads of professionals traveling to foreign locales, transported over the internet, or delivered through direct investment in facilities abroad. Insurance sold by MetLife, mutual funds sold by Vanguard, and movies sold by Lionsgate are obvious examples. Less obvious are accounting services provided by Ernst & Young or engineering services provided by Bechtel. And not at all obvious are a new Mayo Clinic in Shanghai or a Yale campus in Singapore (which in fact exists).

The Trans-Pacific Partnership (TPP) opens up avenues for these and more than a hundred other services to be sold abroad—thereby integrating markets that have long been separated. Expanded services trade potentially ranks among the largest TPP payoffs, especially for the US economy. According to Peter Petri and Michael Plummer, US service exports will increase by $149 billion, the largest gain predicted in that sector for any TPP country. The TPP will boost services trade by $225 billion for all member countries, when fully implemented in about 15 years. (See their chapter in this volume.)

The Korea-US FTA (KORUS) shows that these are not fanciful projections. Korea used the negotiations as a tool to open its professional and telecommunication service sectors and thereby modernize the Korean economy. US exports of services to Korea have grown steadily since KORUS entered into effect in March 2012, increasing from $16.7 billion in 2011 to $20.7 billion in 2014, a 24 percent rise.[1] Korea is not a TPP member, but US experience in the Korean service market previews potential gains in a much larger market once the TPP is ratified.

The tradable business services sector accounts for 25 percent of US employment, double the share of manufacturing (Jensen 2011, 3). Equally important, the business services sector is expanding. Growing subsectors include consulting services, research and development, healthcare, education, and government services. The World Trade Organization's (WTO) General Agreement on Trade in Services (GATS), adopted in 1995, represented the first official attempt to define "tradable" services and to lay the groundwork for multilateral liberalization. GATS defined four "modes" of services trade: Mode 1—cross-border provisions (e.g., software

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1. Services trade data are available at "U.S. Trade in Goods and Services by Selected Countries and Areas," Bureau of Economic Analysis, www.bea.gov/international/index.htm#trade.

sold over the internet from one country to another); Mode 2—consumption abroad (e.g., use of hotel services by a foreign national on vacation); Mode 3—commercial presence (e.g., opening a bank or a chain restaurant in a foreign country); and Mode 4—temporary movement of persons (e.g., a business consultant conducting a site visit abroad) (Jensen 2011, 28).

Attempts to further liberalize services trade within the GATS framework foundered in the WTO's Doha Development Round. This failure prompted a subgroup of 23 WTO members—including 8 TPP members and counting 28 EU countries as a single WTO member—to launch the Trade in Services Agreement (TiSA). TiSA could be completed in 2016 and might achieve a high degree of liberalization.[2] For the moment, however, the TPP accord represents the high water mark of services liberalization in the world economy.

PAYOFF TO THE US ECONOMY

While the United States faces a comparative disadvantage in manufacturing standardized consumer goods—and therefore imports such items from Asia and Latin America—the law of comparative advantage always has a flip side. The United States enjoys an enormous comparative advantage in making and selling sophisticated services. As table 1 shows, the United States currently enjoys an annual trade surplus of more than $200 billion in cross-border service transactions. The outward stock of US foreign direct investment (FDI) in services amounts to $3.7 trillion, whereas the inward stock is $1.2 trillion. As table 2 shows, income receipts for US outward FDI in service industries far exceed income payments on US inward FDI ($318 billion versus $54 billion in 2014).

Table 1 US trade in cross-border services, 2005–14
(billions of US dollars)

Year	Exports	Imports	Balance of payments
2005	373	304	69
2006	417	341	76
2007	488	373	116
2008	533	409	124
2009	513	387	126
2010	563	409	154
2011	628	436	192
2012	656	452	204
2013	688	464	224
2014	711	477	233

Source: US Bureau of Economic Analysis, www.bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=1&isuri=1&6210=4&6200=160.

Many of the highest paid professions are found in tradable service jobs. The US labor force ranks among the most highly educated in the world and features star entrepreneurs and outstanding innovators. Facebook, Google, and Uber—to name a few exemplary firms—are less than 20 years old yet dominate the global economy in their respective spheres. It cannot be forgotten that the internet, which has spawned applications into every nook of modern life, was started and nurtured in the United States.

The fact that US trading partners significantly limit their service imports implies that TPP liberalization will open vistas for US exporters. All TPP partners, like other WTO members, are signatories to the GATS. While this multilateral agreement, dating from the Uruguay Round completed in 1995, provides a framework for liberalization, to date it has required very little actual reduction of barriers. Moreover, negotiations in the ill-fated Doha Round have failed to dismantle the array of nontariff barriers used by WTO members to protect their domestic service suppliers.

Among TPP members, Canada, Japan, New Zealand, the United States, and Singapore have joined the Agreement on Government Procurement (GPA), which requires transparency and nondiscrimination in covered government procurement (including some services). TPP Chapter 15 on Government Procurement requires greater transparency on the part of members that have not joined the GPA (see chapter by Tyler Moran in this volume).

2. The 23 members of TiSA are *Australia*, *Canada*, *Chile*, Chinese Taipei (Taiwan), Colombia, Costa Rica, the European Union (28 countries), Hong Kong, Iceland, Israel, *Japan*, Liechtenstein, Mauritius, *Mexico*, *New Zealand*, Norway, Pakistan, Panama, *Peru*, South Korea, Switzerland, Turkey, and the *United States*. Italicized countries are TPP members.

Given empty shelves in the GATS framework and limited membership in the GPA, estimated "tariff equivalent barriers" to services trade are high among TPP members. Tariff-equivalent figures translate regulatory barriers and quantitative restrictions into ad valorem tariffs. Lionel Fontagné, Amelie Guillin, and Cristina Mitaritonna (2011) have done the hard work of translating service sector barriers imposed by several countries into tariff-equivalent figures, shown in table 3. Restrictive barriers are common all over the Pacific, and sales of business services, the largest component of US service exports, are particularly restricted. The barriers include outright bans, quotas, restrictive licenses, buy-national procurement rules, and discriminatory access to distribution networks.

Specifically, in communication services, barriers in Japan and Singapore are estimated at 63 percent tariff equivalents, followed by Mexico with 56 percent tariff-equivalent barriers. Removing an outright merchandise tariff of 56 or 63 percent would bring shouts of joy; dismantling equivalent regulatory barriers should also be cause for celebration. In financial services, New Zealand and Australia are the most restrictive. Such high barriers have long hindered US service firms from selling to foreign markets.

Back-of-the-envelope calculations suggest that *complete* elimination of *global* barriers to business services could increase US service exports by a massive $300 billion when fully implemented.[3] Of course the TPP did not achieve that ambitious target, but it made progress. Consequently, US exports of services are projected to enjoy significant growth.[4]

Table 2 US FDI income in service industries, 2014 (billions of US dollars)

Service industry	Outward FDI income receipts	Inward FDI income payments
Information	16	4
Banking	5	10
Finance and insurance	39	18
Professional, scientific, and technical services	11	3
Holding companies (nonbank)	224	12
Transportation and warehousing	4	3
Real estate and rental and leasing	15	2
Administration, support, and waste management	4	2
TPP subtotal[a]	50	12
Global total	318	54

FDI = foreign direct investment

a. TPP total for income receipts includes 9 of the 12 TPP countries: Australia, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, and Singapore. TPP total for income payments includes 7 of the 12 TPP countries: Australia, Canada, Japan, Malaysia, Mexico, New Zealand, and Singapore. Values between –$500,000 and +$500,000 are not recorded in BEA data.

Source: US Bureau of Economic Analysis, available at www.bea.gov/iTable/iTable.cfm?ReqID=2&step=1#reqid=2&step=1&isuri=1.

Table 3 Service barriers in the TPP (percent ad valorem equivalent)

TPP member	Communications	Finance	Business	Overall
Australia	32	64	67	51
Canada	28	34	31	30
Japan	63	61	44	46
Mexico	56	53	134	73
New Zealand	38	71	49	47
Singapore	63	53	2	20
United States	37	51	42	36

Note: The "overall" figures are the average of eight reported categories, weighted by the US export total of each category.

Source: Fontagné, Guillin, and Mitaritonna (2011).

3. For details, see Hufbauer, Jensen, and Stephenson (2012).
4. The *Wall Street Journal* highlighted US agriculture, manufacturing, and technology companies as TPP winners, but it missed the point that, in terms of forecast export gains, the biggest TPP winners are US service firms. See David Kesmodel, William Mauldin, and Jonathan D. Rockoff, "Some U.S. Industries Seen as Winners in Pacific Trade Pact," *Wall Street Journal*, October 5, 2015, www.wsj.com/articles/several-u-s-industries-applaud-trans-pacific-partnership-1444078117 (accessed on October 12, 2015).

Peter Petri, Michael Plummer, and Fan Zhai first provided the best quantitative projections for the economic impact of the TPP in 2012. Their updated January 2016 estimates indicate that, for all TPP members, exports of manufactures will increase by $777 billion when the agreement is fully implemented some 15 years hence (see chapter by Petri and Plummer in this volume). Service exports by all TPP members will increase by $225 billion by 2030. Under the TPP, US exports of services are projected to increase by $149 billion. In fact, US firms will claim the lion's share of service export gains enabled by the TPP, namely 67 percent. New access will greatly benefit US companies such as Ernst & Young, McKinsey & Company, Goldman Sachs, Fidelity Investments, the Cleveland Clinic, Bechtel, Yale University, and other titans of the modern American economy.

Three factors explain the predominance of US service firms: the efficiencies of large firms engaged in service industries, the huge US pool of highly educated personnel, and the widespread use of information technology. Compared with most other countries, the United States already provides a better environment for foreign companies in the service industries. The US scores on the Organization for Economic Cooperation and Development (OECD) Services Trade Restrictiveness Index (STRI) are lower than the OECD averages in 11 sectors.[5] For example, in legal services, the United States has the lowest score (0.12) while Mexico has the highest (0.53). Very low US scores in the motion picture industry (0.06) and sound recording (0.05) also reflect a business-friendly environment. As a consequence of their TPP commitments, other members will liberalize their service market access barriers to a much greater extent than will be required of the United States.

While this chapter focuses on benefits to the United States, it must be emphasized that TPP partners will enjoy significant economic gains from liberalizing their service markets. In most countries, service industries fall well behind US and Singapore productivity and quality levels. This is true of everything from retail trade to telecommunications to mutual funds. It is especially true of service industries in Japan, Mexico, Malaysia, and Vietnam. Low-cost, high-quality, and efficient services are essential for economic growth and critical inputs for export industries. These relationships are widely recognized among TPP partners. US exports of manufactures are projected to increase by $201 billion, somewhat larger than services, but only account for 26 percent of the TPP total.

SERVICES IN THE TPP

Services trade rightly received a lot of attention in TPP negotiations. In fact, 12 service sectors and approximately 168 subsectors are identified in the agreement. Four TPP chapters are exclusively devoted to these variegated services: Chapter 10, Cross Border Trade in Services; Chapter 11, Financial Services; Chapter 12, Temporary Entry for Business Persons; and Chapter 13, Telecommunications. In addition, Chapter 9, Investment, covers foreign direct investment in services as well as goods; Chapter 14, Electronic Commerce, covers the sale of services (entertainment, education, etc.) as well as the sale of goods; and Chapter 17, State-Owned Enterprises, covers SOEs that sell services or goods.

Chapter articles set forth principles of liberalization. If the TPP stopped there, free trade and investment in services would become the rule for the TPP member countries. However, numerous exceptions are scheduled both in chapter annexes and in the four annexes to the entire agreement: Annex I, Non-Conforming Measures (subject to a ratchet or future negotiation); Annex II, Non-Conforming Measures (of a permanent nature); Annex III, Financial Services; and Annex IV, State-Owned Enterprises. Like KORUS (and unlike GATS), the TPP adopts a "negative list" approach for scheduling nonconforming measures. A "negative list" means that, unless a particular service sector or subsector is scheduled, market access is open to firms based in all TPP members.

5. 2015 data are available at OECD Services Trade Restrictiveness Index (STRI), http://stats.oecd.org/Index.aspx. The OECD STRI measures the following 19 sectors: logistics, accounting, architecture, engineering, legal services, motion pictures, broadcasting, sound recording, telecommunications, air transport, maritime transport, road freight transport, rail freight transport, courier, distribution, commercial banking, insurance, computer, and construction.

Importantly, this approach will ensure free trade in newly created services. Meanwhile, the negative lists provide ready targets for future negotiations to enlarge the scope of free trade and investment.

In broad terms, with scheduled exceptions, TPP members have now promised fair and equal treatment to foreign firms that seek to enter their service markets through trade, investment, or both. New restrictions on market access are not permitted, and new unilateral liberalization will be automatically extended to all TPP members—again, with country- and subject-specific exceptions set forth in the annexes. As a general matter, foreign suppliers need not establish residence in other TPP countries to access local markets, either for goods or services.

Nevertheless, direct investment and trade flows are often two sides of the same coin. This is especially true for trade in services (see WTO 1996). Unlike the WTO, modern bilateral and regional trade agreements commonly include investment chapters that complement their service chapters (Houde, Kolse-Pat and Miroudot 2007). Chapter 9 of the TPP follows this pattern. The investment chapter ensures that service firms can establish operations in partner countries, and it gives needed protection for fair treatment and compensation in the event of expropriation.

The unique features of TPP commitments in financial services (TPP Chapter 11) are examined in the chapter by Anna Gelpern. For present purposes, suffice it to observe that—for prudential reasons—the liberalization of financial services is considerably more limited than liberalization of most other service sectors.

STICKY BARRIERS ENDURE

While the United States will reap substantial gains from services liberalization abroad, it insisted on retaining "sacred" barriers at home. These hobbled the US Trade Representative's efforts to secure still greater liberalization abroad and they continue to impose high costs on the US economy.

Temporary movement of skilled personnel. Special US visas enable the temporary entry of foreign business persons (L-1A visas for executives and managers and L-1B visas for skilled personnel), and together approximately 150,000 foreigners enter the United States annually under the L visas. But because of the political sensitivity of immigration, the United States made no new commitments in the TPP. In TPP Chapter 12, however, other TPP members did commit to negotiate reciprocal country-specific entry provisions for business persons.

"Cabotage" laws. The Merchant Marine Act of 1920, also known as the Jones Act, has raised the costs of transporting goods between US ports for almost a century. The Jones Act requires "all merchandise transported between two ports within the jurisdiction of the United States be carried by a U.S.-flag vessel, built in the United States, owned by a U.S. citizen and crewed by American merchant mariners."[6] Similar "cabotage" laws exist in other countries and other industries—notably air travel. By excluding competition from foreign shipping and airlines, such laws significantly raise the cost of transporting goods and people, while conferring economic rents on a handful of protected firms and their employees.

State professional licensees. Tradable service jobs include many of the traditionally highest paid professions—such as doctors, engineers, and attorneys. These professions are highly regulated at the state level, and practitioners are often barred from selling their services in another state, much less another country. Attorneys eligible to practice in California cannot simply cross the border and represent clients in Arizona. First they must be admitted to practice by the state bar association. Medical licenses work in a similar manner. While licensing boards are necessary to maintain standards of competence and ethics, inflexible rules can diminish competitive forces, both nationally and internationally. Counterpart licenses and boards abroad obviously diminish

6. See American Maritime Congress, "The Jones Act—the Foundation of the Merchant Marine," Issue Briefing, www.americanmaritime.org/about/jonesact.pdf (accessed on August 20, 2015).

the export potential of US firms and professionals. The TPP calls upon members to give due recognition to the professional qualifications of personnel based in other TPP countries but does not require recognition.

Excepted service industries. Rules issued by the Federal Communications Commission (FCC) illustrate restrictions on service firms, whether domestic or foreign. Newspaper and broadcast station cross-ownership is prohibited if the station's service area entirely covers the city where the newspaper is published. However, as long as a TV station group does not reach more than 39 percent of all US TV households, a single entity can own a large number of TV stations nationwide. Mergers between major television networks such as ABC, CBS, Fox, and NBC are prohibited. Last, foreign ownership of capital stock of US broadcast, common carrier, or aeronautical radio station licensees is restricted to 20 percent of equity, while foreign investment of a firm that owns such media groups is limited to 25 percent.[7]

Subfederal procurement of services. States and municipalities regularly purchase services from private firms—everything from consulting engineers and database management to health and educational services. The United States excluded all subfederal procurement—goods and services—from TPP coverage, and other countries did likewise (see chapter by Tyler Moran on government procurement).

Additional limitations. Box 1 provides a long (but only partial) list of other US nonconforming measures, drawn from the four annexes. As the examples cited above and box 1 illustrate, consistent with the GATS and prior US FTAs, the United States was unwilling to use the TPP as a vehicle for significantly liberalizing service sectors.

US unwillingness served as justification for other TPP countries to insist on their own long lists of nonconforming measures. As a result, scheduled barriers will continue to restrict trade and growth in the Pacific countries. But the glass of liberalization is more than half full, since Japan, Malaysia, and Vietnam committed to far more liberalization of services trade in the TPP than they had promised in the GATS.

In the TPP, Japan liberalized package delivery services by FedEx and UPS and promised national treatment for 85 nonfinancial services including such activities as technical testing and radio and television services (see box 2). Malaysia will substantially augment its sparse commitment under the GATS (see box 3). Vietnam will provide national treatment in 64 subsectors of services such as telecommunications and remove many nontariff barriers such as caps on foreign capital contributions to new ventures (see box 4). These commitments will not only sharply increase the market access of US service firms but also spur growth in the three TPP partners.

7. This limit may be increased at the FCC's discretion, which it rarely exercises. More details available at "Foreign Ownership Rules and Policies for Common Carrier, Aeronautical En Route and Aeronautical Fixed Radio Station Licensees," FCC, updated November 20, 2014, www.fcc.gov/encyclopedia/foreign-ownership-rules-and-policies-common-carrier-aeronautical-en-route-and-aeronauti (accessed on August 13, 2015).

Box 1 Other illustrative US nonconforming measures

	Sector	Obligations concerned	Description
Annex I	Atomic energy	NT	A license issued by the Nuclear Regulatory Commission is required for commercial purposes.
	Business services	NT, LP	A license is required for exports of certain high-tech goods and software.
	Mining	NT, MFN	Aliens and foreign corporations are limited in acquiring energy pipelines.
	All sectors	NT, MFN, SMBD	Overseas Private Investment Corporation (OPIC) programs are not available to non-US citizens.
	Land transportation	NT, LP, MFN	Only registered US persons may provide bus or truck services.
	Transportation services	NT, LP	A customs broker's license and a US office are required.
	All sectors	NT, MFN	Foreign firms, except for certain Canadian issuers, may not use the small business registration forms to register public offerings of securities.
Annex II	Social services	NT, MFN, LP, PR, SMBD	The United States reserves the right to adopt measures with respect to social services.
	Minority affairs	NT, LP, PR, SMBD	The United States reserves the right to adopt measures with respect to socially or economically disadvantaged minorities.
	Betting and gambling	NT, MFN, LP, PR, SMBD	The United States reserves the right to adopt or maintain any measure relating to betting and gambling services.
	All sectors	MA	The United States reserves the right to adopt measures consistent with US obligations under Article XVI of the General Agreement on Trade in Services (GATS) (NT and MFN schedules).
	All sectors	MFN	The United States reserves the right to adopt measures granting better treatment under free trade agreements.
Annex III	Banking and other financial services	SMBD	All directors of national banks must be US citizens.
		NT, MA	Foreign ownership of Edge corporations is limited to foreign banks.
		NT, MA	Credit unions and saving banks must be organized under US laws.
		NT, MA	A foreign bank must establish an insured banking subsidiary.
		NT	Foreign banks are required to register as investment advisers.
		NT	Foreign banks cannot be members of the Federal Reserve System.
		MA	The United States undertakes no commitment allowing the expansion by a foreign bank into another state.
		NT, MA, CBT	The authority to act as a sole trustee of an indenture for a bond offering is subject to a reciprocity test.
		NT, MA	Designation as a primary dealer in US government debt securities is conditioned on reciprocity.
		MFN	A broker-dealer registered under US law that has its principal place of business in Canada may maintain its reserves in a bank in Canada.
	Insurance	NT, CBT, MA	Branches of foreign insurance companies are not permitted to provide surety bonds for US government contracts.
		CBT	The insured must demonstrate that the insurance was sought in the US market when federal maritime vessels are insured by non-US person.
Annex IV	State-owned enterprises	Nondiscriminatory treatment	To facilitate housing finance in the United States, Fannie Mae and other federal financing banks may purchase and sell financial products only to US persons.

NT = national treatment; MFN = most-favored nation treatment; LP = local presence; SMBD = senior management and boards of directors; PR = performance requirements; CBT = cross-border trade; MA = market access

Note: Annex I pertains to "Non-Conforming Measures" (subject to a ratchet or future negotiation); Annex II pertains to "Non-Conforming Measures" (of a permanent nature); Annex III pertains to "Financial Services"; and Annex IV pertains to "State-Owned Enterprises."

Source: TPP full text, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

Box 2 Illustrative service liberalization commitments for Japan

- In the TPP, Japan secured narrower exceptions, compared to its previous FTAs. Japan agrees not to introduce new nonconforming measures for aircraft manufacturing and repair. Discriminatory measures for "new" services (aka "unrecognized or technically unfeasible services"), as well as measures for nonnuclear energy utilities to favor domestically made equipment are not allowed. For the first time, Japan clarifies that its exception for "postal services" does not cover the delivery of parcels, packages, and goods—e.g., courier services, including express.
- In GATS, of the 138 nonfinancial services subsectors in the comprehensive list (W/120), Japan agreed to full national treatment commitments for Mode 1 (cross-border supply) and Mode 3 (commercial presence) in only 26 subsectors. It has no GATS commitments in 50 subsectors. By comparison, in the TPP, applying its negative-list Non-Conforming Measures (NCMs) to the W/120, Japan agreed to full national treatment commitments in 85 services subsectors, and improvements over GATS in another 47.
- Subsectors in which Japan's TPP commitments are improved over its GATS commitments include:

  Research and development; Technical testing; Courier services; Telecom; Radio and television services; Other communications services; Distribution; Air, road, water, and rail transport; Services auxiliary to all modes of transport.

GATS = General Agreement on Trade in Services

Source: TPP full text, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

Box 3 Illustrative service liberalization commitments for Malaysia

- Elimination of foreign capital cap in telecom services (Malaysia set a 30 percent cap under the GATS).
- Elimination of all joint venture and performance requirements for 12 service sectors in the upstream oil and gas industry, including drilling services, turbine repair and maintenance, and seismic data acquisition.
- Liberalization of its legal services market for the first time.
- Malaysia's GATS commitments are fewer than Vietnam's, so the TPP provides a significantly broader coverage than GATS. Subsectors in which Malaysia's TPP commitments are improved over its GATS commitments include:

  Computer and related services; Research and development services; Rental/leasing without operators; Advertising services; Management consulting; Audiovisual services; Construction services; Environmental services; Higher education services.

GATS = General Agreement on Trade in Services

Source: TPP full text, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

Box 4 Illustrative service liberalization commitments for Vietnam

- Elimination of foreign capital cap in non-facilities-based telecom services within 5 years (Vietnam set the cap at 65 percent under the GATS).
- Elimination of its economic needs test (ENT) for additional retail stores: immediately for stores less than 500 square meters and within 5 years for all stores.
- Elimination of foreign capital cap for electronic game services within 5 years (Vietnam set the cap at 49 percent under the GATS).
- Elimination of joint venture requirements for freight brokerage and related cargo logistics services.
- In GATS, of the 138 nonfinancial services subsectors in the comprehensive list (W/120), in only 8 did Vietnam promise full national treatment for Mode 1 (cross-border supply) and Mode 3 (commercial presence). It did not have GATS commitments in 57 subsectors. By comparison, in TPP Vietnam promises full national treatment in 64 subsectors, and improvements over GATS in another 43 subsectors.
- Nonfinancial subsectors in which Vietnam's TPP commitments improve on its GATS commitments include:
  Engineering services; Advertising services; Management consulting services; Services incidental to mining and manufacturing; Related scientific and technical consulting services; General construction services; All environmental services; Services auxiliary to all modes of transport; Interdisciplinary R&D; Real estate services; Rental/leasing of ships and other transport equipment; Radio and television services; Other communications services such as Facebook, Instagram, etc.; Home security services; Entertainment and recreational services; Air transportation services.

GATS = General Agreement on Trade in Services

Source: TPP full text, https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text.

CONCLUSION

The United States made few new commitments in the four core TPP service chapters (cross-border trade, temporary movement of persons, finance, and telecommunications) or in the related chapters on subjects that significantly affect services trade (investment, electronic commerce, and state-owned enterprises). But other TPP countries did make commitments. Despite exceptions for nonconforming measures, those commitments bring foreign practices closer to US norms. In turn, US service firms enjoy better access, especially to the markets of Japan, Malaysia, and Vietnam.

Moreover, the TPP chapters establish a minimum floor for liberalization, which will eventually be achieved in TiSA and agreed by future members of the TPP. Nonconforming measures scheduled in the TPP may be whittled away in future negotiations. Services trade offers enormous opportunity for US export growth in the decade ahead. The TPP represents a significant milestone in reaching that potential.

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CHAPTER 8

FINANCIAL SERVICES

ANNA GELPERN

Trade and investment treaties have covered financial services for decades, but they all tread gingerly on national regulators' turf, separating financial liberalization from other investment and service commitments.[1] As a result, finance remains largely the province of national regulation, coordinated through technocratic networks and international institutions such as the Financial Stability Board and the Basel Committee on Banking Supervision (see, e.g., Brummer 2011). When it comes to banks, securities markets, payments, and insurance, governments have preferred nonbinding, informal commitments to the enforcement machinery of international trade law.

The financial services chapter of the Trans-Pacific Partnership (TPP) continues this pattern.[2] While broadly committing members to openness and nondiscrimination, it includes a handful of specific pledges of greater access to payment and clearing systems and cross-border portfolio management, along with constraints on state provision of financial services (notably postal insurance) and procedural protections for regulated service providers. Yet it mostly preserves national authority over finance, and even adds a few safeguards to that objective.

The TPP's approach, while incremental, is significant for three reasons. First, the treaty brings together countries with radically different financial sectors in the first multilateral agreement after a series of unprecedented financial crises and against a backdrop of financial market uncertainty. Second, substantive and procedural commitments by TPP members add up to a reasonably coherent set of shared general standards for regulating the financial industry and its key subsectors. Despite country-specific exceptions and lengthy implementation timelines, these standards are now the baseline both for potential members, notably China and Korea, and for future agreements, which could affect trillions of dollars in financial transactions. Third and related, the TPP contains tools and incentives for targeted coordination of trade and financial regulation in a fast-changing global market.

WHAT MAKES THE TPP SPECIAL? PARTIES AND TIMING

The TPP covers a large swath of global finance: its members account for over $26 trillion in combined bank assets and similar levels of stock market capitalization. However, the grand totals mask a vast range among its

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1. See, e.g., North American Free Trade Agreement (NAFTA), Chapter 14, concluded in 1992, the General Agreement on Trade in Services (GATS) Annex on Financial Services, concluded in 1997, and the parallel Understanding on Commitments in Financial Services.
2. In contrast, European negotiators in transatlantic trade talks sought to make the trade and investment agreement the preeminent governance framework for trade in financial services (Johnson and Schott 2013).

member countries, which may be the treaty's bigger achievement. Other chapters in this volume discuss the diversity in TPP members' income levels and economic and technological development. Table 1 illustrates the diversity in their financial sectors.

The TPP brings together countries such as Japan, with bank assets over $9 trillion, or nearly 190 percent of GDP, and Peru, whose banking sector holds $60 billion in assets, just over 30 percent of GDP. Mexico, where bank lending to the private sector has only recently exceeded 20 percent of GDP, is represented alongside Australia, where banks play a big role and loans to the private sector have long topped 100 percent of GDP.[3] Countries with some of the world's biggest and most established debt and equity markets, such as the United States and Canada, participate side by side with Vietnam, one of the youngest and smallest securities markets in Asia (ADB 2014).

The treaty also binds jurisdictions with very different legal systems and approaches to financial regulation: common law, civil law, and Islamic law. New York remains a leading global financial center, but Kuala Lumpur is among the most important markets in Islamic finance, with well-developed analogues to commercial banking and bond issuance (EY 2014, Kammer et al. 2015). The TPP also includes countries where the public sector dominates finance, and those where its presence is limited.

Moreover, TPP members vary dramatically in their openness to the global financial markets and willingness to allow foreign investment in the financial sector. At one extreme, Mexico's banks are overwhelmingly foreign owned in the wake of crises and reforms in the 1990s, including changes brought by the North American Free Trade Agreement (NAFTA) (IMF 2012, Haber and Musacchio 2013). At the other extreme, Vietnam has had a 30 percent total cap and further internal limits on foreign ownership of domestic banks (ADB 2014). Malaysia, too, has maintained formal and informal numerical caps on foreign equity investment in financial services firms, even as foreign-owned providers dominate some sectors, such as insurance (US Department of State 2015).

The United States has very different trading relationships with its TPP partners when it comes to financial services. As table 2 illustrates, the United States is a large net exporter of financial services. Among TPP members, US export levels vary from less than 1 percent in Chile, Malaysia, and New Zealand, to nearly 7 percent in Canada. The data in table 2 also reveal an unusual feature of the new agreement: Within the TPP, the biggest US trading partners in financial services are countries with which the United States already has trade or investment agreements, or both. Australia, Canada, Chile, Mexico, Peru, and Singapore all have free trade agreements (FTAs) with the United States; and Japan is bound by certain commitments under the GATS Financial Services Annex. Under the TPP, most of these countries, notably Japan, undertake further liberalization commitments in financial services.

In addition, the TPP promises greater access to substantial and growing financial markets, such as Malaysia and Vietnam—and possibly China, should it decide to join. Korea, another potential future member, is among the newest US FTA partners; the TPP financial services chapter builds on the corresponding chapter in the US-Korea FTA. A state that joins the TPP after it has been agreed would have very limited scope to vary from its terms.

Overall, the TPP affects a large segment of US trade in financial services, though not as large as US financial services trade with Europe: US financial services exports to TPP members in 2014 were $16 billion, or 18 percent of the total, compared with 44 percent of the total for Europe (BEA 2015). For countries such as Australia, the TPP accounts for a larger portion of their financial services exports, 31 percent in 2014.[4]

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3. World Bank, *World Development Indicators*, Domestic Credit to Private Sector by Banks (percent of GDP), http://data.worldbank.org/indicator/FD.AST.PRVT.GD.ZS (accessed on January 21, 2016).
4. Information from the Australian Department of Foreign Affairs and Trade, "Outcomes: Financial Services," fact sheet dated October 12, 2015, https://dfat.gov.au/trade/agreements/tpp/Documents/outcomes-financial-services.pdf (accessed on January 27, 2016).

Table 1 Selected economic and financial sector indicators of TPP members, 2013

TPP member	Population (millions)	GDP (billions of dollars)	Deposit-taking bank assets (percent of GDP)	Stock market capitalization (percent of GDP)	Domestic debt securities (percent of GDP)[a]	Bank concentration (percent)[b]
Australia	23.1	1,560.4	124.8	82.9*	87.2	68.8*
Brunei	0.4	16.1	37.6	n.a.	n.a.	n.a.
Canada	35.2	1,826.8	140.7*	108.0*	91.6	60.6
Chile	17.6	277.2	75.2	109.3*	47.8	52.1*
Japan	127.3	4,919.6	189.7	60.9*	242.6	94.9
Malaysia	29.7	313.2	132.2	142.1*	108.3	71.0
Mexico	122.3	1,260.9	38.1	38.2*	46.0	56.5
New Zealand	4.4	185.8	150.7*	44.9*	31.2	90.5
Peru	30.4	202.3	30.5	46.7*	13.7	68.0
Singapore	5.4	297.9	145.9	126.3*	36.0	84.3
United States	316.1	16,768.1	58.1	107.0*	174.4*	34.9
Vietnam	89.7	171.4	103.4	16.2*	n.a.	45.4
Potential TPP members						
China	1,357.4	9,240.3	138.7	44.1*	42.6	38.7
Korea	50.2	1304.6	119.7	88.5*	104.7	50.6*

n.a. = not available

a. Domestic debt securities include both public and private. Data for New Zealand and Singapore include only domestic public debt securities.
b. Bank concentration is defined as the assets of the three largest commercial banks as a share of total commercial banking assets.

Note: All data are for 2013 unless noted by asterisk, which indicates latest available data used.

Source: World Bank's Global Financial Development Database, http://databank.worldbank.org/data/reports.aspx?source=global-financial-development (accessed on January 19, 2016).

Finally, the timing of the TPP is significant. The financial services chapter is the first of its kind in a major multilateral treaty agreed since the recent crises in the United States and Europe. These transatlantic crises made it hard for governments in the biggest financial centers to dictate regulatory approaches to the rest of the world—especially countries with fresh memories of the Asian financial crisis—or to insist on their firms' unfettered right to expand. On the other hand, some governments have committed to far-reaching postcrisis financial reform and cannot risk being seen as bargaining away their hard-won crisis prevention and management tools in exchange for trade openness. The fact that the signatory states found scope for agreement under the circumstances is significant and bodes well for advocates of trade liberalization and trade governance. The timing also helps explain some of the substantive and procedural commitments in the treaty chapter, discussed in the next section.

Table 2 US financial services trade, 2014

TPP member	US exports: Millions of US dollars	US exports: Percent of total financial services exports	US imports: Millions of US dollars	US imports: Percent of total financial services imports
Australia	3,602	4.1	656	3.4
Brunei	n.a.	n.a.	n.a.	n.a.
Canada	5,870	6.7	1,659	8.5
Chile	383	0.4	47	0.2
Japan	3,033	3.5	1,031	5.3
Malaysia	309	0.4	83	0.4
Mexico	1,508	1.7	365	1.9
New Zealand	284	0.3	37	0.2
Peru	n.a.	n.a.	n.a.	n.a.
Singapore	982	1.1	423	2.2
Vietnam	n.a.	n.a.	n.a.	n.a.
TPP total	15,971	18.3	4,301	22.1
Potential TPP members				
China	3,133	3.6	421	2.2
Korea	903	1.0	247	1.3

n.a. = not available

Source: US Bureau of Economic Analysis, US Trade in Services, by Type of Service and by Country or Affiliation, October 15, 2015, www.bea.gov.

WHAT IS OLD AND WHAT IS NEW UNDER THE TPP?

Core Commitments

The financial services chapter addresses financial institutions, investors in such institutions, and cross-border trade in financial services (Article 11.2(1)). At its core, the chapter reiterates and elaborates national treatment (NT), most favored nation (MFN), and market access principles applicable to financial services in recent US bilateral trade and investment agreements.[5] TPP members commit to treat one another's financial institutions, investors in those institutions, and financial service providers no less favorably than their own (NT) or those of other TPP members (MFN) in like circumstances.

Financial institutions[6] benefit from additional market access disciplines. TPP members agree not to limit the number of financial institutions operating in their jurisdiction, the total value or number of transactions in which they engage, or the total number of people they employ; nor can states require that a financial institution be organized in a particular legal form, subject to prudential considerations noted below (Article 11.5). Financial institutions are also protected from expropriation and guaranteed a minimum standard of treat-

5. The corresponding chapter of the Korea-US Free Trade Agreement (KORUS), which went into effect in March 2012, served as a model for the TPP chapter, although the TPP makes several notable departures from the KORUS template.
6. The TPP defines "financial institutions" formally (and somewhat circularly as firms licensed and regulated as financial institutions, with no apparent regard for their functions or activities. Financial institutions, such as banks, are distinguished from other suppliers of financial services, such as payment network operators.

ment (MST) under the TPP's investment chapter and, to enforce these protections, may avail themselves of the investor-state dispute settlement (ISDS) mechanism (see chapter by Gary Hufbauer in this volume).

MST guarantees foreigners a minimum level of justice and security, recognizing that "aliens" can be vulnerable to abuse in foreign territory. It is a perennially controversial standard in customary international law (e.g., Borchard 1940). Whether international law gives aliens more protection than host country nationals, and how much more, has been debated for centuries, but applying MST to financial services in a trade agreement is new. TPP critics have said that extending MST protections to financial services gives foreign investors, but not local residents, fresh grounds to challenge postcrisis regulations for imposing costs unanticipated at the time of investment undermining hard-won and essential regulatory progress.[7]

Under the TPP, MST comprises the obligations of "fair and equitable treatment" (understood to include primarily access to the courts and due process of law) and "full protection and security" (adequate police protection) (Article 9.6). The former is more contentious, since some investment panels interpreted similar language in the 1990s and early 2000s to shield firms from regulations that went against their investment expectations (e.g., UNCTAD 2012). More recently, the United States, among others, has sought to clarify that MST did not insure investor expectations or confer new substantive rights beyond those already applicable to states under customary international law. The TPP investment chapter includes express clarifications to that effect[8]—a gain for regulatory autonomy. Nonetheless, its application to financial services remains untested and its future interpretation uncertain.

Prudential Carveout and Procedural Safeguards

Financial services get their own chapter in trade agreements because finance has distinct attributes, presents distinct risks, and has long been regulated in distinct ways that are hard to accommodate in a framework that applies to services and investment in general. Finance is central to the functioning of the economy as a whole. Financial markets and institutions are interconnected and prone to panic and contagion, which can cause severe and widespread damage, as happened in the Asian financial crisis and the more recent US and European crises. Reflecting these attributes and risks, financial firms and markets get both explicit and implicit government support and must submit to strict oversight by specialized regulators.

"Prudential" regulation is a central part of this oversight regime. It seeks to keep institutions solvent; ensure that markets function properly; protect investors, depositors, and insurance policy holders; and prevent financial crises. It can include minimum capital requirements, activity and investment restrictions, ownership screens, and other highly intrusive measures. Governments take different approaches to prudential regulation, which they coordinate in part through transnational administrative channels such as the Basel Committee mentioned earlier.

Many widely used prudential measures affect foreign and domestic firms differently and could be challenged as inconsistent with trade liberalization commitments. Recognizing the economic and political importance of financial regulation, trade and investment agreements have long carved out prudential measures from their scope, so long as they are not used to avoid parties' treaty commitments. The TPP contains a standard prudential carveout, excerpted in box 1. The United States has strongly and consistently advocated for the inclusion of such carveouts—although other national authorities have not been hard to persuade.

7. See, e.g., Public Citizen. *Trans-Pacific Partnership (TPP): More Job Offshoring, Lower Wages, Unsafe Food Imports*. Washington. Available at www.citizen.org/TPP (accessed on January 18, 2016).
8. For example, Article 9.6(4) states that "For greater certainty, the mere fact that a Party takes or fails to take an action that may be inconsistent with an investor's expectations does not constitute a breach of this Article, even if there is loss or damage to the covered investment as a result."

Box 1 TPP prudential carveout (Article 11.11(1))

[A] Party shall not be prevented from adopting or maintaining measures for prudential reasons, including for the protection of investors, depositors, policy holders, or persons to whom fiduciary duty is owed by a financial institution or cross-border financial service supplier, or to ensure the integrity and stability of the financial system. If these measures do not conform with the provisions of this Agreement to which this exception applies, they shall not be used as a means of avoiding the Party's commitments or obligations under those provisions.

TPP commitments also exclude generally applicable monetary and credit policies (Article 11.11(2)) and emergency rescue policies of the sort the United States used to support banks and markets during the financial crisis (Article 17.13(1)).

The TPP's innovation is in the dispute settlement procedure that would apply to determine whether a measure is, in fact, there "for prudential reasons" or otherwise exempt.[9] An investor challenging financial regulations via ISDS must request a joint determination by home and host financial authorities on whether the regulation is exempt. The joint determination is binding on the arbitrators. If there is no joint determination, the TPP calls for arbitrators to presume that the home and host authorities agree, unless the investor's home state formally takes the position that the host regulation is not exempt. Absent a joint determination, the financial authorities on either side can institute separate state-to-state proceedings under chapter 28 of the TPP and have a new panel decide whether the exception applies. The panel's decision would also be binding on ISDS arbitrators (Article 11.22(2)).

The practical result of these procedural designs, applied to substantive carveouts for prudential regulation, is that an investor seeking to challenge host regulation should make sure it has the backing of its own government. Otherwise, it could find itself in the awkward position of fighting a losing battle against two governments before very constrained arbitrators. In all, financial firms under the TPP are more limited than firms in other sectors in the relief they can get from taking their grievances to ISDS.

The TPP's novel treatment of exceptions in dispute resolution evokes a broader pattern of deference to financial regulatory authorities and financial experts.[10] It establishes a Committee on Financial Services, comprising national financial authorities, to supervise the implementation and elaboration of the financial services chapter and consider questions referred by the parties (Article 11.19).[11] The mechanism replicates in the trade setting some features of the continuous expert coordination approach characteristic of financial regulation.

Specific Commitments on Cross-Border Financial Services

In addition to its innovations applicable to financial services broadly, the TPP seeks to expand access and level the playing field for foreign firms in several discrete but important areas. Most of these concern cross-border financial services specified in Annex 11-B to the TPP chapter. States separately elect to abide by particular service commitments in Annex 11-A.

9. TPP text defines "prudential reasons" to include "the maintenance of the safety, soundness, integrity, or financial responsibility of individual financial institutions or cross-border financial service suppliers as well as the safety and financial and operational integrity of payment and clearing systems" (footnote 10). The list is not exclusive.
10. For example, in investor-state disputes, the TPP requires consideration of subject matter expertise in panel appointments.
11. The committee is to meet at least once a year. The US Treasury is the designated US authority on the committee.

- *Portfolio Management*. The TPP opens the door to cross-border investment advice and investment management services among members, subject to prudential and registration requirements that states may impose (Article 11.6, Section A, Annex 11-B). States may still require that a person with ultimate responsibility for investment management be located in their territory, but the bulk of the advisory and analytical operation may be located in the territory of another TPP member (footnote 28). For the most part, however, prudential measures will continue to serve as binding constraints on portfolio managers' cross-border expansion. For example, this provision does not cover cross-border sales of investment fund shares.
- *Payment and Clearing Systems and Payment Services*. Foreign financial institutions established in a TPP member country will be able to gain access to public clearing and payment systems, including public financing available to users of these systems in the ordinary course of business. Such access remains subject to the usual domestic regulatory constraints. Although this provision does not guarantee investors access to the host's lender of last resort, it does create potential claims on host state resources (Article 11.15). Subject to nondiscriminatory safeguards, TPP members have agreed to liberalize cross-border payment services among their territories, using proprietary payment card networks such as Visa and MasterCard (Section D, Annex 11-B). These services include balance verification, authentication, and notification, as distinct from funds transfers.
- *Insurance*. US trade agreements have long had commitments in, and sought greater access to, insurance markets. The TPP's financial services chapter contains relatively mild commitments on the part of the treaty members to expedite approval of new insurance products (Article 11.6). It also seeks to diminish the advantages of large state-run postal insurance systems, which play a uniquely important role in the Asian insurance market. Postal insurance has access to a vast distribution network and often enjoys other market access privileges and subsidies. The TPP includes state commitments to improve financial reporting by postal insurance providers and to refrain from giving postal insurers competitive advantage vis-à-vis private firms through licensing, distribution, and product restrictions. Violations of postal insurance commitments are subject to state-to-state dispute resolution (Annex 11-B, Section C).

State-Owned Financial Firms

State-owned or -controlled financial firms are an important feature of the financial landscape everywhere—including the United States, with its housing finance agencies, Fannie Mae and Freddie Mac, Export-Import Bank, and Overseas Private Investment Corporation. State-owned finance is even more dominant in parts of the Asia-Pacific region, including TPP members, such as Vietnam, and potential members, especially China. Failure to deal with state finance would limit the TPP's relevance in the area. As it stands, the treaty takes important but limited steps toward including state-owned firms in its framework.

The financial services chapter does not apply to the activities of public pension funds or to any other activities "conducted for the account...or using the financial resources of the Party, including its public entities" so long as they do not compete with private service providers (Article 11.2(3)). This language could be read very broadly to carve out all state-owned finance, especially since competition has been hard to prove in practice, but parallel inclusion of disciplines on postal insurance suggests that the carveout is not all-encompassing.

The path-breaking chapter on state-owned enterprises (SOEs) specifically exempts giant swaths of public financial services provision, including export finance and investment,[12] domestic development finance, and financial emergency measures, as noted earlier (Article 17.13). The caveat, as in the financial services chapter, is that public financial service providers not compete with private firms or serve as conduits for discriminatory subsidies.

Finally, sovereign wealth funds are not covered by TPP disciplines except insofar as they channel noncommercial assistance. Singapore's two principal sovereign wealth funds are excluded altogether.[13]

Malaysian Exceptionalism

Malaysia has taken extensive reservations to the financial services chapter. The reservations annex includes many specific provisions concerning Islamic financial services, but also a much-criticized term preserving the right to withhold licenses for financial institutions unless "the Minister of Finance or the [central bank] determines that the application for license or approval would be in the best interest of Malaysia," defined among other ways by reference to the need for Malaysians to retain "an economically meaningful" share of the financial sector in Malaysian hands (Annex III). Not only does the country thus retain effective control over market access, but its stated grounds for reservation conflict with basic tenets of market access in trade agreements. Moreover, the reservation is framed as a permanent position, not an interim transition measure.[14]

This outcome disappointed many US financial firms. However, it must be seen in context. Malaysia is a large and important financial market in Asia, a leading Islamic financial center, and a new FTA partner for the United States. For decades, it has taken controversial positions on financial liberalization, including prominently defying the International Monetary Fund and the G-7 by imposing capital controls during the Asian financial crisis. Opening its financial sector is politically controversial at home, perhaps more so than in many other countries in the TPP and beyond. Nonetheless, Malaysia has made meaningful commitments under the TPP. The "best interests" test is combined with undertakings of regulatory process and transparency, and replaces hard numerical caps on foreign ownership.

Any assessment of Malaysia's reservations must consider whether bigger concessions are politically plausible under the circumstances. It must also balance the value of Malaysia's TPP commitments and of its continued engagement in the TPP financial services talks against the risks of administrative discretion and the national preference embedded in its "best interests" test. On balance, even limited participation by Malaysia in the partnership is significant. It is too early to tell whether it is a step toward greater openness, an invitation to similar reservations by others, neither, or both.

TRADE, FINANCE, AND THE DATA LOCALIZATION DEBATE

The strongest criticism of the TPP by US financial firms concerns the exclusion of financial services from the general ban on data localization. Under the treaty's electronic commerce chapter, states give up the ability to require service providers to store data in a member's territory as a condition of doing business there (Article

12. The carveout for export finance and investment is limited to countries that adhere to the disciplines agreed under the auspices of the Organization for Economic Cooperation and Development (OECD) (Articles 17.13.2(c) and 17.13.3(c)). The TPP thus serves as a vehicle for extending OECD export finance and investment disciplines to states that might not have previously signed on to them.
13. To benefit from the exception, a fund must fit the definition of "sovereign wealth fund" in the SOE chapter, which includes membership in the International Forum of Sovereign Wealth Funds (IFSWF) or adoption of its governing document, the Santiago Principles. Until and unless IFSWF becomes a source of binding commitment to commercial behavior, this is not a high bar: while the IFSWF exhorts its members to act in a transparent and commercial manner, it scrupulously avoids anything approaching substantive regulation or enforcement (Truman 2010).
14. In contrast, Brunei, Chile, Mexico, and Peru negotiated multiyear delays before they have to submit MST claims to ISDS (Annex 11-E). Vietnam, which, like Malaysia, is an important new FTA partner for the United States, agreed to a transition with a new ratchet mechanism for its nonconforming measures in financial services, so that going forward it can only liberalize (Annex 11-C(1)).

14.13). Under the financial services chapter, states commit instead to allow financial institutions to transfer data and engage data processing services across national borders in the ordinary course of business (Annex 11-B, Section B).[15] But a member can still require banks to keep servers and data in its territory. Such localization is inconsistent with the business model of global financial firms: isolating or duplicating data in a single country can be costly and burdensome.

This conflict is about much more than bank servers; it reveals a fundamental governance problem. Both information and financial flows are essentially aterritorial: they reside nowhere but may be subject to capture anywhere. A global firm wants the capacity to move information and funds[16] across the world on a moment's notice; some see this capacity as definitional—it comes with significant operational and tax advantages.

But regulators' authority is still essentially territorial, whereas they want to be able to seize data and resources quickly to address abuse or to contain a financial crisis. Each government might therefore rather have global conglomerates keep a minimum amount of capital and certain essential information in its jurisdiction. When an international financial conglomerate fails, each government might rush to seize what it can to make sure that its constituents get paid. Under the circumstances, it is not surprising to see governments worry about their ability to prevent or resolve crises, react to abuses in finance or data privacy[17]—or, on a more sinister note, police their people—when firms can instantly whisk assets and data out of their reach.

Governments would not need to worry, however, if they could trust other governments to help them recover assets or data, especially if they shared common regulatory standards. Coordinating regulation and building trust among supervisors is an overarching goal of cross-border financial governance. The work on cross-border resolution in the wake of the Lehman Brothers bankruptcy is only the most recent example (e.g., Financial Stability Board 2015). By this logic, if the TPP could nudge regulators toward cooperation in data sharing, subject to privacy and other appropriate safeguards, it might weaken the data localization imperative for some countries—and make it unacceptable for others to insist upon.

On the other hand, financial regulators have a thoroughly mixed record of cross-border cooperation. There are good reasons for mistrust. But the TPP may be cause for optimism. The fact that such diverse countries with fresh yet very different memories of financial crises could agree on a common approach to trade in financial services is a good sign. The financial services chapter includes a framework for ongoing dialogue; some of the same people will also participate in traditional financial regulatory fora. It may be time to experiment with closer linkages between the two.

CONCLUSION

The financial services chapter in the TPP is an incremental affair for the most part. It includes a number of existing US FTA partners, who make additional commitments, and it brings a few new parties to the table, notably Malaysia and Vietnam. It allows financial institutions to bring claims against states for violating Minimum Standard of Treatment—albeit narrowed and clarified. However, it also includes process innovations, such as the option of state-to-state arbitration to determine whether exceptions under the chapter apply to a member's case. These procedural features in practice limit the scope for firms' ability to challenge host country regulation.

The TPP also includes specific commitments to liberalize trade in portfolio management services, insurance, and payment services. It makes a gesture in the direction of disciplining state-owned financial institutions, but imposes few binding constraints on what they do. On balance, the chapter reflects measured liber-

15. This provision has antecedents going back to the GATS (e.g., Sorsa 1997; see also the GATS Annex on Financial Services, available at https://www.wto.org/english/tratop_e/serv_e/10-anfin_e.htm, accessed on January 27, 2016).
16. These often amount to the same thing—Bitcoin is an extreme example.
17. Privacy is a more attenuated motive for data localization under the TPP because firms can still transfer data, even if they have to keep a copy in one place. TPP members cannot force a bank to keep the only version of its data in their territory.

alization with new procedural safeguards. It may not go as far as some in the financial services industry had hoped—but it is an achievement nonetheless.

Controversies surrounding Malaysia's reservations and data localization requirements are symptomatic of broader challenges at the intersection of trade disciplines and finance. States still prefer to keep trade and its binding enforcement out of finance. They try to retain maximum flexibility to use measures of their choosing to protect safety and soundness, and financial stability. Against this background, trade disciplines articulate core values, minimum standards of behavior, and a trajectory of liberalization. Trade agreements such as the TPP can provide not only a shared baseline but also the impetus for regulatory coordination. This in turn might eventually make governments less likely to demand that firms keep data and assets in their territory.

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CHAPTER 9

PROVISIONS ON INVESTMENT

THEODORE H. MORAN AND LINDSAY OLDENSKI

The Trans-Pacific Partnership (TPP) is often referred to as a trade agreement, but many of its most important payoffs to the United States will come through the expansion of foreign direct investment (FDI), rather than just trade, among the 12 member economies.

FDI benefits the United States in many ways. First, inward FDI by foreign firms in the United States creates high-paying jobs and injects capital and research and development (R&D) spending into the US economy. In addition to these direct effects, the presence of foreign firms generates positive spillovers for local US firms through opportunities to learn from technologies and production techniques introduced into the US economy and through productivity improvements resulting from competitive pressures brought on by the presence of foreign rivals.

Second, outward FDI by US multinational corporations (MNCs) creates opportunities for US firms to expand their global market share, which leads to growth both at home and abroad. Some policymakers fear that outward FDI might substitute for US-based operations by US MNCs, but investigations by PIIE and other researchers show that the work that US MNCs do abroad complements their US activities, so that any growth in the global footprint of US firms benefits US workers and the US economy.

The TPP agreement promotes these positive effects from inward and outward FDI through specific provisions that directly encourage FDI. At the same time the reduction of trade barriers in the TPP also contributes to greater FDI flows because MNCs are responsible for the majority of international trade. MNCs rely on imported goods and services as low-cost inputs, which enable their exports to be competitive in international markets.

TPP PROVISIONS AFFECTING FDI

One of the most important aspects of the TPP approach to FDI policy is that TPP countries commit themselves to accepting FDI on a "negative list" basis, which means that their markets are fully open in all sectors except those explicitly excluded. The alternative would be for partner countries to specify which sectors were fully open while excluding all others. This alternative approach would almost surely be more restrictive. The negative list approach means that when new products and services are introduced, the sectors where these are found will automatically be open to FDI without the need to specifically negotiate new rules. The negative list approach greatly increases the confidence of investors about where they can expect business-friendly treatment.

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Moreover, the TPP assures international companies that they will not be required to meet "performance requirements" such as local content or technology-transfer/technology-localization mandates. Local content requirements (LCRs) are already prohibited under the Trade-Related Investment Measures (TRIMs) section of the World Trade Organization, but they have nonetheless been popping up around the world in recent years (Cimino-Isaacs, Hufbauer, and Schott 2014). Performance requirements are intended to help local producers, yet they often have the opposite effect. Because LCRs impose high costs on investors, they often deter investments that could have otherwise benefited the local economy. When investment does take place under local content regimes, it is much less efficient, producing fewer gains to be distributed among the investors and the host country.

The impact of the TPP on Malaysia is illustrative: The elimination of LCRs allows US auto companies for the first time to export cars without limitation into the Malaysian market while integrating Malaysia into their global supply chains for vehicles and parts. Automotive MNCs previously have had to bring knocked-down car kits into Malaysia for local assembly in subscale plants, leaving Malaysian consumers with more expensive and lower quality models to choose from.

Thus it is clear that the ban on performance requirements not only protects international investors but also benefits host economies. Performance requirements hinder the creation of international supply chains since they interrupt the seamless integration of goods and services within MNC networks. The TPP, however, does allow governments to aid the development of local suppliers in other ways, such as public-private partnerships to transfer technical and management skills to local firms and workers and creation of vendor-development programs to certify local suppliers.

In a related provision, the TPP ensures that international investors will be free to appoint senior managers of any nationality, further enhancing ease of entering new markets and coordinating supplier networks.

The TPP agreement also imposes important new regulations on state-owned enterprises (SOEs) to prevent them from exercising unfair advantages in comparison to other firms and investors. The restrictions on SOEs are beneficial for encouraging investment among the TPP members themselves, but they also set an important precedent for future agreements, especially those that might include China.

The nonconforming exceptions for SOEs contained in the Annexes to the main TPP text do not appear to be large or exceptional: For example, the state-owned oil company in Vietnam can sell oil domestically below market prices if the government so chooses; Malaysian SOEs can allocate up to 40 percent of their budgets to purchase goods and services from Bumiputera firms so as to afford affirmative action for indigenous Malays; and in the United States, Freddie Mac and Fannie Mae can provide government guarantees for timely payment on mortgage-backed securities.

More broadly, the TPP agreement includes provisions to improve intellectual property protection, remove barriers to investment in services, and increase consistency and transparency of regulatory regimes across partner countries. The strengthening of intellectual property protections in Vietnam, for example, is expected to give the Vietnamese economy a competitive edge for production of information technology (IT) hardware and software vis-à-vis China, allowing investors from the United States and Japan to expand their market share at the expense of rivals from Europe and South Korea.

These issues are discussed at length in separate chapters of this volume, yet they all also play a role in creating a stable environment for FDI. This is especially true of investor-state dispute settlement (ISDS) provisions (see related chapter by Gary Hufbauer), which have been shown to encourage FDI, especially in countries with weak legal institutions.[1]

1. Lindsay Oldenski, "What Do the Data Say About the Relationship between Investor-State Dispute Settlement Provisions and FDI," Trade and Investment Policy Watch blog, Peterson Institute for International Economics, March 11, 2015, http://blogs.piie.com/trade/?p=163.

Finally, the overall reduction of barriers to trade and improved market access associated with the TPP will increase FDI simply because trade and investment are complements. FDI follows the expansion of exports to customize production for local markets, reduce transportation costs, set up direct retail links, and in some cases establish export hubs. Eighty percent of all trade in today's world takes place among affiliates of MNCs or within supply chains organized by them. So the nexus between the growth of trade and the growth of investment among countries has become a central part of contemporary globalization.

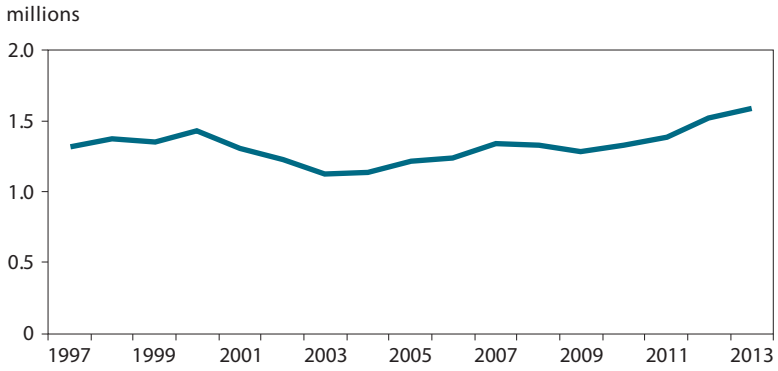
As explained in detail in chapter 1, Peter A. Petri and Michael G. Plummer estimate that about 27 percent of US gains from the TPP will be driven by the investment provisions of the agreement. Outward FDI stocks are expected to increase by $149 billion and inward FDI stocks are expected to increase by $128 billion by 2030 as a result of the agreement.

So, from a US perspective, a large component of the benefits from the implementation of the TPP will accrue via FDI flows, both inward FDI into the US economy and outward FDI to access partner economies.

INWARD FDI BY TPP FIRMS IN THE UNITED STATES

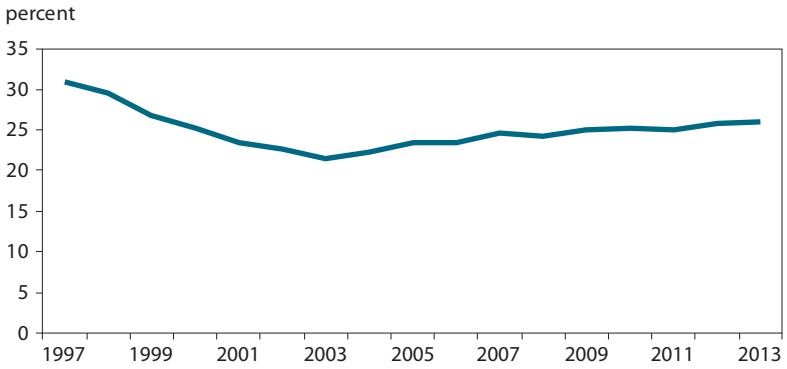
In 2013 (the most recent year for which data are available), firms headquartered in TPP countries employed almost 1.6 million workers in the United States, which was 26 percent of all US workers employed by affiliates of foreign firms in that year. Figures 1a and 1b show that employment by TPP country firms in the United States, both in absolute terms and relative to total employment by all foreign firms, peaked in the late 1990s, dipped slightly in the early 2000s, and has been increasing recently. This pattern suggests that there is potential for even greater growth in employment of US workers. These firms paid average wages and benefits of more than $75,000 per worker, which is well above the average for all US firms. Firms from TPP countries are already among the largest and most well-paying employers in the United States. Figures 2a and 2b show that firms from TPP countries are also important contributors of value added to the US economy. Through the specific provisions highlighted earlier in this chapter, TPP has the potential to expand investment by these valuable employers in the United States.

Figure 1a Total employment by TPP country firms in the United States, 1997–2013



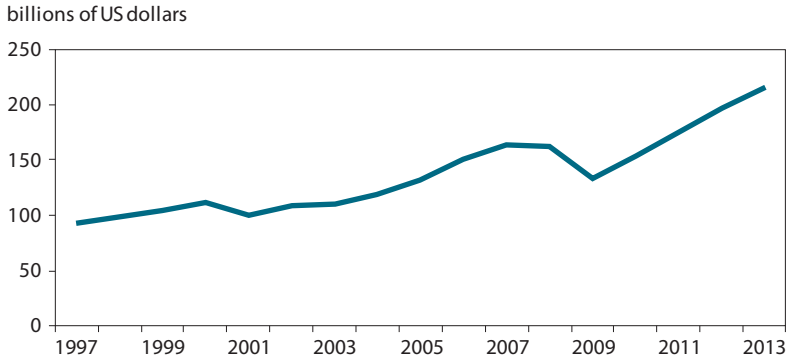
Source: US Bureau of Economic Analysis.

Figure 1b TPP share of foreign affiliate employment in the United States, 1997–2013



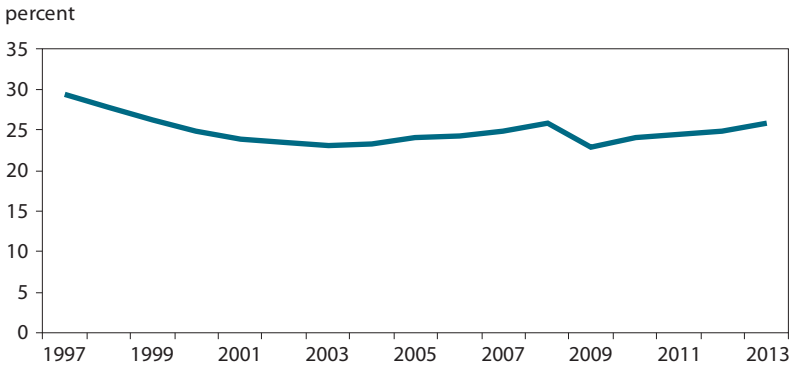
Source: US Bureau of Economic Analysis.

Figure 2a Total value-added by TPP country firms in the United States, 1997–2013



Source: US Bureau of Economic Analysis.

Figure 2b TPP share of foreign affiliate value-added in the United States, 1997–2013



Source: US Bureau of Economic Analysis.

Besides creating jobs, TPP firms inject capital and create value added within the US economy. In 2013, affiliates of firms from TPP countries spent almost $75 billion on new capital expenditures in the United States, which was 34 percent of total capital expenditures by affiliates of foreign firms in the United States that year. Value added by firms from TPP countries has been increasing and in 2013 made up about 26 percent of total value added by foreign firms in the United States.

Firms from TPP countries invest in a variety of sectors of the US economy. The top three are manufacturing, wholesale trade, and finance and insurance. Professional and technical services and real estate also receive substantial inflows of FDI. Within manufacturing, the largest subsectors for FDI are transportation equipment, chemicals, food, and machinery. Table 1 provides details on the total value added by foreign firms in these sectors in 2013, the most recent year for which data are available.

FDI has economic implications even beyond job creation, investment, and R&D spending. The presence of foreign firms puts competitive pressure on domestic firms while at the same time bringing know-how that domestic firms might use to improve performance. When foreign firms enter a market, they deploy new production technologies, management practices, and quality-control procedures that can spill over to the local market. These FDI spillovers can take the form of horizontal technology transfers from foreign to domestic firms in the same industry. Workers may leave a foreign-owned firm and take the techniques they have learned with them to their next job in a domestic firm. Domestic firms can observe new production techniques simply by being close to foreign competitors. Spillovers may also be vertical. If foreign-owned firms wish to source inputs locally, they may demand higher quality from, or even share production technology with, their suppliers, resulting in greater productivity of local firms in upstream industries. Earlier work (Moran and Oldenski 2013) shows that roughly 12 percent of the total productivity growth in the United States from 1987 to 2007 can be attributed to productivity spillovers from inward FDI. Firms from TPP countries have been, and will continue to be, an important part of these gains.

Table 1 US inward FDI by sector from the five largest TPP partner countries, 2013

Sector	Millions of US dollars
Manufacturing	59,246
Transportation equipment	22,947
Chemicals	6,843
Food	6,287
Machinery	4,108
Primary and fabricated metals	2,898
Computers and electronic products	2,785
Electrical equipment and appliances	753
Wholesale trade	40,241
Finance and insurance	32,449
Other Industries	29,123
Professional and technical services	8,518
Real estate and rental and leasing	6,145
Retail trade	4,125
Information	4,121

FDI = foreign direct investment

Notes: Inward FDI is measured as value added using data from the US Bureau of Economic Analysis. The top five TPP source countries for US inward FDI are Japan, Canada, Australia, Mexico, and Singapore.

Source: US Bureau of Economic Analysis.

FDI FROM JAPAN IS ESPECIALLY IMPORTANT

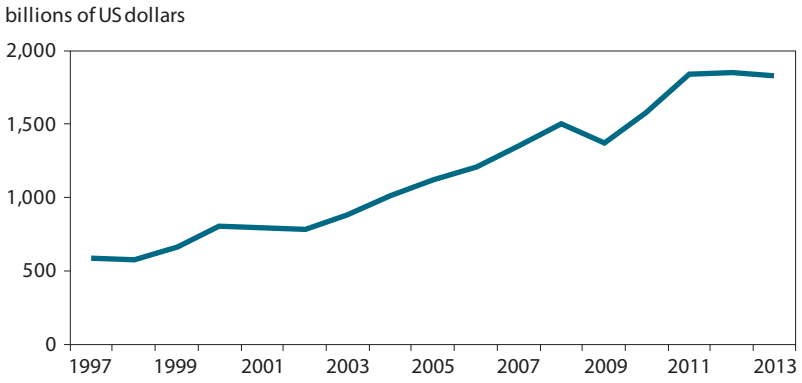
Japan is the most important of the TPP countries for FDI in the United States. In 2013, Japanese firms were the largest source of new inflows of FDI into the United States for the first time since 1992, injecting almost $45 billion of fresh investment into the US economy in that year alone. The data show Japanese investors are a dynamic component of the US economy. Integration has steadily increased through Japanese suppliers coinvesting with primary investors and through backward linkages to indigenous US companies.

MNCs of all types pay higher wages than purely domestic firms do. However, the US-based employees of foreign-owned MNCs earn more than even US MNC employees do. Among foreign MNCs operating in the United States, Japanese firms pay higher than average wages, making them exceptional contributors to creating high-paying jobs in the US economy. In 2012 the average US worker at a Japanese firm received almost $80,000 in wages and benefits, well above the US average and above the average of other foreign firms in the United States (Moran and Oldenski 2015). This is due in part to the high-value activities, such as R&D, that Japanese firms perform in the United States. The R&D intensity of Japanese-owned firms in the United States, as measured by annual R&D expenditure per employee, is much higher and has been growing much more rapidly than that of other foreign firms in the United States. In 2013 Japanese firms had R&D spending of more than $9,320 per worker, compared with about $8,680 for the average foreign firm. TPP provisions that encourage FDI will expand this important injection of high value-added spending in the US economy.

INVESTMENT BY US FIRMS IN TPP COUNTRIES

In addition to increasing investment in the United States, the TPP will also create greater opportunities for US firms to expand not just through exports but also through FDI. As shown in figure 3a, investment by US MNCs in TPP countries has been growing over time. In 2013, 31 percent of sales by foreign affiliates of US MNCs poured into TPP countries (figure 3b). Many of the provisions that will likely appear in a final agreement will improve the access of US firms in TPP countries by standardizing investment rules, strengthening intellectual property protections, and removing barriers to entry. Previous research has shown that global expansion of US-based firms strengthens these companies and increases their hiring and investment both at home and abroad (Hufbauer, Moran, and Oldenski 2013). As US MNCs coordinate the operations of home- and foreign-based affiliates to maximize their global market share, expansion abroad serves as a net complement to, rather than substitute for, US domestic activities. When a US firm increases employment at its foreign affiliates by 10 percent, employment by that same firm in the United States goes up by an average of 4 percent. Capital expenditures and exports from the United States by that firm also increase by about 4 percent. R&D spending, which is associated not just with overall US employment but also with employment in highly skilled, highly paid jobs, increases by 5.4 percent.

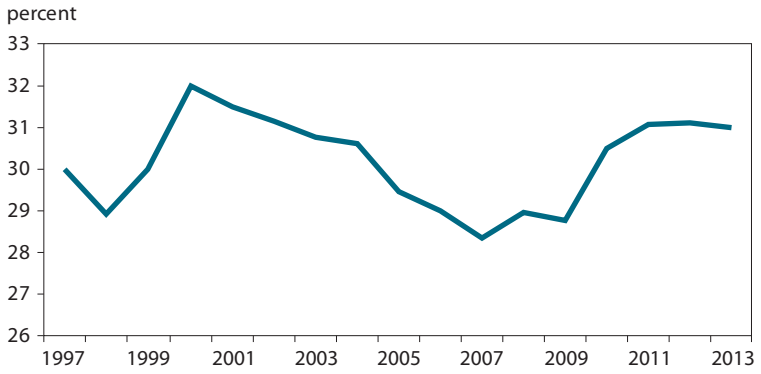
Figure 3a Sales by US MNCs in TPP countries, 1997–2013



MNCs = multinational corporations

Source: US Bureau of Economic Analysis.

Figure 3b TPP share in total sales by foreign affiliates of US MNCs, 1997–2013



MNCs = multinational corporations

Source: US Bureau of Economic Analysis.

Manufacturing is the largest sector for outward FDI by US firms in TPP partner countries. Wholesale and retail trade are also important. Within manufacturing, the largest subsectors for FDI are chemicals, computers and electronics, and transportation equipment. Table 2 provides details on the total value added by US firms in these sectors in 2013, the most recent year for which data are available.

The globalization of R&D on the part of US companies has particularly strong synergies with R&D conducted by the same US firms at home. These synergies come in the form of joint research conducted across borders, as when a GE Healthcare team creates high-performance diagnostic software at its twin campuses in upstate New York and Munich, then assembles the resulting hospital products in Waukesha, Wisconsin. Other synergies come in the form of lo-

cating lower-cost R&D abroad so as to fund larger amounts of higher-cost R&D at home, as when Caterpillar runs two shifts of researchers at its emissions control laboratory in Peoria, ships the raw data overnight for simple coding and analysis in India, and gets more bang for the R&D buck when the lab in Illinois opens at 7 am the next morning. A final kind of synergy comes when new products and processes developed for overseas markets by US affiliates located there—like a battery-powered jeep-portable MRI scanner for rural India—require technical and marketing support from the MNC parent headquarters in the United States.

To be sure, these findings do not imply that every home industry sector where TPP outward investment originates will always be expanding on a net basis. What is striking, however, is that US firms that engage in outward investment have consistently offered better prospects for their workers than firms that do not, in both expanding and contracting industries (Hufbauer, Moran, and Oldenski 2013; Richardson 2005a, 2005b). So, while some readjustments will certainly be needed as some sectors contract while others expand, the overall effect should be a net positive for the United States.

Table 2 US outward FDI by sector to the five largest TPP partner countries, 2013

Sector	Millions of US dollars
Manufacturing	123,144
Chemicals	25,134
Computers and electronics	13,004
Transportation equipment	10,623
Food	10,520
Machinery	7,449
Primary and fabricated metals	3,771
Electrical equipment and appliances	2,854
Other Industries	41,098
Wholesale trade	39,729
Retail trade	28,018
Mining	27,248
Finance and insurance	23,897
Professional and technical services	23,528
Information	7,463

FDI = foreign direct investment

Note: Outward FDI is measured as value added using data from the US Bureau of Economic Analysis. The top five TPP destination countries for US outward FDI are Japan, Canada, Australia, Mexico, and Singapore.

Source: US Bureau of Economic Analysis.

CONCLUSION

Although the TPP is often referred to as a trade agreement, it is about much more than just trade. A number of its provisions will impact FDI both directly and indirectly. In particular, the negative list basis for leaving all other sectors open to FDI, the removal of performance requirements, the limits on state-owned enterprises, and the investor-state dispute resolution provisions will have direct positive effects on FDI among member countries. Provisions that improve intellectual property protection, remove barriers to investment in services, and increase consistency and transparency of regulatory regimes across partner countries will also help to create an environment conducive to greater cross-border investments. Finally, the reduction of trade barriers between member countries will also increase FDI because multinational firms rely heavily on imports of intermediate goods and services for their global supply chains. Together, these provisions will increase both investment in the United States by foreign firms and opportunities for expansion abroad by US MNCs. Inward FDI brings employment growth, high wages, capital inflows, and new R&D spending as well as positive productivity spillovers to domestic US firms. Outward FDI allows US firms to expand their global market share, hiring more workers and investing more capital both at home and abroad. Altogether FDI expansion that results from the TPP will bring many important benefits for US workers, US firms, and the US economy as a whole.

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CHAPTER 10

INVESTOR-STATE DISPUTE SETTLEMENT

GARY CLYDE HUFBAUER

Among the most disputed provisions in the Trans-Pacific Partnership (TPP) is an already agreed provision designed to protect firms that invest abroad against unfair or arbitrary treatment by foreign governments. The investor-state dispute settlement (ISDS) provision in the TPP is the latest version of a mechanism contained in a series of international economic agreements going back many decades. These substantive rules limit the grounds for expropriation, grant foreign firms the same rights and benefits as local firms (national treatment) or third-country firms (most favored nation treatment), and require governments to give "fair and equitable treatment" to foreign firms. The rules are usually enforced by arbitration systems that enable foreign firms to challenge unfair treatment by local governments and win compensation, if justified. Such protections have been deemed necessary in agreements going back at least to an accord between Germany and Pakistan in 1959, and they have successfully protected US investments in many countries.

Although these rules are sought by investors, emerging-market and developing countries also embrace them as a means of reassuring foreign firms that the welcome mat is out for direct investment and that once a factory, mine, or office is established, the foreign firm will enjoy fair treatment.

The value of ISDS assurance lies in its role as a restraint against unjustified expropriation or unfair treatment when governments change political direction. In recent years, for example, ISDS played a central role in a handful of high-profile, billion-dollar cases, such as Argentina's renationalization of YPF and the Russian seizure of Yukos in the mid-2000s. But expropriation awards are not restricted to billion-dollar cases or emerging-market countries. AbitibiBowater, a US firm, filed an ISDS claim under the North American Free Trade Agreement (NAFTA) against Canada in 2008, after the Newfoundland government expropriated some $300 million worth of assets when the company announced that it would close a paper mill in the province.[1] The Newfoundland legislation was unusually forthright: The legislation contained subsections labeled "No compensation" and "Expropriation of land and assets." Abitibi and Canada settled the case for $130 million.

The TPP improves upon the ISDS model inherited from NAFTA and contained in various bilateral investment treaties (BITs). Nevertheless the ISDS measure has drawn fire from TPP critics. Senators Elizabeth Warren (D-MA) and Bernie Sanders (I-VT), alongside the AFL-CIO and other critics, charge that creation of an international tribunal in which corporations can challenge governments and sometimes win awards could undermine

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1. For a summary of the case, see Cris Best, "The Federal Government Settles AbitibiBowater's NAFTA Claim," *The Court*, August 27, 2010 (accessed on November 12, 2015). The relevant legislation of the Newfoundland government is available at www.canlii.org/en/nl/laws/stat/snl-2008-c-a-1.01/latest/snl-2008-c-a-1.01.html#1_.

health, safety, and environmental regulations in the United States and other trading partner countries. Many of these critics, however, oppose the TPP for its general purpose of encouraging liberalized trade and direct investment by US multinational corporations. These fundamental objections put the critics at odds with the philosophy of the TPP and other trade and investment agreements, which, after all, are designed to promote international commerce. Following the economic and financial crisis of 2007–08, multinational corporations (MNCs) have generally come under fire from all sides because of their outsized role in the globalized economy. As for trade, in 2012 the top 500 US companies accounted for 60 to 70 percent of US exports and imports, and fewer than 5,000 companies worldwide are estimated to handle more than 70 percent of global trade in goods and services (Soroka 2014). As for foreign direct investment (FDI), in 2014 just 100 MNCs controlled 10 percent of global FDI, and fewer than 5,000 MNCs are estimated to control 80 percent of global FDI (UNCTAD 2015).

But the ISDS provisions in the TPP are a significant improvement over those in previous agreements, though they substantially replicate the provisions found in the Korea-US FTA (KORUS), which entered into force in March 2012. The ISDS mechanism in the TPP, for example, respects environmental, health, and safety regulation, and ensures the transparency of dispute proceedings. Echoing recent EU agreements, the TPP more narrowly defines "fair and equitable treatment" than the definition in previous such accords. It also eliminates forum shopping—i.e., the attempt by companies to litigate in the most sympathetic places—and enables the assessment of costs against a losing party (a provision that discourages frivolous cases).

TPP Chapter 9 also clarifies that the investor bringing the case against the government bears the burden to prove all elements of its claims. It makes proceedings fully open and transparent and allows civil society organizations and others not party to the dispute to participate. In addition, Chapter 9 will for the first time clarify important concepts in the nondiscrimination and minimum standard of treatment obligations. For example, it clarifies the definition of legitimate public welfare objectives as a ground for defending a country's regulations and makes clear that frustrated investor expectations are not in and of themselves sufficient to overturn such regulations. TPP countries will also establish a code of conduct for ISDS arbitrators to guide arbitrator independence and impartiality.

The major shortcoming of TPP is the absence of an appellate mechanism for ISDS cases. But TPP also contains some other innovations that respond to ISDS critics and are generally disliked by the US business community. Highly prominent is that Article 29.5 of TPP Chapter 29, Exceptions, bars tobacco companies from bringing ISDS claims. This innovation responds to criticism that tobacco firms have launched claims against both Uruguay and Australia for their cigarette package regulations.[2] Business firms fear that the precedent set by the TPP proscription on tobacco claims could, in subsequent investment chapters, be extended to alcohol, corn syrup, or other products.

Less prominent, but perhaps commercially more important, at US insistence, financial firms are precluded from bringing ISDS claims that assert they are being discriminated against in terms of market access. TPP Article 9.3(3) defers consideration of covered financial services issues to TPP Chapter 11, Financial Services. Importantly, Chapter 11 allows financial regulators complete discretion to determine which foreign firms are permitted to participate in local financial markets. An aspiring foreign financial firm must prove that it is "fit and proper" to do business; the regulator is not obligated to prove defects. US regulators, including the Federal Reserve, refused to have their latitude curbed by TPP provisions. The flip side, of course, is that US financial firms are precluded from bringing discrimination claims against the regulatory practices of other TPP members that deny them market access. Neither NAFTA nor other US bilateral trade and investment agreements curbed the unlimited discretion of financial regulators, so in this respect the TPP continues a well-established tradition.

The revamped ISDS provisions in Chapter 9 of the TPP apply to all the 12 member countries and go far more than half-way in meeting the specific objections of ISDS critics.

2. The regulations in question either require plain packages, without evocative camels or cowboys, or require packages showing disfigured cancer victims. These cases are still being litigated.

WHY ARE ISDS PROVISIONS IN THE TPP?

The TPP is generally considered a trade agreement, but reducing barriers to trade will also increase FDI flows among firms in the 12 partner countries. Firms will gain greater access in each other's markets, allowing them to expand their overseas operations and capture a bigger share of the global market. To protect these investments, Chapter 9 in TPP seeks to strengthen the rule of law in the Asia-Pacific region, to deter foreign governments from discriminating against foreign investors, and to protect the right to regulate in the public interest. Toward these ends, the TPP ensures that investors have effective remedies in the event of a breach of their rights, while reforming the ISDS system by providing for tools to dismiss frivolous claims and instituting a range of other procedural and substantive safeguards.

Customarily, ISDS provisions were part of BITs, of which almost 3,000 are now in force worldwide. The United States has 41 BITs with countries near and far and is actively negotiating a BIT with China, aimed at strengthening the rights of US firms in a country with a checkered record on investment issues. Starting with NAFTA in 1994, however, the United States has also included an investment chapter in its free trade agreements (FTAs, now numbering 20), and ISDS provisions are an integral part of these chapters.[3]

A principal goal of BITs and FTAs is to promote investment—ISDS provisions are supports, not the main show. Given their principal objective, what does empirical research show about the success of BITs and FTAs in promoting investment?[4]

Several studies find that BITs do increase direct investment.[5] They also identify factors that determine when BITs are more or less effective at promoting FDI. In particular, BITs are most useful when they supplement weak domestic legal institutions in the host country (Busse, Nunnenkamp, and Roy 2010). Axel Berger et al. (2010) focused on transition countries in Central and Eastern Europe and concluded that BITs attracted FDI when national reputations were in doubt immediately after the Cold War regimes collapsed. Peter Egger and Valeria Merlo (2007) used firm-level data for German multinationals and found that the presence of a BIT increased the number of multinational firms that were active in a particular host country, as well as the amount of FDI per firm. BITs also have been shown to improve foreign investor perceptions of the property rights environment (Rose-Ackerman and Tobin 2011, UNCTAD 2009).

Investment experts commonly believe that ISDS provisions are crucial for establishing the credibility and effectiveness of BITs when one of the partners is a developing country.[6] On the other hand, a study of the potential benefits to the United Kingdom from including ISDS provisions in an agreement with the United States suggested that the benefits would be modest since "the US government assesses the UK as a very safe place to invest" (Skovgaard Poulsen, Bonnitcha, and Yackee 2013). Generalizing from that study, ISDS systems seem less useful for investment between advanced countries. The rub is that, in an agreement that covers both advanced and developing countries, such as the TPP, it would be invidious to limit ISDS provisions to disputes involving the developing-country members.

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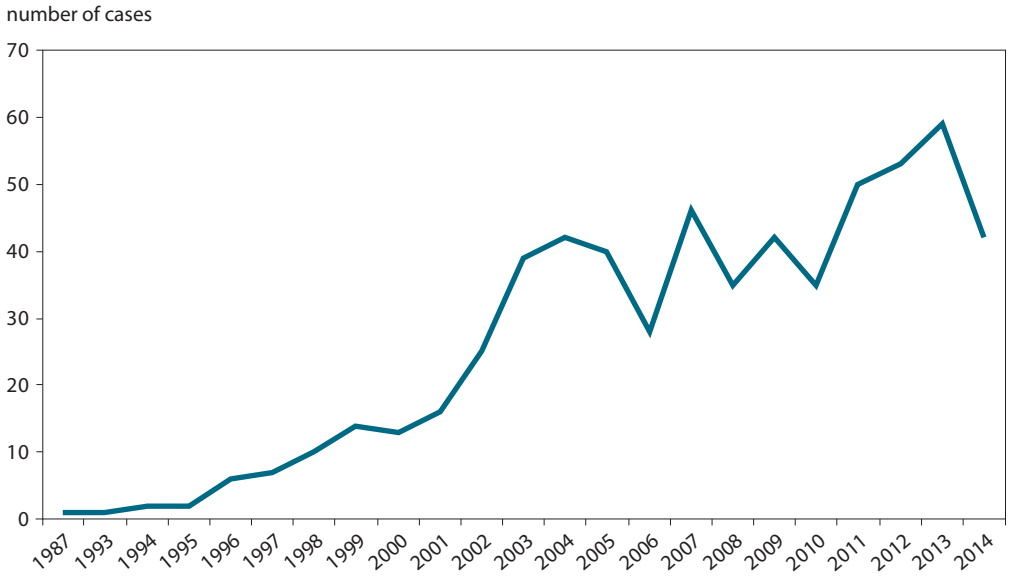
3. An exception is the US-Australia FTA, which did not include ISDS provisions. This omission was at the insistence of Australian officials and based on the "recognition of the Parties' open economic environments and shared legal traditions, and the confidence of investors in the fairness and integrity of their respective legal systems." However, Australia has included ISDS provisions in its other FTAs with China, Korea, Australia, Thailand, Singapore, ASEAN, and now TPP. See "Australia-United States FTA–Guide to the Agreement," Australia Department of Foreign Affairs and Trade, March 1, 2014 (accessed on November 10, 2015).
4. Ample empirical research shows that strong FTAs boost trade between the partners above baseline levels. See, for example, Hufbauer and Schott (2009).
5. For example, see Egger and Merlo (2007), Egger and Pfaffermyar (2004), Rose-Ackerman and Tobin (2009, 2011), Busse, Nunnenkamp, and Roy (2010), Neumayer and Spess (2005), and Haftel (2010). A blog post by Lindsay Oldenski summarizes this literature; see "What Do the Data Say About the Relationship between Investor-State Dispute Settlement Provisions and FDI," March 11, 2015, Trade and Investment Policy Watch, Peterson Institute for International Economics.
6. See, for example, Wälde (2005) and Allee and Peinhardt (2010). However, a BIT, even with ISDS provisions, cannot completely compensate for an extremely weak investment environment (see Rose-Ackerman and Tobin 2009, 2011).

Figure 1 Number of investor-state dispute settlement (ISDS) cases, 1987–2014



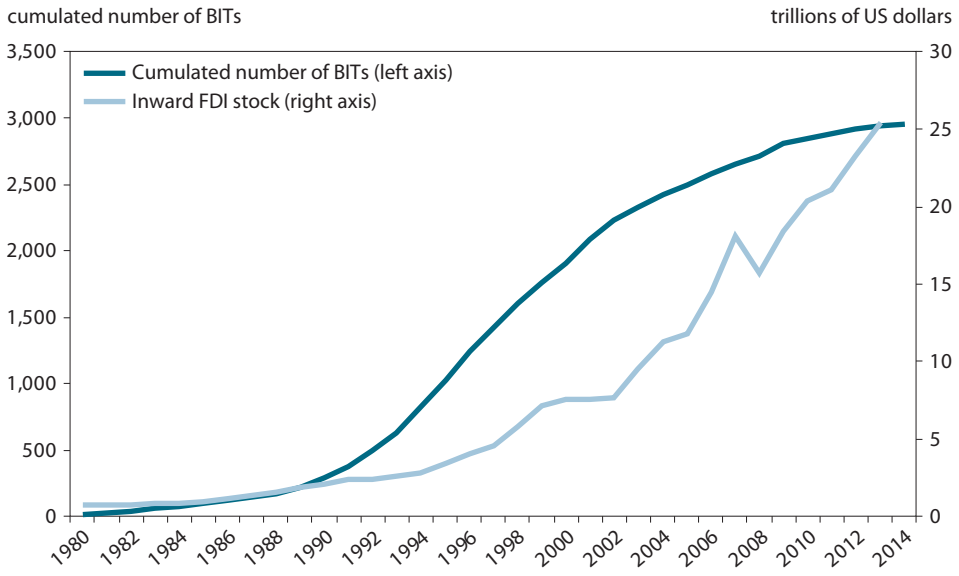
Source: UNCTAD database of ISDS, http://unctad.org/en/Pages/DIAE/ISDS.aspx.

Figure 1 shows that the number of ISDS cases worldwide has steadily grown. This rise, however, appears to track the expansion of FDI and overall growth in the number of BITs in force (figure 2). Critics point to the growing number of ISDS cases as evidence of a "corporate takeover of sovereignty." A more plausible explanation is that the rapid expansion of FDI creates more opportunities for friction between firms and states, and the growing number of ISDS cases simply tracks a world economy in which BITs and FTAs are designed both to entice FDI and to ensure fair play thereafter.

Arbitration procedures were standardized in 1966, when the World Bank created the International Center for the Settlement of Investment Disputes (ICSID) as a neutral forum to handle ISDS claims. Similar fora are based in London, Paris, and Stockholm, but ICSID oversees the vast majority of claims. To date, ICSID has handled almost 500 cases (ICSID 2015). Of these, 36 percent were settled between the parties before going to arbitration. The arbitrators declined to hear 16 percent of claims for want of jurisdiction. They dismissed 19 percent of claims for lack of merit. Only in 29 percent of cases did the arbitrators uphold some or all of the business claims. According to UNCTAD's *World Investment Report 2015* there were only 42 known ISDS cases in 2014, down from a high point of 59 in 2013 (see figure 1). Globally, as the characteristics of the caseload suggest (settlements, dismissal, etc.), the ISDS system has provided an effective forum for governments and corporations to settle their disputes in a timely manner, without getting bogged down in local courts, which are often clogged, sometimes incompetent, and might well apply very different substantive standards to similar claims.

The United States has been a leading proponent of the ISDS system for resolving investment disputes, alongside the World Trade Organization (WTO) system for resolving trade disputes, precisely because the United States has been able to sell the virtues of its legal principles to other countries. ISDS arbitration and WTO arbitration are not alien concepts; they are part of the broader US answer to the demands of 21st century globalization. Otherwise diplomats would spend a much larger fraction of their time in the political resolution of investment and trade disputes. Global commerce requires global rules consistently applied, and ISDS

Figure 2 Global inward foreign direct investment stock and investment treaties, 1980–2014



BITs = bilateral investment treaties

Sources: FDI data from UNCTAD Statistics, http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx; number of BITs from UNCTAD International Investment Agreements Navigator, http://investmentpolicyhub.unctad.org/IIA.

is part of the needed structure. To be sure, that does not mean the system should not be improved upon where warranted, such as in its transparency and review procedures.

Far from a record of MNCs trampling sovereign states, firms have won less than one-third of the cases resolved by the ISDS process.[7] Over past decades, only 13 ISDS cases have been brought against the United States. And the United States has not lost a single case. Why? Because the United States does not expropriate private property without compensation nor does it enact arbitrary or discriminatory laws against foreign firms. The *World Investment Report 2015* highlights that, to date, US firms have brought more cases against foreign states than any other country, some 124 cases by the end of 2014 (UNCTAD 2015). Argentina, with 56 cases brought against it, takes the honor of the most frequent respondent, reflecting of course Argentina's fast and loose behavior towards foreign investors.

MISLEADING CHARGES AND LEGITIMATE COMPLAINTS

Contrary to what the critics imply, American taxpayers have not had to cough up billions or even millions of dollars in ISDS damages. They have not had to cough up anything. Lacking examples from actual cases in the US context, critics resort to hypothetical scenarios that find no basis in 50 years of ISDS history. Critics rely

7. High-profile cases cited as cause for concern about ISDS often refer to companies that allegedly seek to roll back regulations. Important examples include the Philip Morris–Australia plain-packaging tobacco case (see "Tobacco plain packaging-investor-state arbitration," Australian Government, for more detail) and the Vattenfall-Germany nuclear energy case (see Bernasconi-Osterwalder and Hoffman 2012), among others. But the fact that such cases have been launched says nothing about the utility of the ISDS system. Moreover, the cited cases and most others in contention have not yet been fully decided; it makes no sense to condemn the ISDS system for imagined failures. See table 1 for a description of these "notorious" cases.

on four misleading charges to reject the ISDS system. However, in addition to these charges, they have two legitimate complaints.

Arbitrators Lack Integrity. Critics argue that arbitrators serve corporate clients one day and decide ISDS cases the next. They neglect to mention that arbitrators are selected from a large panel of qualified attorneys and that each side has several opportunities to remove candidates with a potential bias. Critics overlook the oath of impartiality, the arbitrator's commitment to decide cases strictly in accordance with the law and the facts. Critics are unable to cite a single case of corrupt or inappropriate behavior by an ISDS arbitration panel. The idea floated by the European Union of a standing investment court has good points, as discussed in the next section, but past improprieties are not among the justifications. TPP Article 9.21, Selection of Arbitrators, restates the requisite impartiality and integrity of arbitrators.

Only MNCs Use ISDS. But that is hardly a surprise. An "investor-state dispute settlement" procedure by definition involves investors—the firms at risk of expropriation or discrimination by foreign governments. Also by definition, international firms tend to be big firms: In the world of FDI fewer than 5000 MNCs probably control more than 80 percent of the assets of foreign affiliates, now totaling approximately $100 trillion. There is ample precedent for creating special courts for special purposes, in this case investors, because expertise is required to make sensible decisions. Thus the US Court of Appeals for the Federal Circuit has exclusive jurisdiction over patent appeals, and the WTO's Appellate Body decides government-to-government disputes over trade rights.

Critics may have a legitimate complaint that kindred dispute forums should be created for nongovernmental parties—e.g., labor unions or environmental organizations—to bring complaints against violations of other chapters in trade agreements. But that's not an argument for denying MNCs the avenue of ISDS relief.

National Courts Should Decide Disputes. It is true that some countries have honest, speedy, and competent judicial systems, but many others do not. Moreover, the international law of investor rights is a complex field, and in many respects it differs from laws applied by domestic courts. In particular, international law has higher standards in terms of fair compensation, and ISDS procedures work faster than many national courts. Critics respond that MNCs should just take a gamble on national court systems and forget about ISDS. This ignores two basic facts of international investment life. First, many developing countries want ISDS provisions in their BITs and FTAs in order to make themselves more attractive to MNCs. Second, when countries change political course and decide to expropriate the property of American investors or discriminate against US firms, it is not just Wall Street that loses. The "investor class" includes Harvard's endowment, major public employee pension funds like CalPERS, and ordinary Americans with retirement savings managed by mutual funds. Thus ISDS is needed to protect the pocketbooks of a great many American families and institutions.

ISDS Decisions Overturn Local Laws. Critics often cite cases against Egypt, Germany, and the Czech Republic as examples where claimants seek to overturn local labor, health, and environmental laws, largely based on claims of discriminatory treatment and "indirect expropriation." But in these and other "notorious" cases, critics are running ahead of decisions (see table 1 for summaries). To take just one example, the Veolia firm has been accused of repealing a higher minimum wage in Egypt. That case is still pending, and even if the arbitrators rule in favor of Veolia, the result will be a damage award, not a repeal of Egypt's minimum wage law.

Most of the contentious cases, like Veolia's claim, await judgment. Corporate claims may be dismissed or settled, or the responding countries may well prevail. Americans know very well that lawyers often seek huge damages to create a splash or prompt a settlement, even when the facts are weak. Just look at claims in the 13 ISDS cases brought against the United States where the claimants lost, or the 175 cases dismissed worldwide. Since NAFTA was ratified, ISDS provisions have been amended to ward off frivolous claims against environmental, health, and safety regulations.

Table 1 "Notorious" ISDS cases

Case	Summary
	Pending cases
Renco v. Peru	In 2010, the Renco Group launched a $800 million case against Peru under the US-Peru FTA. It claimed that Peru failed to provide "fair and equitable treatment" when it did not approve an extension to a pollution abatement plan for a metal smelter in La Oroya, Peru.
Philip Morris v. Australia; Philip Morris v. Uruguay	In 2011, Philip Morris International claimed that the company was subject to an unconstitutional acquisition of property due to public health measures that allegedly violated its intellectual property rights via a requirement to cover the logo on its tobacco products. In 2012, Australia's Highest Court ruled against Philip Morris claiming the labels qualify as public health measures. In 2014, a tribunal bifurcated the proceedings and is separately considering jurisdictional issues and the merits. Meanwhile, the case with Uruguay is still pending.
Vattenfall v. Germany II	In 2012, Vattenfall, a Swedish energy firm, launched a case under the EU's Energy Charter Treaty against Germany, due to Germany's decision to phase out nuclear power. The final ruling is still pending. This is Vattenfall's second investor-state dispute settlement case (see below). Vattenfall is seeking nearly $5 billion in the claim.
Occidental Petroleum v. Ecuador	In 2012, a tribunal ruled on a long-running case between Ecuador and Occidental Petroleum Corporation under the US-Ecuador BIT. The ruling ordered Ecuador to pay the company $2.3 billion due to its expropriation of all of the firm's office and property (including oil fields). Ecuador has filed a request for annulment of the award, and a decision on annulment is pending.
Churchill Mining v. Indonesia	Since 2012, Churchill has been seeking damages of not less than $1.05 billion to settle a long-running dispute over Indonesia's ability to regulate locally issued permits for mining rights.
Veolia v. Egypt	In 2012, Veolia Propreté launched a case against Egypt under the France-Egypt BIT. The company is seeking at least $110 million based on disputes related to the minimum wage for employees affecting the terms of a 15-year contract for waste management in the city of Alexandria.
Eli Lilly v. Canada	In 2013, Eli Lilly, a US pharmaceutical firm, launched a case seeking $481 million for Canada's denial of patents for Strattera and Zyprexa, drugs used to treat attention deficit hyperactivity disorder, schizophrenia, and bipolar disorder.
Lone Pine v. Canada	In 2013, Lone Pine Resources launched a $241 million claim under NAFTA against Canada for its "arbitrary, capricious, and illegal revocation of the Enterprise's valuable right to mine for oil and gas under [Quebec's] Saint Lawrence River."
Infinito Gold v. Costa Rica	In 2014, Infinito Gold claimed that Costa Rica violated the Costa Rica-Canada BIT when a domestic court revoked its mining concession in San Carlos, Alajuela in 2010. The company is seeking $94 million in compensation for expenditures it incurred to build and develop the gold mine.
	Decided and settled cases
Ethyl v. Canada	In 1997, Ethyl launched a NAFTA claim against Canada when it instituted a ban on imports of the gasoline additive MMT for use in unleaded gasoline. Canada, which was facing numerous suits for the ban, settled the claim and agreed to pay the company $13 million in damages and legal fees.
S.D. Myers v. Canada	In 1998, S.D. Myers launched a NAFTA claim against Canada's temporary ban on the export of a hazardous waste, polychlorinated biphenyls (PCB). The tribunal ordered Canada to pay the company $5.6 million.
Metalclad v. Mexico	In 1999, Metalclad Corporation launched a NAFTA claim against Mexico when Guadalcazar, a Mexican municipality, failed to grant a construction permit for expansion of a toxic waste facility. The tribunal awarded the company $16.2 million.
Saluka v. Czech Republic	In 2001, Saluka claimed that the Czech Republic violated rights under the Netherlands-Czech Republic BIT. The tribunal decided that the Czech Republic violated the "fair and equitable" treatment provision and acted unfairly when it granted greater aid to banks in which the government was a major stakeholder during an economic downturn. The tribunal ordered the government to pay Saluka $236 million.

(table continues)

Table 1 "Notorious" ISDS cases *(continued)*

Case	Summary
	Decided and settled cases
CMS Gas v. Argentina	In 2001, CMS Gas Transmission Company filed a claim against Argentina under the US-Argentina BIT when the state attempted to alter the company's contract related to tariff rates on electricity. These actions were part of Argentina's response to a 2001 economic meltdown. The tribunal ruled in CMS's favor; subsequently Blue Ridge Investment purchased the rights from CMS to collect on the award.
Eureko v. Poland	In 2003, Eureko filed a claim against Poland under the Netherlands-Poland BIT after the county failed to honor an agreement to complete the insurance company's privatization process. The two parties settled the case for an undisclosed amount. Reports estimate that Poland paid $1.6 billion to settle.
RDC v. Guatemala	In 2007, Railroad Development Corporation (RDC) launched a claim under the CAFTA-DR after the government of Guatemala decided the RDC's use of state-owned resources to operate the country's railways under a 50-year contract was lesivo (harmful to the country's interest). This decision ultimately forced RDC to stop operating the railway. While the tribunal dismissed allegations of violation of national treatment and expropriation, it did find a violation of the "minimum standard of treatment." The company was awarded $18.6 million.
ExxonMobil and Murphy Oil v. Canada	In 2007, ExxonMobil and Murphy Oil filed a NAFTA claim arguing that Newfoundland and Labrador had violated the agreement by imposing retroactive research-spending requirements on its offshore oil producers. ExxonMobil and Murphy Oil were awarded $13.9 million and $3.4 million, respectively.
TCW v. Dominican Republic	In 2007, TCW Group claimed that the Dominican Republic violated CAFTA-DR by failing to compensate the company for negotiated tariffs rates and subsidies. The government decided to settle and agreed to pay TCW $26.5 million.
Chevron v. Ecuador	In 2006, Chevron launched a case against Ecuador claiming it had failed to provide an "effective means of asserting claims and enforcing rights" under the US-Ecuador BIT. This case is separate from the litigation from the Lago Agrio oil fields, but Chevron and Ecuador are contesting several large legal battles, which remain unresolved and span several jurisdictions. While the ISDS tribunal awarded Chevron approximately $700 million in this case, it is unclear whether Ecuador will honor any international arbitration rulings against it.
Bilcon of Delaware et al. v. Canada	In 2008, Bilcon launched a case under NAFTA claiming that the company was subject to an excessive environmental assessment in an "arbitrary and unfair manner," after a report by a Canadian Joint Review Panel halted Bilcon's efforts to operate a quarry in Nova Scotia. In particular, Bilcon claimed that the panel's proceedings were inconsistent with Canadian law and that similar projects undertaken by Canadian firms were not subject to such scrutiny. The tribunal ruled that Canadian action breached its "minimum standard of treatment" and national treatment obligations. While the case has been decided, a decision on the amount of compensation is pending—investors are seeking $300 million.
Vattenfall v. Germany I	In 2009, Vattenfall launched its first claim against Germany under the EU's Energy Charter Treaty when a local municipality delayed the issuance of permits for a coal-fired power plant and issued new environmental standards, making the investment "unviable." The company claimed the actions amounted to an expropriation and violated the "fair and equitable treatment" principle. The German government reached an undisclosed settlement with Vattenfall, which modified the new environmental standards.
Abengoa v. Mexico	In 2010, Abengoa filed a claim under the Mexico-Spain BIT arguing that Zimapán's denial of an operating license for a hazardous waste facility was a violation of the "minimum standard of treatment." The tribunal ordered Mexico to pay Abengoa more than $40 million, plus interest.

ISDS = investor-state dispute settlement; FTA = free trade agreement; BIT = bilateral investment treaty

Sources: Government of Canada, "NAFTA - Chapter 11 - Investment," www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/disp-diff/mobil.aspx?lang=eng; "Abengoa S.A. y COFIDES S.A. v. United Mexican States, ICSID Case No. ARB(AF)/09/2," www.italaw.com/cases/1871; Lawrence Herman, "Canada Loses Another Investment Dispute Under NAFTA," http://hermancorp.net/2015/03/23/canada-looses-another-investment-dispute-under-nafta/; Public Citizen, "Case Studies: Investor-State Attacks on Public Interest Policies," www.citizen.org/documents/egregious-investor-state-attacks-case-studies.pdf; Marek Strzelecki and Marynia Kruk, "Poland and Eureko Settle Dispute," Wall Street Journal, October 5, 2009, www.wsj.com/articles/SB125469684214462753; US State Department, "Railroad Development Corp. v. Republic of Guatemala," www.state.gov/s/l/cafta15/c33261.htm.

KORUS, which has been widely acknowledged as a baseline template for the TPP, since it includes the highest standards of US past practice, sheds light on this issue. Annex 11-B to the investment chapter declares:

> 3. (b) Except in rare circumstances, such as, for example, when an action or a series of actions is extremely severe or disproportionate in light of its purpose or effect, non-discriminatory regulatory actions by a Party that are designed and applied to protect legitimate public welfare objectives, such as public health, safety, the environment, and real estate price stabilization (through, for example, measures to improve the housing conditions for low-income households), do not constitute indirect expropriations.(1)
>
> Note (1): For greater certainty, the list of "legitimate public welfare objectives" in subparagraph (b) is not exhaustive.

The Korea-Australia and Korea-Canada FTAs have identical ISDS provisions to KORUS, but they additionally state that government decisions to refuse investments under Australia's Foreign Investment Policy and the Investment Canada Act are also exempt from ISDS litigation.[8] The Korea-Vietnam FTA has largely the same ISDS provisions as KORUS. Thus Korea and its four FTA partners preserved their sovereign right to enact and enforce appropriate regulations. Only when, in rare circumstances, regulations discriminate in a severe or disproportionate way against foreign investors can they be challenged.

TPP Article 9.15, Investment and Environmental, Health and other Regulatory Objectives, coupled with Annex 9-11, essentially restate these limitations on ISDS:

> Nothing in this Chapter shall be construed to prevent a Party from adopting, maintaining or enforcing any measure otherwise consistent with this Chapter that it considers appropriate to ensure that investment activity in its territory is undertaken in a mannerconsistent to environmental, health or other regulatory objectives.

Secret Proceedings. Critics have pointed to a lack of transparency in ISDS hearings. On this matter, there is room for criticism. In many legal disputes, some degree of confidentially is required—particularly when trade secrets are involved. The track record of ISDS cases shows, however, that secrecy has gone too far in many of the decided cases. An UNCTAD report recommending reform to ISDS proceedings points out that, of the 85 cases heard before the UN's Permanent Court of Arbitration only 18 were made public (see UNCTAD 2013). ICSID, to its credit, includes a public registry of its cases, though settlements are often undisclosed and other cases can remain confidential if both disputing parties agree. In two general categories the lack of transparency seems especially counterproductive. The first category includes cases where the dispute clearly concerns the public interest—such as Australia's battle with tobacco labeling requirements. The second category includes cases in which public finances could be severely affected because of the size of the claim.

TPP negotiators heeded this criticism. Article 9.23, Transparency of Arbitral Proceedings, calls for open hearings and public disclosure of all documents, with a narrow exception for "protected information" (e.g., trade secrets). Three of the four Korean FTAs also address the secrecy criticism. ISDS provisions under KORUS state that hearings and documents must be open to the public. Further, nondisputing third parties can request admission to hearings. ISDS provisions do allow disputing parties to hold closed hearings and to preserve confidential information but only when circumstances require—the same as for court proceedings in many countries. The Korea-Canada FTA adopts an identical transparency text. The Korea-Australia FTA

8. Australia's Foreign Investment Policy requires the government to review every foreign investment proposal against a national interest test; for the full text, see www.firb.gov.au/content/policy.asp. The Investment Canada Act also requires the government to review foreign investments that could threaten national security; for the full text, see http://laws-lois.justice.gc.ca/eng/acts/I-21.8/page-1.html.

goes further and requires that both parties consider application of the United Nations Commission on International Trade Law (UNCITRAL) Rules on Transparency in future cases.[4] While the Korea-Vietnam FTA does not ensure transparency of arbitral proceedings, TPP Article 9.23 requires transparency in arbitral hearings between TPP members, if launched under TPP Chapter 9.

No Appellate Review. Both opponents and supporters of ISDS are concerned about the absence of appellate review in ISDS cases. This likely reflects the slow evolution of ISDS case management within the international economic system. A major current shortcoming is that, under the ICSID Convention, appellate reviews are limited to "irregular constitution or corruption of the arbitral tribunal, serious departure from a fundamental rule of procedure, failure to state reasons for the award or a manifest excess of power" (UNCTAD 2015, 150). These grounds importantly exclude instances when arbiters make errors of law in their rulings or make awards that are not supported by the facts of the case. Unlike criticisms about undue secrecy in ISDS cases, which can be answered with relatively simple fixes, creating an effective appellate review process is complicated, though still a worthy endeavor.

Recognizing this ISDS concern, KORUS attached Annex 11-D, "Possibility of a Bilateral Appellate Mechanism," which states that Korea and the United States will consider the establishment of a bilateral appellate body to review decisions made in arbitrations within three years after the agreement was enacted.[9] The Korea-Australia and Korea-Canada FTAs share this same understanding, but not the Korea-Vietnam FTA. As noted, the TPP has no provision for appellate review.

The European Union has recently tabled a creative proposal in the context of the Transatlantic Trade and Investment Partnership (TTIP) (discussed in the next section). Unfortunately, TPP Chapter 9 makes no provision for appellate review. One reason is that the United States is so happy with its win-loss record in ISDS cases (13-0) that it did not want to risk the possibility of adverse appellate decisions.

EUROPEAN PROPOSAL: AN INVESTMENT COURT?

Prior to the TPP, the European Union took the lead on reforming ISDS mechanisms in the wake of intensive public debate. The EU trade commissioner recently tabled a proposal that outlines recent improvements to ISDS mechanisms adopted in EU bilateral trade agreements, proposes a single international court, and suggests a path forward for the TTIP negotiations (see EC 2015).

The European Union concluded trade negotiations with both Canada (Comprehensive Economic and Trade Agreement or CETA) and with Singapore (EU-Singapore FTA) in 2014. These agreements incorporated several major improvements in their ISDS mechanisms, which now find parallels in TPP Chapter 9.

- The "right to regulate" for legitimate policy objectives was made explicit. These objectives may include "public health, safety, environment, public morals, and the promotion and protection of cultural diversity." The TPP contains parallel language.
- Clearer language has been added on key concepts—such as fair and equitable treatment and indirect expropriation. The TPP does likewise.
- "Forum shopping" is explicitly prohibited. Moreover, UNCITRAL rules of transparency have been adopted, which makes all documents publically available and opens hearings to the public. The TPP does likewise.[10]
- States are able to issue binding interpretations of provisions which subsequent arbitrators must abide. The TPP allows amendments if all members agree in writing.
- The "loser pays principle" has been adopted, which requires investors cover all the legal costs in lost cases. The TPP gives arbitrators the power to allocate costs.

9. As of June 2015, the KORUS Implementation Committee has not released its discussion report.
10. Existing ISDS provisions in US agreements with FTA and BIT partners, such as Mexico, Canada, and Korea, will remain available as alternatives to TPP Chapter 9 for corporate complainants that choose to use those forums.

These provisions address several complaints and create a better framework for dealing with investment disputes. The EU proposal for ISDS reform acknowledges, however, that further improvements are needed, specifically the right to regulate, the appellate mechanism, and the relationship between ISDS and domestic courts. Of these, the appellate mechanism is arguably most in need of reform. As discussed above, ISDS cases are one of the few—if not only—category of cases for which no substantive appeals process exists. Rulings may be "annulled" or "set aside" for improprieties, but decisions are not reviewed for their adherence to the law and the facts. The EU proposal suggests using the WTO Appellate Body as a model, though it acknowledges the political difficulty of creating an appeals court. Unfortunately, as revealed in TPP negotiations, US officials have expressed skepticism towards this proposal. Despite US reluctance, these proposals should, and likely will, serve as a platform for the ongoing TTIP negotiations.

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