Chapter 4
Manufactured Goods and Natural Resource and Energy Products[365]

Introduction

The TPP Agreement is likely to have a limited impact on U.S. production and trade of manufactured goods and natural resource and energy (MNRE) products. The U.S. manufacturing sector is already more liberalized than other sectors, such as agriculture and services, and duties are generally low. The value of dutiable U.S. MNRE imports from TPP partners in comparison to the size of total U.S. trade and production is small. The Commission expects that U.S. production in all sectors modeled will increase on an absolute basis over time. Model results indicate that TPP would result in an increase in exports of $15.2 billion (0.9 percent) above the projected 2032 baseline, and an increase in imports of $39.2 billion (1.1 percent) above the baseline. Output would be $10.8 billion (0.1 percent) less than the projected 2032 baseline and employment 0.2 percent less. Given the gains projected in many of the agricultural and services industry sectors, this model feature results in the already more liberalized U.S. manufacturing sector generally projected to post less output growth with TPP than would be expected in its absence. Some individual industries (e.g., titanium metal) may experience more adverse impacts from TPP than other MNRE sectors, while others such as passenger vehicles may benefit from TPP.

This chapter will first provide a brief overview of U.S. trade and market access provisions. It will then examine in more depth five sectors for which there will be significant U.S. trade liberalization with the full implementation of TPP: (1) passenger vehicles; (2) textiles and apparel; (3) footwear; (4) chemicals; and (5) titanium metal. Finally, it briefly discusses several sectors that do not have significant U.S. tariffs, but for which TPP might have substantial implications.

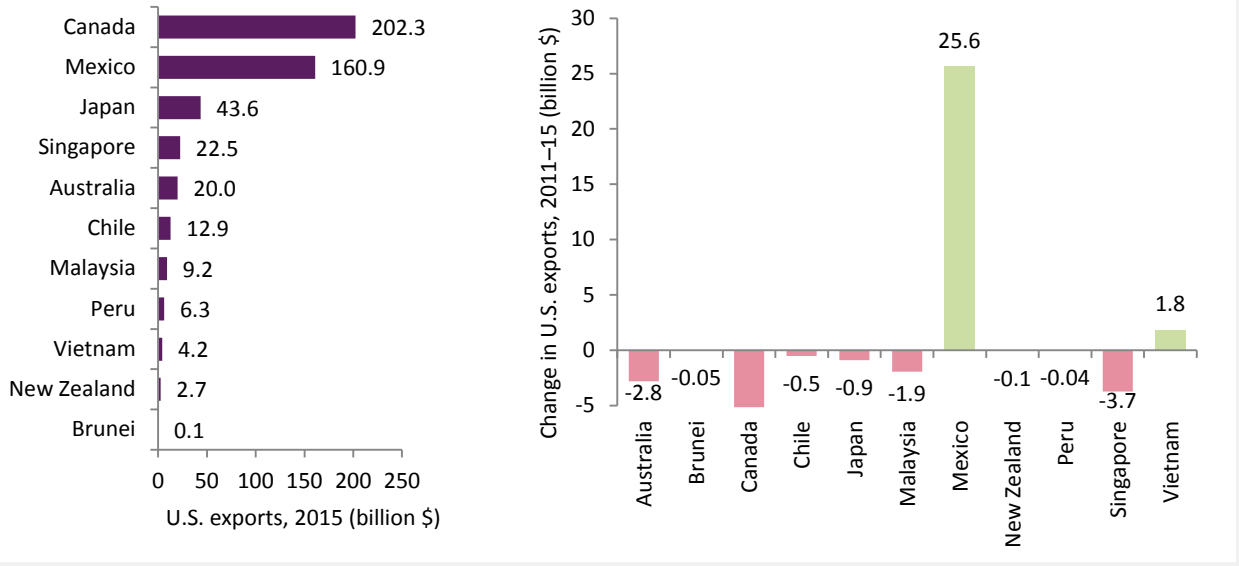
[365] This chapter covers all U.S. trade in goods except agriculture, fish, and fish products (covered in chapter 3). In addition, while computers and electronic products are covered in this chapter, e-commerce and computer services are covered in chapter 5.

Trade Overview

U.S. Exports

U.S. MNRE exports to the 11 other TPP parties increased from $472.4 billion to $525.5 billion (11 percent) during 2011–14, then fell by 8 percent to $484.5 billion in 2015—due, in part, to lower commodity prices. U.S. exports of these products to TPP parties accounted for 44 percent of U.S. exports in 2015. Canada and Mexico were the largest export markets in 2015, accounting for a combined 75 percent of U.S. exports to TPP parties (figure 4.1). Exports increased to two TPP parties, Mexico and Vietnam, during 2011–15.[366]

Figure 4.1: U.S. domestic exports to TPP parties, 2011–15



Source: USITC DataWeb/USDOC (accessed February 17, 2016). Corresponds to appendix table J.13.

The MNRE category can be divided into durable products, nondurable products, and other MNRE products (table 4.1). U.S. exports of durable MNRE products[367] to TPP parties grew by 7 percent during 2011–15, while exports of mining, forestry, and other MNRE products grew by 2 percent. Exports of nondurable goods, on the other hand, fell by 5 percent. In 2015, moreover, U.S. exports in all North American Industry Classification System (NAICS) industry

[366] USITC DataWeb/USDOC (accessed February 17, 2016).
[367] Durable goods are "those that can be stored or inventoried and that have an average life of at least 3 years"; nondurable goods "are all other commodities that can be stored or inventoried." Seskin and Parker, "A Guide to the NIPA's," March 1998.

subsectors[368] except transportation equipment declined from 2014 levels.[369] The decrease in export values in 2015 was largely a result of strong dollars and lower prices due to the drop in oil and natural gas prices, which contributed to lower prices for downstream products such as petroleum products and chemicals.[370]

The leading export industry subsectors in 2015 were transportation equipment, chemicals, machinery, computer and electronic products, and petroleum and coal products.[371] The composition of U.S. exports to TPP members reflects the overall composition of U.S. exports and production.

Table 4.1: U.S. MNRE domestic exports, TPP parties, 2011–15, million dollars

	2011	2012	2013	2014	2015
Durable MNRE products					
Computer and electronic products	46,640	47,273	46,701	46,538	45,621
Electrical equipment, appliances, and component	18,303	20,090	20,560	25,834	24,692
Fabricated metal products, nesoi	19,848	21,883	22,695	24,024	22,681
Furniture and fixtures	2,883	3,335	3,319	3,335	3,105
Machinery, except electrical	60,989	67,436	61,751	60,368	55,587
Miscellaneous manufactured commodities	15,153	16,104	16,118	16,202	15,576
Nonmetallic mineral products	5,175	5,317	5,271	5,658	5,525
Primary metal manufacturing	26,107	25,939	25,637	26,199	22,461
Transportation equipment	93,828	106,135	107,936	111,067	113,404
Wood products	3,181	3,387	3,428	3,573	3,260
Subtotal durable MNRE products	292,107	316,898	313,418	322,799	311,910
Nondurable MNRE products					
Apparel and accessories	1,657	1,727	1,750	1,676	1,532
Chemicals	67,279	70,034	69,662	70,352	65,545
Leather and allied products	1,277	1,335	1,595	1,580	1,471
Paper	12,610	13,030	13,316	12,646	12,466
Petroleum and coal products	43,159	46,159	48,571	46,682	33,955
Plastics and rubber products	17,444	19,270	19,666	21,213	20,275
Printed matter and related products, nesoi	3,924	3,777	3,643	3,387	3,045
Textile mill products	1,775	1,919	1,969	1,971	1,854
Textiles and fabrics	3,918	4,090	4,339	4,638	4,502
Other	3	2	2	2	2
Subtotal nondurable MNRE products	153,047	161,344	164,514	164,146	144,646

[368] NAICS industry subsectors are NAICS 3-digit numbers (e.g., 334: computer and electronic product manufacturing).
[369] USITC DataWeb/USDOC (accessed February 17, 2016).
[370] For many products, the quantity of exports increased in 2015 despite the drop in the value of exports. USITC DataWeb/USDOC (accessed February 17, 2016); Federal Reserve Bank of St. Louis website, "Trade Weighted U.S. Dollar Index: Major Currencies," https://research.stlouisfed.org/fred2/series/DTWEXM (accessed February 12, 2016); Hong, Musso, and Simons, "Oil-Price Shocks," May 2015; King, "Oil Slump," February 9, 2016; USDOL, "PPI Detailed Report," January 2016, 42–43.
[371] USITC DataWeb/USDOC (accessed February 10, 2016).

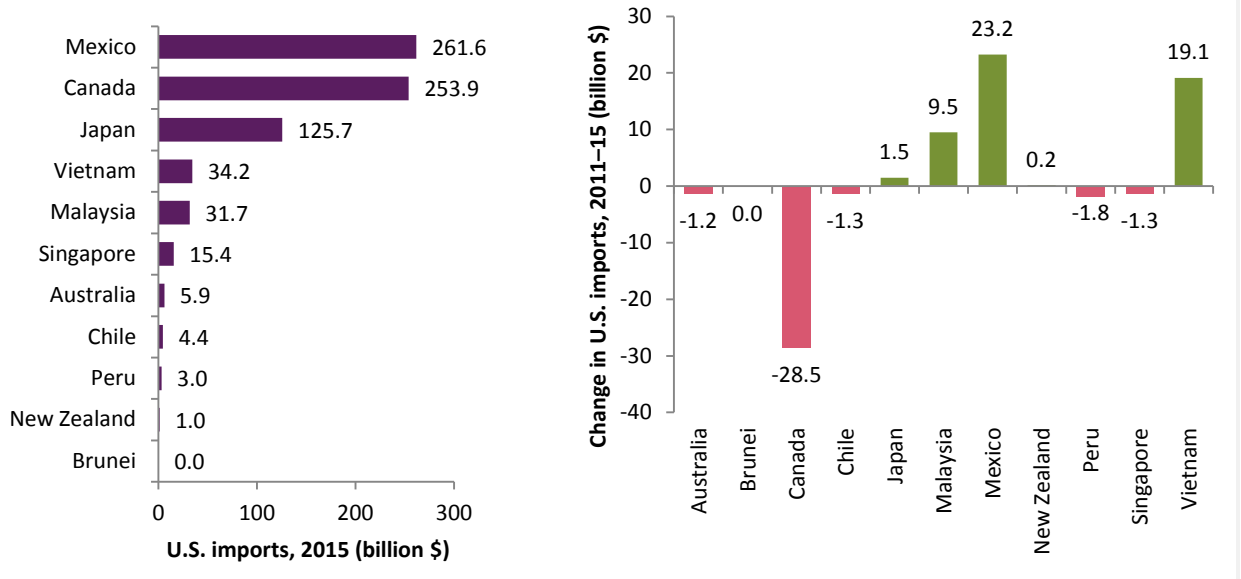
	2011	2012	2013	2014	2015
Mining, forestry, and other MNRE products					
Forestry products, nesoi	779	815	910	903	834
Minerals and ores	7,285	6,745	6,768	7,568	6,620
Oil and gas	9,796	9,177	13,731	22,962	14,638
Other MNRE products	9,393	7,849	6,772	7,169	5,835
Subtotal mining, forestry, and other MNRE products	27,253	24,586	28,181	38,603	27,927
Total MNRE products	472,408	502,828	506,112	525,548	484,483

Source: USITC DataWeb/USDOC (accessed February 10, 2016).
Notes: Nondurable goods exclude most food, beverage, and tobacco products, which are included in the agriculture chapter. Other MNRE products include waste and scrap, used goods, goods returned to Canada, and special import provisions. Totals may not sum due to rounding. Nesoi = not elsewhere specified or included.

U.S. Imports

U.S. imports from TPP member countries increased from $717.5 billion to $736.9 billion (3 percent) during 2011–15, though 2015 imports were down 6 percent from the 2014 total of $783.0 billion. The 2015 decline was primarily a result of a drop in the value of U.S. oil and gas imports, which fell by $55.7 billion (46 percent). The three largest TPP sources of U.S. imports in 2015 were Mexico (35 percent), Canada (34 percent), and Japan (17 percent) (figure 4.2). However, imports from Vietnam (up 127 percent), Malaysia (up 43 percent), New Zealand (up 18 percent), and Mexico (up 10 percent) grew the most rapidly during 2011–15.[372]

Figure 4.2: U.S. imports for consumption from TPP partners, 2011–15



Source: USITC DataWeb/USDOC (accessed February 17, 2016). Corresponds to appendix table J.14.

[372] USITC DataWeb/USDOC (accessed February 17, 2016).

In 2015, 19 percent of U.S. imports from TPP members were dutiable, up from 16 percent in 2011. This reflects an increase in imports from non-FTA partners like Vietnam and Japan as well as an increase in dutiable imports from Canada and Mexico.[373] As a result, the trade-weighted average applied ad valorem duty rate[374] from TPP members increased from 3.6 percent in 2011 to 4.1 percent in 2015 (table 4.2). However, there were wide variations in the trade-weighted average ad valorem duty rates on U.S. imports from TPP members, ranging from 0.6 percent for Canada to 14.6 percent for Vietnam.[375]

Table 4.2: U.S. imports for consumption, dutiable value, and duties collected, TPP parties, 2015

	Customs value (million $)	Dutiable value (million $)	Duties collected (million $)	Trade-weighted average duty rate (percent)
Mexico	261,585.0	10,398.9	332.1	3.2
Canada	253,897.4	30,048.8	168.1	0.6
Japan	125,687.7	75,297.3	2,259.3	3.0
Vietnam	34,164.9	19,075.3	2,784.8	14.6
Malaysia	31,713.1	4,086.0	218.7	5.4
Singapore	15,438.8	836.2	27.5	3.3
Australia	5,882.0	276.4	9.2	3.3
Chile	4,444.8	120.8	3.2	2.7
Peru	3,012.0	230.7	3.1	1.3
New Zealand	1,047.4	231.7	7.5	3.2
Brunei	12.2	11.9	1.2	10.4
Total	736,885.3	140,614.1	5,814.6	4.1

Source: USITC DataWeb/USDOC (accessed February 17, 2016).
Note: Totals may not sum due to rounding. Nesoi = not elsewhere specified or included.

U.S. MNRE imports from TPP partners are dominated by a few products, with transportation equipment and computer and electronic products accounting for a combined 47 percent of imports in 2015 (table 4.3). However, apparel and accessories, transportation equipment (including passenger vehicles), and leather and allied products (including footwear) accounted for a combined 72 percent of duties collected.[376]

[373] A significant portion of the increase in dutiable imports from Canada was oil and gas imports that likely did not meet rules of origin under NAFTA. Association of Corporate Counsel, "Exporting Canadian Oil and Gas: The Challenge of NAFTA Compliance," December 1, 2011.
[374] Duties collected divided by dutiable value.
[375] USITC DataWeb/USDOC (accessed February 10, 2016).
[376] USITC DataWeb/USDOC (accessed February 17, 2016).

Table 4.3: U.S. imports for consumption, dutiable value, and duties collected, TPP parties, 2015

	Customs value (million $)	Dutiable value (million $)	Duties collected (million $)	Trade-weighted average duty rate (percent)
Durable MNRE products				
Transportation equipment	227,812	54,074	1,380	2.6
Computer and electronic products	117,332	6,521	197	3.0
Machinery, except electrical	55,779	9,457	304	3.2
Primary metal manufacturing	37,841	753	44	5.8
Electrical equipment, appliances, and component	36,202	8,692	255	2.9
Fabricated metal products, nesoi	18,955	5,063	198	3.9
Miscellaneous manufactured commodities	18,016	2,068	76	3.7
Furniture and fixtures	10,237	48	3	5.9
Wood products	9,747	237	12	5.2
Nonmetallic mineral products	5,908	791	38	4.8
Subtotal durable MNRE products	537,830	87,705	2,508	2.9
Nondurable MNRE products				
Chemicals	49,996	4,278	223	5.2
Plastics and rubber products	16,644	3,847	155	4.0
Apparel and accessories	16,295	11,351	2,108	18.6
Petroleum and coal products	15,684	1,613	6	0.3
Paper	11,089	135	8	5.8
Leather and allied products	7,619	5,270	698	13.2
Textiles and fabrics	1,925	379	30	7.9
Textile mill products	1,693	524	36	6.9
Printed matter and related products, nesoi	1,608	1	0	4.3
Other	18	0	0	[a]
Subtotal nondurable MNRE products	122,570	27,399	3,264	11.9
Mining, forestry, and other MNRE products				
Oil and gas	66,573	25,426	41	0.2
Minerals and ores	2,829	27	0	0.9
Forestry products, nesoi	213	0	0	a
Other MNRE products	6,870	58	1	2.6
Subtotal mining, forestry, and other MNRE products	76,485	25,510	43	0.2
Total MNRE products	736,885	140,614	5,815	4.1

Source: USITC DataWeb/USDOC (accessed February 17, 2016).

Notes: Nondurable goods exclude most food, beverage, and tobacco products, which are included in the agriculture chapter. Other MNRE products include waste and scrap, used goods, good returned from Canada, and special import provisions. Totals may not sum due to rounding. Nesoi = not elsewhere specified or included.

[a] No dutiable items.

Overview of MNRE Market Access Provisions

The tariff reductions in TPP would likely have the strongest impact on U.S. trade in MNRE products, but a number of nontariff measures—such as provisions on national treatment, rules of origin, and remanufactured goods—would also have trade implications. This section covers provisions on national treatment and market access (TPP, Chapter 2) and rules of origin (TPP, Chapter 3). Other provisions in the agreement related to goods trade are covered in chapter 6 of this report, including customs administration and trade facilitation, technical barriers to trade, state-owned enterprises, government procurement, labor, environmental issues, investment, intellectual property protection, and regulatory coherence.

National Treatment, Market Access, and Rules of Origin

U.S. Tariff Commitments

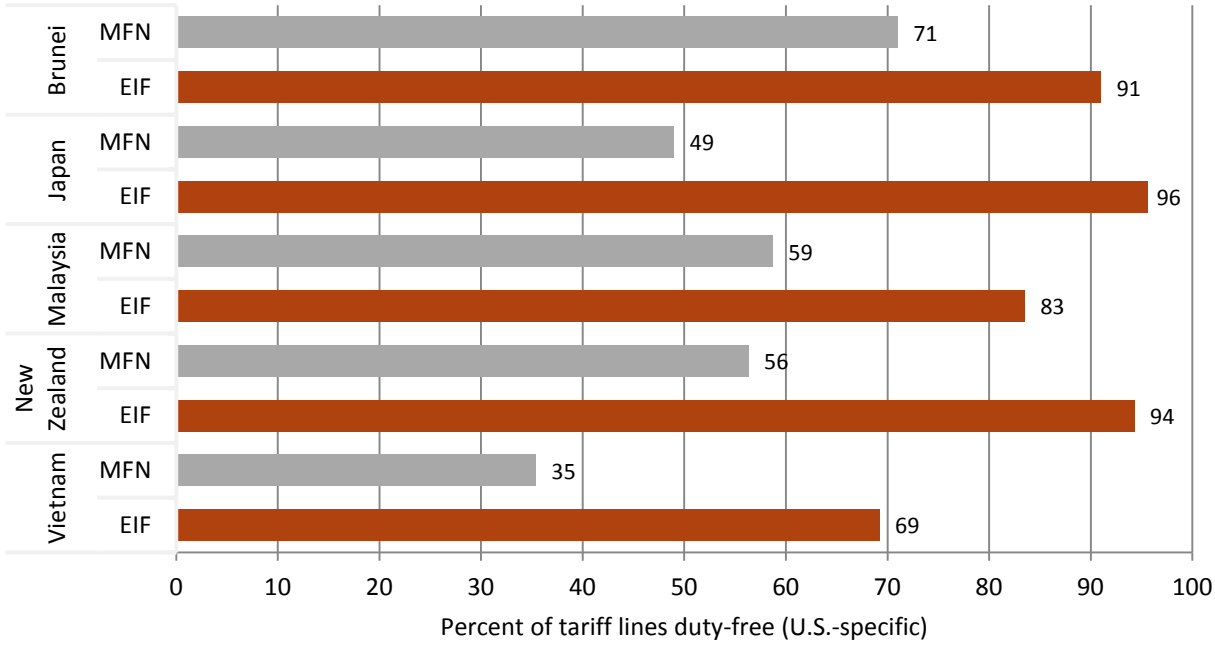
The United States would eliminate duties on most imports of MNRE products as soon as the agreement enters into force, with the remaining tariffs eliminated over time (Annex 2-D: Tariff Commitments). Goods from non-FTA TPP parties currently enter duty free for about 39 percent of tariff lines under permanent normal trade relations rates. Upon entry into force (EIF), goods would enter duty free from these TPP parties under 84 to 91 percent of tariff lines. The initial import tariff reductions under TPP would, however, be less significant than might be indicated by simply adding up the number of affected tariff lines. For example, U.S. passenger vehicle imports from Japan, which would not be duty free on EIF, account for less than 10 tariff lines, but made up 29 percent of the value of 2015 U.S. imports from Japan.[377]

TPP Partner Tariff Commitments

TPP would lead to substantial reductions in tariff rates for U.S. exports to TPP parties, particularly those with which the United States does not already have a trade agreement (TPP, Annex 2-D: Tariff Commitments). For the five non-FTA partners in TPP combined, the share of tariff lines that are duty free for U.S. MNRE exports would increase from 53 percent to 86 percent upon EIF, with further tariff reductions phased in over time. Among TPP countries, substantial variation exists in the immediate extent of duty reductions from the agreement. For example, 96 percent of Japan's tariff lines would be duty free for U.S. exports upon EIF (figure 4.3). For Vietnam, a lower share of tariff lines—69 percent—would be duty free upon EIF. However, Vietnam has higher tariff rates, and the simple average tariff rate for duties that would be eliminated is 9.8 percent.

[377] USITC DataWeb/USDOC (accessed February–March 2016).

Figure 4.3: Percent of tariff lines for U.S. exports to current non-FTA partners that are or will become duty free upon TPP entry into force, MNRE products



Source: TPP, chap. 2, Annex 2-D. Corresponds to appendix table J.15.
Notes: MFN: most favored nation. EIF: entry into force of TPP. MFN rates are those listed in each country's tariff elimination schedule. Tariff lines that are duty free at the entry into force of the agreement only include MFN duty-free rates and those for which duties would be eliminated under TPP. EIF rates are specific to U.S. exports—rates of duty elimination may vary by country. For New Zealand, the analysis does not include the tariff lines for which duty rates apply for the good of which it is a part.

National Treatment

The agreement would require national treatment of goods (treatment equivalent to that given to domestic goods), in accordance with Article III of GATT 1994 (Article 2.3). TPP specifies that national treatment applies to regional (state-level) as well as central governments. For the United States, national treatment provisions would have significant implications for U.S. exports of natural gas. Natural gas, traded either via pipeline (in its natural state) or as a liquid (LNG) for movement in tankers, currently requires an export license approved by the U.S. Department of Energy, which is provided if the license is in the "public interest." If the United States has an FTA with the export destination, the application is automatically deemed

consistent with the "public interest."[378] The United States currently gives automatic approval for LNG exports to 18 FTA partners, but non-FTA partners—such as Japan (the world's largest LNG importer by volume)—require distinct permits.[379] The implications of national treatment for LNG are considered at the end of this chapter.

Other Market Access Provisions

In addition to tariffs, the agreement would limit administrative fees and prohibit duties, taxes, and charges on exports that are inconsistent with those applied on goods sold in the domestic market (Articles 2.15 and 2.16). The agreement also would limit restrictions on the import or export of goods, and prohibit requirements to maintain a relationship with a local distributor as a condition of importing (Article 2.11). The agreement would further prohibit import licenses, except as allowed by the WTO Agreement on Import Licensing Procedures, and require TPP members to provide information that would increase the transparency of export and import licensing procedures (Articles 2.13 and 2.14). TPP would prohibit providing new import duty waivers or conditioning import licenses on performance requirements (Articles 2.1, 2.5, and 2.11).[380]

A provision in TPP on remanufactured goods[381] specifies that the same provisions on import and export restrictions that apply to goods trade also would apply to remanufactured goods, and specifies that any import restrictions on used goods would not apply to remanufactured goods. The agreement would allow countries to require that remanufactured goods be labeled as such and that they meet the same technical requirements as new goods (Article 2.12).[382] The

[378] Of the countries with which the United States already has an FTA in effect, only South Korea is a major LNG importer. Chile, Mexico, and Singapore are FTA partners that import smaller volumes of LNG. Therefore, most companies seeking to export U.S.-produced LNG have applied for export approval to countries with which the United States does not yet have an FTA. Note that a non-FTA export approval need not specify a destination country; only sanctioned countries are prohibited from receiving the exports. Thus a non-FTA authorization is limited to an approved volume of LNG but not to a particular destination.

[379] Companies can request short-term (less than two years) or long-term permits. U.S. Department of Energy website, http://energy.gov/fe/services/natural-gas-regulation/how-obtain-authorization-import-andor-export-natural-gas-and-lng.

[380] Performance requirements are obligations such as a requirement that a certain level of domestically produced goods or services be exported or that domestic goods be used in order to receive benefits for their imports. Performance requirements related to investment are discussed in chapter 6. USTR, "National Treatment and Market Access for Goods" (accessed January 23, 2016).

[381] Remanufactured goods are not defined in the agreement. In a recent USITC study, these were defined as "non-agricultural goods that are entirely or partially comprised of parts that (i) have been obtained from the disassembly of used goods; and (ii) have been processed, cleaned, inspected, and tested to the extent necessary to ensure they have been restored to original working condition or better; and for which the remanufacturer has issued a warranty." USITC, *Remanufactured Goods*, October 2012, xvi.

[382] For Vietnam, the provision specifying that restrictions on the imports of used goods does not apply to remanufactured goods does not take effect until 3 years after the entry into force of the agreement, and after that time does not apply to a list of goods specified in Annex 2-B to the chapter (Annex 2-B).

United States is the largest global producer and exporter of remanufactured goods, and the treatment of these products as used goods is a significant barrier to U.S. exports.[383]

TPP also has several provisions related to information technology products. First, TPP would require that members participate in the WTO Information Technology Agreement (TPP, Article 2.20).[384] Second, the agreement would prohibit restrictions on the import and export of commercial cryptographic goods, and is the first U.S. trade agreement to incorporate such a provision (Article 2.11) (box 4.1).[385] Third, the agreement further prohibits technical regulations and conformity assessment procedures[386] that require the manufacturer or supplier to (1) provide access to the technology, production process, or other proprietary information, (2) have a local partner, or (3) incorporate a particular algorithm or cipher (Annex 8-B).

Box 4.1: Potential Impacts of TPP Provisions on Cryptographic Goods

Vietnam is the only TPP party that has attempted to place restrictions on the import of cryptographic goods.[a] Vietnam's 2013 Draft Law on Information Security included a broad restriction on the import of "civic" cryptographic goods, including a ban on import and use of foreign encryption products (with a few exceptions).[b] Although the 2013 draft law was put on hold for a couple of years, the Vietnamese National Assembly passed an updated law with similar import restrictions on November 19, 2015; the law is expected to take effect on July 1, 2016.[a]

Commercial cryptographic goods provisions would have the potential to have a more significant long-term impact if extended to future trade agreements, according to U.S. industry representatives.[b] They state that their value lies in preventing potential barriers, rather than breaking down existing trade barriers among TPP countries. SIA has identified China, India, and Russia as countries that currently have

[383] Existing U.S. trade agreements with Australia, Chile, Peru, and Singapore contain provisions on remanufactured goods, though the scope of the coverage may differ from that in TPP. USITC, *Remanufactured Goods*, October 2012, xvii, 2-21.

[384] Only three TPP members have not joined the Information Technology Agreement—Brunei, Chile, and Mexico. Brunei is required to participate a year after TPP enters into force, but the agreement specifies that the participation of Chile and Mexico is dependent on their domestic consultation procedures. Therefore, they have not made a firm commitment to join the agreement.

[385] These are "any good implementing or incorporating cryptography, where the good is not designed or modified specifically for government use and is sold or otherwise made available to the public" (Article 2.11). These provisions would apply to a wide range of information and communications technology products, such as computers, mobile phones, video gaming consoles, and Internet routers. Currently, the majority of such products are sold commercially, and more than 90 percent of semiconductor products, according to a Semiconductor Industries Association (SIA) estimate, incorporate encryption. SIA, "Why Do We Need Encryption Rules?" September 2013; industry representative, telephone interview by USITC staff, December 11th, 2015; SIA, written submission to the USITC, January 22nd, 2016.

[386] In addition to the encryption provisions discussed here, the agreement provides that a supplier's declarations of conformity are acceptable for ensuring that information technology equipment meets electromagnetic compatibility requirements. For telecommunications equipment, the agreement encourages members to implement the Asia-Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement for Conformity Assessment of Telecommunications Equipment and the APEC Mutual Recognition Arrangement for Equivalence of Technical Requirements. USITC, hearing transcript, January 13, 2016, 331 (testimony of Ed Brzytwa, Information Technology Industry Council).

the most problematic restrictions on cryptographic goods. Industry representatives stated that the provisions in TPP set an important precedent for potential future entrants as well as other potential trade and investment agreements.

Sources: Crypto Law Survey, "Vietnam" (accessed February 9, 2016); SIA, "Why Do We Need Encryption Rules?" September 2013; SIA, written submission to the USITC, January 22nd, 2016; Industry representative, telephone interview by USITC staff, December 11, 2015; industry representative, telephone interview by USITC staff, December 14, 2015.

[a] SIA, written submission to the USITC, January 22, 2016; SIA asserts that the Vietnamese law would be contrary to the TPP Agreement, and that the Vietnamese government will be required to amend the law significantly.

[b] Vietnam's semiconductor imports are growing rapidly, but it is not yet a top 10 export market for the United States. Vietnam's semiconductor imports from the world increased from $1.8 billion in 2010 to $11.1 billion in 2014, while their semiconductor imports from the United States increased from $87 million in 2010 (0.18 percent of U.S. semiconductor exports) to $792 million in 2014 (1.9 percent); GTIS, Global Trade Atlas database (accessed February 24, 2016).

Rules of Origin

TPP's negotiated rules of origin would establish the eligibility of each shipment for the tariff benefits accorded under the agreement, subject to proper documentation by the importer and verification by customs authorities (TPP Chapter 3).[387] Shipments not meeting the rules of the agreement would continue to be charged normal trade relations duty rates, or any rates provided by another law or agreement of the parties.[388] In addition, because many commitments in the agreement apply expressly to originating goods (discussed below) of the parties, the rules set parameters for the administration of customs procedures or other nontariff measures. The impact of each rule would be product- or industry-specific and will be discussed in the corresponding sections of this report, such as the passenger vehicle and textile and apparel sections below.

Like existing U.S. FTAs, TPP would accord benefits to three classes of goods (Article 3.2): (1) those "wholly obtained or produced" within one or more parties to the agreement; (2) those produced entirely in the region exclusively from originating materials; and (3) those produced entirely in the region while incorporating non-originating materials but complying with product-specific rules. In the first group, no non-member inputs are allowed; examples of covered goods are crops grown and harvested in TPP countries and naturally occurring minerals mined or

[387] TPP's rules of origin chapter includes four annexes and an appendix. Annex A to the chapter provides for a transition period in which certain parties may continue to request a certification of origin from a "competent authority" of an approved exporter under stated procedures. Annex B sets out the minimum data requirements for a certification of origin serving as the basis of a claim under the TPP. Annex C lists exceptions to the de minimis rules, all of them relating to agricultural products, so that certain goods containing larger quantities of third-country content cannot obtain benefits of the agreement. Annex D lays out the product-specific rules for each HS provision, and an appendix lists additional requirements for certain automotive goods.

[388] A Committee on Rules of Origin and Origin Procedures is established to consider matters arising under the chapter, provide for its administration, and consider changes or modifications based on technology and production or on the HS.

taken within their territories. Article 3.3(e) adds aquaculture goods to the list of wholly originating goods found in earlier FTAs.[389]

The second class of eligible goods, those produced entirely from originating materials, contemplates two processing stages within the TPP region. These articles may incorporate both TPP and third-country materials, if the latter are first processed into intermediate originating components that are then used to produce originating end products. An example of the second case would be a manufactured product such as a gearbox, where some of the gears were manufactured in the TPP region using steel from outside of the region and all other parts were wholly produced within the region.

The third class of eligible goods involves the assembly or processing within the TPP member countries of materials—whether originating or non-TPP—in a way allowed by the product-specific (or HS line-specific) rules enumerated in TPP Annex 3-D. Only the non-TPP inputs must comply with these product-specific rules. The product-specific rules applied to this third class of goods generally involve either (1) changes of tariff classification (specified for each HS category) that result from manufacturing or processing, or (2) regional value content (RVC) criteria computed under specified formulas. The RVC levels set a threshold that seeks to ensure sufficient contribution from within the region, while recognizing that non-originating materials may be needed to produce the final good.[390] For example, as discussed in more detail below, passenger vehicle engines must meet a minimum RVC level of 45 percent to qualify for duty reductions under TPP, meaning that 45 percent of the value of the engine originates within the TPP region.

The enforcement and verification procedures available to an importing party under TPP are enumerated in more detail and with more procedural steps and time limits than in any existing U.S. FTA. For example, information from the exporter, producer, or importer to establish a good's eligibility must be accepted by the importing party, so documentation is not limited to that supplied by the importer. The host government must be given notice of verification activities and allowed to assist and, if possible under its domestic law, to participate in site visits. Written requests for information or for a visit must be made to the firms involved under very detailed procedures, and specific time limits for responses to requests for information are set out.

[389] Article 3.1 defines aquaculture as the farming of aquatic organisms, including fish, mollusks, crustaceans, other aquatic invertebrates and aquatic plants from seed stock such as eggs, fry, fingerlings or larvae, by intervention in the rearing or growth processes to enhance production such as regular stocking, feeding or protection from predators.

[390] As with other U.S. FTAs, TPP would set up a separate net cost method of computing RVC for automotive goods, but TPP also would add a new focused value method relating to specific non-originating materials.

Impact of TPP on U.S. Production and Trade of MNRE Products

TPP would likely result in an increase in trade with TPP partners, but a negative impact on the overall growth of the sector. U.S. MNRE output and employment would grow less than the projected baseline, according to the Commission's model results. Commission estimates indicate that TPP would result in an increase in exports of $15.2 billion (0.9 percent) above the projected 2032 baseline, and an increase in imports of $39.2 billion (1.1 percent) above the baseline (box 4.2 and table 4.4), with some of the increase in trade with TPP partners offset by lower trade (compared to the baseline estimates) with non-TPP partners (tables 4.5 and 4.6). Output would be $10.8 billion (0.1 percent) less than the projected 2032 baseline and employment 0.2 percent lower than the baseline projection. The impact of TPP on output of both manufactured goods[391] and natural resource and energy products would be small, though there would be a slight increase (less than 0.05 percent) in output of natural resources. As discussed below, the limited impact of TPP on output growth in these sectors reflects the existing, relatively low trade barriers and the assumption that U.S. aggregate output equals productive capacity. However, there are individual sectors (e.g., titanium) that would likely experience more significant impacts.

Box 4.2: TPP Modeling Approach

As discussed in chapter 2, the Commission's modeling analysis began by generating a projection of the global economy through 2032, with detailed forecasts for the 12 countries in TPP, including the United States, and for major non-TPP trading partners. This projection provided a baseline against which the effects of policy changes from the TPP Agreement could be compared. The modeling included three types of liberalization: removing or reducing tariffs and tariff-rate quotas (TRQs), removing certain nontariff measures (NTMs) on goods and on traded (cross-border) services, and investment liberalizations that improve market access for U.S.-owned foreign affiliates.

In this report, estimates of the effects of liberalizing each sector are presented relative to the baseline changes expected to take place through 2032. For example, U.S. producers' output of natural resources and energy products are projected to grow 21.13 percent between 2017 and 2032 in the absence of TPP. TPP is estimated to increase U.S. output of natural resources and energy products by about $342 million or 0.02 percent (rounded to 0.0 percent in table 4.4), for an overall increase of approximately 21.15 percent through 2032.

The Commission's model assumes that growth or contraction across all sectors within a country generates aggregate output equal to the productive capacity of that economy. In TPP, many of the agricultural and services industry sectors experience greater liberalization abroad than do manufacturing sectors. As these sectors expand and absorb resources in the United States, the already

[391] Manufacturing in this chapter does not include the production of food, beverage, and tobacco products, and other goods which are included in chapter 3 of this report. Minerals and mineral products are included in the manufacturing total.

more liberalized U.S. manufacturing sector is generally projected to post lower output growth and lower employment growth with TPP than would be expected in its absence. As explained in chapter 2 of this report, the model does not capture the costs associated with employment transition and temporary unemployment.

The Commission's estimates of the impact of TPP on individual sectors may also be moderated by limitations on the number of industry-specific variables in the model and the composition of the sectors. The model includes some industry-specific features, such as elasticities of substitution between similar products from different origins, but it is difficult to capture all of the factors affecting competitiveness in the model parameters. Some U.S. MNRE sectors in the model may be more competitive than other sectors. For example, a competitive U.S. industry sector (e.g., instruments and medical devices) is not fully differentiated from a less competitive sector. The model results, therefore, may understate potential gains for instruments and medical devices and overstate the gains for a less competitive industry. Similarly, some manufacturers receive substantial revenue from the sale of services and may benefit from services liberalization, but some of these gains may be reflected in services model results presented in chapter 5 rather than in manufacturing estimates.[a]

[a] Model results for natural resources do include some related services (specifically, electricity production, collection, and distribution; gas manufacture and distribution; and water collection, purification, and distribution). Services and provisions related to services are discussed in chapter 5.

Table 4.4: Estimated effects of TPP on U.S. output, employment, and trade: Changes relative to baseline in 2032

	Exports		Imports		Output		Employment
	Million $	Percent	Million $	Percent	Million $	Percent	Percent
Manufacturing and natural resources and energy	15,187.5	0.9	39,245.4	1.1	-10,843.0	-0.1	-0.2
Manufacturing	12,873.9	0.8	36,840.7	1.1	-11,185.1	-0.1	-0.2
Natural resources and energy	2,313.6	3.0	2,404.7	0.7	342.1	0.0	-0.2
Selected industry sectors							
Chemicals	1,944.1	0.7	5,283.4	1.3	-2,854.8	-0.3	-0.3
Textiles	256.6	1.3	869.4	1.6	-328.5	-0.4	-0.4
Wearing apparel	10.3	0.3	1,891.3	1.4	424.7	1.0	0.9
Footwear	137.7	12.2	1,103.6	2.7	29.8	0.5	0.8
Titanium downstream products	-33.9	-1.1	115.4	14.2	-202.4	-1.2	-1.3
Passenger vehicles	1,953.9	1.9	2,371.7	0.8	1,628.3	0.3	0.3
Auto parts and trailers	1,219.8	1.2	3,039.2	1.6	-1,365.9	-0.3	-0.3
Total (selected sectors above)	5,488.5	1.0	14,674.0	1.3	-2,668.9	-0.1	-0.2
Other manufacturing and NRE	9,699.0	0.9	24,571.4	1.0	-8,174.0	-0.1	-0.2

Source: USITC estimates.

Notes: Dollar values are in 2017 prices. Percentages and values are determined in the projected 2032 economy. Dollar values may not match the value produced by applying percentage changes in this table to current values in the 2015 economy. Totals may not sum due to rounding. Manufacturing does not include the production of food, beverage and tobacco products and other goods that are within the WTO definition of agriculture and are covered in chapter 3. Minerals and mineral products are included in the manufacturing total.

Table 4.5: Estimated effects of TPP on U.S. exports: Changes relative to baseline in 2032

Sector	All TPP		NAFTA partners		Existing FTA partners		New FTA partners		Rest of the world		All countries	
	Million $	Percent	Million $	Percent	Million $	Percent	Million $	Percent	Million $	Percent	Million $	Percent
Manufacturing and natural resources and energy	29,484.8	3.9	12,406.4	2.2	2,356.8	2.1	14,721.6	16.2	-14,297.3	-1.6	15,187.5	0.9
Manufacturing	26,405.1	3.7	10,025.4	1.9	2,343.9	2.1	14,035.8	17.4	-13,531.2	-1.6	12,873.9	0.8
Natural resources and energy	3,079.7	6.5	2,381.1	6.5	12.8	2.5	685.8	6.6	-766.1	-2.6	2,313.6	3.0
Selected industry sectors												
Chemicals	5,457.2	3.6	2,089.4	1.8	493.6	2.7	2,874.2	21.2	-3,513.1	-2.4	1,944.1	0.7
Textiles	551.7	5.2	232.2	2.5	28.4	3.6	291.1	48.9	-295.0	-3.1	256.6	1.3
Wearing apparel	27.9	1.1	-69.7	-3.3	9.4	5.8	88.2	44.0	-17.6	-1.2	10.3	0.3
Footwear	135.0	23.6	-4.1	-1.6	-5.9	-9.7	145.0	55.4	2.6	0.5	137.7	12.2
Titanium downstream products	47.3	7.1	11.1	3.5	1.7	2.6	34.5	12.0	-81.2	-3.4	-33.9	-1.1
Passenger vehicles	3,054.0	6.0	106.3	0.3	8.7	0.1	2,939.0	151.8	-1,100.1	-2.1	1,953.9	1.9
Auto parts and trailers	1,702.1	2.1	1,378.5	1.9	71.3	1.7	252.3	16.3	-482.3	-2.5	1,219.8	1.2
Total (selected sectors above)	10,975.2	3.7	3,743.7	1.5	607.2	2.0	6,624.4	36.0	-5,486.7	-2.3	5,488.5	1.0
Other Manufacturing and NRE	18,509.6	3.9	8,662.8	2.7	1,749.6	2.2	8,097.2	11.2	-8,810.6	-1.4	9,699.0	0.9

Source: USITC estimates.

Notes: Dollar values are in 2017 prices. Percentages and values are determined in the projected 2032 economy. Dollar values may not match the value produced by applying percentage changes in this table to current values in the 2015 economy. Totals may not sum due to rounding. Manufacturing does not include the production of food, beverage and tobacco products and other goods that are within the WTO definition of agriculture and are covered in chapter 3. Minerals and mineral products are included in the manufacturing total.

The small impact of TPP on U.S. production and trade reflects the relatively small size of dutiable U.S. MNRE imports from TPP partners in comparison to the size of total U.S. trade and production. While imports from TPP members accounted for 37 percent of U.S. imports in 2015, dutiable imports from TPP members accounted for only 7 percent of U.S. imports from the world. Dutiable imports are even smaller when compared to U.S. production and the U.S. market. For example, dutiable imports of durable goods from TPP members totaled $87.7 billion in 2015 and, as with MNRE imports overall, accounted for only 7 percent of U.S. imports of durable goods (dutiable and duty-free) from all countries in 2015. In comparison, U.S. shipments of durable goods totaled $2.9 trillion (including exports), and dutiable imports from TPP members accounted for only 2 percent of the $3.9 trillion U.S. market for durable goods.[392] Similarly, on the export side, 75 percent of U.S. exports to TPP members are to NAFTA FTA partners Canada and Mexico alone (see figure 4.1).

[392] U.S. Census, "Advance Report," January 28, 2016, 2; USITC DataWeb/USDOC (accessed February 17, 2016).

Table 4.6: Estimated effects of TPP on U.S. imports: Changes relative to baseline in 2032

Sector	All TPP		NAFTA partners		Existing FTApartners		New FTA partners		Rest of the world		All countries	
	Million $	Percent	Million $	Percent	Million $	Percent	Million $	Percent	Million $	Percent	Million $	Percent
Manufacturing and natural resources and energy	43,449.6	3.7	20,666.0	2.2	1,062.4	2.6	21,721.3	11.3	-4,204.2	-0.2	39,245.4	1.1
Manufacturing	40,133.1	4.4	17,398.5	2.5	1,022.9	2.5	21,711.7	11.3	-3,292.4	-0.1	36,840.7	1.1
Natural resources and energy	3,316.5	1.2	3,267.4	1.2	39.5	4.9	9.6	3.1	-911.9	-1.6	2,404.7	0.7
Selected industry sectors												
Chemicals	6,202.8	6.8	2,712.7	4.1	339.6	2.7	3,150.5	22.7	-919.4	-0.3	5,283.4	1.3
Textiles	786.0	14.7	183.8	4.6	4.8	5.3	597.4	46.4	83.4	0.2	869.4	1.6
Wearing apparel	7,355.1	25.0	11.7	0.2	2.2	0.2	7,341.3	35.2	-5,463.8	-5.1	1,891.3	1.4
Footwear	1,551.9	23.4	93.6	13.4	0.3	4.6	1,458.0	24.6	-448.3	-1.3	1,103.6	2.7
Titanium downstream products	202.1	109.7	-4.2	-10.2	-1.7	-10.7	208.1	164.1	-86.8	-13.8	115.4	14.2
Passenger vehicles	933.8	0.5	806.4	0.6	2.7	1.8	124.8	0.3	1,437.9	1.4	2,371.7	0.8
Auto parts and trailers	3,830.3	3.9	2,887.4	3.3	8.1	2.7	934.7	8.7	-791.1	-0.8	3,039.2	1.6
Total (selected sectors above)	20,862.0	5.1	6,691.4	2.2	355.9	2.5	13,814.7	15.6	-6,188.0	-0.9	14,674.0	1.3
Other manufacturing and NRE	22,587.7	2.9	13,974.6	2.2	706.5	2.6	7,906.6	7.6	1,983.7	0.1	24,571.4	1.0

Source: USITC estimates.

Notes: Dollar values are in 2017 prices. Percentages and values determined in the projected 2032 economy. Dollar values may not match the value produced by applying percentage changes in this table to current values in the 2015 economy. Totals may not sum due to rounding. Manufacturing does not include the production of food, beverage and tobacco products and other goods that are within the WTO definition of agriculture and are covered in chapter 3. Minerals and mineral products are included in the manufacturing total.

Sector-specific Analyses

The impact of TPP will vary significantly by sector, as noted above. Five sectors were selected for additional analysis in this study: (1) passenger vehicles; (2) textiles and apparel; (3) footwear; (4) chemicals; and (5) titanium metal. The sectors were chosen based primarily on the relatively high U.S. tariff rates or high value of duties collected on imports of sectoral goods.[393] Other factors influencing the choice of sectors included the potential impact of TPP on U.S. sectoral production and trade, the existence of nontariff barriers that may impact U.S. sectoral trade, and the extent to which specific provisions of the agreement (such as rules of origin) may affect sectoral trade.

In addition, issues in four other sectors—aerospace, motorcycles, crude petroleum, and liquefied natural gas—were chosen for brief discussion. While U.S. tariffs are low for goods in these sectors, other TPP-related considerations (e.g., national treatment for LNG exports) are of interest in this context. This section appears at the end of the chapter.

Passenger Vehicles[394]

Assessment

The Commission's modeling estimates that U.S. passenger vehicle exports to TPP countries would likely rise significantly as a result of TPP, but would be offset by a decline in exports to non-TPP countries. Overall U.S. passenger vehicle exports would increase by more than 2 percent ($2.9 billion), and parts exports would increase by 1.5 percent ($2.1 billion) by year 30, relative to the baseline estimate. In the short term, a decrease in U.S. passenger vehicle exports is possible, since U.S. passenger vehicles would face increased competition in Canada (a major market for U.S. passenger vehicles) from other TPP countries before those countries lowered their tariffs on U.S. exports. Competition from Japan is particularly important: in year 6 of the agreement Japan would gain tariff-free access to Canada, which the United States already has under NAFTA. At the same time, tariffs on U.S. exports of these goods to Vietnam and Malaysia remain until year 13. By year 15, however, economic effects simulations suggest that U.S. passenger vehicle exports would increase due to reductions of tariffs and nontariff barriers on U.S. passenger vehicle exports in Malaysia and Vietnam, and reduction of nontariff barriers in Japan (table 4.7). Many in the U.S. industry, however, consider increased access to the Japanese market unlikely in practice, and the Commission presents alternative estimated

[393] In the case of passenger vehicles, U.S. tariffs are lower than the other sectors discussed here, but the high value of imports results in passenger vehicles being one of the sectors with the highest levels of duties collected from TPP parties.

[394] Passenger vehicles are cars, sport-utility vehicles, minivans, and light trucks included in HS 8703.22, 8703.23, 8703.24, 8703.31, 8703.32, 8703.90, 8704.21, and 8704.31.

effects in box 4.5 to reflect this view. The tendency of manufacturers to build passenger vehicles and source many of the parts for those vehicles in the same region that the vehicles are sold would likely reduce the impact of the agreement on imports and exports.[395]

Once the agreement has been fully implemented in 2047, USITC model results indicate that U.S. passenger vehicle imports (primarily from Japan) would likely increase by nearly $4.3 billion, over the predicted baseline. Parts imports, primarily from Mexico, would increase by a similar amount. Exports of vehicles (primarily to Japan and Vietnam) would increase by nearly $2.9 billion. The expected increases in trade account for only a small percent of U.S. passenger vehicles and parts trade.

Table 4.7: Estimated effects of TPP on U.S. output, employment, and trade of passenger vehicles and parts: Changes relative to baseline in 2032 and 2047

	Exports		Imports		Output		Employment
	Million $	Percent	Million $	Percent	Million $	Percent	Percent
Passenger vehicles							
15 years	1,954	1.9	2,372	0.8	1,628	0.3	0.3
30 years	2,899	2.2	4,272	1.1	1,429	0.2	0.2
Parts							
15 years	1,220	1.2	3,039	1.4	-1,366	-0.3	-0.3
30 years	2,062	1.5	4,516	1.5	-1,394	-0.2	-0.3

Source: USITC estimates. Estimates for year 15 are shown above to match results in other sector analyses. Year 15 includes all tariff and nontariff changes from the agreement directly affecting passenger vehicles and parts except for the removal of tariffs on U.S. imports of passenger vehicles from Japan.
Note: Percentages and values determined in the projected 2032 and 2047 economies. Dollar values may not match the value produced by applying percentage changes in this table to current values in the 2015 economy.

Overview of U.S. Trade with TPP partners

The United States was the world's third-largest exporter of passenger vehicles in 2015, and the largest single-country importer (box 4.3).[396] In 2015, the United States exported nearly $63 billion in passenger vehicles (table 4.8). Canada was by far the top destination for U.S. passenger vehicle exports, with nearly a third of U.S. passenger vehicle exports by value sent there. The European Union (EU) and China were the next two highest export destinations by value.

[395] For example, many vehicles sold by Japanese manufacturers in the United States are made in North America with high levels of North American content. Klier and Rubenstein, *Who Really Made Your Car?* 2008, 136; Hill et al., "Contribution of the Automotive Industry," January 2015, 8; Coffin, *Passenger Vehicle Industry and Trade* Summary, 2013, 4.
[396] GTIS, Global Trade Atlas database (accessed March 25, 2016).

Box 4.3: U.S. Industry and Employment

From 2013 to 2015, U.S. passenger vehicle production increased from 10.9 million to 11.8 million units (table below). The stronger U.S. economy contributed to growth in passenger vehicle sales from 15.5 million units in 2013 to 17.5 million units in 2015, a U.S. record for annual passenger vehicle sales.

U.S. passenger vehicle sales, production, and employment, 2013–15

	2013	2014	2015
U.S. sales (millions of units)	15.5	16.4	17.5
U.S. production (millions of units)	10.9	11.4	11.8
U.S.-headquartered producers (millions of units)	5.9	6.2	6.4
Japanese-headquartered producers (millions of units)	3.6	3.8	3.8
Other (millions of units)	1.4	1.4	1.5
U.S. passenger vehicle employment (thousands)	155.7	167.1	173.3
U.S. motor vehicle parts and bodies employment (thousands)	508.7	537.0	560.4

Source: Ward's Automotive Reports, "North America Vehicle Production Summary," January 25, 2016, 8; Binder, *Ward's Automotive Yearbook,* 2012–15; BLS, "Employment, Hours, and Earnings" from the Current Employment Statistics survey (accessed April 11, 2016).
Note: numbers may not sum due to rounding.

U.S. passenger vehicle production is primarily made up of large cars and trucks destined for the domestic market. The *Wall Street Journal* estimates that 18 percent of passenger vehicles produced in the United States were exported in 2014. According to estimates by the Bureau of Labor Statistics, 173,000 people were employed in passenger vehicle manufacturing in 2015. This was an increase of nearly 20,000 workers from 2013, but a decline from the early to mid-2000s when over 200,000 workers were employed in this industry.

Most major global passenger vehicle manufacturers produce and sell in North America for the U.S. market, which is the second-largest single-country market (behind China) in the world. The U.S. market purchases a higher share of light pickup trucks, large cars, and SUVs than other markets.

Sources: Binder, *Ward's Automotive Yearbook,* 2015; Binder, *Ward's Automotive Yearbook,* 2012; Lutz, "U.S. Auto Exports Hit Record in 2014," February 6, 2015; BLS, "Employment, Hours, and Earnings" from the Current Employment Statistics survey (accessed April 11, 2016).

Table 4.8: U.S. passenger vehicle domestic exports, 2013–15, million dollars

U.S. exports	2013	2014	2015
TPP			
Canada	21,403	22,577	21,356
Mexico	4,197	4,190	3,544
Australia	1,460	1,917	1,695
Japan	655	647	569
Chile	623	469	406
New Zealand	103	200	185
Peru	130	143	136
Vietnam	38	74	104
Singapore	11	11	7
Malaysia	3	7	8
Brunei	6	5	5
Total TPP	28,630	30,241	28,016
ROW			
EU	8,133	9,204	9,649
China	8,502	11,109	9,118
Other	19,906	18,679	15,911
Total ROW	36,541	38,992	34,678
Total	65,171	69,234	62,694

Source: USITC DataWeb/USDOC (accessed February 24, 2016).
Note: ROW = rest of world.

The United States imported over $181 billion in vehicles in 2015 (table 4.9). Nearly two-thirds of these vehicles came from three TPP partner countries (Canada, Japan, and Mexico). The EU and South Korea were two other major suppliers of passenger vehicles to the U.S. market.

Table 4.9: U.S. passenger vehicle imports, 2013–15, million dollars

	2013	2014	2015
TPP			
Canada	43,594	43,180	42,550
Mexico	31,446	34,801	38,058
Japan	37,772	33,891	35,765
Other TPP	159	164	146
Total TPP	112,971	112,036	116,519
ROW			
EU	36,549	39,598	45,332
South Korea	12,147	14,577	17,278
Other	3,147	1,604	2,058
Total ROW	51,843	55,779	64,668
Total	164,813	167,815	181,186

Source: USITC DataWeb/USDOC (accessed February 24, 2016).
Note: ROW = rest of world.

Summary of Provisions

For passenger vehicles, the most important provisions in the agreement are tariff reductions, product-specific rules of origin (ROOs), specific appendixes on ROOs, and bilateral agreements with Japan and Malaysia. These provisions remove tariffs on U.S. imports of passenger vehicles and parts, and tariff and nontariff barriers to U.S. exports. In addition, for a vehicle to be considered originating, the agreement's ROOs require a level of regional value content (RVC) that is lower than the level required by NAFTA, but higher than the level required by most other U.S. trade agreements. However, as noted above, vehicle manufacturers tend to build vehicles in the region they are sold, and buy most parts in the same region where the vehicle is built, limiting the impact of the agreement on North American supply chains.[397]

Rules of Origin

The ROOs for passenger vehicles under TPP would be simpler and easier for passenger vehicle manufacturers to meet than NAFTA ROOs.[398] Under the TPP ROOs for passenger vehicles, no change in tariff classification is required as long as the vehicle has an RVC of at least 45 percent using the net cost method or 55 percent using the build-down method.[399]

Under the TPP ROOs for vehicle parts, the RVC may be calculated using the net cost, build-up,[400] or build-down methods. For parts classified in HS heading 8708, for example, the net cost and build-up RVC requirement ranges between 35 and 45 percent. The comparable RVC requirement for passenger vehicle engines is 45 percent.[401] The RVC requirement for parts and engines under the build-down method is higher, ranging between 45 and 55 percent.

To meet the RVC requirement for certain passenger vehicle parts,[402] materials from non-TPP countries used in their production must undergo one or more specified production operations

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[397] Industry representative, telephone interview by USITC staff, January 28, 2016; industry representative, telephone interview by USITC staff, January 29, 2016.
[398] USITC, hearing transcript, January 13, 2016, 180 (testimony of Celeste Drake, AFL-CIO); academic professional, telephone interview by USITC staff, January 27, 2016.
[399] TPP, Annex 3-D, 87.02-87.05. Build-down "calculates the RVC by subtracting the value of the non-originating merchandise (VNM) from the adjusted value (AV) of the finished product. The adjusted value includes all costs, profit, general expenses, parts and materials, labor, shipping, marketing, and packing." Net cost "captures only the costs involved in manufacturing, including factory labor, materials, and direct overhead. Other costs, such as sales promotion, marketing, royalties, and profit, are excluded from the calculation." CRS, *International Trade: Rules of Origin*, June 24, 2015, 9–10.
[400] Build-up method RVC is calculated by "adding together the value of all of the regional inputs (e.g., costs, general expenses, parts, materials, labor, shipping, marketing, and packing)," then dividing that by the adjusted value of the good to get the RVC. CRS, *International Trade: Rules of Origin*, June 24, 2015, 9.
[401] Engines for passenger vehicles are classified in HS subheadings 8407.33, 8407.34, and 8408.20. TPP, Annex 3-D, Product-Specific Rules of Origin.
[402] Identified in TPP, Annex 3-D, Table C, Appendix 1, including certain engines, chassis, and other motor vehicle parts of HS heading 8708.

(e.g., complex assembly, extrusion)[403] in one or more TPP countries to be considered originating. Furthermore, the value of these materials can be counted as originating content only when their value does not exceed the 5 or 10 percent threshold specific to each part.[404]

If a part has a high enough RVC to count as originating, then the full value of the part can be counted for the RVC of the vehicle. Further, some parts may be counted as originating (and thus included in the RVC) if they have undergone one or more of the aforementioned production processes in one or more TPP countries.[405]

The originating content required for vehicles to receive duty-free treatment under TPP is significantly lower than that for NAFTA, which requires 62.5 percent originating content, but higher than other trade agreements that include the United States, such as the U.S.-Korea FTA (KORUS), which required only 35 percent originating content (table 4.10). One industry representative estimated that differences in calculation methods between NAFTA and TPP reduce the gap in RVC between the two agreements to 8 percent.[406] However, some observers have argued that Appendix 1 to TPP's Annex 3-D may reduce the value of RVC required for a vehicle to qualify as originating, so that a vehicle could qualify for TPP treatment with less than 45 percent of the content of the vehicle coming from a TPP country. This could occur if some of the non-originating content underwent one of the processes allowed for in the appendix.[407]

[403] TPP, Annex 3-D, Table B, Appendix 1.
[404] TPP, Annex 3-D, Table C, Appendix 1; Nuthall, "Trans-Pacific Pact Clears the Way," November 17, 2015.
[405] Parts included in this rule are toughened safety glass, laminated safety glass, bodies for the motor vehicles of headings 8701-8705, bumpers, body stampings and door assemblies, and drive axles with differential (whether or not provided with other transmission). For the specific HS subheadings and thresholds included, see TPP, Annex 3-D, Appendix 1; Nuthall, "Trans-Pacific Pact Clears the Way," November 17, 2015.
[406] Essentially, an RVC of 53 percent under TPP rules would result in the same RVC as a 62.5 percent rule under NAFTA rules. This is because all of the parts not included on the tracing list under NAFTA could be imported parts, but they would still count as originating for purposes of the RVC calculation. Industry representative, telephone interview by USITC staff, January 27, 2016; U.S. Congress, House, Committee on Ways and Means, *TPP Issue Analysis: Trade,* January 8, 2016, 11.
[407] USITC, hearing transcript, January 13, 2016, 180 (testimony of Celeste Drake, AFL-CIO); academic professional, telephone interview by USITC staff, January 27, 2016.

Table 4.10: Comparison of rules of origin for passenger vehicles in trade agreements

Agreement	Methods for calculating RVC	RVC requirement
TPP	Net cost Build-down	45 percent 55 percent
NAFTA	Net cost with "tracing" and "deemed originating"	62.5 percent (translates to 53 percent if calculated under the ROOs for other FTAs)
KORUS	Net cost Build-down	35 percent 55 percent

Sources: U.S. Congress, House, Committee on Ways and Means, *TPP Issue Analysis: Trade,* January 8, 2016; U.S.-Korea Free Trade Agreement (KORUS), Annex 6-A, Specific Rules of Origin; North American Free Trade Agreement (NAFTA), Chapter 4, Rules of Origin, Article 403, Automotive Goods; TPP, Annex 3-A, Product-Specific Rules of Origin.

The differences in the ROOs between TPP and NAFTA could affect U.S. parts producers in two ways. First, the TPP ROOs could lead to lower U.S. content in vehicles produced in the United States and exported to NAFTA countries, as the RVC required under TPP is lower than that under NAFTA.[408] However, the vast majority of U.S. production is destined for the U.S. market, so U.S. manufacturers would be unlikely to significantly modify their supply chains to gain tariff savings on the smaller share of the vehicles they produce and export to TPP countries. Second, the TPP rules could lead to lower U.S. content in vehicles produced in NAFTA countries and exported to the United States, again due to the difference in ROOs between TPP and NAFTA.[409] Since a significant percentage, or even the majority, of vehicles produced in Canada and Mexico are destined for the U.S. market, it is possible that some U.S. exports of parts to those countries could be affected by the TPP ROOs.

Tariff Reductions

Under TPP, the United States would agree to remove tariffs on passenger vehicle imports. For countries that already had a trade agreement with the United States, all passenger vehicle imports would be duty free upon EIF, since they already receive duty-free treatment based on their earlier trade agreement with the United States. For four of the five new partners—Brunei, Malaysia, New Zealand, and Vietnam—tariffs on passenger vehicle imports would be reduced in 10 annual stages and become duty free on January 1 of year 10 of the agreement (table 4.11). For the fifth new partner, Japan, tariffs on U.S. imports of passenger vehicles would be phased out over a longer period: 25 years for cars and sport-utility vehicles, and 30 years for pickup trucks and work vans.[410] Eighty percent of tariffs on parts originating from Japan would be

[408] Academic professional, telephone interview by USITC staff, January 27, 2016.
[409] Ibid.
[410] TPP, Annex 2-D U.S. Tariff-Elimination Schedule.

eliminated upon EIF, and all tariffs on parts originating from Japan would be removed by year 15.[411]

Table 4.11: U.S. tariff concessions for TPP countries

Type of vehicles	Subheadings	MFN rate	Phase-out period with Japan	Phase-out period for other countries without an FTA with the United States
Cars, sport-utility vehicles, minivans	8703.22, 8703.23, 8703.24, 8703.31, 8703.32, 8703.33, 8703.90	2.5 percent	Tariff unchanged during years 1–14, then drops to zero in 3 steps from years 15 to year 25	Reduced in 10 annual stages, duty free on January 1 of year 10
Pickup trucks and work vans	8704.21, 8704.31	25 percent	Tariff remains until year 29, when it drops to zero	Reduced in 10 annual stages, duty free on January 1 of year 10

Source: TPP, Annex 2-D, U.S. Tariff-Elimination Schedule.
Note: For existing U.S. FTA partners, tariffs have already been eliminated.

U.S.-made passenger vehicles already enter most TPP markets (including Japan) duty free, but Malaysia and Vietnam agreed to remove substantial tariffs under TPP. Malaysia agreed to eliminate its tariffs on passenger vehicles, but tariffs for some types of fully assembled passenger vehicles would not be completely eliminated until year 13 of the agreement (table 4.12).[412] Malaysia would eliminate its tariffs on most automotive parts on EIF. Vietnam agreed to eliminate its passenger vehicle tariffs by year 13 and its tariffs on automotive parts by year 11 of the agreement.[413]

[411] U.S. Congress, House, Committee on Ways and Means, *TPP Issue Analysis: Trade,* January 8, 2016, 7.
[412] TPP, Annex 2-D, Malaysia Tariff-Elimination Schedule.
[413] Ibid.

Table 4.12: Malaysia and Vietnam passenger vehicle and parts: current tariffs and staging

Country	Product	Tariff	Staging
Malaysia	Passenger vehicles (CKD)	10 percent[a]	Eliminated in either 3 or 6 annual stages depending on engine size.
Malaysia	Passenger vehicles (CBU)	30 percent	Tariffs eliminated in 6, 11, or 13 annual stages depending on engine size.
Malaysia	Engines	0 percent (compression ignition); 5 percent (spark ignition)	Immediately on EIF.
Malaysia	Other parts	0 to 30 percent	Immediately on EIF.
Vietnam	Passenger vehicles (CKD)	0	No change.
Vietnam	Passenger vehicles (CBU)	70 percent	Tariffs remain in place for 1 to 5 years (depending on vehicle size and type), then are cut in annual stages until free of duty effective January 1 of year 13.
Vietnam	Engines	25 to 30 percent	Eliminated in annual stages over 8 years.
Vietnam	Other parts	3 to 27 percent	Eliminated in annual stages from 4 to 11 years.

Source: TPP, Annex 2-D, Viet-Nam Tariff-Elimination Schedule and General Notes to Tariff Schedule; TPP, Annex 2-D, Malaysia Tariff-Elimination Schedule and General Notes to Tariff Schedule.
Note: CKD = completely knocked down (disassembled); CBU = completely built up.
[a] CKD vehicles for the transport of goods from Malaysia (i.e., trucks and work vans) are free of duty.

U.S.-Japan Bilateral Agreements

Japan and the United States negotiated several bilateral agreements that could have a significant impact on U.S.-Japan passenger vehicle trade. First, Japan and the United States agreed to a separate appendix on motor vehicles (TPP, U.S. Appendix D, Motor Vehicle Trade, see box 4.4). The appendix could reduce the impact of a number of Japanese nontariff measures on U.S. passenger vehicle exports to Japan: it would improve the regulatory development process, remove some unnecessary regulations through post-implementation review, and provide additional protections and safeguards. The appendix also details modifications to the TPP safeguard measure that could protect the U.S. market from a significant increase in vehicle imports from Japan.

Two other Japanese concessions should also have a positive impact on U.S. passenger vehicle exports to Japans. When first accepted into TPP negotiations, Japan agreed to expand its Preferential Handling Procedure (PHP) from 2,000 units per model to 5,000 units per model.[414] This increases the number of vehicles per model each manufacturer can send to Japan without undergoing Japan's unique set of emissions and safety examinations. Second, in a side letter

[414] The PHP is a simplified conformity assessment procedure for small-volume vehicle imports. TPP, Appendix D, "Appendix between Japan and the United States on Motor Vehicle Trade."

between Japan and the United States, Japan agreed to recognize seven U.S. safety standards as no less stringent than Japan's requirements.[415]

Box 4.4: Summary of TPP, U.S. Appendix D, Motor Vehicle Trade[a]

Development of regulations

- *Publication of regulations*: Parties must wait at least 12 months between the publication of a technical regulation or conformity assessment and the date on which compliance is required.
- *Informal advisory councils*: Japan would ensure that the informal advisory councils used by Japan to develop regulations operate transparently, and that relevant information is shared with any and all interested companies.
- *Post-implementation review*: Japan and the United States would agree to periodically conduct post-implementation reviews of significant regulations that affect motor vehicles.
- *Transparent development of new regulations*: Japan and the United States would ensure transparent development of new regulations, including 12 months' advance notice, and public posting of information on regulations in development when such information is supplied to a nongovernmental expert or interested person.
- *Regulating new products*: Japan and the United States agree not to delay import of a new product merely because it is new, and thus not expressly allowed.
- *Treatment of Preferential Handling Procedure (PHP)*: This provision would prevent modifications to the PHP that unnecessarily increase the burden for importers. Japan would also agree that any financial incentives offered for motor vehicle purchase, including tax incentives, would include vehicles imported under the PHP.

Zoning: Would make zoning of service and repair facilities transparent and non-discriminatory.

Safeguard: Would create a transitional safeguard that is different from other trade remedy safeguards because it can be used multiple times over the course of the tariff reduction period, for no more than two years.[416]

Special accelerated dispute settlement: Would be a mechanism available for any actual or proposed measure by either country that affects motor vehicles. If a complainant's tariffs have not been reduced, then a "delay remedy" can be used. Or if tariffs have already been reduced, then they can be "snapped back" in response to a disputable policy measure. The benefit for the complainant is calculated using a proportional calculation so that it is roughly equivalent to the level of its imports from the respondent.[b]

Expedited consultation provision: Would allow for consultation on regulations, as well as rumored regulations.

[415] TPP, Japan-U.S. Letter on Safety Regulations for Motor Vehicles (accessed January 4, 2016), https://ustr.gov/sites/default/files/TPP-Final-Text-JP-to-US-Letter-on-Safety-Regulations-for-Motor-Vehicles.pdf.
[416] The transitional safeguard can be extended for an additional two years.

Special bilateral committee: Would create a formal committee that would meet to help resolve any issues that arise related to U.S.-Japan motor vehicle trade.

Source: TPP, Japan-U.S. Letter on Safety Regulations for Motor Vehicles, https://ustr.gov/sites/default/files/TPP-Final-Text-US-JP-Letter-Exchange-on-Certain-Auto-NTMs.pdf; TPP, Appendix to Annex 2-D, Appendix, "Motor Vehicle Trade."

[a] This is an appendix to TPP's Annex 2-D, "Motor Vehicle Trade," also titled "Japan Appendix D-1 Appendix between Japan and the United States on Motor Vehicle Trade."

[b] The calculation of benefits is the sum of the level of benefits of equivalent effect and the level of benefits of equivalent effect multiplied by the ratio of the four-year average of complainant imports from the respondent divided by respondent imports from the complainant.

U.S.-Malaysia Bilateral Agreement

The United States and Malaysia agreed to a side letter on automotive nontariff barriers, which may reduce nontariff barriers to U.S. passenger vehicle exports. Such barriers have previously limited U.S. exports to Malaysia. Under this side letter, Malaysia would agree to:

- participate in the Asia-Pacific Economic Cooperation's Auto Dialogue work program;
- consider whether U.S. safety and emissions standards are acceptable alternatives for complying with Malaysian regulations;
- increase transparency in the creation of regulations and standards related to excise taxes;
- not provide excise tax credits for export performance or local content beginning on January 1, 2021;
- not restrict imports of new U.S. motor vehicles through quotas, import licenses, or additional charges; and
- accept transaction values submitted by importers for customs valuation.[417]

Estimated Effects of TPP on the Passenger Vehicle Sector

Impact on U.S. Exports

While large percentage increases in U.S. passenger vehicle exports to Malaysia, Vietnam, and Japan would likely occur in the long run due to the reduction in tariff and nontariff barriers under TPP, they would likely not represent a significant increase in total U.S. passenger vehicle exports. Although these three countries are the only significant TPP consumers of passenger vehicles that do not have a free-trade agreement with the United States, they currently account for a relatively low share of U.S. exports. According to one industry source, U.S.-headquartered manufacturers expect a larger increase in sales by U.S. companies producing in the region (e.g.,

[417] TPP, US-MY, Letter Exchange on Auto Imports. https://ustr.gov/sites/default/files/TPP-Final-Text-US-MY-Letter-Exchange-on-Auto-Imports.pdf.

increased Vietnamese production, as well as exports from non-TPP countries like Thailand) than of vehicles exported from the United States.[418]

In the short run, as noted earlier, U.S. exports may actually decrease, as competitors gain duty-free access to a major U.S. vehicle export destination (Canada) before Malaysian and Vietnamese tariffs on vehicles are removed. Industry sources and public statements both indicate concern that without enforceable currency manipulation provisions, future Japanese currency devaluation could eliminate any access to Japan gained through reduction of nontariff barriers.[419]

According to Commission model estimates, total U.S. exports of passenger vehicles are expected to increase by $2.9 billion as a result of TPP upon full implementation of the agreement (year 30). This includes an increase of $3.9 billion in exports to new FTA partners (primarily Japan and Vietnam), partially offset by a decline of $1.2 billion in U.S. exports to non-TPP countries (table 4.13).

Table 4.13: Estimated effects of TPP on U.S. exports of passenger vehicles and parts: Changes relative to baseline in year 15 (2032) and year 30 (full implementation, 2047)

	Export change, year 15		Export change, year 30	
	Million $	Percent	Million $	Percent
Passenger Vehicles				
TPP				
NAFTA partners	106	0.3	152	0.3
Other FTA partners	9	0.1	-23	-0.2
New partners	2,939	151.8	3,932	160.4
All TPP countries	3,054	6.0	4,060	5.7
ROW	-1,100	-2.1	-1,162	-1.9
All countries	1,954	1.9	2,899	2.2
Parts				
TPP				
NAFTA partners	1,379	1.9	2,179	2.1
Other FTA partners	71	1.7	69	1.1
New partners	252	16.3	347	24.0
All TPP countries	1,702	2.1	2,595	2.3
ROW	-482	-2.5	-533	-2.5
All countries	1,220	1.2	2,062	1.5

Source: USITC estimates. Estimates for year 15 are shown above to match results in other sector analyses. Year 15 includes all tariff and nontariff changes from the agreement directly affecting passenger vehicles and parts, except for the removal of tariffs on U.S. imports of passenger vehicles from Japan.
Note: Percentages and values determined in the projected 2032 and 2047 economies. Dollar values may not match the value produced by applying percentage changes in this table to current values in the 2015 economy. ROW = rest of world.

[418] Industry representative, telephone interview by USITC staff, October 26, 2015.
[419] Biegun, written testimony to the USITC, January 16, 2016, 4–5; USITC, hearing transcript, January 13, 2016, 157–58 (testimony of Josh Nassar, UAW).

U.S. automotive parts exports to TPP countries are expected to increase by $2.1 billion, with a $2.2 billion increase in exports to NAFTA countries partially offset by a $533 million decline in exports to non-TPP countries.

TPP member countries' acceptance of U.S. safety and emissions standards is an important part of the agreement for U.S. manufacturers. Current requirements to meet different standards for smaller markets like Malaysia and Vietnam may make it too expensive on a per-unit basis for a U.S. manufacturer to provide a broad range of vehicles at competitive prices in those countries, likely reducing U.S. exports to those markets. One U.S. manufacturer expressed concern that potential U.S. export growth could be diminished if more countries without FTAs with the United States joined the agreement, but were not required to accept U.S. vehicle safety and emissions standards.[420] U.S.-headquartered vehicle manufacturers would be particularly affected by non-acceptance of these standards, as many countries, including Malaysia and Vietnam, have standards based on those developed for Europe by the United Nations Economic Commission for Europe (UNECE). Widespread acceptance of UNECE standards makes it less expensive for manufacturers producing in countries (like those in the EU) with similar standards to export vehicles to countries that also accept UNECE standards.[421]

Japan

Although USITC estimated effects indicate that U.S. exports to Japan could potentially increase by $2.2 billion (149 percent) as a result of TPP, any increased export volume would likely represent only a small share of total U.S. passenger vehicle exports. However, market factors (such as a declining market or consumer preferences) or nontariff barriers may limit any increase (see box 4.5). Japan is the largest TPP passenger vehicle market outside the United States, but imports relatively few passenger vehicles. Japan's vehicle sales in 2015 totaled 5.6 million; of which 5.1 million of those sales were vehicles produced in Japan by Japanese-headquartered manufacturers.[422]

[420] Industry representative, interview by USITC staff, Washington, DC, January 21, 2016.
[421] The United States uses its own safety and emissions standards—the Federal Motor Vehicle Safety Standards (FMVSS) for safety and the Corporate Average Fuel Economy (CAFE) Standards for emissions. While these standards tend to be similar to UNECE standards, some testing requirements and standards are different. U.S. manufacturers often have to complete additional testing and certification in order to export into markets that use UNECE standards. Biegun, written testimony to the USITC, January 13, 2016, 6; CRS, *U.S. and EU Motor Vehicle Standards*, February 18, 2014, 2; industry representative, interview by USITC staff, Washington, DC, January 20, 2016.
[422] Binder, *Ward's Automotive Yearbook 2015*, "Asia Vehicle Sales by Country and Company," 2015.

Box 4.5: Alternative Estimated Effects of U.S. Passenger Vehicle Exports to Japan

Many in the U.S. passenger vehicle industry believe that Japan will not allow a significant increase in passenger vehicle imports to occur. Thus, in contrast to the main simulation, which includes a 50 percent ad-valorem equivalent reduction to Japanese nontariff barriers, the Commission ran a simulation where Japan's nontariff barriers to U.S. passenger vehicle exports do not decline. This simulation indicates that as a result of TPP, U.S. passenger vehicle exports to Japan would decline by $297 million, and total U.S. passenger vehicle exports would decline by $84 million, relative to the model's baseline estimates.

Sources: USITC estimated effects; ITAC-2, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 6–7; Biegun, written testimony to the USITC, January 16, 2016, 4–5.

Although Japan has no tariffs on passenger vehicles, a number of nontariff barriers were reported in 2014 (table 4.14). Many of them are addressed in one of TPP's bilateral agreements between the United States and Japan, or in one of the side letters.

Table 4.14: List of reported Japanese nontariff barriers to vehicle imports, and TPP actions

Regulatory barrier	Explanation	TPP action
Remote keyless entry (RKE) and tire pressure management system (TPMS) radio frequency/power	RKE and TPMS signal strength requires certification and ID marking by the supplier.	No specific action
Daytime running lamps (DRL)	Japan does not allow DRL, forcing manufacturers to disable DRL for vehicles sold in Japan.	No specific action
Exterior noise	Japan has unique acceleration, proximity, and cruise-by noise tests and standards.	No specific action
Exhaust emissions, fuel economy, and safety	Japan requires a unique emission and fuel economy test mode that differs from the two major test modes available around the world.	Japan agreed that U.S. vehicles shall be deemed to comply with Japanese safety standards if they meet a U.S. standard that is no less stringent than the Japanese one. The United States and Japan agreed to cooperate bilaterally to harmonize safety and environmental standards.
Occupant protection	Japan requires two crash tests—one UN Economic Commission for Europe (UNECE) test and one Federal Motor Vehicle Safety Standard test—a unique configuration.	Japan agreed that U.S. vehicles shall be deemed to comply with Japanese safety standards if they meet a U.S. standard that is no less stringent than the Japanese one.
Explosives law	Limits use of explosives and gun powder in automotive applications (excepting airbags and seatbelt pre-tensioners).	No specific action
High-pressure gas safety law	Japan's safety law for high-pressure gas makes it very difficult to import	Japan agreed to permit the import of any motor vehicle

Regulatory barrier	Explanation	TPP action
	hydrogen inflators for airbags and hydrogen tanks for fuel cell vehicles.	part necessary to repair a U.S.-originating vehicle that was deemed to comply with the Road Vehicle Transport Act on imports (including if it used U.S. standards that were deemed no less stringent).
Auto taxes and tax incentives	Japan applies nine auto-related taxes on the acquisition, ownership, and running of a passenger vehicle, with several taxes disproportionately impacting imported vehicles.	No specific action
Auto-related tax incentives	Some tax incentives exclude vehicles certified under Japan's Preferential Handling Procedure (PHP), a small volume import program often used by U.S. automakers.	Japan agreed to not adopt or apply PHP and relevant regulations in such a way that vehicles imported under it are ineligible for any financial incentives offered by the central government.
Distribution outlets and service centers	Acquiring land within approved zoning areas is often difficult, as is receiving approval from the Ministry of Land, Infrastructure, Transport and Tourism to establish a new service/repair center.	Both parties agreed to apply any laws or regulations related to zoning and applicable to the establishment of distribution or repair facilities for motor vehicles in a transparent and non-discriminatory way.

Source: AAPC, written submission to the USTR, June 9, 2013; TPP, US-JP Letter on Safety Regulations for Motor Vehicles, https://ustr.gov/sites/default/files/TPP-Final-Text-US-JP-Letter-Exchange-on-Certain-Auto-NTMs.pdf.

Canada

While the United States already has tariff-free access to Canada via NAFTA, U.S. passenger vehicle exports to Canada would likely be lower than the baseline estimate, because Canada would remove its 6.1 percent tariff on vehicle imports from other TPP countries by year 5 of the agreement. Canada was the top U.S. export market for passenger vehicles in 2014, representing 33 percent ($22.6 billion) of U.S. passenger vehicle exports.[423] With other TPP countries, particularly Japan, gaining tariff-free access to Canada, the relative cost of Japanese vehicles compared to U.S. vehicles will likely decline, according to Commission simulations. As a result, Canadian imports of vehicles from Japan would likely increase from the $2.4 billion total seen in 2014,[424] potentially cutting into the volume of U.S. exports to Canada. This decline in U.S. exports to Canada would be due to Japanese-brand manufacturers exporting more Japan-

[423] USITC DataWeb/USDOC (accessed November 6, 2015).
[424] GTIS, Global Trade Atlas database (accessed November 6, 2015).

produced vehicles to Canada, or (to a lesser extent) choosing to export vehicles from Japan to Canada that were previously exported from the United States.[425]

Malaysia

Although Malaysia is not currently a major market for U.S. passenger vehicle exports, tariff-free access and liberalization of nontariff measures, such as excise taxes tied to local content and quotas,[426] may lead to a significant increase in U.S. passenger vehicle exports to Malaysia. However, any increase is not expected to significantly affect total U.S. passenger vehicle exports because Malaysia is a relatively small market, with only 670,000 units sold in 2014.[427] In 2014, for example, U.S. passenger vehicle exports to Malaysia totaled $7.4 million (452 units).[428]

According to Malaysian import data, the United States was the 15th-largest supplier of passenger vehicles to Malaysia in 2014.[429] In 2014, U.S.-headquartered manufacturers sold 16,000 vehicles in Malaysia, accounting for 2 percent of the Malaysian market, but many of them are either produced from kits[430] in Malaysia or imported from within the region (primarily Thailand).[431] Malaysian and Japanese companies account for 47 and 42 percent, respectively, of Malaysian vehicle sales.[432]

Tax incentives for local content, import quotas, and negotiated taxable values have severely limited the competitiveness of imports in the Malaysian passenger vehicle market.[433] While imported and domestically produced vehicles are taxed the same in Malaysia, vehicles assembled in Malaysia receive tax credits that reduce their tax burden by as much as 50 percent compared to imported vehicles.[434] Further, Malaysia has used a system of "approved permits" to limit the number of vehicles imported to 10 percent of the total market. Also, the taxable base value of imported vehicles is reportedly not based on the transaction

[425] Industry representative, telephone interview by USITC staff, February 4, 2016.
[426] Ibid., November 4, 2015.
[427] Binder, *Ward's Automotive Yearbook 2015*, "Asia Sales," 2015.
[428] USITC DataWeb/USDOC (accessed November 6, 2015).
[429] Malaysian data only credits the United States with supplying the Malaysian market with 84 units of passenger vehicles worth $1.8 million in 2014. GTIS, Global Trade Atlas database (accessed January 14, 2016).
[430] A kit contains the parts needed to assemble a vehicle. These kits of vehicles are often referred to as "completely knocked down" or CKD in the trade literature. Vehicles are often imported as kits due to government import regulations offering a significantly lower tariff for imports of kits, than for fully assembled or "completely built up (CBU)" vehicles.
[431] Industry representative, telephone interview by USITC staff, November 4, 2015; GTIS, Global Trade Atlas database (accessed February 11, 2016); Binder, *Ward's Automotive Yearbook 2015*, "Asia Vehicle Sales by Country and Company," 2015.
[432] Binder, *Ward's Automotive Yearbook 2015*, "Asia Vehicle Sales by Country and Company," 2015.
[433] AAPC, written submission to the U.S. Trade Representative, November 22, 2010.
[434] Swire, "Malaysia Confirms U-Turn on Vehicle Excise Tax Cut," January 21, 2014.

cost of the vehicle, but rather on the value negotiated by the manufacturer and the Malaysian government.[435]

Through tariff elimination and liberalization agreed to in a side letter with the United States, the Malaysian market likely would be more open to imports from the United States and production by U.S.-headquartered manufacturers. Nonetheless, although Malaysia agreed to consider whether meeting U.S. safety and emission standards could be an acceptable alternative to complying with Malaysian regulations, the U.S. industry is concerned that Malaysia may not accept U.S. standards.[436] Modifying vehicles for current Malaysian standards increases the cost per vehicle of manufacturing for the Malaysian market, reducing profit margins.[437]

Vietnam

While tariff-free access would likely lead to a significant percentage increase in U.S. passenger vehicle exports to Vietnam, it would not be significant relative to total U.S. passenger vehicle exports. With total vehicle sales of only 135,000 units in 2014, Vietnam is not a major passenger vehicle market. In 2014, the United States was Vietnam's fifth-largest supplier of passenger vehicle imports. Vietnam imported $33 million (926 units) of such vehicles from the United States,[438] and U.S.-headquartered manufacturers sold over 19,000 units in Vietnam in 2014. These sales, which included vehicles produced outside the United States by U.S.-headquartered manufacturers, represented 14 percent of Vietnamese vehicle sales, behind only Japanese (54 percent) and South Korean (19 percent) manufacturers.[439] In order to encourage domestic assembly, Vietnam has no tariffs on vehicles imported in kits, but maintains a 70 percent tariff on assembled vehicles, which would be removed for TPP partners as part of the agreement.[440]

U.S. Parts Exports

According to estimated effects from Commission simulations, U.S. parts exports would increase slightly and production would decline slightly as a result of TPP. Similar to the scenario for passenger vehicles, U.S. parts exports to Canada could be negatively affected by Canada's elimination of parts tariffs for all TPP countries, particularly Japan. Canada would remove tariffs

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[435] AAPC, written submission to the U.S. Trade Representative, November 22, 2010.
[436] TPP, US-MY Letter Exchange on Auto Imports, https://ustr.gov/sites/default/files/TPP-Final-Text-US-MY-Letter-Exchange-on-Auto-Imports.pdf; Biegun, written submission to the USITC, January 16, 2016, 6–7; ITAC-2, *The Trans-Pacific Partnership Agreement*, December 2, 2015; industry representative, interview by USITC staff, Washington, DC, January 21, 2016; industry representative, telephone interview by USITC staff, January 28, 2016.
[437] Industry representative, interview by USITC staff, Washington, DC, January 21, 2016.
[438] GTIS, Global Trade Atlas database (accessed January 14, 2016).
[439] Binder, *Ward's Automotive Yearbook 2015*, "Asia Vehicle Sales by Country and Company," 2015.
[440] The kits are also known as completely knocked down, or CKD. Already assembled vehicles are also known as completely built up, or CBU.

of 6–8.5 percent on passenger vehicle parts imports from all TPP countries upon entry into force, potentially reducing any cost advantage of U.S. parts exports. Further, those parts that Japanese manufacturers already import from Japan will now count towards the RVC necessary to export from Canada or Mexico to the United States, which may impact the level of U.S. inputs used. The difference in the RVC required by TPP compared to NAFTA could lead vehicle producers in Canada or Mexico to source parts from low-cost countries outside of TPP.[441]

According to Commission estimates, however, U.S. parts exports to NAFTA would increase, likely due to increased demand for parts in those countries due to increased vehicle output.

Any negative impact on U.S. parts exports to Canada and Mexico is likely mitigated by the strong tendency of most vehicle manufacturers to source their parts within a day's drive of the plant to reduce logistics costs, avoid the impacts of a shifting currency, and help maintain low inventories.[442] Most passenger vehicle assembly plants operate on a just-in-time basis, so a supplier using parts imported from outside the NAFTA region may need to warehouse parts close to an assembly plant (increasing the cost of the parts).[443] If, however, the price difference between parts produced in the NAFTA region compared to outside the region were significant enough, a supplier might be willing to source outside the region.[444]

Industry sources indicate that two factors tend to affect the likelihood a part could be imported from outside the region. First, parts that are relatively delicate tend to be produced closer to the assembly plant (e.g., seat assemblies tend to be assembled within an hour's drive of an assembly plant), while those that are less likely to be damaged during transport can be produced farther away.[445] A second factor affecting the likelihood of a part being imported from outside the region is the labor intensity of the product. U.S. parts production tends to be more cost-competitive for parts with lower labor intensity.[446]

Impact on U.S. Imports

In the short term, U.S. imports of passenger vehicles would likely not be significantly affected by TPP, as the staged tariff eliminations on U.S. imports of passenger vehicles do not begin until year 15. In the long run, U.S. imports of vehicles would likely increase once tariffs on imports from Japan are removed. Japan would likely be the leading beneficiary of the tariff elimination,

[441] Academic professional, telephone interview by USITC staff, January 27, 2016.
[442] Walsh, "Analysts: Trans-Pacific Partnership Unlikely to Have Major Impact," October 11, 2015.
[443] Academic professional, telephone interview by USITC staff, January 27, 2016.
[444] Industry representative, interview by USITC staff, Washington, DC. November 4, 2016; academic professional, telephone interview by USITC staff, January 27, 2016.
[445] Klier and Rubenstein, *Who Really Made Your Car?* 2008, 159; industry representative, telephone interview by USITC staff, February 4, 2016.
[446] Industry representatives, telephone interview by USITC staff, February 4, 2016.

since Japan is the largest passenger vehicle manufacturer other than the United States in TPP. However, U.S. passenger vehicle parts suppliers may be affected sooner, as tariffs on parts are removed earlier.

According to model estimates, U.S. passenger vehicle imports would increase by $4.3 billion above the baseline upon full implementation of the agreement (table 4.15). Imports from Japan would increase by $1.6 billion, and imports from NAFTA partners would increase by $1.8 billion, making up the majority of the increase. Parts imports would increase by $4.5 billion, with imports from NAFTA partners increasing by $5.5 billion. That increase would be partially offset by declines in imports from non-TPP countries.

Table 4.15: Estimated effects of TPP on U.S. imports of passenger vehicles and parts: Changes relative to baseline in year 15 (2032) and year 30 (full implementation, 2047)

	Import change, year 15		Import change, year 30	
	Million $	Percent	Million $	Percent
Passenger vehicles				
TPP				
NAFTA partners	806	0.6	1,789	0.8
Other FTA partners	3	1.8	2	5.7
New partners	125	0.3	1,612	3.9
All TPP countries	994	0.5	3,403	1.3
ROW	1,438	1.4	869	0.6
All countries	2,372	0.8	4,272	1.1
Parts				
TPP				
NAFTA partners	2,887	3.3	5,484	4.6
Other FTA partners	8	2.7	4	1.5
New partners	935	8.7	621	5.7
All TPP countries	3,830	3.9	6,110	4.6
ROW	-791	-0.8	-1,593	-0.9
All countries	3,039	1.6	4,516	1.5

Source: USITC estimates. Estimates for year 15 are shown above to match results in other sector analyses. Year 15 includes all tariff and nontariff changes from the agreement directly affecting passenger vehicles and parts, except for the removal of tariffs on U.S. imports of passenger vehicles from Japan.
Note: Percentages and values determined in the projected 2032 and 2047 economies. Dollar values may not match the value produced by applying percentage changes in this table to current values in the 2015 economy. ROW = rest of world.Certain groupings may not sum to their parent groupings due to rounding.

Japan

In the long run, Japan is likely the largest beneficiary of the removal of U.S. passenger vehicle tariffs, as it was the fourth-largest manufacturer of passenger vehicles in the world (behind China, the EU, and the United States) and the largest supplier of U.S. passenger vehicle imports outside of North America in 2014.[447] An increase in imports from Japan could displace some U.S. production, but it could also displace imports from other countries that already have tariff-

[447] OICA, "Production Statistics" (accessed March 16, 2015); USITC DataWeb/USDOC (accessed March 16, 2015).

free access to the U.S. market (e.g., Canada, Mexico, or South Korea) or are not a part of TPP (e.g., the EU). However, Japanese manufacturers have invested billions of dollars in assembly plants in North America, with most of those vehicles destined for North American markets, particularly the United States. Also, large Japanese manufacturers primarily import two types of vehicles from Japan into the U.S. market: luxury vehicles and vehicles meant to make up a temporary gap between high U.S. consumer demand and North American production of that model.[448]

The removal of the 25 percent tariff on pickup trucks and other vehicles for the transport of goods is unlikely to have a major impact on U.S. imports of pickup trucks. Assembly plants located in the United States and Mexico supply virtually all of the U.S. market for these vehicles, and this likely would not change under TPP. The United States is the world's largest market for such vehicles, and passenger vehicle manufacturers tend to locate their assembly plants close to their largest markets to take the greatest advantage of economies of scale.[449] Further, U.S. consumers tend to prefer larger pickup trucks with more high-end features than those sold in other markets.[450] It is possible that removal of the 25 percent tariff would lead to an increase in the availability of relatively niche pickup trucks, but these trucks are unlikely to have the sales volume in the United States necessary to locate production in North America.[451]

Other Countries

Vietnam and Malaysia are the only other vehicle producers in TPP without existing U.S. FTAs. It is unlikely, though, that they would significantly increase vehicle exports to the United States, because of distance, differences in consumer preferences between U.S. and Southeast Asian consumers, and safety and emissions standards.[452] Malaysia exported less than 10 passenger vehicles to the United States in 2014, and appears to primarily produce vehicles for its domestic market.[453] While Vietnam is not currently a large producer, industry sources have indicated that U.S. imports from Vietnam could increase somewhat.[454]

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[448] Industry representative, telephone interview by USITC staff, February 4, 2016; industry representative, telephone interview by USITC staff, February 25, 2015.
[449] For example, the majority of U.S. vehicle sales by non-U.S. manufacturers are of vehicles manufactured in the United States. Bozzella, written testimony to the USITC, January 22, 2016, 5; Coffin, *Passenger Vehicles*, 2013, 4.
[450] Industry representative, telephone interview by USITC staff, January 28, 2016.
[451] Examples of such niche produtcs include the Ford Ranger and the Toyota Hilux. Beene, "After 'Chicken Tax,' a Flood of Foreign Trucks?" June 29, 2015, 1.
[452] Industry representative, interview by USITC staff, Washington, DC, January 21, 2016.
[453] GTIS, Global Trade Atlas database (accessed July 14, 2015); OICA (accessed January 21, 2015).
[454] Industry representative, telephone interview by USITC staff, February 4, 2016; industry representative, interview by USITC staff, Washington, DC, January 21, 2016.

U.S. Parts Imports

U.S. imports of parts for passenger vehicles could significantly increase soon after the implementation of the agreement, but distance and transportation costs would likely limit the effect of TPP to low-volume parts and parts of certain product categories. While most parts for passenger vehicles produced in the United States tend to be manufactured within a day's drive of production, removal of tariffs reduces the cost difference between imported parts and locally produced parts, which could boost U.S. imports.[455] Thus, the main driver of the increase in parts imports is actually the predicted increase in U.S. vehicle production.

Summary of Views of Interested Parties

Union and academic professionals are concerned that the relatively low RVC requirement in ROOs will decrease the U.S. content in vehicles traded in TPP compared to NAFTA, but other industry sources tend to support TPP ROOs. The AFL-CIO recommended an RVC in TPP that was significantly higher than NAFTA, and is concerned that with more countries in TPP and an RVC requirement below NAFTA's, U.S. parts producers will be negatively affected and non-TPP members will benefit.[456] The UAW, which represents workers in the auto industry and other industries, agreed that the low RVC in TPP could put U.S. production and employment at risk.[457] An academic source shared the UAW and AFL-CIO's concerns, and pointed out that the RVC change would happen immediately upon entry into force of the agreement.[458] However, one industry source argued that the relatively low RVC was necessary because some parts not commonly used in the United States, like small diesel engines and manual transmissions, tend not to be produced domestically. Manual transmissions and diesel engines are more commonly used in other TPP countries, and a higher RVC in TPP could prevent U.S.-built small manual-shift diesel-engine vehicles (for example) from qualifying as originating for the purpose of exporting to other TPP countries.[459] In its report, the International Trade Advisory Council (ITAC) on Automotive Equipment and Capital Goods (ITAC-2) stated that most committee members support the level of RVC in TPP, but some are concerned the RVC is not strong enough.[460]

Many in the U.S. auto industry do not believe TPP would cause significant increases in U.S. passenger vehicle exports to Japan. A Ford Motor Company official stated that Ford does not expect a significant increase in brand sales or vehicle exports from the United States to Japan because of alleged continued Japanese currency manipulation and nontariff barriers that limit

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[455] Klier and Rubenstein, *Who Really Made Your Car? 2008,* 136; industry representative, interview by USITC staff, Washington, DC, January 21, 2016; industry representative, telephone interview by USITC staff, January 28, 2016.
[456] AFL-CIO, written submission to the USITC, January 13, 2016, 39–42.
[457] Nassar, written submission to the USITC, December 23, 2015, 5.
[458] Academic professional, telephone interview by USITC staff, January 27, 2016.
[459] Industry representative, telephone interview by USITC staff, January 28, 2016.
[460] ITAC-2, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 4, 6–7.

non-Japanese sellers to a small portion of the Japanese market.[461] Ford also announced that it planned to stop selling vehicles in Japan because it saw "no path to profitability."[462] Members of ITAC-2 also believe "these commitments will not lead to a substantially larger U.S. presence in the Japanese motor vehicle market," although they believe the commitments would result in some improvements.[463]

The trade association Global Automakers supports the inclusion of provisions in the TPP Customs Administration and Trade Facilitation chapter that encourage modernization of customs practices throughout the TPP region. Global Automakers asserts that quicker processing and simpler and more transparent documentation requirements will make it easier for U.S. manufacturers to access TPP markets. Global Automakers also states that facilitative and transparent procedures required in this chapter will ensure that goods are treated fairly by customs officials, and reduce conflicts of interest in customs administration.[464]

According to U.S. industry representatives, the most significant issue that is not included in TPP is currency manipulation. In its submission, Ford describes currency manipulation as "the 21st century trade barrier facing American manufacturers," and claims that without a binding agreement limiting a country's ability to manipulate its currency, gains and concessions on market access and other reforms are at risk.[465] This view is supported in public statements by the UAW, the United Steelworkers (USW), and AFL-CIO.[466] A different industry source argued that currency manipulation is less of an issue than it was in the past, and stated that entry into the Japanese market is difficult because it is an extremely competitive market that is shrinking, with established domestic players.[467] In its submission to the USITC, Global Automakers[468] supports the approach to currency taken by TPP parties, asserting that one reason it is preferable is that "it avoids commitments that could restrict U.S. options aimed at achieving economic growth."[469]

A recent study conducted by the minority staff of the U.S. House of Representatives Committee on Ways and Means noted that TPP also does not restrict "duty drawback" provisions, which allow a country to refund a tariff on an imported good if the good is used as an input for a

[461] Biegun, written testimony to the USITC, January 16, 2016, 4–5.
[462] Spring and Tajitsu, "Facing Weak Market Share," January 25, 2016.
[463] ITAC-2, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 6–7.
[464] Bozzella, written testimony to the USITC, January 22, 2016, 4.
[465] Biegun, written submission to the USITC, January 16, 2016, 2.
[466] Nassar, written testimony submitted to the USITC, December 23, 2015, 4–5; Gerard, written testimony to the USITC, December 29, 2015, 6–7; Drake, written submission to the USITC, December 29, 2016, 13, 19.
[467] Industry representative, telephone interview by USITC staff, January 29, 2016.
[468] The Association of Global Automakers represents international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. Bozzella, written testimony to the USITC, January 22, 2016, 1.
[469] Bozzella, written testimony to the USITC, January 22, 2016, 4.

product that is then exported. Such provisions were restricted in NAFTA, so the lack of restriction in TPP may create an additional incentive for producers in Mexico, which offers duty drawbacks outside of NAFTA, to source products from a non-TPP country.[470]

Textiles and Apparel[471]

Assessment

The largest changes in textiles and apparel trade from TPP would likely occur in U.S. imports of apparel. The Commission's model projects that U.S. demand for both imported and domestically produced apparel would increase over the 2032 baseline. The modeling results estimate that TPP would result in a 1.4 percent ($1.9 billion) increase in U.S. imports of apparel over the 2032 baseline (i.e., expected level of imports in 2032 without TPP), and a 0.3 percent ($10 million) increase in U.S. exports. Imports of apparel would be expected to grow most significantly from Vietnam, the second-largest supplier to the United States, while those from China, the largest U.S. apparel supplier, would be expected to decline.[472]

The Commission's model results indicate that U.S. output and employment in the apparel sector also would increase slightly (by 1.0 percent and 0.9 percent, respectively), over the 2032 projected baseline. High-end, niche products, replenishment or quick turnaround products, and other items that generally do not compete with imports are among the types of products being produced domestically. Examples of such products include those that require customized, often smaller orders, such as sports team uniforms, test market products or reorders, and fast-fashion items.

The Commission's model results for textiles (non-apparel) estimate that TPP would result in U.S exports that are 1.3 percent ($257 million) higher than the baseline estimate, and imports that are 1.6 percent ($869 million) higher, compared with the 2032 baseline. The model estimates that output and employment in the textiles sector would be slightly lower compared with the 2032 baseline (by 0.4 percent each).

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[470] U.S. Congress, House, Committee on Ways and Means, *TPP Issue Analysis: Trade,* January 8, 2016, 12.
[471] Provisions on textiles and apparel are mainly covered in TPP's chapter 4. The chapter covers all the textile articles and apparel covered in HTS chapters 50–63 (excluding raw cotton, wool, and vegetable fibers, which are considered agricultural products). TPP chapter 4 also includes a number of other products that are classified in other HTS chapters (outside of chapters 50–63), including certain travel goods, handbags, and similar products (HTS chapter 42); umbrellas (HTS chapter 66); glass fibers and articles thereof (HTS chapter 70); and pillows, quilts, and similar articles (HTS chapter 94). The focus of this analysis is on the textile and apparel articles covered in HTS chapters 50–63, unless specifically noted. For a complete list of the HTS subheadings covered by Chapter 4 of TPP, see TPP, Chapter 4, Article 4.1, and Annex 4-A, Textiles and Apparel Product-Specific Rules of Origin.
[472] The Commission's modeling accounts for the TPP ROOs for textiles and apparel as they apply to Vietnam's exports of textiles and apparel. See appendix G for additional details.

Overview of U.S. Trade with TPP Partners[473]

U.S. exports of textiles and apparel to TPP countries totaled $7.9 billion in 2015, down by 2 percent from 2013 levels (table 4.16). In 2015, U.S. exports of textiles and apparel to TPP countries accounted for 54 percent of total U.S. textile and apparel exports to the world ($14.7 billion) (table 4.17). Roughly 22 percent of domestic shipments of textiles and apparel were exported in 2015 (box 4.6). Textiles accounted for most of the value of U.S. exports of such products to TPP countries (81 percent or $6.4 billion).[474] Within the TPP countries, the current FTA partners accounted for the vast majority of U.S. textile and apparel exports (94 percent) in 2015; Mexico and Canada were the largest markets for U.S. exports to TPP countries for both textiles (91 percent) and apparel (80 percent) that year. Japan was the largest destination for U.S. exports to non-FTA TPP countries, accounting for 3 percent of U.S. textile exports and 11 percent of U.S. apparel exports to TPP countries.

Table 4.16: U.S. exports of textiles and apparel to the TPP region, 2013–15, million dollars

	2013	2014	2015
Textiles and apparel	8,059	8,284	7,887
Textiles	6,309	6,609	6,356
Apparel	1,750	1,676	1,532

Source: USITC DataWeb/USDOC (accessed February 17, 2016).
Note: Trade data are based on NAICS 313, 314, and 315, excluding certain animal hair and vegetable fibers (e.g., raw wool and cotton waste).

[473] Unless otherwise noted, trade data in this section based on USITC DataWeb/USDOC (accessed February 17, 2016). Trade data are based on NAICS 313, 314, and 315, excluding certain animal hair and vegetable fibers (e.g., raw wool and cotton waste).
[474] These include textiles (yarns and fabrics) and textile products (e.g., sheets, towels, tents, etc.) covered in NAICS 313 and 314.

Table 4.17: U.S. domestic exports of textiles and apparel to the world, the TPP region, and TPP countries, 2013–15, million dollars

Country	2013	2014	2015
TPP non-FTA partners	595	554	468
Brunei	1	([a])	1
Japan	462	400	336
Malaysia	37	42	23
New Zealand	56	56	49
Vietnam	39	55	60
TPP FTA partners	7,464	7,731	7,419
Australia	226	208	212
Canada	3,190	3,251	3,044
Chile	98	84	84
Mexico	3,803	4,045	3,943
Peru	66	63	63
Singapore	81	80	72
TPP total	8,059	8,284	7,887
ROW	6,815	6,971	6,783
World	14,874	15,255	14,670

Source: USITC DataWeb/USDOC (accessed February 17, 2016).
Notes: ROW = rest of world. Trade data are based on NAICS 313, 314, and 315, excluding certain animal hair and vegetable fibers (e.g., raw wool and cotton waste).
[a] Less than $500,000.

Box 4.6: U.S. Textile and Apparel Industry

Domestic shipments of textiles and apparel totaled $67.9 billion in 2015, up 10 percent from 2009, but still below the pre-recession level of $77.8 billion in 2008. Textile mills output (e.g., yarns, threads, and fabrics) accounted for 45 percent of the value of domestic shipments of textiles and apparel in 2015. Textile product mills (e.g., home furnishings and other miscellaneous textile articles) accounted for another 34 percent of the total, and apparel manufacturing accounted for the remainder. During 2013–15 U.S. textile mill shipments declined by 2 percent to $30.8 billion, while textile product mill shipments grew by 2 percent to $23.2 billion. U.S. shipments of apparel hit an all-time low in 2013 at $12.3 billion, but subsequently increased to $13.9 billion in 2015 as brands and retailers increased domestic sourcing in part to diversify their supply.

In 2015, employment in the textile and apparel industry totaled 369,500 jobs, down 11 percent (48,000 jobs) from 2009. However, at least some of the decline may be attributed to gains in labor productivity, which increased during the period for all three sectors (textile mills, textile product mills products, and apparel manufacturing). The BLS labor productivity index (2007 = 100) for textile mills increased from 98.7 in 2009 to 107.2 in 2015; for miscellaneous textile products, from 89.2 to 102.4; and for apparel, from 80.1 to 89.3.

Sources: U.S. Census, Manufacturers' Shipments, Inventories, and Orders, Historical Data, "Shipments" (accessed February 19, 2016); USDOL, BLS, "Employment, Hours, and Earnings" (accessed February 19, 2016); USDOL, BLS, "Annual Index of Labor Productivity"(accessed April 15, 2016); Lu, "2015 U.S. Fashion Industry Benchmarking Study," June 2015.
Note: Data for North American Industrial Classification System (NAICS) 313 (textile mills), 314 (textile product mills), and 315 (apparel manufacturing).

U.S. imports of textiles and apparel from TPP countries totaled $19.9 billion in 2015, accounting for 17 percent of total U.S. textile and apparel imports from the world ($118.5 billion) (tables 4.18 and 4.19). Apparel accounted for most of the value of U.S. imports from TPP countries (82 percent or $16.3 billion). Within TPP countries, Vietnam accounted for the largest share of U.S. textile and apparel imports ($11.1 billion or 56 percent of TPP imports), nearly all of which consisted of apparel. The current FTA partners accounted for 39 percent ($7.7 billion) of U.S. textile and apparel imports from TPP partner countries in 2015.

Table 4.18: U.S. imports of textiles and apparel from the TPP region, 2013–15, million dollars

	2013	2014	2015
Textiles and apparel	17,332	18,775	19,913
Textiles	3,413	3,569	3,618
Apparel	13,919	15,205	16,295

Source: USITC DataWeb/USDOC (February 17, 2016).
Notes: Totals may not sum due to rounding. Trade data are based on NAICS 313, 314, and 315, excluding certain animal hair and vegetable fibers (e.g., raw wool and cotton waste).

Table 4.19: U.S. imports of textiles and apparel from the world, TPP region, and TPP countries, 2013–15, million dollars

	2013	2014	2015
TPP non-FTA partners	9,704	10,937	12,222
Brunei	4	4	6
Japan	518	519	536
Malaysia	546	558	569
New Zealand	30	30	30
Vietnam	8,606	9,825	11,081
TPP FTA partners	7,628	7,838	7,691
Australia	24	37	46
Canada	1,811	1,855	1,860
Chile	15	18	17
Mexico	5,099	5,249	5,132
Peru	646	658	622
Singapore	33	22	14
TPP total	17,332	18,775	19,913
ROW	93,167	95,454	98,592
Total	110,498	114,229	118,505

Source: USITC DataWeb/USDOC (accessed February 17, 2016).
Note: ROW = rest of world. Totals may not sum due to rounding. Trade data are based on NAICS 313, 314, and 315, excluding certain animal hair and vegetable fibers (e.g., raw wool and cotton waste).

Summary of Provisions

Market Access

All textile and apparel duties would be eventually eliminated under TPP. Over 70 percent of the U.S. textile and apparel 8-digit rate lines would be free of duty upon entry into force (EIF) (table 4.20). These lines are estimated to account for about 28 percent of dutiable imports from TPP countries in 2015.[475] Some of the top categories of imports of apparel from Vietnam, such as certain cotton and manmade fiber sweaters, manmade fiber dresses, and manmade fiber water-resistant anoraks (jackets), would be free of duty upon EIF. The duty rates for an additional 7 percent of the 8-digit textile and apparel subheadings would be phased out in equal stages over 5 years. The products in tariff lines subject to the 5-year staging category accounted for only 3 percent of total dutiable imports from TPP countries in 2015.[476] These include a variety of products, including certain cotton yarns and baby garments. For most of the remaining textile and apparel items, which accounted for about 69 percent of dutiable imports in 2015,[477] the duty rate would be cut on EIF by 35 or 50 percent (depending on the product) and then remain in place for 10 to 12 years. A few items have an additional duty reduction of 15 percent on January 1 of year 6.

Table 4.20: U.S. tariff phaseout schedule for textiles and apparel, by 8-digit HTS subheading

Staging category	Description of staging	Number of 8-digit subheadings in chapters 50–63 (excluding natural fibers)	Number of 8-digit subheadings for apparel (chapters 61 and 62)
EIF	Duties eliminated upon entry into force.	1116	422
B5	Duties eliminated in 5 annual stages, duty free, effective January 1 of year 5.	113	55
US6	Duties reduced by 35 percent upon entry into force and remain at that rate until December 31 of year 10. Goods are duty free effective January 1 of year 11.	19	18
US7	Duties reduced by 35 percent upon EIF and remain at that rate until December 31 of year 12. Goods are duty free effective January 1 of year 13.	11	8
US8	Duties reduced by 35 percent upon EIF and remain at	14	7

[475] Based on USITC DataWeb/USDOC (accessed February 18, 2016). The data are estimated because a few 8-digit subheadings have more than one staging category, and the split does not always match 10-digit statistical breakouts. In addition, the U.S. staging category is not the same for all TPP countries for a few products. For example, the category "men's and boys' shirts of cotton" (6110.20.20) is split between "dress shirts" and other shirts. Dress shirts are duty free on EIF for Vietnam and Malaysia; for all other TPP countries, dress shirts are not duty free until year 13. Men's dress shirts of cotton are defined to include HTS statistical suffixes 6205.20.2016; 6205.20.2021; 6205.20.2026; and 6205.20.2031, plus shirts that are otherwise classified under 6205.20.20 that meet certain other criteria.

[476] USITC DataWeb/USDOC (accessed February 18, 2016).

[477] USITC DataWeb/USDOC (accessed February 18, 2016). The data are estimated because a few 8-digit subheadings have more than one staging category, and the split does not match 10-digit statistical suffixes.

Staging category	Description of staging	Number of 8-digit subheadings in chapters 50–63 (excluding natural fibers)	Number of 8-digit subheadings for apparel (chapters 61 and 62)
	that rate until December 31 of year 5. On January 1 of year 6, the duties are reduced by an additional 15 percent of the base rate and remain at that rate until year 10. Goods are duty free effective January 1 of year 11.		
US9	Duties reduced by 35 percent upon EIF and remain at that rate until December 31 of year six. On January 1 of year seven the duties are reduced an additional 15 percent of the base rate and remain at that rate until year 12. Goods are duty free effective January 1 of year 13.	14	7
US9	Duties reduced by 35 percent upon EIF and remain at that rate until December 31 of year six. On January 1 of year seven the duties are reduced an additional 15 percent of the base rate and remain at that rate until year 12. Goods are duty free effective January 1 of year 13.	14	7
US10	Duties reduced by 50 percent upon EIF and remain at that rate until December 31 of year ten. Goods are duty free effective January 1 of year 11.	112	27
US11	Duties reduced by 50 percent upon EIF and remain at that rate until December 31 of year twelve. Goods are duty free effective January 1 of year 13.	141	36

Notes: A few 8-digit subheadings are split for the purpose of the tariff phase, in which case they are counted twice if they have different phaseout schedules. Changes on EIF cover some rate lines that have an NTR tariff rate of zero.

U.S. industry sources indicated that the products considered most sensitive to imports from TPP countries, particularly Vietnam, received the longer staging (duties remain in place for 10 or 12 years).[478] According to the National Council of Textile Organizations (NCTO), these included products that account for a large share of U.S. imports from Dominican Republic-Central America Free Trade Agreement (CAFTA-DR) partners and other key Western Hemisphere partners, which are important customers to the U.S. textile industry.[479] For knit apparel in the longer staging categories (e.g., t-shirts and cotton and manmade fiber knit pants),[480] the duty remains in place for 10 years. For woven apparel in the longer staging categories (e.g., cotton and manmade fiber trousers and men's wool suits),[481] the duty remains in place for 12 years. Numerous textile finished goods and intermediate products also fall into longer staging categories. These include some cotton, wool, and manmade fiber yarns, certain cotton and

[478] NCTO, written submission to the USITC, February 16, 2016, 3; industry representatives, telephone interviews by USITC staff, January 14 and 18, 2016.
[479] NCTO, written submission to the USITC, February 16, 2016, 3.
[480] Includes staging categories US6, US8, and US10 (table 4.20).
[481] Includes staging categories US7, US9, and US11 (table 4.20).

manmade fiber woven fabrics, tire cord, certain knit fabrics, and certain home furnishings, such as table and bed linens.

U.S. exporters already have duty-free market access to six of the TPP parties under existing U.S. FTAs. For the non-FTA TPP countries, most of the duties would go to zero upon EIF. For example, Japan would eliminate nearly all of its duties on imports of textiles and apparel upon EIF. For some apparel items, Japan would phase out the duties in 11 equal annual stages. Similarly, virtually all of Malaysia's tariffs would be eliminated upon EIF, with tariffs on the remaining few items eliminated in 6 equal annual stages. With a few exceptions, nearly all of Vietnam's tariffs on textiles and apparel would also go to zero upon EIF. The most notable exception is used clothing (HS 6309.00), for which duties would be phased out over 16 years. For Brunei, most textile and apparel products would be free upon EIF.

Rules of Origin

Similar to most other U.S. agreements, TPP would apply yarn-forward tariff shift ROOs to most textile and apparel goods. For example, in order for a garment to qualify for preferential treatment under the agreement, production of specified yarns and fabrics used in the garment, as well as the cutting and sewing, must occur in the United States and/or other TPP countries.[482] Notable exceptions to these rules apply to brassieres and certain baby garments; for these products, fabrics must be cut or knit to shape and sewn in the TPP countries in order to qualify. In addition, there is a cut-and-sew tariff shift rule for apparel in chapters 61 and 62 made from certain fabrics, including coated or impregnated fabrics classified in chapter 59 and silk fabrics classified in chapter 50. The agreement also requires that cotton, manmade fiber filament, and manmade staple fiber sewing thread[483] used in all apparel and made-up textile articles (HTS chapters 61–63) and narrow elastic fabrics (from the yarn stage forward) used in all apparel (HTS chapters 61 and 62) be "formed and finished" in the TPP countries. A notable flexibility to the yarn-forward rule is the "short supply" list, which allows the use of certain inputs used in textile and apparel products that are considered to be in short supply[484] in the TPP countries (box 4.7).

[482] The tariff shift rule for goods in chapters 61, 62, and 63 applies only to the component of the good (garment or made-up article) that determines the tariff classification of the good, i.e., the "essential character" component.
[483] Includes certain manmade filament yarns used as sewing thread.
[484] A negotiated list of fibers, yarns, and fabrics that are deemed not to be available from producers in commercial quantities in a timely manner within the parties to the agreement.

Box 4.7: Short supply provisions

The TPP includes a short supply list,[a] which contains a total of 194 inputs (fibers, yarns, and fabrics) considered to be in short supply in the TPP countries. Of the 194 products on the list, 8 are temporary (eligible for 5 years from EIF); the remainder are permanent. Textile and apparel goods can be cut or knit to shape and assembled using inputs on the short supply list sourced from outside the TPP countries and still qualify for benefits under the agreement. Certain inputs on the short supply list are subject to specific end-use requirements, such as men's dress shirts. In addition, apparel and made-up articles made from inputs on the short supply list must still meet the TPP rules for sewing thread and narrow elastic fabrics. Unlike CAFTA-DR, the short supply list for TPP is set—the agreement does not provide a mechanism for adding or removing products from the list.

The United States and Singapore have a separate side letter that, among other things, allows Singapore to use the TPP short supply list under the existing Singapore FTA in addition to that agreement's existing short supply list. U.S. textile and apparel imports from Singapore are already free of duty.[b]

Source: Compiled by USITC.
[a] TPP, chap. 4, Short Supply List, https://ustr.gov/sites/default/files/TPP-Final-Text-Annex-4-A-Appendix-1-Short-Supply-List.pdf.
[b] TPP, U.S.-SG Letter Exchange on Textiles, and US-SG FTA, https://ustr.gov/sites/default/files/TPP-Final-Text-US-SG-Exchange-on-Letters-on-Textiles-and-US-SG-FTA.pdf.

For countries with existing agreements, partners could use either the TPP or existing ROOs when exporting to the United States. There might be some advantage to using TPP ROOs for apparel if manufacturers spread different steps of production across multiple or new TPP partners.[485]

Earned Import Allowance Program for Vietnam

TPP would provide for an Earned Import Allowance Program (EIAP) with Vietnam.[486] This program would authorize certain woven cotton pants and other bottoms[487] (bottoms), cut and sewn or otherwise assembled in Vietnam, to enter the United States free of duty under specific conditions if they are made from certain U.S. cotton fabrics,[488] or fabrics originating from another TPP country, or from any origin, provided it qualifies for preferential treatment under the agreement (box 4.8). Without the EIAP, TPP-originating cotton bottoms would be subject to a yarn-forward rule of origin and the pants would not be free of duty until January 1 of year 13; non-TPP-originating cotton bottoms would be subject to NTR rates of duty.

[485] Benefits of accumulation are more likely in the long run, after apparel duties are fully eliminated. USITC, hearing transcript, January 15, 2016, 717 (testimony of Stephen Lamar, AAFA); industry representative, interview by USITC staff, Washington, DC, December 16, 2015.
[486] TPP, chap. 4, U.S. app. E, https://ustr.gov/sites/default/files/TPP-Final-Text-US-Appendix-E-Earned-Import-Allowance-Program.pdf.
[487] Includes men's and boys' trousers, bib and brace overalls, breeches or shorts, classified in HTS subheadings 6203.42.20 and 6203.42.40, and women's and girls' trousers, bib and brace overalls, breeches or shorts classified in HTS subheadings 6204.62.20 and 6204.62.40.
[488] U.S. fabrics must be wholly formed and finished in the United States and classified in HTS chapter 52.

Box 4.8: EIAP with Vietnam

Under the EIAP with Vietnam, firms exporting U.S.-produced cotton fabrics for use in bottoms would receive two credits that can be used to import finished cotton bottoms from Vietnam. One credit can be used to receive immediate duty-free treatment for bottoms made with the U.S. qualifying fabrics, and the other credit can be used towards receiving immediate duty-free treatment for cotton bottoms made with non-U.S. fabrics. The EIAP provides an uncapped benefit for duty-free imports of woven cotton bottoms made with U.S. fabrics at a ratio of 1-for-1. The EIAP provides a capped benefit for duty-free imports of woven cotton bottoms assembled in Vietnam with non-U.S. fabrics at a ratio of .75- for-1 for women's bottoms and 1.3- for-1 for men's bottoms. Duty-free imports of woven cotton bottoms made from non-U.S. fabrics is limited to 15 million square meters equivalent in year 1, growing to 20 million square meters equivalent by year 10 (and for subsequent years).

Source: Compiled by USITC.

Safeguard Mechanism and Customs Cooperation

The agreement contains a textiles and apparel-specific safeguard mechanism through which a TPP party may temporarily reimpose duties on a good. The party may take this action if increased imports of that good benefiting from preferential treatment under TPP result in serious damage or threaten to cause serious damage to the U.S. or TPP industry in a like or directly competitive good (TPP Chapter 4, Articles 4.3–4.9). The agreement includes detailed customs measures to ensure accuracy of the claims of origin to prevent circumvention of the agreement and to enforce measures affecting trade in textiles and apparel. In addition to customs cooperation, the agreement also includes bilateral side letters between the United States and Brunei, Malaysia, and Vietnam that set up additional requirements for textiles and apparel.[489] The Brunei letter states that the government would collect and provide information to the United States on its trade and production of textiles and apparel. Among other things, the letters with Malaysia and Vietnam state that TPP partners would establish and maintain a monitoring system for textile and apparel firms exporting to the United States.

Estimated Effects of TPP on the Textiles and Apparel Sectors

Impact on U.S. Exports

The Commission's modeling results estimate that TPP would result in a 1.3 percent ($257 million) increase in U.S. exports of textiles to the world over the 2032 baseline. According to the model, U.S. exports of textiles to new FTA partners would experience the largest increase

[489] TPP, U.S.-BN Letter Exchange on Textiles and Apparel, https://ustr.gov/sites/default/files/TPP-Final-Text-US-BN-Letter-Exchange-on-Textiles-and-Apparel.pdf; TPP, U.S.-MY Letter Exchange on Registered Textile and Apparel Enterprises, https://ustr.gov/sites/default/files/TPP-Final-Text-US-MY-Letter-Exchange-on-Registered-Textile-and-Apparel-Enterprises.pdf; TPP, U.S.-VN Letter Exchange on Registered Textile and Apparel Enterprises, https://ustr.gov/sites/default/files/TPP-Final-Text-US-VN-Letter-Exchange-on-Registered-Textile-and-Apparel-Enterprises.pdf.

(48.9 percent or $291 million). The model indicates that U.S. exports of textiles to non-TPP countries would decline 3.1 percent overall ($295 million) compared with the 2032 baseline.

Certain textile subsectors would likely benefit more than others. According to NCTO, there may be some opportunities to increase exports of certain textiles on a limited scale to new FTA partner countries, including technical textiles and cotton and specialty yarns.[490] In particular, in the short term, U.S. yarn producers might be able to increase exports of cotton spun yarn to Vietnam to allow Vietnamese apparel producers to meet the yarn-forward rule of origin for apparel.[491] Currently U.S. cotton yarn exports to Vietnam are small (accounting for less than 1 percent of total U.S. cotton yarn exports), but they more than doubled to $1.7 million in 2015 over 2014 levels. However, any increases in U.S. exports of cotton yarns may be short-lived, as there has been significant investment in short-staple spinning in Vietnam, and the country's cotton consumption has rapidly expanded in recent years.[492] The EIAP program with Vietnam may also help stimulate U.S. exports of denim and other cotton fabrics intended for use in bottoms to Vietnam, although there are mixed opinions on whether this program would be used.[493]

There may also be opportunities to increase U.S. exports of nonwovens to TPP member countries, especially fabrics under HTS heading 5603 (often referred to in the industry as "rolled goods"). U.S. imports under heading 5603 are currently duty free on an NTR basis. The TPP would give the U.S. industry reciprocal market access in TPP countries. For example, Japan's and Vietnam's ad valorem duties on nonwoven fabrics are 4.3 percent and 12 percent, respectively; both would be free of duty on EIF. Currently such nonwoven fabrics are among the top textile products that the United States ships to Japan and Vietnam, although exports to Japan dropped by 40 percent from 2014 to $40.4 million in 2015.

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[490] The Industry Trade Advisory Committee on Textiles and Clothing (ITAC-13) also stated that "members producing cotton yarns and fabrics express some optimism for export opportunities due to competitive pricing." NCTO, written submission to the USITC, February 16, 2016, 2, 6; ITAC-13, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 8.

[491] One textile industry representative stated that there has been significant Chinese investment in cotton ring spinning in Vietnam, which limits U.S. export opportunities in ring spun yarns. However, there may be some opportunity to export cotton open-end spun yarns, which are less labor intensive to produce than ring spun yarns. Industry representative, telephone interview by USITC staff, February 19, 2016.

[492] USDA, FAS, *Cotton: World Markets and Trade*, January 2016.

[493] Some industry representatives said that the EIAP is not practical for a variety of reasons, including the long distances and time required to ship fabrics from the United States to Vietnam, and uncertainties as to how the program would be implemented. However, according to AAFA, some of its members indicated that they might be able to use the program. Gap Inc. also stated it thought it would use the program. USFIA, written submission to the USITC, December 29, 2015, 5; USITC, hearing transcript, January 15, 2016, 766 (testimony of Stephen Lamar, AAFA), 767–68, (testimony of Julie Hughes, USFIA), and 769 (testimony of Stephanie Lester, Gap Inc.); industry representative, telephone interviews by USITC staff, January 11, 2016 and February 5, 2016.

For apparel, the Commission's modeling results estimate the TPP would result in a 0.3 percent ($10 million) increase in U.S. exports of apparel to the world over the baseline. Although there is demand in TPP countries for "Made in the USA" apparel such as denim jeans, high-end men's tailored clothing, fashion knitwear, and hosiery, according to industry representatives, it is likely that any increase in U.S. exports under TPP would be limited because most of these products would not meet the yarn-forward ROOs under the agreement.[494] However, other industry representatives suggested that it would not be an issue for U.S. apparel manufacturers to meet the ROOs.[495]

Impact on U.S. Imports

The Commission's modeling results estimate that TPP would result in a 1.6 percent ($869 million) increase in U.S. imports of textiles and a 1.4 percent ($1.9 billion) increase in U.S. imports of apparel from the world over the 2032 baseline. As the second largest supplier of apparel to the U.S. market, Vietnam is expected to realize the largest gains in exports of apparel to the U.S. market under TPP.[496] The projected increase from Vietnam would likely in part be offset by a decline in U.S. imports of apparel from non-TPP partners, particularly China, the largest apparel supplier to the U.S. market. According to the model, U.S. imports of apparel from non-TPP partners would decline by 5.1 percent ($5.5 billion) compared with the 2032 baseline.

The U.S. Fashion Industry Association (USFIA), representing U.S. apparel brands and retailers, indicated that the long duty staging would limit the use of the agreement for U.S. imports.[497] Although the duties on products subject to the longer duty staging (10–12 years) will be reduced by at least a 35 percent on day 1 of the agreement, Gap Inc. indicated that this cut is not enough to encourage increased imports under the agreement.[498] However, there may be some incentive to increase imports of apparel products that have high duties, such as synthetic apparel, which would see a 50 percent tariff cut.[499]

Nevertheless, over the long run, there are significant duty savings to be realized for products that meet the ROOs. In 2015, dutiable imports of textiles and apparel from TPP countries totaled $12.3 billion, with an estimated trade-weighted average duty of 17.7 percent ad valorem. Duties would be eliminated on EIF on tariff lines representing about $3.5 billion in

[494] USITC, hearing transcript, January 15, 2016, 773, 775, 827 (testimony of Stephen Lamar, AAFA); USITC, hearing transcript, January 15, 2016, 776–77 (testimony of Julie Hughes, USFIA); apparel industry representatives, interviews by USITC staff, Washington, DC, December 9 and 16, 2016.
[495] Textile and apparel industry representatives, telephone interviews by USITC staff, February 5 and 10, 2016.
[496] One study estimated that exports of apparel from Vietnam to the United States would increase by $12.5 billion in 2025 as a result of TPP. Tot, "Textiles and Apparel Industry Report," April 2014, 25.
[497] USITC, hearing transcript, January 15, 2016, 722 (testimony of Julie Hughes, USFIA).
[498] USITC, hearing transcript, January 15, 2016, 811 (testimony of Stephanie Lester, Gap Inc.).
[499] Ibid.

dutiable imports from all TPP countries in 2015, with a trade-weighted average duty of 12.6 percent ad valorem.[500] U.S. imports of apparel from TPP countries that are likely to experience the largest initial increases are those products that are duty free on EIF and have a cut-and-sew rule of origin or are able to use the "short supply" flexibilities to use non-originating inputs. Examples include certain cotton and manmade fiber sweaters, men's and boys' cotton dress shirts, women's and girls' manmade fiber dresses, baby garments, brassieres, apparel made with coated fabrics, and certain water-resistant jackets (see "Market Access" and "Rules of Origin" discussions above).

Impact on Imports of Apparel from Vietnam

TPP presents an opportunity for significant duty savings on imports from Vietnam, which is already a competitive major supplier of apparel to the U.S. market, ranking second after China.[501] U.S. duties on imports of apparel from Vietnam totaled over $1.9 billion in 2015.[502] U.S. imports of apparel from Vietnam totaled $10.5 billion in 2015, accounting for nearly one-half of Vietnam's exports of apparel.[503] As noted above, Vietnam is expected to realize the largest gains in exports of apparel to the U.S. market under TPP.

Initial growth in U.S. imports from Vietnam under TPP preferences would likely be moderated, particularly in the short term, by Vietnam's inability to meet the yarn-forward ROOs, coupled with long duty phaseouts for certain key products. Although Vietnam has a competitive, export-oriented apparel manufacturing industry, it lacks upstream production of textile inputs (yarn and fabric) and dyeing and finishing capabilities; it relies heavily on imports of yarn and fabric inputs (box 4.9). According to the American Apparel and Footwear Association (AAFA), about 88 percent of the yarns and fabrics used in Vietnam are imported.[504] However, only 8 percent ($1 billion) of Vietnam's imports of yarns and fabrics were from TPP partners in 2014.[505] China is Vietnam's largest source of textile imports, followed by South Korea and Taiwan. All three are non-TPP countries.[506] Under a yarn-forward rule, apparel manufactured with imported textile inputs from non-TPP countries would not qualify for duty-free treatment.[507]

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[500] Estimated by USITC staff based on import data from USITC DataWeb/USDOC (accessed February 18, 2016).
[501] A recent survey of 30 U.S. fashion companies noted that 90 percent of firms are already sourcing in Vietnam. Lu, "2015 U.S. Fashion Industry Benchmarking Study," June 2015.
[502] USITC DataWeb/USDOC (accessed February 17, 2016).
[503] Vietnam's exports of apparel totaled $20.3 billion in 2014, the latest year available. Its top export markets in 2014 were the United States (45 percent of apparel exports), followed by the EU (15 percent), Japan (13 percent), and South Korea (11 percent). GTIS, Global Trade Atlas database (accessed February 22, 2016).
[504] USITC, hearing transcript, January 15, 2016, 715 (testimony of Stephen Lamar, AAFA).
[505] GTIS, Global Trade Atlas database (accessed February 22, 2016).
[506] China accounted for 46 percent of Vietnam's total textile imports, while South Korea and Taiwan together accounted for another 34 percent. GTIS, Global Trade Atlas database (accessed February 22, 2016); Thomasson, "Vietnam on the Move," June 2014.
[507] U.S. exports of yarns and fabrics to Vietnam totaled only $104.9 million in 2014, accounting for 1 percent of Vietnam's total yarn and fabric imports. GTIS, Global Trade Atlas database (accessed February 22, 2016).

Capacity constraints and related price effects could also moderate some of Vietnam's market access gains under TPP.[508] For example, one U.S. importer noted concerns that apparel manufacturing costs, as well as other indirect transportation costs, would increase in Vietnam as a result of TPP.[509] Wage rates in Vietnam grew by double-digit rates in recent years and could drive up production costs for apparel if the trend continues.[510] Finally, it is likely that U.S. importers would increasingly compete with EU firms for apparel manufacturing capacity in Vietnam, given that the EU also recently concluded a free trade agreement with Vietnam.[511]

Box 4.9: Vietnam's Ability to Meet Yarn-forward Rules of Origin

Current estimates of Vietnam's domestic ability to meet a yarn-forward rule of origin for apparel vary by product or factory, and range from 12 to 20 percent of the products. However, for some products such as fleece and certain woven fabrics, inputs are more readily available. Although there is some domestic textile production within Vietnam, only one-quarter of the output is currently estimated to be of export quality. According to numerous industry sources, the dyeing and finishing segments of the supply chain are underdeveloped, as the Vietnam government tightly controlled permits for such operations in the past. Unclear regulations have led to a dearth of investment in this area, resulting in a bottleneck in Vietnam's supply chain.

In 2014, Vietnam's textile industry consisted of 145 yarn spinners, 401 weaving facilities, 105 knitting mills, 94 dyeing and finishing plants, and 7 nonwoven manufacturers. Anticipating yarn-forward rules under TPP, domestic and foreign firms have been investing in upstream fiber and textile capabilities in Vietnam, where TPP-related FDI in the textiles and apparel sector is estimated to be in excess of $1 billion. Major foreign investors are from China, Hong Kong, Taiwan, and South Korea. Additionally, the Vietnam National Textile and Garment Group (VINATEX), Vietnam's largest textiles and apparel corporation and a state-owned enterprise, is investing in spinning and weaving capacity. It is likely that as this investment becomes operational, more apparel would qualify for benefits under the FTA.

Cotton yarn spinning in Vietnam has grown rapidly since 2010, driven by exports to China, its largest export market (accounting for 80–90 percent of Vietnam's cotton yarn exports), and investment in anticipation of TPP. The increased demand for cotton yarn from China is due to China's domestic cotton policy. To work around restrictions, Chinese textile firms import cotton yarn instead of spinning it domestically. Chinese firms have invested significantly in yarn-spinning in Vietnam, including relocating operations to that country. For example, Texhong Textile, a Chinese company, has investments in Vietnam that accounted for one-quarter to one-third of Vietnam's total yarn production in 2015; much of this production is exported to China. According to statistics from the International Textile Manufacturers Federation (ITMF), Vietnam's installed capacity of short-staple spinning machines (to

[508] Textile and apparel industry representatives, interviews by USITC staff, Ho Chi Minh City, October 15–17, 2014.
[509] Apparel industry representative, interview by USITC staff, January 11, 2016; Barrie, "TPP to Benefit Vietnam and Malaysia Most by 2030," January 11, 2016.
[510] In 2015, the minimum wage in Vietnam grew 13–15 percent, and in 2016 the minimum wage was again raised 12.4 percent. Between 2010 and 2015, wages have increased two times for FDI firms and three times for domestic firms, on average. Officials expect wages to rise again in 2017. Donaldson, "2014: Global Sourcing to Be More Costly," January 1, 2014; Russell, "Vietnam Apparel Industry Calls for Lower Minimum," September 3, 2015; Dezan Shira & Associates, "Vietnam's Minimum Wages to Increase in 2016," September 14, 2015.
[511] Industry representative, interview by USITC staff, Washington, DC, December 16, 2015; USITC, hearing transcript, January 15, 2016, 779 (testimony of Stephanie Lester, Gap Inc.).

produce cotton or cotton blend yarns) more than doubled from 1.9 million spindles in 2009 to 5.1 million in 2013. Among major textile producers, Vietnam has one of the highest modernization rates of its spinning capacity based on the share of its machinery that is less than 10 years old. Cotton consumption in Vietnam has more than tripled since 2011, indicating that Vietnam is developing its textile supply chain.

According to industry sources, Vietnamese-produced yarns and fabrics are more expensive than similar goods produced in China. For example, in 2014, Vietnamese yarn was estimated to be 5–10 percent more expensive than similar yarn produced in China; fabrics were 5–8 percent more expensive. Under TPP, however, slightly higher input costs can be offset by duty savings on U.S. imports of finished apparel from Vietnam, which had a trade-weighted average duty of 18.5 percent ad valorem in 2015. With limited capacity for inputs to meet yarn-forward ROOs, certain apparel manufacturers expressed concern that increased demand for yarn would lead to higher prices for already scarce goods. Higher input costs could also moderate the ability of Vietnam's apparel producers to export under TPP in the short to medium term. However, in the long run, increased domestic production of yarn and fabric in Vietnam would shorten lead times. According to one source, Vietnam now needs an extra 10–12 days' lead time to import yarn and fabric inputs.

Sources: GTIS, Global Trade Atlas database (accessed February 22, 2016); textile and apparel industry representatives, interviews by USITC staff, Ho Chi Minh City, October 15–17, 2014; Tot, "Textiles and Apparel Industry Report," April 2014, 11, 13, 17, and 20; Olah, "Vietnam Poised to Become Major Apparel Power," January 30, 2014; CRS, *U.S. Textile Manufacturing and TPP,* August 28, 2014, 14; Fernandez-Stark, Frederick, and Gereffi, *The Apparel Global Value Chain*, November 2011, 7; Dezan Shira & Associates, "Foreign Invested Firms," August 5, 2014; AmCham Vietnam, "TPP: Another Hong Kong Firm to Invest $200 Million" (accessed February 18, 2016); USITC, hearing transcript, January 15, 2016, 729 (testimony of Stephanie Lester, Gap Inc.); USDA, FAS, *Cotton: World Markets and Trade,* January 2016; Textile World, "Yarn Exports Drive Growth in Vietnam's Spinning," January 19, 2016; Textile Outlook International, *World Markets for Textile Machinery, Part 1,* December 2015, 122; ITMF, *Shipments Statistics Vol. 33/2010,* May 2010; ITMF, *Shipments Statistics Vol. 37/2014,* May 2014.

Impact on Imports of Apparel from Malaysia

U.S. imports of apparel from Malaysia are also expected to increase under the agreement, although expected increases would be smaller in absolute terms than for Vietnam. Malaysia is a smaller supplier of apparel to the U.S. market,[512] and labor shortages may inhibit growth in production.[513] Malaysia's exports to the United States would immediately benefit from TPP, as its key exports to the United States fall under the EIF staging category and/or qualify for "short supply" flexibilities.[514] Men's and boys' woven cotton dress shirts and sweaters of cotton or manmade fiber accounted for roughly one-half of U.S. apparel imports from Malaysia in 2015.[515] Malaysia, along with Vietnam, would gain duty-free access to the U.S. market for

[512] U.S. imports of apparel from Malaysia totaled $546 million in 2015. USITC DataWeb/USDOC (accessed February 17, 2016).
[513] PwC, *Study on Potential Economic Impact of TPP,* December 2015, 154.
[514] USITC, hearing transcript, January 15, 2016, 717 (testimony of Stephen Lamar, AAFA); USFIA, written submission to the USITC, January 29, 2016, 3.
[515] The duty paid on U.S. imports from Malaysia totaled $102.6 million that year. HTS subheadings 6205.20.20, 6110.20.20, and 6110.30.30. USITC DataWeb/USDOC (accessed February 23, 2016).

certain men's and boys' cotton dress shirts[516] upon EIF, coupled with short supply flexibilities for fabric inputs.[517]

In addition, Malaysia may have the potential to increase exports of other products, since it has a vertically integrated textile and apparel sector that is better positioned to meet the yarn-forward ROOs.[518] One study found that the Malaysian textile industry could potentially realize gains from greater value chain integration with Vietnam, increasing textile exports to meet TPP ROOs.[519]

Impact on Imports of Apparel from Singapore

Although Singapore is a small supplier of apparel to the U.S. market, it is possible that U.S. imports of some products would increase as a result of a U.S.-Singapore TPP side letter allowing Singapore to use the TPP short supply list under the existing U.S.-Singapore FTA. U.S. imports under the Singapore FTA are already free of duty, so Singapore would be able to ship goods under the FTA using inputs in the TPP short supply list for immediate duty-free treatment. U.S. imports of apparel from Singapore totaled $12.4 million in 2015, a decline of 62 percent from 2011.

Summary of Views of Interested Parties

According to the report of the Industry Trade Advisory Committee (ITAC) on Textiles and Clothing, the majority of its members "view the Agreement as achieving a balanced outcome."[520] Some members raised concerns with specific aspects of TPP. However, while neither representatives of the textile sector (yarns and fabrics) nor the apparel sector are totally satisfied with the agreement, they nevertheless have publicly supported the agreement.[521] A number of issues regarding TPP were raised at the Commission's hearing, in written submissions to the Commission, and in industry representatives' interviews with Commission staff, as discussed below.

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[516] Men's dress shirts as defined under 62052020A in the U.S. Tariff Offer under TPP. See appendix D, "Positions of Interested Parties," for a discussion of industry views on the definition of dress shirts.
[517] U.S. import duties remain on imports from all other TPP countries until year 12.
[518] One industry source indicated that it already purchases fabrics from Malaysia for use in apparel manufacturing. In recent years, Malaysia has received significant additional investment in its yarn and fabric sector, the majority of which was FDI. Industry representative, telephone interview by USITC staff, January 11, 2016; PwC, *Study on Potential Economic Impact of TPP*, December 2015, 143 and 145.
[519] PwC, *Study on Potential Economic Impact of TPP*, December 2015, 153.
[520] ITAC-13, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 1.
[521] AFMA, "AFMA Announces Support of TPP," February 17, 2016, http://www.fibersource.com/f-info/More_News/02-19-2016AFMATPP.pdf (accessed February 24, 2016); NCTO, "U.S. Textile Manufacturers Endorse Trans-Pacific Partnership," January 21, 2016; AAFA, "Apparel & Footwear Association Releases Statement of Support," February 1, 2016; TPP Apparel Coalition, "TPP Apparel Coalition Applauds Signing of the TPP," February 3, 2016. The TTP Apparel Coalition is made up of AAFA, NRF, OIA, RILA, and USFIA.

Rules of origin. The U.S. textile industry supports the yarn-forward rule of origin for apparel.[522] According to NCTO, the yarn-forward rule would allow the benefits of the agreement to go to TPP countries, serve as a driver for investment in the region, and ensure "that the current FTA structure is not destabilized."[523] On the other hand, both Gap Inc. and associations representing apparel brands, retailers, and importers stated that the yarn-forward ROOs would limit imports under TPP.[524] The National Retail Federation (NRF) stated the TPP rule of origin for apparel is one of the most restrictive of any U.S. agreement and that "restrictive rules impose compliance costs that are quite large and constitute hidden barriers to trade."[525]

A few industry representatives stated that the differences in the textile and apparel ROOs from one FTA to the next make it difficult for the industry to know and comply with the rules and may inhibit some importers from claiming preferences under TPP.[526] As stated in one written submission, the different rules for various FTAs means that a factory exporting to multiple different FTA partners may be required to have different supply chains for the same inputs—or they may choose to change their supply chains to meet the most restrictive ROOs in order to avoid cross-contamination of inputs in a factory.[527] According to NRF and AAFA, some of their members do not make use of FTAs because of the complicated and burdensome ROOs.[528]

Short supply provisions. NCTO, representing the domestic textile industry, stated that some of its members were dissatisfied with some of the items designated for the short supply list, including certain wool yarns for sweaters and fabrics of polyester/wool blends.[529]

U.S. Fashion Industry Association (USFIA) indicated that while some of the items on the short supply list (such as performance outerwear fabrics, wool blend fabrics, and flannel) would help its members, it is concerned that products on the list are narrowly defined and have end-use requirements.[530] In addition, industry representatives stated that the inability to change the short supply list means that new products would not be able to be added as new yarns and

[522] NCTO, written submission to the USITC, February 16, 2016, 2; industry representatives, telephone interviews by USITC staff, January 14 and 18, 2016.
[523] In its written submission, NCTO noted that the United States has FTAs in place with six TPP countries based on the yarn-forward rule of origin and stated that "a weaker or vastly different TPP rule would have undermined billions in existing U.S. exports." NCTO, written submission to the USITC, February 16, 2016, 2, 5.
[524] USITC, hearing transcript, January 15, 2016, 729–30 (testimony of Stephanie Lester, Gap Inc.) and 782 (testimony of Stephen Lamar, AAFA); NRF, written submission to the USITC, February 16, 2016, 5; RILA, written submission to the USITC, February 16, 2016, 3; USFIA, written submission to the USITC, January 27, 2016, 4–5.
[525] NRF, written submission to the USITC, February 16, 2016, 5.
[526] USITC, hearing transcript, January 15, 2016, 782–83 (testimony of Stephen Lamar, AAFA); NRF, written submission to the USITC, February 16, 2016, 5.
[527] Collinson, written submission to the USITC, December 29, 2015, 3–4.
[528] NRF, written submission to the USITC, February 16, 2016, 5; AAFA, written submission to the USITC, February 5, 2016, 3.
[529] NCTO, written submission to the USITC, February 16, 2016, 2.
[530] USITC, hearing transcript, January 15, 2016, 725 (testimony of Julie Hughes, USFIA).

fabrics are developed.[531] According to NRF, the flexibilities intended to make the agreement more usable "may inject a high degree of complexity and uncertainty into sourcing" and dissuade some retailers, particularly smaller importers, from importing under TPP.[532]

Effect on Western Hemisphere trade. The government of El Salvador and the Central American-Dominican Republic Apparel and Textile Council expressed concern that the initial 35 percent duty cut for most textile and apparel products could "cause a rapid shift in production away from the well-established Western Hemisphere supply chain."[533] They estimate that lost orders resulting from the transfer of production during the first year of the agreement could affect 15–18 percent of industrial employment in the CAFTA-DR region.[534] They requested that the market access provisions intended to protect the Western Hemisphere textile and apparel supply chain be implemented correctly and "rigorously enforced," particularly for three products of particular importance to the CAFTA-DR region—pullovers and similar articles of cotton and acrylic, and men's and boys' cotton shirts (not knitted) other than dress shirts.[535] Finally, they expressed concern at the way the flexibilities provided for the TPP ROOs could affect their industry, including the short supply provisions, apparel products eligible for cut-and-sew provisions, and the EIAP program with Vietnam.[536]

On the other hand, Gap stated that the benefits of TPP are not expected to come "at the expense of Western Hemisphere producers or their U.S.-based textile suppliers." Instead, according to Gap, the trade would shift from other countries that pay full duties, such as other Asian suppliers.[537] In addition, Gap stated that in the next two to three years it is planning to triple its production of goods in the Western Hemisphere, particularly in Haiti and Central America.[538] NCTO stated that TPP has three key elements that are intended to keep Western Hemisphere trade stable: (1) the yarn-forward rule of origin; (2) limited cut-and-sew rules and the absence of any trade preference levels that allow exceptions to the ROOs; and (3) the longest duty phaseouts on products that cover the majority of imports from the CAFTA-DR countries (81 percent) in particular, as well as from the entire Western Hemisphere

[531] USITC, hearing transcript, January 15, 2016, 725, 784 (testimony of Julie Hughes, USFIA); USITC, hearing transcript, January 15, 2016, 785 (testimony of Stephanie Lester, Gap Inc.).
[532] NRF, written submission to the USITC, February 16, 2016, 1–2.
[533] Government of El Salvador, written submission to the USITC, February 16, 2016, 1; CECATEC-RD, written submission to the USITC, February 16, 2016, 1.
[534] Government of El Salvador, written submission to the USITC, February 16, 2016, 2; CECATEC-RD, written submission to the USITC, February 16, 2016, 1.
[535] These products are classified in the HTS as follows: pullovers and similar articles of cotton and acrylic (part of HTS subheadings 6110.20.20 and 6110.30.30) and men's and boy's cotton shirts (not knitted) other than dress shirts (part of 6205.20.20). Government of El Salvador, written submission to the USITC, February 16, 2016, 2; CECATEC-RD, written submission to the USITC, February 16, 2016, 2.
[536] Government of El Salvador, written submission to the USITC, February 16, 2016, 2–3; CECATEC-RD, written submission to the USITC, February 16, 2016, 2–3.
[537] USITC, hearing transcript, January 15, 2016, 730 (testimony of Stephanie Lester, Gap Inc.).
[538] Ibid., 731 (testimony of Stephanie Lester, Gap Inc.).

(66 percent).[539] Nevertheless, one U.S. textile industry representative estimated that U.S. textile industry exports to the Western Hemisphere could decline in the long term by as much as 10–15 percent because of TPP.[540]

Labor provisions.[541] Although representatives of apparel firms and importers supported strong labor provisions, some representatives expressed concern about how the provisions would be implemented and how this might affect U.S. importers sourcing from Vietnam.[542] According to USFIA, "If the United States can suspend tariff concessions for Vietnam at any time—for reasons having nothing to do with conditions at the factories run by our member companies and their business partners—apparel brands may hesitate to utilize the Agreement, blunting the benefits to our sector."[543]

Trusted Trader program. USFIA commented that TPP does not recognize the U.S. Customs and Border Protection (CBP) "Trusted Trader"[544] program.[545] According to USFIA, its member companies have invested "millions of dollars and hours of time" to provide details to CBP officials on how they do business as part of the Trusted Trader program.[546] USFIA points to the side letters with Vietnam and Malaysia that require "time-consuming collection of data and additional paperwork," including detailed paper copies of raw materials invoices, purchase orders, bills of lading, cutting records, etc., that "run counter to the Trade Facilitation and Enforcement Act . . .[that] requires Customs to move to an all-electronic interface."[547]

Dress shirts. A few industry sources had concerns with the definition of dress shirts (breakouts under HTS subheadings 6205.20 and 6206.30). Dress shirts are duty free on EIF for Vietnam and Malaysia, and also are covered under the short supply provisions of the agreement. A textile industry representative said that the definition for dress shirts in the market access provisions should specify a yarn size for the fabric used in the dress shirts, as it does for the definition in

[539] NCTO, written submission to the USITC, February 16, 2016, 2, 4.
[540] Industry representative, telephone interview by USITC staff, February 19, 2016.
[541] Side agreements between the United States and Brunei, Malaysia, and Vietnam obligate those states to undertake certain labor reforms before TPP can enter into force between the United States and those countries. For more information, see box 6.3 in chapter 6 of this report.
[542] USITC, hearing transcript, January 15, 2016, 716, 760, and 829 (testimony of Stephen Lamar, AAFA); USFIA, written submission to the USITC, January 29, 2015, 6.
[543] USFIA, written submission to the USITC, December 29, 2015, 5.
[544] For information on the Trusted Trader program, see U.S. Customs and Border Control website at http://www.cbp.gov/border-security/ports-entry/cargo-security/trusted-trader.
[545] USITC, hearing transcript, January 15, 2016, 726, 785–86 (testimony of Julie Hughes, USFIA); USFIA, written submissions to the USITC, December 29, 2015, 6, and January 29, 2016, 1–2.
[546] USFIA, written submissions to the USITC, December 29, 2015, 6.
[547] Ibid., December 29, 2015, 6, and January 29, 2016, 2.

the short supply provisions.[548] The concern is that the definition is too broad and could allow imports of some work shirts.[549] U.S. importers stated that the short supply definition for men's dress shirts leaves room for uncertainty as to how U.S. CBP would interpret it.[550] Also, importers expressed concern that the definition of dress shirts is "U.S. centric" and may not be recognized by customs officials in other TPP countries.[551]

Travel Goods.[552] Three witnesses at the public hearing stated that there would be significant benefits for U.S. imports of travel goods.[553] AAFA noted that Vietnam is the second-largest supplier of travel goods to the U.S. market and that there is a strong, immediate opportunity to take advantage of TPP for travel goods, given the flexible ROOs and immediate duty-free treatment.[554] However, according to the report of the ITAC on Textiles and Clothing, travel goods industry members who manufacture in the United States or CAFTA-DR countries "feel that having all travel goods become duty free immediately from Vietnam is likely to have a negative effect on the redevelopment of the U.S. textile industry and thus have a negative effect on U.S. jobs."[555] The Leather Specialty Company, a domestic producer of travel goods, stated that there are over 20 manufacturers of travel goods in the United States that would be affected by TPP.[556] This firm further stated because of TPP, it has put on hold plans to increase hiring and investment in new equipment.[557]

Footwear[558]

Assessment

TPP would likely result in a $1.1 billion (2.7 percent) increase in U.S. imports of footwear from all countries as compared to the baseline estimate in 2032. According to the Commission's

[548] The short supply provisions state that the fabrics that can be used in the short supply provisions must be of 67 nm or finer for single yarns, or of yarn count 135 nm or finer per ply for multiple yarns. Industry representative, telephone interviews by USITC staff, January 13, 2016.
[549] Industry representative, telephone interviews by USITC staff, January 13, 2016.
[550] Industry representatives, interview by USTIC staff, Washington, DC, December 16, 2015; industry representative, telephone interview by USITC staff, January 11, 2016.
[551] Industry representative, interview by USTIC staff, Washington, DC, December 9, 2015; industry representative, telephone interview by USITC staff, January 11, 2016.
[552] Travel goods are not covered in the modeling or trade table for textiles and apparel. Travel goods are included under "other leather products" for the purposes of the modeling.
[553] USITC, hearing transcript, January 15, 2016, 713–14, 805 (testimony of Stephen Lamar, AAFA) and 737–38 (testimony of Richard Harper, OIA); USITC, hearing transcript, January 13, 2016, 292 (testimony of Sarah Thorne, Wal-Mart Stores, Inc.).
[554] USITC, hearing transcript, January 15, 2016, 713–14 (testimony of Stephen Lamar, AAFA).
[555] ITAC-13, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 10.
[556] The Leather Specialty Company, written submission to the USITC, March 16, 2016, 1.
[557] Ibid.
[558] Includes all types of footwear (protective footwear, athletic shoes, plastic and rubber footwear, slippers, and footwear parts) classified in HTS chapter 64.

model results, U.S. imports from all TPP countries would rise by $1.6 billion (23.4 percent). Most of this increase would be accounted for by imports of footwear from Vietnam, the second-largest supplier overall and the biggest TPP supplier of footwear to the U.S. market. Because U.S. imports already account for the vast majority of domestic footwear purchases, the significant growth in U.S. footwear imports from TPP countries, especially Vietnam, is expected to occur at the expense of China and other non-TPP footwear suppliers. These imports are not expected to compete with or negatively affect U.S. production. U.S. imports of footwear from China would fall by $400.4 million (1.3 percent) under TPP.

TPP's impact on U.S. footwear exports is expected to be significant. Total U.S. footwear exports to the TPP countries would grow by $135.0 million (23.6 percent). Most of the growth would be accounted for by a $125.0 million (76.5 percent) increase in U.S. footwear exports (primarily parts used to assemble footwear for the U.S. market) to Vietnam. U.S. industry sources have stated that they expect no immediate significant increase in U.S. footwear production as a result of the TPP,[559] and the Commission's model results show a small (0.5 percent) increase in footwear output as compared to the 2032 baseline.

Overview of U.S. Trade with TPP Partners

U.S. Exports

During 2013–15, U.S. exports of footwear to the world grew 7.2 percent, rising from $788.9 million to $845.9 million (table 4.21). During the same period, total U.S. footwear exports to the TPP countries increased even faster—by 22.4 percent to $400.5 million. The TPP parties accounted for almost half (47.3 percent) of total U.S. footwear exports in 2015, up from 41.4 percent ($327.3 million) in 2013. Of the top non-FTA TPP partners, U.S. exports of footwear (primarily parts) to Vietnam increased by 72.5 percent, from $60.1 million in 2013 to $103.7 million in 2015. At the same time, U.S. footwear exports to Japan fell by 3.9 percent, fluctuating from $56.2 in 2013 to million to $54.0 million in 2015. The principal footwear products that the United States exports to TPP countries include leather shoes, footwear parts, and branded athletic footwear (box 4.10).

[559] U.S. footwear industry representative, email message to USITC staff, January 21, 2016.

Table 4.21: U.S. domestic exports of footwear, 2013–15, million dollars

Country	2013	2014	2015
TPP			
Canada	126.4	139.1	148.6
Vietnam	60.1	86.4	103.7
Japan	56.2	51.7	54.0
Mexico	43.9	49.0	41.6
Australia	10.6	13.7	20.3
Chile	12.6	13.0	14.8
Singapore	10.4	12.5	12.6
New Zealand	4.3	2.2	2.3
Peru	2.1	1.5	1.2
Brunei	0.5	1.0	1.0
Malaysia	0.3	0.3	0.4
Total TPP	327.3	370.5	400.5
ROW	461.6	455.2	445.3
Total	788.9	825.7	845.9

Source: USITC DataWeb/USDOC (accessed February 16, 2016).
Note: Totals may not sum due to rounding. ROW = rest of world.

Box 4.10: U.S. Footwear Industry and Employment

The United States has a small footwear industry that manufactures footwear for both the U.S. and foreign markets. For more than a decade, U.S. firms have been outsourcing labor-intensive footwear production to low-cost countries while retaining design, branding, and distribution functions in the United States.[a] Some firms produce a limited amount of footwear in the United States, including products for the U.S. military under the Berry Amendment.[b] American-made shoes, which accounted for just 1.6 percent of the U.S. footwear market in 2014,[c] are concentrated in niches—rubber/fabric footwear, including athletic shoes;[d] men's work shoes; and plastic/protective footwear.[e] They have a reputation for high quality, value, and durability.[f] The recent growth of U.S. domestic exports in the past few years, particularly to Canada, is attributed to Canadian consumers' high regard for U.S. footwear, the strength of the Canadian dollar against the U.S. dollar, and to trade preferences under the North American Free Trade Agreement.[g]

As U.S. footwear companies have relied increasingly on foreign sources to manufacture footwear, the number of domestic producers of footwear has continued to decline. During 2013–15, the number of domestic footwear manufacturing establishments fell from 278 to 274.[h]

[a] IBISWorld, *Shoe and Footwear Manufacturing in the US*, December 2015, 7; U.S. footwear industry representative, telephone interview by USITC staff, January 27, 2016.

[b] IBISWorld, *Shoe and Footwear Manufacturing in the US*, December 2015, 7; U.S. footwear industry representative, telephone interview by USITC staff, February 10, 2016; USITC, hearing transcript, January 15, 2016, 763–64 (testimony of Matt Priest, Footwear Distributors and Retailers of America). The Berry Amendment was originally passed by Congress in 1941 to promote the purchase of certain U.S. goods. It was included in subsequent defense appropriations acts until it was made permanent in fiscal year 1994 by section 8005 of Public Law 103-139. See Defense Procurement and Acquisition Policy, Berry Amendment FAQs, http://www.acq.osd.mil/dpap/cpic/ic/berry_amendment_faq.html.

[c] U.S. footwear industry representative, email message to USITC staff, January 20, 2016.

[d] Although most of its shoes are produced in foreign factories, New Balance, a privately owned footwear firm, states that it continues to manufacture more than 4 million pairs of its athletic shoes annually in its facilities in Maine and Massachusetts. Richardson, "Pacific Trade Deal Has Potential to Hurt, Help," October 5, 2015; U.S. footwear industry representative, telephone interview by USITC staff, March 9, 2016.

[e] U.S. footwear industry representative. Email messages to USITC staff, February 24, 2016 and April 5, 2016.

[f] IBISWorld, *Shoe and Footwear Manufacturing in the US*, December 2015, 12.

[g] IBISWorld, *Shoe and Footwear Manufacturing in the US,* December 2015, 8, 18.
[h] The 2015 data are estimated by staff based on preliminary statistics from the U.S. Department of Labor. USDOC, BLS, "Quarterly Census of Employment and Wages" (accessed April 12, 2016).

U.S. Imports

The United States is a major world importer of footwear, and during 2013–15, U.S. imports of footwear from the world rose by $2.6 billion (10.7 percent) to $27.2 billion (table 4.22). During the same period, U.S. imports of footwear from the TPP countries grew by $1.4 billion (40 percent) to $4.9 billion, and the TPP countries accounted for 18 percent of total U.S. footwear imports in 2015. In 2015, most (87 percent) of the U.S. imports of footwear imported from the TPP countries were dutiable. Of the TPP countries, Vietnam is the largest footwear supplier to the U.S. market, accounting for 88 percent of U.S. footwear imports from the TPP countries in 2015; after China, it is the second leading footwear supplier to the U.S. market. In light of challenges facing Chinese footwear factories in recent years, including rising labor and material costs, labor shortages, employee turnover, and closures,[560] U.S. footwear companies have been diversifying their supply chains and view Vietnam as an attractive alternative footwear supplier.[561] During 2013–15, U.S. footwear imports from Vietnam rose by almost 50 percent, growing from $2.9 billion in 2013 to $4.3 billion in 2015.[562]

Table 4.22: U.S. footwear imports for consumption, 2013–15, million dollars

Country	2013	2014	2015
TPP			
Vietnam	2,900.9	3,550.5	4,328.6
Mexico	549.0	498.9	493.9
Canada	46.8	58.4	72.6
Australia	6.4	6.6	7.9
Japan	4.9	2.0	5.5
Peru	3.2	3.8	4.3
Malaysia	2.7	1.9	2.1
New Zealand	0.3	0.2	0.4
Singapore	0.3	0.7	0.2
Brunei	0	0.08	0.8
Chile	0.2	0.09	0.03
Total TPP	3,514.7	4,123.0	4,915.6
ROW	21,110.6	21,625.9	22,333.7
Total	24,625.2	25,748.8	27,249.3

Source: USITC DataWeb/USDOC (accessed February 16, 2016).
Note: Totals may not sum due to rounding. ROW = rest of world.

[560] FootwearBiz, "Shoe Factory Closes in Putian," January 28, 2016; FootwearBiz, "China's Share of U.S. Footwear Market," February 11, 2016.
[561] RILA, written submission to the USITC, February 15, 2016; NRF, written submission to the USITC, February 15, 2016.
[562] Statements by U.S. footwear industries representatives at the FDRA Sourcing Intelligence Summit, July 22–23, 2015; Barrie, "Mitigating Footwear Sourcing Risks in Vietnam," September 22, 2015.

The leading types of footwear imported from Vietnam in 2015 were sports and athletic footwear; certain footwear containing rubber and plastic outer soles and leather uppers, including work shoes; and various men's and women's leather boots. The average U.S. tariff on footwear imports from Vietnam (which accounted for 99.5 percent of the dutiable value of U.S. footwear imports from TPP countries) is 12.5 percent, whereas the U.S. average rate of duty on footwear imports from all TPP countries is 10.8 percent. Industry sources report that Vietnam's footwear industry expects to boost its footwear exports by 20 percent in 2016 because of the TPP and other new FTAs.[563]

Summary of Provisions

TPP (Annex 3-D, Article 3.2) would grant immediate and reciprocal duty-free market access for footwear produced in TPP countries except for 18 "sensitive" U.S. tariff lines—primarily rubber or plastic protective footwear (i.e., work boots, waterproof footwear, and hip waders), as well as leather boots, women's pumps, and athletic shoes valued at over $12/pair that are still produced in the United States. In 2015, U.S. imports of footwear classified in the 18 "sensitive" U.S. tariff lines accounted for 41.6 percent (by quantity) of total U.S. footwear imports from the TPP countries. Current duties on the 18 footwear items, which range from 5.0 percent to 37.5 percent (table 4.23), would be phased out over several different staging categories during the first 12 years of the agreement.[564] In year 12, all duties on U.S. footwear imports would be eliminated and all U.S. imports of footwear from TPP countries would enter the United States free of duty.

Table 4.23: 18 sensitive footwear items and duty rates, 2015

HTS number	Description	Duty rate 2015 (percent)
6401 headings	Waterproof footwear, with outer soles and uppers of rubber or plastics, the uppers of which are neither fixed to the sole nor assembled by stitching, riveting, nailing, screwing, plugging, or similar processes.	
6401.10.00	With a metal toe-cap. Ex: industrial rubber steel-toe work boots.	37.5
6401.92.90	Without a metal toe-cap, covering the ankle but not the knee. Ex: Rubber rain boots, fireman's boots, industrial rubber boots.	37.5
6401.99.10	Without a metal toe-cap, covering the knee. Ex: Hip waders.	37.5
6401.99.30	Without a metal toe-cap, not covering the ankle, protective against water, oil, grease or chemicals or cold or inclement weather, without closures. Ex: Rubbers.	25.0
6401.99.60	Without a metal toe-cap, not covering the ankle, protective against water, oil, grease or chemicals or cold or inclement	37.5

[563] FootwearBiz, "Vietnam: Footwear Industry Targets 20% Growth," January 22, 2016.
[564] The duty rates on these products would be reduced and/or eliminated in varying annual periods over 4-, 5-, 7-, 9-, or 12-year periods.

HTS number	Description	Duty rate 2015 (percent)
	weather, with closures. Ex: Rubbers with buckles.	
6402 headings		
6402.91.10	Footwear with outer soles and uppers of rubber or plastics covering the ankle, protective against water, oil, grease or chemicals or cold or inclement weather, with a metal toe cap, other than sports footwear. Ex: Basic cold weather boot.	37.5
6402.91.80	Not waterproof or protective, other than sports footwear, without a metal toe-cap, covering the ankle, valued over $6.50 but not over $12/pair. Ex: High-top basketball shoe, work boot, dress or casual boot.	90 cents per pair +20.0
6402.99.90	Not waterproof or protective, other than sports footwear, without a metal toe-cap, not covering the ankle, valued over $12/pair. Ex: Men's athletic shoes.	20.0
6403 Headings	Footwear with outer soles of rubber/plastics/leather or composition leather and uppers of leather.	
6403.40.30	With a metal toe-cap with welt construction. Ex: Men's leather boots.	5.0
6403.40.60	With a metal toe-cap, not welt construction. Ex: Men's leather work boot.	8.5
6403.91.30	Covering the ankle, welt construction. Ex: Men's leather boot.	5.0
6403.91.60	Covering the ankle, not welt construction; for men, youths, or boys. Ex: Men's leather boot.	8.5
6403.91.90	Covering the ankle, not welt construction, for other than men, youths, or boys. Ex: Women's leather upper fashion boot.	10.0
6403.99.40	Not covering the ankle; welt construction. Ex: Men's oxford work shoe.	5.0
6403.99.60	Not covering the ankle, not welt construction; for men, youths or boys. Ex: Men's leather work shoe.	8.5
6403.99.90	Not covering the ankle; not welt construction; for persons other than men, youths or boys; valued over $2.50/pair. Ex: Women's pump.	. 10.0
6404 Headings	Footwear with outer soles of rubber or plastics and uppers of textile.	
6404.19.20	Designed to be worn as protection against water, oil, grease or chemicals or cold or inclement weather. Ex: Cold weather boot.	37.5
6404.19.90	Not protective, not open toe or open heel, valued over $12/pair. Ex: Textile upper casual dress shoe.	9.0

Source: HTS, 2015 (Rev.2).

Similar to the ROOs for footwear under NAFTA and other FTAs, the TPP ROOs for footwear require substantial transformation (using what is known as the tariff shift rule)[565] and a regional value content of at least 55 percent of the appraised value of the article.[566] Especially significant are two TPP requirements: that all uppers and assemblies of uppers (also called "hanging uppers")—the parts of the shoe that account for a significant share of a shoe's value because of the high labor content—originate in the TPP region, and that a tariff differential be in effect until all duty phaseouts on the 18 sensitive footwear items are completed. The tariff differential rule (TPP, Section B, Annex 2-D of Chapter 2, National Treatment and Market Access for Goods) would require that the tariff assessed on a footwear product imported into the U.S. market be based on the TPP country in which the principal value added or production process occurred (e.g., Vietnam, where footwear is manufactured and for which current tariffs on footwear are high and would be phased out over 12 years). The tariff may not be assessed based on a TPP country in which the product has undergone minimal operations such as packaging.[567] This rule would ensure that the tariff phaseout schedules for sensitive footwear products from certain TPP countries such as Vietnam are upheld.

The TPP would also immediately allow "accumulation" (Article 3.10 of Chapter 3, Rules of Origin and Origin Procedures). Accumulation would permit the TPP parties to treat materials and processing used to manufacture a TPP good from one TPP party in the same way they treat materials and processing from any other TPP party. As such, accumulation would likely strengthen incentives for TPP businesses to integrate production and supply chains within the TPP region rather than bring in supply chain components from outside the region.[568]

Also, under TPP Japan would eliminate its longstanding tariff-rate quota (TRQ) on leather footwear imports (i.e., leather footwear classified in HS headings 6403, 6404, 6405). Currently, the TRQ sets an annual quota of 12 million pairs of footwear that are subject to a quota tariff rate based on the footwear's tariff classification. If imports of footwear into Japan exceed the quota, the effective Japanese tariff rates reportedly rise to as much as 189 to 300 percent per

[565] "Substantial transformation" is production that results in a new and different good, which then has a name, character, use, and HTS classification that differs from those of its constituent materials. For example, non-originating raw materials (e.g., leather, plastic, rubber, etc.) would be allowed by the TPP if the final footwear product were produced in the TPP region.

[566] In contrast to NAFTA and other FTAs which use only the "net cost" method (requiring a calculation of the direct and some indirect costs of producing the shoe minus non-originating content) to calculate the regional value content (RVC) of the imported footwear, the TPP would offer alternative methods of calculating RVC: build-down and build-up. Both methods rely on the values of the finished good and the originating and non-originating materials. Value equates to price. According to an industry representative, both methods appear easier to use than the net cost method used in NAFTA. U.S. industry representative, email message to USITC staff, March 16, 2016.

[567] For example, footwear produced in Vietnam and shipped to Canada or Mexico for packaging would not qualify for the zero duty rate under NAFTA.

[568] USTR, "Rules of Origin and Origin Procedures," November 5, 2015.

pair.[569] The TPP would eliminate the TRQ, and Japan's regular tariff rates on footwear would be assessed and then phased out over the first 12 years of the agreement.

Estimated Effects of TPP on the Footwear Sector

Impact on U.S. Exports

Some industry representatives speculate that because the TPP would create a large, multilateral export market, it would encourage the overall growth of U.S. footwear exports.[570] Commission model estimates indicate that TPP would result in a $135.0 million (23.6 percent) increase in total U.S. footwear exports with TPP partners. However, most of the increase would be accounted for by a $125.0 million (76.5 percent) rise in U.S. exports of footwear (primarily parts used to assemble footwear) to Vietnam because footwear production is expected to rise in Vietnam under TPP. In contrast, U.S. footwear exports to NAFTA partners would fall by $4.1 million (1.6 percent).

The Commission's modeling results predict a small increase (0.5 percent) in U.S. output and a small increase (0.8 percent) in U.S. employment as a result of TPP. As previously discussed, U.S. footwear imports already account for most footwear purchases in the U.S. market, and most of the increase in U.S. footwear imports resulting from the TPP would come at the expense of non-TPP footwear suppliers such as China. Moreover, footwear made in the United States tends to serve a different market from that for imported footwear. Footwear produced in the United States is designated for the U.S. military or appeals to consumers seeking Made-in-the-USA or Assembled-in-the-USA branded athletic footwear.[571] Industry sources indicated that it is unclear if U.S. footwear production would increase as a result of anticipated export growth to Vietnam as a result of TPP.[572] It is likely that any increase in manufacturing and employment resulting from TPP would first occur indirectly in the overall footwear supply chain that includes distribution (jobs at ports, trucking jobs, warehouse jobs, and retail jobs), and engineering, before occurring directly in footwear manufacturing.[573]

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[569] USTR, "National Treatment and Market Access for Goods," November 5, 2015; FDRA, written submission to the USITC, January 15, 2016.
[570] U.S. footwear industry representative, telephone interview by USITC staff, February 10, 2016.
[571] FDRA, written submission to the USITC, February 5, 2016, iii.
[572] However, the TPP reportedly may help boost domestic manufacturing of certain footwear components. U.S. footwear industry representatives, telephone interviews with USITC staff, December 10, 2015, and December 16, 2015.
[573] Russell, "In the Money: Nike Reaffirms U.S. Production," June 29, 2015; FDRA, "Trans-Pacific Partnership: Issue Background," n.d. (accessed April 13, 2016).

Impact on U.S. Imports

The Commission's modeling results show that TPP would result in a $1.1 billion (2.7 percent) increase in worldwide imports of U.S. footwear. However, U.S. imports of footwear from all TPP countries would rise by $1.6 billion (23.4 percent) above the projected 2032 baseline. Vietnam would account for most of the increase in U.S. footwear imports from TPP countries. The growth in imports from Vietnam is expected because of the additional cost savings offered by TPP's elimination of U.S. duties on imports from Vietnam.

U.S. imports of footwear from Vietnam have grown rapidly in recent years without trade preferences, so it is likely that once all duties have been eliminated by TPP, such imports would accelerate at the expense of China, the largest supplier of footwear to the U.S. market.[574] The Footwear Distributors and Retailers Association (FDRA) has estimated that by 2019, Vietnam will supply 22 percent of the volume of all U.S. footwear imports.[575] Several major U.S. footwear firms have already begun sourcing a significant share of their footwear purchases from Vietnam. Nike reports that in fiscal 2015, contract factories in Vietnam manufactured about 43 percent of total Nike brand footwear, compared to 32 percent and 20 percent for China and Indonesia, respectively.[576] Furthermore, in anticipation of duty-free imports and other trade benefits under TPP, some large footwear companies began expanding footwear production in Vietnam even before the signing of the TPP Agreement.[577] Wolverine, a U.S. firm that specializes in work boots, indicated that in light of TPP's expected benefits, it would shift more of its sourcing from China to Vietnam.[578] However, one industry source noted that the growth of U.S. footwear imports from Vietnam could be tempered by higher costs that Vietnamese footwear producers will face in meeting TPP labor and environmental commitments and standards.[579] Concerning increases in footwear imports from other TPP countries, industry sources have suggested that U.S. footwear imports from Malaysia, a tiny footwear supplier to the U.S. market, also could grow as a result of TPP.[580]

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[574] *World Footwear,* "Business of Footwear: Vietnam's Victory," January/February 2016, 10; FDRA, written submission to the USITC, February 5, 2016, iii.

[575] USITC, hearing transcript, January 15, 2016, 744 (testimony of Matt Priest, Footwear Distributors and Retailers of America). In a post-hearing submission, FDRA stated that it commissioned a study in 2013 analyzing the effect of TPP's elimination of duties. The study found that "the most significant impact will be the large shift in production from China." FDRA, written submission to the USITC, February 5, 2016.

[576] Nike, "Form 10-K," 67 (accessed January 11, 2016).

[577] In late 2015, Taiwan-based Pou Chen, reportedly the world's largest contract shoemaker, announced plans to move a significant share of its footwear manufacturing from China to Vietnam because of the latter's lower labor costs and more favorable tariffs under the TPP. Ting-Fang, "Shoemaker Shifts Production to Vietnam Following TPP," 2015; *World Footwear,* "News: Vietnam," 2016, 3.

[578] FootwearBiz, "Wolverine Worldwide to Shift Production from China," 2014; Phuong, "U.S. Firms Move Footwear Factories to Vietnam," 2014.

[579] U.S. footwear industry representative, telephone interview by USITC staff, January 28, 2016.

[580] U.S. footwear industry representative, interview by USITC staff, Rosslyn, VA, December 16, 2015.

Summary of Views of Interested Parties

In its December 2, 2015, report on TPP, the Industry Trade Advisory Committee (ITAC) on Textiles and Clothing provided summary comments on TPP that reflect the key views of its footwear members and the U.S. footwear industry as a whole.[581] U.S. footwear industry representatives have generally and publicly supported TPP. Several principal issues concerning the agreement were raised in ITAC's report, at the Commission's hearing, in written submissions to the Commission, and in interviews with industry representatives, as presented below.

TPP's Duty Elimination and Phaseouts on 18 Sensitive Footwear Items

The TPP's footwear provisions would offer immediate duty elimination on most footwear products and staged duty phaseouts on 18 sensitive footwear items. The provisions are viewed as offering enough flexibility to account for the complexities of modern supply chains while helping to ensure that significant manufacturing activity remains in the TPP region.[582] The Outdoor Industry Association has stated that TPP presents a tremendous opportunity and that it had consulted closely with domestic suppliers and manufacturers to ensure that its position would not harm U.S. producers.[583]

The association stated that it supported flexible ROOs and immediate duty phaseouts for non-import-sensitive outdoor footwear products, whereas it proposed stricter ROOs and longer duty phaseouts for import-sensitive products.[584] However, the association expressed disappointment that TPP does not include tariff breakouts beyond the HTS 8-digit subheadings. But it stated that TPP will "still provide significant benefits for footwear sourced in the TPP region and Made in USA products."[585]

*The Footwear Distributors and Retailers Association (*FDRA) remarked that the footwear industry has been "heavily and disproportionately burdened by duties," which it characterized as averaging over 10 percent and reaching up to 67.5 percent, in contrast to an average tariff of 1.5 percent on all imported goods.[586] FDRA emphasized its view that eliminating these tariffs on

[581] Whereas the U.S. non-rubber footwear industry supports the TPP, the rubber footwear and plastic footwear industry takes a neutral position on it. ITAC-13, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 3-4, 6-7, 10.
[582] Ibid.
[583] USITC, hearing transcript, January 15, 2016, 734–35 (testimony of Rich Harper, Outdoor Industry Association).
[584] Ibid., 736.
[585] Ibid., 736–37.
[586] USITC, hearing transcript, January 15, 2016, 741 (testimony of Matt Priest, Footwear Distributors and Retailers of America).

footwear imports will lead to lower shoe prices for U.S. consumers.[587] FDRA has stated that it has long supported TPP and has urged the United States to implement the agreement as soon as possible.[588] Because annual duties paid on U.S. footwear imports total $450 million, TPP as negotiated is seen as providing "significant savings for consumers and for brands, retailers, and their footwear supply chain."[589]

Industry sources have also suggested that the cost savings created by eliminating the steep duties on footwear imports would allow leading footwear companies like Nike to create new manufacturing[590] and engineering jobs in the United States.[591] FDRA stated that TPP duty savings will enable footwear companies to "create and expand U.S. footwear jobs through both direct investment in new jobs from TPP duty savings, and the movement of additional units with more competitive pricing."[592] The Outdoor Industry Association asserted that the "cost savings realized from duty reductions will result in lower costs for manufacturers and consumers of outdoor products that will in turn fuel innovation when reinvested in research and development, create new products, and encourage more people to go outdoors with the best possible apparel, footwear, equipment and accessories."[593] The association added that "enhanced market access for U.S. leather footwear products will likely increase domestic production, exports and raw leather purchases from U.S. tanneries. This in turn will fuel economic growth and more American jobs for outdoor companies."[594]

The American Apparel and Footwear Association (AAFA) has emphasized that much of TPP's impact and opportunities are related to trade relations between the United States and Vietnam

[587] USITC, hearing transcript, January 15, 2016, 743 (testimony of Matt Priest, Footwear Distributors and Retailers of America). Noting that imports of outdoor products are among the most highly taxed when entering the U.S. market, the Outdoor Industry Association has stated that the TPP will eliminate many of the disproportionately high import tariffs assessed on outdoor products not made in the United States. USITC, hearing transcript, January 15, 2016, 734–35 (testimony of Rich Harper, Outdoor Industry Association).
[588] USITC, hearing transcript, January 15, 2016, 747–48 (testimony of Matt Priest, Footwear Distributors and Retailers of America).
[589] USITC, hearing transcript, January 15, 2016, 744 (testimony of Matt Priest, Footwear Distributors and Retailers of America) and January 15, 2016, 714 (testimony of Steve Lamar, American Apparel and Footwear Association). Concerning footwear, AAFA has noted that "non-sensitive footwear gets immediate duty-free access and sensitive footwear faces longer-term phaseouts" and that given the expected duty savings, there are substantial opportunities to take advantage of the deal. USITC, hearing transcript, January 15, 2016, 714 (testimony of Steve Lamar, American Apparel and Footwear Association).
[590] In May 2015, right before President Obama's visit to Nike headquarters to discuss the TPP, Nike announced that it was prepared to start manufacturing shoes in the United States again if the TPP went into effect. DeBonis, "With Obama on Hand, Nike Announces," May 8, 2015. And Nike has indicated that once the TPP enters into force, it is committed to increasing investments aimed at developing advanced manufacturing of footwear in the United States. U.S. footwear industry representative, email message to USITC staff, February 17, 2016.
[591] Soni, "Trans-Pacific Partnership: How It Affects Footwear Firms," May 22, 2015.
[592] USITC, hearing transcript, January 15, 2016, 746 (testimony of Matt Priest, Footwear Distributors and Retailers of America).
[593] USITC, hearing transcript, January 15, 2016, 734 (testimony of Rich Harper, Outdoor Industry Association).
[594] USITC, hearing transcript, January 15, 2016, 739 (testimony of Rich Harper, Outdoor Industry Association).

and the phaseouts and ultimate elimination of duties on imports from Vietnam.[595] However, AAFA also noted its concern about the U.S.-Vietnam labor provisions, which could freeze duty reductions if Vietnam does not undertake certain commitments by year 5.[596]

Also pointing to improvements in trade as a result of TPP, the Retail Industry Leaders Association (RILA) voiced support for TPP by noting that Vietnam and Malaysia "provide the biggest opportunities for U.S. retailers sourcing apparel and footwear from the region."[597] The National Retail Federation (NRF) stated that producers of athletic footwear in Vietnam are competitive suppliers and echoed the positive feedback from apparel and footwear retailers on the benefits of TPP's tariff elimination.[598]

According to some industry sources, however, as a result of TPP, the few remaining U.S. footwear manufacturers would likely face increased competition and lower profit margins on their footwear after all the duties on the 18 "sensitive" footwear HS categories are phased out.[599] New Balance, one U.S. footwear manufacturer of athletic footwear said that TPP could make it much more difficult for it to continue to manufacture domestically if inexpensive imports from Vietnam flooded the U.S. market.[600] In April 2016, New Balance announced it was renewing its opposition to TPP claiming that eliminating tariffs would lower the price of imports and jeopardize its factory jobs in New England.[601]

Japan's Elimination of its Tariff-rate Quota

For several years, footwear industry and government representatives have reported that Japan's TRQ on leather footwear imports has restricted the access of U.S. footwear exports to the Japanese market.[602] Representatives of the U.S. footwear industry have therefore voiced support for Japan's elimination of its TRQ on leather footwear and the resulting high tariffs

[595] USITC, hearing transcript, January 15, 2016, 714 (testimony of Steve Lamar, American Apparel and Footwear Association).
[596] USITC, hearing transcript, January 15, 2016, 716 (testimony of Steve Lamar, American Apparel and Footwear Association). See also box 6.3, chapter 6 of this report, on the U.S.-Vietnam labor side agreement.
[597] RILA, written submission to the USITC, February 15, 2016.
[598] NRF, written submission to the USITC, February 15, 2016.
[599] U.S. footwear industry representatives, telephone interviews by USITC staff, December 10, 2015, and March 9, 2016.
[600] U.S. footwear industry representative, telephone interview by USITC staff, December 10, 2015 and IBISWorld, *Shoe and Footwear Manufacturing in the US*, December 2015, 9.
[601] Chesto, Jon. "New Balance Accuses Pentagon of Reneging on Sneaker Deal," April 12, 2016.
[602] U.S. footwear industry representative, interview by USITC staff, Rosslyn, VA, December 16, 2015; USTR, *2015 National Trade Estimate Report*, 2015, 213.

charged, noting that removing the TRQ would "provide better market access to Japan, increasing exports and enhancing job growth."[603]

Chemicals[604]

Assessment

Under TPP, the Commission estimates that U.S. exports of chemical products, including pharmaceuticals, would be $1.9 billion (0.7 percent) higher than 2032 baseline estimates and U.S. imports would be $5.3 billion (1.3 percent) higher than the baseline, due in part to tariff reductions. The modeling results also indicate that by 2032 output would be $2.9 billion (0.3 percent) lower under TPP, relative to the baseline (see box 4.11 for a brief description of the U.S. chemical industry). Output would be lower because U.S. tariffs for chemicals are relatively low now (see box 4.2), as well as the expectation that imports would be higher than exports, compared with baseline estimates. The modeling results also indicate that by 2032 employment would be 0.3 percent lower than the baseline.

Much of the impact in trade would likely be centered on the new TPP partners.[605] In addition to tariff elimination and market access, industry sources identified provisions regarding rules of origin (ROOs), regulatory harmonization and transparency, and intellectual property (IP) as significant issues for the U.S. chemical industry.

Box 4.11: U.S. Chemical Industry

According to the American Chemistry Council (ACC), the U.S. chemical industry accounts for about 15 percent of global chemical production and is the second-largest in the world after China's.[a] The sector produces a wide variety of commodity and specialty products—e.g., adhesives, dyes and pigments, pesticides, pharmaceuticals, cosmetics, and plastics resins—that are used in all segments of the U.S. economy.[b] The sector directly employed about 804,000 people in 2014.[c]

[a] ACC, *Guide to the Business of Chemistry 2015*, June 2015, 8.
[b] Commodity chemicals are usually high-volume, low-price (and low-margin) products. In comparison, specialty chemicals are usually low-volume, high-price products.

[603] USITC, hearing transcript, January 15, 2016, 718–19 (testimony of Steve Lamar, American Apparel and Footwear Association); USITC, hearing transcript, 737 (testimony of Richard Harper, Outdoor Industry Association); Matt Priest, FDRA, written submission to the USITC, January 15, 2016, 5.
[604] This discussion includes chemicals and pharmaceuticals. References to "chemicals" refer to both sectors. Where data for these two sectors are disaggregated, they are referred to as "pharmaceuticals" and "other chemicals." Trade data in this section are based on NAICS 325 (chemical manufacturing) and 326 (plastics and rubber products manufacturing).
[605] New TPP partners are those with which the United States currently does not have FTAs, including Brunei, Japan, Malaysia, New Zealand, and Vietnam. Estimates of the effects of liberalizing each sector are presented relative to the baseline changes expected to take place through 2032. In this sector, however, there would be some more immediate effects (e.g., those resulting from tariff liberalization).

[c] The ACC employment estimate for the chemical sector (including pharmaceuticals) for 2014—804,000 direct jobs, augmented by an additional 6 million supported by the industry—is based on NAICS 325. BIO and PhRMA provided higher employment estimates for the biotechnology industry and the U.S. innovative biopharmaceutical industry, respectively. BIO, written submission to the USITC, February 17, 2016, 1; PhRMA, written submission to the USITC, February 11, 2016; ACC, *Guide to the Business of Chemistry 2015,* .June 2015.

Overview of U.S. Trade with TPP Partners

U.S. exports of chemicals (including pharmaceuticals) to TPP partners grew during 2013–14—from about $89 billion to almost $92 billion—before declining to about $86 billion in 2015. Canada, Mexico, and Japan accounted for about 86 percent of the total in 2015. On average, TPP partners accounted for about 42 percent of total U.S. chemical exports annually during 2013–15 (table 4.24).[606]

Table 4.24: U.S. domestic exports of chemicals, million dollars

	2013	2014	2015
TPP			
Canada	34,676.8	35,861.4	32,747.5
Mexico	31,005.3	32,712.6	30,683.3
Japan	10,148.2	10,303.0	10,033.6
Singapore	4,355.4	3,945.3	3,992.8
Australia	3,687.2	3,486.1	3,377.1
Chile	2,136.3	2,007.7	1,836.9
Peru	1,285.6	1,325.5	1,143.1
Malaysia	1,060.5	929.5	938.3
Vietnam	552.5	579.8	652.6
New Zealand	413.7	407.5	409.9
Brunei	6.4	5.5	5.2
Total TPP	89,327.6	91,564.3	85,820.5
ROW			
Belgium	13,232.8	14,842.7	15,566.2
China	14,591.1	14,603.0	14,147.6
Other ROW	96,945.9	96,861.1	93,996.7
Total ROW	124,769.9	126,306.9	123,710.5
Total	214,097.4	217,871.2	209,531.0

Source: USITC DataWeb/USDOC (accessed February 10, 2016).
Note: Totals may not sum due to rounding. ROW = rest of world. Data are for NAICS 325 and 326, excluding some agricultural products. The agricultural products accounted for a relatively small share of total and TPP trade.

U.S. imports of chemicals (including pharmaceuticals) from TPP partners totaled $67 billion in 2015, with Canada, Japan, Mexico, Singapore, and Malaysia accounting for 97 percent of TPP imports (see table 4.25). About 88 percent of U.S. imports from TPP parties entered duty-free in 2015 under various programs, including U.S. FTAs or the Agreement on Trade in Pharmaceutical

[606] USITC DataWeb/USDOC (accessed January 21, 2016).

Products.[607] The remainder were subject to an average duty of about 4.7 percent. Since many of the chemicals traded between the United States and non-TPP parties are directly comparable in cost and quality, tariff reductions will likely lead to higher imports.

Table 4.25: U.S. imports for consumption of chemicals, million dollars

	2013	2014	2015
TPP			
Canada	33,993.7	34,442.1	32,488.6
Japan	14,006.7	13,897.7	13,027.5
Mexico	9,629.0	10,384.4	10,440.4
Singapore	5,996.1	6,047.8	6,336.9
Malaysia	1,815.6	2,002.4	2,057.4
Chile	816.0	847.9	820.6
Vietnam	387.0	455.4	662.4
Australia	656.0	584.6	595.3
New Zealand	104.2	91.4	108.7
Peru	202.8	122.5	96.7
Brunei	7.0	16.1	5.3
Total TPP	67,614.2	68,892.3	66,639.9
ROW			
China	32,202.3	34,622.0	33,190.1
Ireland	20,399.3	21,395.4	25,742.8
Germany	21,363.2	24,618.5	24,126.7
Other ROW	147,410.6	151,672.4	163,167.8
Total ROW	180,576.8	189,517.5	194,741.8
Total	248,191.0	258,409.7	261,381.7

Source: USITC DataWeb/USDOC (accessed February 10, 2016)
Note: Totals may not sum due to rounding. ROW = rest of world. Data are for NAICS 325 and 326, excluding some agricultural products. The agricultural products accounted for a relatively small share of total and TPP trade.

Summary of Provisions

TPP would immediately eliminate duties on almost 97 percent of U.S. chemical exports to the "new" TPP partners, resulting in a lower-bound estimate of duty savings of at least $570 million (based on 2015 data).[608] TPP would also immediately eliminate tariffs from new partners on about 87 percent of U.S. imports. The value of U.S. dutiable imports of chemicals from TPP countries was relatively low in 2015 (about $8 billion, or 12 percent of total such imports), but

[607] The Agreement on Trade in Pharmaceutical Products (also called the Pharmaceutical Zero-for-Zero Initiative) was negotiated pursuant to authority contained in legislation that implemented the Uruguay Round Agreements and entered into force in 1995. It eliminated tariffs on pharmaceuticals for all WTO members. Other agreements providing duty-free entry for many chemicals that entered into force in 1995 under the Uruguay Round Agreements include the Uruguay Round Concessions on Intermediate Chemicals for Dyes and the Chemicals Tariff Harmonization Agreement.
[608] USITC estimates. This duty savings estimate, based on an average rate of duty of 5 percent, could be much higher, given that the new TPP markets have fairly high tariffs for certain chemicals.

elimination of duties would potentially result in industry savings of almost $400 million annually, based on an average duty rate of 4.7 percent in 2015.[609]

A number of TPP provisions, aside from tariff rate reductions or eliminations, would have a significant impact on the chemical industry. First, ROOs are very important in this sector (TPP, Chapter 2, Annex 3-D; HTS chapters 28–40). The TPP Agreement, like many of the newer FTAs, adds process rules to supplement tariff shifts as criteria to determine origin (Chapter 2, Annex 3-D, notes for Section VI and HTS Chapter 39). For example, the chemical reaction rule is considered a useful alternative to tariff shifts to confer origin, since many chemicals can be produced via chemical reactions without undergoing a subheading-level change. Under the tariff shift requirement, "the foreign input must have a different heading or subheading than the exported product."[610]

However, the TPP ROOs also include regional value content (RVC) rules, which are generally not favored by industry;[611] sources also note the potential for colorants to be imported from non-TPP parties under the ROOs for HS Chapter 32. Importers reportedly can choose the rules that work best for them under a particular agreement, but then the provisions of that agreement apply to all phases of the transaction. For example, according to one source, if an importer chooses any rule under TPP, then the transaction will be subject to TPP-specific provisions (e.g., customs entry fees would be charged and duty drawback would be available). Alternatively, if the importer is using a NAFTA rule, then customs entry fees would not be charged, but duty drawback would not be available either.[612]

TPP's provisions with regard to regulatory harmonization and the ability to maintain or develop transparent, risk-based regulatory systems[613] (Articles 25.2–25.5) are likely to have a substantial impact on the chemical and pharmaceutical sectors. So will transparency provisions for pharmaceutical pricing and reimbursement policies (TPP Annex 26-A, paragraph 26-A.2), along with issues related to IP, including biologics and data protection. The TPP Cosmetics Annex (Annex 8-D) is expected to harmonize regulations among TPP partners, reportedly allowing U.S. companies to enjoy similar benefits to those in the Association of Southeast Asian Nations and Latin American regional agreements, according to the Personal Care Products Council (PCPC). Among other things, potential benefits cited by the PCPC include addressing divergent labeling requirements among individual markets, eliminating requirements for Certificates of Free Sale, and eliminating dual registration for products that "only differ by

[609] Based on duties paid on dutiable U.S. imports in 2015. USITC DataWeb/USDOC (accessed February 10, 2016).
[610] USDOC, ITA, "North American Free Trade Agreement: Rules of Origin," December 17, 2014.
[611] One source cited the reported difficulty of "proving" RVC thresholds as prices fluctuate. "Chemical Reaction Rule Under Rules of Origin--Proposal by Australia," n.d. (accessed March 15, 2015).
[612] Industry representative, email message to USITC staff, March 11, 2016.
[613] Regulatory issues, technical barriers to trade, and standards are addressed in more detail in chapter 6 of this report.

shade or fragrance." TPP also addresses processes for developing chemical regulations, as well as good regulatory practices for chemicals.[614]

In regard to intellectual property rights (IPR), a provision important to the pharmaceutical sector is the length of the term of protection for data related to new biologic products (Article 18.52).[615] About 900 biologic products are currently under development in the United States.[616] As noted in chapter 6 of this report, where IPR is addressed in more detail, TPP requires at least 8 years of protection, or at least 5 years of protection plus other measures to deliver a comparable outcome, for a new biologic product.

Impact on U.S. Exports

The Commission's model results estimate that U.S. exports of chemicals would be $1.9 billion higher as a result of TPP (about 0.7 percent above the 2032 baseline estimate).[617] Products in the "other chemicals" category are projected to drive the increase. Japan, Malaysia, and Vietnam—which are not partners in existing U.S. FTAs and which have fairly high rates of duty for certain chemicals—are expected to account for about half the TPP increase.[618] Whereas U.S. chemical exports to Japan and Malaysia are expected to increase by about 12 and 41 percent, respectively, such exports to Vietnam are expected to more than double, increasing by about $882.4 million to $1.7 billion.[619] Higher U.S. chemical exports to Japan would be split between pharmaceuticals and other chemicals (about one-third and two-thirds, respectively); higher exports to Malaysia and Vietnam would mostly consist of other chemicals. The model indicates that the increased TPP exports would likely redirect U.S. exports away from non-TPP parties, including the EU and China.

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[614] USDOC, ITA, "Opportunities for the Chemical Sector," November 2015.

[615] Article 18.52.2 defines a biologic as, at a minimum, a product that is or contains a protein produced using biotechnology processes, for use in human beings for the prevention, treatment, or cure of a disease or condition. Biologic products are considered to represent a major area of U.S. biopharmaceutical innovation and investment. Data protection precludes the unauthorized use by others—for example, generic drug companies—of the clinical test data and other information generated to support a new product for a specified period of time. BIO, written submission to the USITC, February 17, 2016, Appendix A.

[616] *Economist*, "Going Large," January 3, 2015; PhRMA, "Medicines in Development: Biologics 2013," February 7, 2013. The Biotechnology Innovation Organization (BIO) estimates that U.S. exports of biopharmaceuticals to TPP countries in 2014 were valued at about $8 billion and that biologics accounted for about 28 percent of that total (or $2.3 billion). The top three markets for biopharmaceuticals in 2014 were Canada, Mexico, and Australia.

[617] The ACC projected export growth of $1.2 billion. USITC, hearing transcript, January 13–15, 2016, 750 (testimony of Greg Skelton, American Chemistry Council).

[618] The International Trade Administration of the U.S. Department of Commerce, noted that the three countries have fairly high rates of duty for certain chemicals. USDOC, ITA, "Opportunities for the Chemical Sector," November 2015. According to USITC analysis, the simple averages of the duty rates for U.S. exports of cosmetics to Vietnam are fairly high; for example, the averages for two HS 6-digit subheadings are as high as 16–18 percent.

[619] Large absolute increases to NAFTA partners Canada and Mexico are also projected but, given that they are already such large U.S. partners, the growth in U.S. exports to the NAFTA partners is fairly small in percentage terms.

The tariff liberalization is also expected to help producers of products subject to lower rates of duty. ANSAC, an organization representing the three U.S. producers of natural soda ash, said that the immediate elimination of duties on soda ash in Japan and Vietnam will make the U.S. industry more competitive in those markets versus synthetic soda ash from China. ANSAC stated that the U.S. industry exported about $400 million of soda ash to Asia in 2014.[620]

The TPP ROOs may facilitate the increase in exports because companies will be able to use multiple criteria, including the chemical reaction rule and other process rules, to determine eligibility for TPP preferential tariff rates. This is expected to ease the administrative burden on companies.

Impact on U.S. Imports

Model results indicate that overall U.S. imports of chemicals would be $5.3 billion (1.3 percent) higher annually as a result of TPP, compared to the estimated 2032 baseline. Pharmaceuticals would account for 30 percent of the total estimated increase, versus 70 percent for other chemicals.

The increase in chemicals imports would likely be driven by the new FTA partners, particularly Japan and Malaysia, with smaller absolute increases from Brunei, New Zealand, and Vietnam.[621] U.S. imports of chemicals from Japan would reach $10.8 billion (about $1.8 billion or 20 percent above the baseline), with chemicals and pharmaceuticals accounting for about two-thirds and one-third of the increase, respectively. Imports from Malaysia would reach $5.1 billion, about $1.2 billion (or about 30 percent) above than the baseline. Other chemicals would account for most of the higher imports. These TPP imports would likely displace imports from the EU, China, and South Korea, as well as displacing some U.S. production. The ROOs may facilitate increased imports. Under TPP ROOs, companies would be able to use multiple criteria, including the chemical reaction rule and other process rules, to determine eligibility for TPP preferential tariff rates, thereby easing their administrative burden.

Summary of Views of Interested Parties

Several parties testifying at the Commission's hearing discussed the importance of reducing or eliminating tariffs on chemical products among TPP parties. In addition, a number of observers stated that other TPP provisions would have valuable benefits for the chemical industry, including provisions addressing regulatory coherence and transparency. Sources also stressed the importance of strong provisions within the agreement should other countries wish to join at

[620] ANSAC, "ANSAC Supports the Trans-Pacific Partnership (TPP)," October 15, 2015.
[621] Large absolute increases to NAFTA partners Canada and Mexico are also projected but, given that they are already such large U.S. partners, the NAFTA percentage is relatively small.

a later date. Comments about the agreement generally addressed five main categories: tariff elimination; ROOs; regulatory issues, including the Cosmetics Annex; IP; and cross-border data flows.

Tariff elimination/reductions. U.S. industry representatives generally indicated that they support tariff elimination/reduction in TPP parties, including Japan, Vietnam, and Malaysia—all of which have fairly high tariffs for U.S. chemical exports. Benefits resulting from the tariff liberalization are said to range from potential market expansion for U.S. companies, including small and medium-sized enterprises, to the provision of a larger variety of products to growing higher-income populations in TPP countries.[622] For its part, Halosil says that the elimination of tariffs would make its products more cost-competitive in TPP markets, noting: "Tariffs on our product make it artificially cheaper for buyers in Chile and Peru to purchase from one of our competitors in Spain."[623] The Color Pigments Manufacturers Association, Inc. (CPMA), on the other hand, stated that the "immediate removal of tariffs on the products of concern to CPMA would have a negative impact on the domestic production of pigments."[624]

Rules of origin. Industry representatives generally expressed support for the chemical ROOs, particularly the chemical process rules.[625] However, ITAC-3 expressed concern about the inclusion of regional value content rules. ITAC-3 and CPMA also stated concern that the ROOs for HTS headings 3207– 3212 and 3215 (characterized by ITAC-3 as "weaker") would allow for duty-free entry of colorants from non-TPP parties as well as TPP parties.[626]

Arkema Inc. supports the chemical reaction rule, saying it will require less documentation. It adds that "the rule will provide a clear, bright line standard that will help businesses up and down the value chain to understand what does, and what does not, qualify for duty-free treatment." But the company expressed concern that changes to the chemical reaction rule may present challenges for at least one of their products, because competitors would also be able to import materials duty free.[627]

Regulatory Issues, including the Cosmetics Annex. Industry representatives generally indicated support for the regulatory provisions and the cosmetics annex in TPP. They cited numerous

[622] ITAC-3, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 7, 10, 12, 13; PCPC, written submission to the USITC, January 22, 2016, 1; P&G, written submission to the USITC, February 12, 2015, 4; High Impact Technology, LLC, written submission to the USITC, February 12, 2016, 1; USITC, hearing transcript, January 13–15, 2016, 758 (testimony of Maryalice Panarello StClair, Halosil International).
[623] Halosil International, written submission to the USITC, December 21, 2016, 1.
[624] CPMA, written submission to the USITC, February 12, 2016, 2, 4.
[625] ITAC-3, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 7, 10, 12, 13; Arkema Inc., written submission to the USITC, February 12, 2016, 1–2.
[626] ITAC-3, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 7, 10, 12, 13; CPMA, written submission to the USITC, February 12, 2016, 2, 4.
[627] Arkema Inc., written submission to the USITC, February 12, 2016, 1–2.

benefits, including the ability for U.S. companies to compete in countries that currently receive benefits through mutual recognition agreements in Asia and Latin America. Companies also said that both regulatory harmonization and the cosmetics annex will likely reduce marketing and administrative costs and shipping delays.[628] Two pharmaceutical industry representatives cited the importance of transparency provisions with regard to pricing, reimbursement, and regulatory policies in TPP countries.[629]

IPR issues. ITAC-3, BIO, and PhRMA expressed concerns about data protection for biologics. ITAC-3 says its members are generally split regarding the issue. Whereas ITAC-3 members in the generic pharmaceuticals sector generally support the agreement overall, its members in innovative pharmaceutical companies are concerned about the provisions addressing data protection for biologics.[630] BIO and PhRMA also say that the term of data protection for biologics is too short, potentially reducing innovation cycles that lead to new products while simultaneously allowing earlier market entry for biosimilars.[631] BIO adds that the shorter period will likely also allow "foreign competitors to appropriate U.S. technology more quickly, effectively free-riding on U.S. research and development costs."[632] Although BIO cannot quantify the value of the prospective impact on the U.S. biologics industry, it predicts in its submission that U.S. biologic exports to TPP countries (valued at $2 billion) and U.S. jobs will be affected negatively. The Personal Care Products Council also expressed concerns about counterfeit and parallel imports.[633]

Public Citizen and Médecins Sans Frontières asserted that TPP will limit generic competition and, therefore, make medicines more costly and less available globally.[634] Public Citizen also

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[628] USITC, hearing transcript, January 13–15, 2016, 757–58 (testimony of Maryalice Panarello StClair, Halosil International); P&G, written submission to the USITC, February 12, 2016, 5–6; PCPC, written submission to the USITC, January 22, 2016, 2. As noted by the PCPC in their posthearing submission, "In an internal confidential survey, companies reported spending anywhere from $2,000–$5,000 a year on certificates of free sale for entry into TPP markets. Product registrations range from $100 to more than $5,000 when including product fees, consultants, and FTE hours." According to PCPC, one company also said that rules making it unable to overlabel/sticker a product—requiring it to change the product's packaging for a single market—would cost it an extra $30,000 and two months' delay in market entry.

[629] PhRMA, written submission to the USITC, February 11, 2016, 3; industry representative, telephone interview by USITC staff, February 26, 2016. The industry representative also mentioned that KORUS was the first FTA to incorporate such transparency provisions.

[630] ITAC-3, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 7, 10, 12, 13.

[631] BIO, written submission to the USITC, February 17, 2016; PhRMA, written submission to the USITC, February 11, 2016. Biosimilars are a type of biological product that are licensed (approved) by U.S. Food and Drug Administration (FDA) because they are highly similar to an already FDA-approved biological product, known as the biological reference product (reference product), and have been shown to have no clinically meaningful differences from the reference product. U.S. FDA, "Information for Consumers (Biosimilars)," August 27, 2015.

[632] BIO, written submission to the USITC, February 17, 2016.

[633] PCPC, written submission to the USITC, January 22, 2016, 1.

[634] Public Citizen, written submission to the USITC, December 29, 2015, 1, 6; Médecins Sans Frontières, written submission to the USITC, December 22, 2015, 1–2.

stated that TPP's Annex on Transparency and Procedural Fairness for Pharmaceutical Products and Medical Devices "may potentially constrain future policy reforms, including the ability of the U.S. government to curb rising and unsustainable drug prices."[635] On the other hand, PhRMA and BIO said that the U.S. industry works to make pharmaceuticals accessible globally.[636] PhRMA also stated that a "strong TPP must contain essential transparency provisions that ensure due process in pricing, reimbursement and regulatory policies of TPP countries."[637] Both Leading Biosciences and High Impact Technology, LLC, said that IPR protection is a challenge for them. They note that strengthened IPR protection protection under TPP will potentially allow them to expand internationally.[638]

Other Issues. Several other issues were raised by industry, including concern about likely conflicts between TPP and existing U.S. bilateral FTAs. ITAC-3 recommended that the office of the U.S. Trade Representative (USTR) provide more detailed information about the interaction of the agreements and their benefits.[639] As mentioned earlier, chemical industry sources cited other TPP chapters as important facets of the agreement, including Regulatory Coherence; new provisions on cross-border data flows in the E-commerce chapter (which are reportedly expected to boost e-commerce among the TPP parties); new provisions on state-owned enterprises; investment; and IPRs, among other areas.[640]

Titanium Metal

Assessment

U.S. titanium metal[641] imports from TPP members, according to Commission estimates, would likely increase by $202.1 million (109.7 percent) as compared to the 2032 baseline. U.S. output would decrease by $202.4 million (1.2 percent) and employment would similarly decline by 1.3 percent, as compared to the 2032 baseline. Japan is the principal source of U.S. titanium imports,[642] despite a 15 percent U.S. import duty on both unwrought titanium (i.e., titanium sponge, ingot, billet, and powders) and wrought titanium (e.g., bars, sheets, and tubes) (box 4.12), and would benefit the most from the removal of duties. U.S. exports of titanium would

[635] Public Citizen, written submission to the USITC, December 29, 2015, 3.
[636] BIO, written submission to the USITC, February 17, 2016, 5; PhRMA, written submission to the USITC, February 11, 2016, 3.
[637] PhRMA, written submission to the USITC, February 11, 2016, 3.
[638] Leading Biosciences, written submission to the USITC, February 11, 2016, 1; High Impact Technology, LLC, written submission to the USITC, February 12, 2016, 1.
[639] ITAC-3, *The Trans-Pacific Partnership Trade Agreement*, December 2, 2015, 7, 10, 12, 13.
[640] The Dow Chemical Company, written submission to the USITC, February 15, 2015, 2–3; P&G, written submission to the USITC, February 12, 2016, 1, 2, 5; Leading Biosciences, written submission to the USITC, February 11, 2016, 1; High Impact Technology, LLC, written submission to the USITC, February 12, 2016, 1.
[641] Defined as HS codes 8108.20-8108.90.
[642] Principally titanium sponge, HTS 8108.20.0010.

be slightly lower—other TPP members already apply low or zero duties on imports of these products.

Box 4.12: The Titanium Production Process

Titanium is a specialty metal used in a variety of applications, from golf clubs to aerospace.[a] Certain properties of titanium make it ideal for applications where other metals would not be suitable, including its corrosion resistance[b] and strength at high temperatures. Titanium is also valued for its high strength-to-weight ratio, being 30 percent stronger than steel but about half steel's weight; it is twice as strong as aluminum, although 60 percent heavier.[c]

Titanium has a unique production process that differentiates it from other metals. Using chemical processes, titanium-bearing ores are converted into titanium tetrachloride (TiCl4) that is then combined with magnesium under heat and pressure to produce magnesium chloride and a pitted block of titanium metal, called titanium sponge. The titanium sponge is next crushed, sorted, melted, and alloyed with other metals to produce titanium ingot. Ingot can then be manufactured into other downstream titanium products such as sheet, plate, and bar, and then into final products such as aircraft parts.[d] See figure below for an illustration of this process and the corresponding HTS numbers. Different countries may be involved in some or all of the various production steps. Titanium metal is traded internationally at the sponge, ingot, and downstream stages.

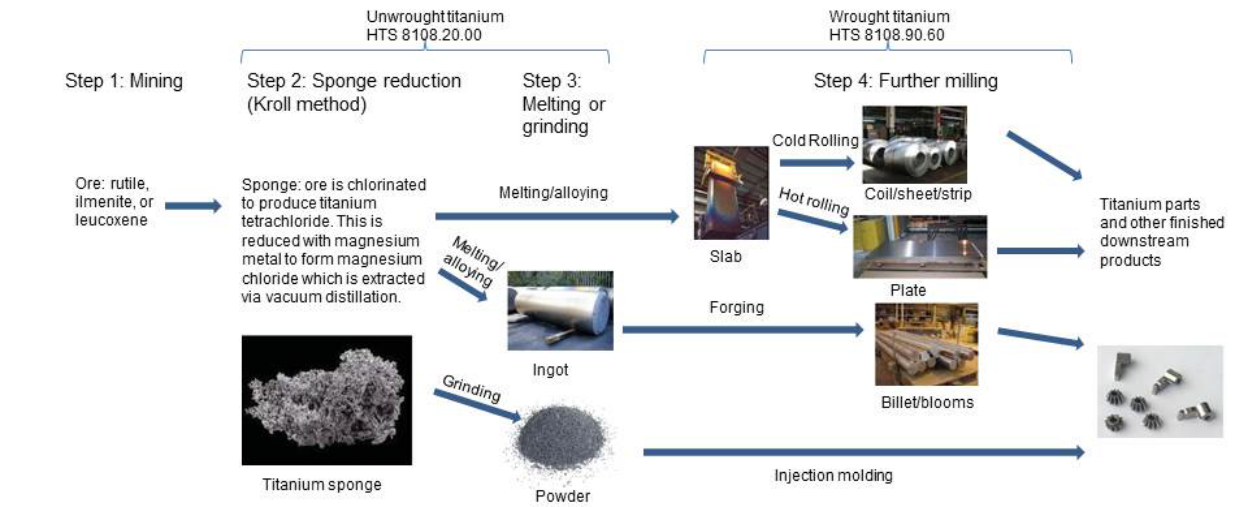
[a] Titanium metal is a distinct product from titanium pigments, although both are derived from the same titanium-bearing ores. Titanium metal accounted for less than 7 percent of titanium mineral concentrate use in 2013, while titanium pigments accounted for 93 percent. Bedinger, "Titanium," 2015, 2.

[b] Pure titanium metal is highly reactive with oxygen. On contact with oxygen, it forms a protective oxide layer that provides corrosion resistance in many applications, such as to chemical exposure and seawater. RMI Titanium, "Titanium Alloy Guide," June 2014, 1.

[c] ASM, "All about Titanium Aerospace Metal" (accessed February 25, 2016).

[d] Seong, "Titanium," 2009, 9–10.

Titanium production steps



Sources: ATI, written submission to the USITC, February 16, 2016, 4-5; Toho Titanium, Hot-rolled Titanium Slab, December 14, 2011, http://www.google.com/patents/EP2394757A1?cl=en ; Jiangsu Tech Web site, www.jiangsutech.com (accessed June 10, 2013); Seiner, prehearing brief, 2013, 5; Specialty Metallurgical Products Web site, www.smptitaniumcom (accessed June 10, 2013).

Overview of U.S. Trade with TPP Partners

U.S. exports of titanium metal totaled 35,041 metric tons (mt) in 2015, of which 26 percent went to TPP partners. However, only three TPP partners—Canada, Japan, and Mexico[643]—are significant U.S. destination markets for these goods (table 4.26 and box 4.13). Of these three countries, only Japan currently applies import tariffs on U.S. titanium (at a relatively low rate of 3 percent ad valorem). These already relatively low tariffs would be removed immediately upon EIF.

Table 4.26: U.S. domestic exports of titanium products, metric tons

Country	2013	2014	2015
TPP			
Canada	2,750	3,341	4,364
Japan	1,935	1,476	2,628
Mexico	1,531	1,724	1,495
Other TPP	394	447	602
Total TPP	6,611	6,989	9,089
ROW			
United Kingdom	11,071	10,455	10,805
France	4,500	4,700	5,054
Germany	1,566	1,695	1,752
Italy	1,358	1,503	1,692
China	909	780	1,089
Other ROW	8,878	7,342	5,559
Total ROW	28,281	26,476	25,952
Total	34,892	33,465	35,041

Source: USITC DataWeb/USDOC (accessed February 29, 2016), for HS 8108.20, 8108.30, and 8108.90.
Note: Totals may not sum due to rounding. ROW = rest of world.

Box 4.13: The U.S. Titanium Industry

Currently, there are two integrated titanium producers in the United States, Allegheny Technologies Incorporated (ATI)[a] and the Titanium Metals Corporation (TIMET), which was acquired by Precision Castparts in 2013.[b] Both firms produce sponge, ingot, and downstream titanium products.[c] A third U.S. titanium ingot and downstream titanium parts manufacturer is RTI, which was acquired by Alcoa on July 23, 2015.[d] RTI has focused on the downstream titanium market. With the qualification of ATI's new titanium sponge facility, the company now produces all its required titanium sponge in-house;[e] however, both TIMET and RTI import titanium sponge, either to supplement U.S. titanium sponge production (TIMET) or for all downstream titanium production (RTI).[f] The United States accounts for roughly a third of titanium sponge imports globally, by value.[g] U.S. titanium sponge employment was estimated at 300 individuals in 2014;[h] together with downstream titanium ingot and cast part producers, in 2013 estimated employment in the U.S. titanium industry totaled more than 4,000 workers. TIMET alone employed more than 2,000 workers in 2013, and RTI employed 732 people in its titanium segment in 2014.[i]

[643] U.S. imports of titanium products from Japan, however, have averaged close to 10 times U.S. exports of titanium products to Japan during 2011–15.

[a] ATI, *2014 Annual Report*, 2015, F-3.
[b] Haflich, "Titanium Industry Undergoes Massive Changes into 2013," January–February 2013, 15.
[c] TIMET is also integrated one step further upstream and produces its own TiCl4. Precision Castparts, *Annual Report, 2015*, 2015, 5.
[d] Metal Bulletin, "RTI Returns to Black in Q1," April 29, 2015. Alcoa intends to create a separate business unit called Alcoa Titanium and Engineered Products and expects to take advantage of titanium's growth in the aerospace market and RTI's downstream product manufacturing capabilities. Smart, "Alcoa Completes Acquisition of RTI," July 23, 2015.
[e] ATI, written submission to the USITC, February 16, 2016, 16.
[f] ATI, written submission to the USITC, June 17, 2013, 3.
[g] GTIS, Global Trade Atlas database, HS 8108.20 (accessed February 25, 2016).
[h] Bedinger, "Titanium and Titanium Oxide," January 2015.
[i] Seiner, prehearing statement to the USITC, 2013, 2–3; RTI, "Form 10-K," 2015.

U.S. titanium metal imports increased 21 percent during 2013–15, rising from 40,076 mt to 48,374 mt (table 4.27). TPP members were a significant source of U.S. imports, supplying 44 percent of U.S. imports in 2015, 90 percent from Japan. Japan is a major global producer of titanium metal, as discussed below.

Table 4.27: U.S. imports for consumption of titanium products, metric tons

Country	2013	2014	2015
TPP			
Japan	15,430	15,917	19,264
Canada	965	1,088	899
Mexico	655	967	958
Other TPP	177	499	389
Total TPP	17,227	18,471	21,511
ROW			
United Kingdom	3,627	3,692	4,480
Russia	6,308	4,773	4,446
Germany	2,444	3,809	3,869
France	2,235	2,534	3,412
China	4,156	3,141	2,637
Other ROW	4,079	8,497	8,020
Total ROW	22,849	26,447	26,863
Total	40,076	44,918	48,374

Source: USITC DataWeb/USDOC (accessed February 29, 2016), for HS 8108.20, 8108.30, and 8108.90.
Note: Totals may not sum due to rounding. ROW = rest of world.

Summary of Provisions

Given the anticipated increase of U.S. imports from Japan, import duties were negotiated to be phased out over 10- or 15-year periods (see table 4.28). Staged tariff reductions would be granted only for U.S. imports from Japan and not imports from any other TPP member country.

Table 4.28: U.S. titanium tariff provisions for Japan

HTS	Description	Base rate (percent)	Negotiated tariff phaseout
8108.20.00	Titanium, unwrought; titanium powders	15	15-year, 1 percent annual reduction
8108.90.30	Titanium, articles nesoi	5.50	10-year, .55 percent annual reduction
8108.90.60	Titanium, wrought nesoi	15	10-year, 1.5 percent annual reduction

Source: U.S. TPP Tariff Schedule, October 30, 2015.
Note: Nesoi = not elsewhere specified or included.

Two other provisions would have possible implications for the U.S. titanium industry. The first is that under the tariff differential rule, Japanese titanium that is still subject to tariffs could receive duty-free U.S. import treatment if it were to undergo more than "a minimal operation" in another TPP member country (e.g., something other than packaging, such as extruding titanium billet into bars).[644] Second, under TPP's rules of origin (ROOs), as applied to titanium classified under HS 8108.20-8108.90, a product would be considered to be of TPP origin if it undergoes "a change to a good of subheading 8108.20 through 8108.90 from any other subheading,"[645] possibly permitting titanium from a non-TPP member country to enter the United States duty free with minimal processing in a TPP-member country other than Japan. This is particularly relevant for titanium billet, currently classified as an unwrought product in 8108.20.00.[646] This is because titanium billet, in particular, may be imported and modified relatively easily in a steel rolling mill into downstream wrought titanium products, a capability currently possessed by a majority of TPP member countries.

Impact on U.S. Exports

The impact of TPP on U.S. exports of titanium products is not expected to be significant. Model results indicated that U.S. exports of titanium products would be $33.9 million (1.1 percent) less than the projected 2032 baseline. An increase in exports to TPP members of $47.3 million (7.1 percent) would be offset by an $81.2 million (3.4 percent) decline in exports to the rest of world, as increased demand within the TPP region leads to higher prices and non-TPP economies turn to suppliers outside the region.

Impact on U.S. Imports

[644] Horgan, written submission to the USITC, December 29, 2015, 2; ATI, written submission to the USITC, February 16, 2016, 18.
[645] TPP, Annex 3-D, Product-Specific Rules of Origin.
[646] The U.S. HTS classification for titanium billet currently does not fit the standard wrought versus unwrought metal product distinction. This billet classification issue has implications for U.S. rules of origin under TPP because titanium billet is currently classified as an unwrought product under HTS 8108.20.00 (despite its forging production requirements), but requires only limited processing (i.e., forging or rolling), using the same equipment as in a steel rolling mill, to be modified to downstream titanium bars or sheets under HTS 8108.90.60. This processed wrought titanium could then receive TPP preferential duties from any TPP partner other than Japan upon EIF due to the negotiated tariff provisions. For more background on U.S. titanium billet classification, please see Customs Ruling HQ 966570, November 7, 2003, and Customs Ruling HQ H027436, April 16, 2009.

Model results indicated a significant increase in U.S. imports of titanium products, with imports from TPP members—particularly Japan—$202.1 million (109.7 percent) higher compared to the 2032 baseline. Imports from non-TPP countries would be $86.8 million (13.8 percent) lower, resulting in an increase from all countries of $115.4 million (14.2 percent).

Although the United States is relatively dependent on imports of titanium sponge to supply its upstream titanium requirements, with imports supplying approximately 73 percent of U.S. consumption in 2015,[647] the anticipated increased imports due to lower U.S. tariffs could negatively impact the U.S. industry. In addition to the expected growth in U.S. imports of unwrought titanium, wrought titanium imports may also increase indirectly from third-party countries, given the proposed ROOs as well as the Japanese titanium industry's recent moves into downstream titanium products. Japan has a large titanium sponge industry, and the United States is its principal export market (table 4.29). The Japanese industry primarily manufactures and exports upstream titanium sponge,[648] which can be used for aircraft engine rotating parts. Japanese firms, however, have announced their intentions to move further into value-added downstream titanium aerospace products, which would compete more directly with downstream U.S. titanium manufactures.[649]

Table 4.29: Japanese production of titanium sponge and unwrought titanium exports to the United States, thousand metric tons

	2011	2012	2013	2014	2015
Japanese production	40.0	40.0	42.0	25.0	30.0
Japanese exports to the United States	15.9	18.9	13.7	12.8	15.1

Source: Bedinger, "Titanium and Titanium Dioxide," 2012–15; GTIS, Global Trade Atlas database, Japanese exports of 8108.20.100 (accessed February 11, 2016, 2016).
Note: Japanese and global titanium sponge production declined in 2015 due in part to high inventory levels that reflected overcapacity in the industry.

Summary of Views of Interested Parties

TIMET and ATI provided written submissions to the USITC regarding the potential impacts of TPP on the U.S. titanium industry. Both companies noted the likely increase in U.S. imports of titanium from Japan and its possible negative impacts on the U.S. unwrought titanium industry.[650] The two companies also highlighted the tariff differential rule, noting that Japanese titanium subject to tariffs could receive duty-free U.S. import treatment if it were to undergo

[647] ATI, written submission to the USITC, February 16, 2016, 28.
[648] Premium quality (PQ) titanium, which has been qualified for rotary grade aircraft engine parts, requires a particularly rigorous inspection and sorting process. In fact, sponge from the bottom of the titanium metal production crucible cannot be used for PQ sponge, and after crushing, the titanium must be visually inspected for size inconsistencies.
[649] Metal Bulletin, "Kobe Sets $91.5M Titanium Expansion," March 10, 2012.
[650] Horgan, written submission to the USITC, December 29, 2015, 1; ATI, written submission to the USITC, February 16, 2016, 7.

more than a minimal operation in another TPP member country, thereby potentially disrupting the U.S. market.[651] Both companies also discussed their concerns with the ROOs as they are applied to titanium and noted that they may allow Russian or Chinese titanium that is currently subject to the 15 percent ad valorem U.S. import duties to enter the United States duty free after minimal modification in a third-party TPP country.[652] The industry is particularly concerned with this last point, given that these ROOs are the same as those originally set out in the 2012 U.S.-Korea free trade agreement and there has been an increase in U.S. imports of titanium mill products from South Korea utilizing inputs (ingots and slabs) from Kazakhstan as a result.

Other Sectoral Issues

Four other sectors did not meet the criteria for full sector analyses, but warrant further discussion based on their size or treatment in TPP. First, aerospace did not fit the criteria for sector analyses above, given the low trade barriers, but is the largest U.S. manufactured goods and natural resource and energy (MNRE) export sector (at the NAICS 4-digit level). Second, motorcycles constitute a small U.S. export sector in comparison to other transportation equipment and one for which U.S. duties range from 0 to 2.4 percent. However, the reduction in tariffs in Malaysia and Vietnam may have significant implications for U.S. exports. Finally, crude petroleum and natural gas face low tariff barriers, but recent changes in U.S. law and the potential facilitation of U.S. exports of natural gas as a result of its receiving national treatment under TPP have implications for U.S. trade in these products. These sectors are briefly discussed below.[653]

Aerospace Considerations in TPP

The aerospace market in the TPP region is large and growing, with TPP members' aircraft orders forecast to total 11,640 aircraft, worth about $1.5 trillion, over 20 years.[654] The United States has the largest industry in the region, with $222.2 billion in shipments of aircraft and parts in

[651] Horgan, written submission to the USITC, December 29, 2015, 2; ATI, written submission to the USITC, February 16, 2016, 18.
[652] Horgan, written submission to the USITC, December 29, 2015, 1; ATI, written submission to the USITC, February 16, 2016, 27.
[653] Aerospace and motorcycles are included in the other transportation equipment sector in the Commission's model. This sector also includes rolling stock, ships, and other vehicles. The Commission's model results indicate that exports of other transportation equipment will increase by 1.3 percent and imports by 2.1 percent as compared to the 2032 baseline. Exports of oil are projected to increase 7.8 percent and exports of gas by 5.3 percent, while imports are projected to increase by 0.3 and 6.1 percent, respectively.
[654] Boeing estimate cited in Harress, "Trans-Pacific Partnership," October 6, 2015.

2015.[655] Tariffs in the region generally have little impact on U.S. aerospace exports, as most U.S. exports of aircraft, spacecraft, gas turbines, and other major parts enter duty free.[656]

According to industry representatives, TPP would likely have a positive benefit on U.S. aerospace production. They indicated that the agreement will (1) increase trade, resulting in higher demand for aircraft in the region; (2) improve U.S. relationships with TPP parties, which will support demand for defense products; and (3) make regional supply chains more efficient, particularly for parts produced in Japan.[657]

Labor unions, however, have indicated that TPP could have a detrimental impact on U.S. aerospace production and employment. They note that Malaysia and Vietnam already produce aircraft parts and are planning to further increase production. The unions note that these countries' lower labor standards and their ability to continue to use offsets under TPP would lead companies to relocate production to those countries.[658] Aerospace manufacturers, on the other hand, have stated that production is unlikely to move to developing countries due to the sophisticated manufacturing processes, skilled workforce, and high-quality output required.[659]

Removal of Tariffs on Motorcycles in Malaysia and Vietnam

In 2015, the U.S. exported $1.2 billion in motorcycles, of which 43 percent went to TPP parties.[660] U.S. motorcycle manufacturers have spoken in support of TPP, because the agreement would lower tariffs on U.S. exports of motorcycles to Malaysia and Vietnam. The 30 percent tariff in Malaysia would be eliminated by year 11 after EIF, and an 83 percent tariff

[655] U.S. Census, "Advance Report," January 28, 2016, 2; PwC, 2015 Aerospace Manufacturing, April 2015, 2.
[656] These products generally enter the United States duty free. Among TPP members, Canada, Japan, and the United States are signatories to the plurilateral agreement on trade in civil aircraft. TPP, Annex 2-D: Tariff Commitments; WTO website, "Plurilateral Agreement on Trade in Civil Aircraft" https://www.wto.org/english/tratop_e/civair_e/civair_e.htm (accessed January 26, 2016).
[657] Japanese companies are major suppliers of components for Boeing aircraft. Aerospace Industries Association, written submission to the USITC, January 22, 2016, 1; Boeing, "Boeing CEO," October 5, 2015; Harress, "Trans-Pacific Partnership," October 6, 2015; USITC, *Shifts in U.S. Merchandise Trade, 2014*, Japan section, June 2015; industry representative, telephone interview by USITC staff, February 26, 2016.
[658] AFL-CIO, written submission to the USITC, December 29, 2015, 14–15; IAM, written submission to the USITC, December 30, 2015, 4; USITC, hearing transcript, January 13, 2016, 171, 174 (testimony of Bruce Olsson, IAM). "Offsets" are industrial compensation arrangements, such as local production requirements, required by foreign governments as a condition of the purchase of goods and services, generally civil aircraft or defense products, from nondomestic suppliers. Dehoff, Dowdy, and Kwon, "Defense Offsets," July 2014.
[659] USITC, hearing transcript, January 14, 2016, 553–54 (testimony of Karan K. Bhatia, General Electric); Catchpole, "Business Owners," November 3, 2015; industry representative, telephone interview by USITC staff, February 26, 2016.
[660] USITC DataWeb/USDOC (accessed February 19, 2016); TPP, Chapter 2.

in Vietnam would be eliminated by year 8.[661] Both markets are much larger than the U.S. market for motorcycles, with annual sales in Vietnam alone totaling more than 3 million motorcycles (compared to U.S. sales of approximately half a million). Also, with rising incomes, motorcycles with larger engine capacities (like those produced in the United States) are becoming more popular in Malaysia and Vietnam.[662]

Crude Petroleum Exports under TPP

Canada had been the only consistent market for U.S. exports of crude petroleum[663] before the removal of the 40-year ban on U.S. exports of crude petroleum on December 31, 2015.[664] In addition, there have been some exports of Alaskan North Slope (ANS) crude to Japan in recent decades.[665] Japan's refineries were built to utilize heavy crudes such as ANS, and it is likely that such exports would continue and could increase somewhat. However, in order to expand U.S. exports of crude to Japan and other nations, including TPP nations, U.S. port and pipeline infrastructure would need to be built or expanded. Based on low crude petroleum prices, it is not likely that other TPP nations would become markets for U.S. crude exports in the near term.

Implications of National Treatment for Liquefied Natural Gas

Potential markets exist in Japan and Vietnam for increased U.S. exports of LNG under TPP, but such export increases are several years in the future, despite the current abundance of U.S.-

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[661] The value of U.S. imports of motorcycles totaled $2.1 billion in 2015, of which 41 percent was from TPP parties. Japan was the largest foreign supplier of motorcycles to the U.S. market in 2015. U.S. imports of motorcycles with engine capacities not exceeding 700 cubic centimeters, and all motorcycle parts, currently enter the United States duty free, while larger-engine motorcycles are subject to a 2.4 percent rate of duty. Tariffs on U.S. imports from all TPP parties, except Japan and Peru, will be eliminated upon EIF. Tariffs on imports from Japan will remain at 2.4 percent until year 5, when they will be eliminated. Tariffs on imports from Peru will be reduced in stages and will be duty free in year 6. TPP, Chapter 2, U.S. Tariff Elimination Schedule. Model results specific to the motorcycle industry are not available. Motorcycles are included in the "other transportation" category, discussed above.

[662] Clothier, "Harley Davidson Sees TPP," October 22, 2015; Kaiser, "Assessing the Global Motorcycle Market," June 20, 2015.

[663] Before this recent legislation (signed into law by the President on December 18, 2015), exports of crude petroleum had been prohibited since 1973, except to adjacent countries and as approved by the U.S. government. U.S. exports to Canada were part of a commercial exchange agreement between U.S. and Canadian refiners approved by the Secretary of the U.S. Department of Energy.

[664] While exports are no longer prohibited, export licenses will continue to be required, and the President will retain the authority to impose new export restrictions for a period not to exceed 1 year under certain circumstances, such as severe crude shortages in the United States or if supply shortages or prices increases occur and are likely to cause sustained adverse effects on U.S employment. Amendment no. 1 to the Senate Amendment to H.R. 2029, 114th Cong. (December 15, 2015), http://docs.house.gov/billsthisweek/20151214/CPRT-114-HPRT-RU00-SAHR2029-AMNT1final.pdf.

[665] In May 1996, the President determined that allowing exports of Alaskan North Slope (ANS) crude coming through Cook Inlet was in the national interest, thus ending the ban on exports of ANS crude only. Japan is the only market for the ANS crude exports.

produced natural gas.[666] U.S. exports of LNG would likely be limited by infrastructure issues that pose major barriers to trade.[667] U.S. ports, as well as ports in other countries, are designed either to import or to export LNG; only a few ports worldwide have both facilities in operation.[668] For example, Vietnam needs to build pipelines and regasification plants in order to import LNG, and Japan needs to increase its existing import capacity at its operational regasification facilities and/or build additional facilities. Additionally, building and retrofitting LNG export terminals is expensive and often encounters long delays.[669]

[666] Vietnam is not currently an LNG importer but has announced plans to import LNG in the next few years. Other than Japan and Vietnam, no other TPP nation is currently planning to import LNG.
[667] The Industrial Energy Consumers of America has expressed concern that TPP will lead to increased U.S. exports of natural gas. It indicates that higher exports will lead to lower natural gas prices in Asia and higher prices in the United States, decreasing the competitiveness of U.S. manufacturers. USITC, hearing transcript, January 13, 2016, 857–60 (testimony of Paul N. Cicio, Industrial Energy Consumers of America).
[668] There are two types of LNG terminals: liquefaction terminals and regasification terminals. Liquefaction terminals receive natural gas by pipeline from a well field. Before it is liquefied the gas must be cleaned of water, carbon dioxide, hydrogen sulfide, and other impurities that might freeze, become corrosive, or interfere with the liquefaction process. Once liquefied, the LNG is sent by pipeline to a LNG carrier ship or into storage to await transport. Regasification terminals receive natural gas—usually by ship—from other areas. At a regasification terminal the LNG might be temporarily stored or sent directly to a regasification plant. Once regasified it is sent by pipeline for distribution or placed in temporary (underground) storage until it is needed.
[669] NBR Energy Security Program, *The Trans-Pacific Partnership as a Pathway*, January 2015.

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