

Forest products

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Change from 2017 to 2018:

- **U.S. total exports of forest products: Increased by \$1.3 billion (3.2 percent) to \$40.9 billion**
- **U.S. general imports of forest products: Increased by \$3.9 billion (8.6 percent) to \$48.7 billion**

Total U.S. trade in forest products increased modestly in 2018. U.S. total exports of forest products increased in value by \$1.3 billion (3.2 percent) (table FP.1).¹ Canada, China, and Mexico were the largest destination markets for U.S. exports, and together accounted for 54 percent of U.S. total exports. The largest absolute increases in exports, by value, were for paperboard and for wood pulp and recovered paper; the largest absolute decreases in exports were for printing and writing papers and for lumber (table FP.2).

U.S. imports of forest products increased in value by \$3.9 billion (8.6 percent) (table FP.1). Canada and China were also leading suppliers to the United States in this sector, as well as importers: these countries provided 62 percent of U.S. imports (table FP.1). The largest absolute increase in imports, by value, was for wood veneer and wood panels; the largest absolute decrease in imports was for newsprint (table FP.2).

¹ Unless otherwise noted, the export data used in this investigation are for domestic exports. For more information on trade terminology, please refer to USITC, "Special Topic: Trade Metrics," Shifts in U.S. Merchandise Trade, 2014, 2015, https://www.usitc.gov/research_and_analysis/trade_shifts_2014/trade_metrics.htm.

Table FP.1 Forest products: U.S. exports and general imports, by selected trading partners, 2014–18

Country/item	Million \$					Absolute change, 2017 to 2018	% change, 2017 to 2018
	2014	2015	2016	2017	2018		
U.S. exports of domestic merchandise:							
Canada	10,100	9,477	9,020	9,221	9,368	148	1.6
China	6,930	6,361	6,775	7,479	6,805	-674	-9.0
Mexico	5,477	5,518	5,441	5,704	5,917	214	3.7
Brazil	376	350	291	264	246	-19	-7.1
United Kingdom	1,675	1,821	1,666	1,638	1,740	102	6.2
Japan	2,139	1,962	1,870	1,903	1,994	91	4.8
Germany	715	628	612	618	642	24	3.9
South Korea	880	809	763	769	828	59	7.7
Indonesia	378	369	393	451	594	143	31.9
India	879	699	686	824	991	168	20.3
All other	9,980	9,482	8,710	9,261	10,251	990	10.7
Total domestic exports	39,529	37,476	36,228	38,132	39,378	1,246	3.3
Foreign exports	1,640	1,584	1,472	1,460	1,484	24	1.6
Total U.S. exports (domestic and foreign)	41,169	39,060	37,700	39,592	40,862	1,270	3.2
U.S. general imports:							
Canada	18,971	18,070	18,704	19,089	19,767	677	3.5
China	8,873	9,522	9,561	9,816	10,530	713	7.3
Mexico	1,817	1,950	1,906	1,978	2,150	171	8.7
Brazil	2,166	2,207	2,181	2,457	2,873	416	16.9
United Kingdom	624	622	627	667	739	71	10.7
Japan	453	460	449	443	428	-15	-3.3
Germany	1,108	1,173	1,185	1,422	1,669	247	17.4
South Korea	616	578	544	537	696	158	29.5
Indonesia	768	749	667	633	880	247	39.0
India	206	223	251	282	357	75	26.7
All other	6,611	6,835	7,040	7,497	8,610	1,112	14.8
Total general imports	42,213	42,390	43,115	44,822	48,696	3,874	8.6

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note: Import values are based on U.S. customs value; export values are based on free alongside ship value, U.S. port of export. Calculations are based on unrounded data. The countries are sorted by those with the largest total U.S. trade (U.S. general imports plus U.S. domestic exports) in these products in the most recent year.

Canada remained the largest export market for U.S. forest products, accounting for 24 percent of total exports. Although U.S. forest products exports to Canada and Mexico grew modestly in 2018, those to China dropped for the first time since 2015. U.S. forest product exports to China had an absolute decrease of \$674 million or 9.0 percent, following China's imposition of additional duties on certain U.S. products and a slowdown in Chinese economic growth (table FP.1).² (For more information, see the last chapter in this report: Special Topic: Section 232 and 301 Trade Actions in 2018.)

As has been the case for many years, in 2018, the largest share of U.S. imports of forest products came from Canada, totaling \$19.8 billion (41 percent); this represented a modest increase of \$677 million (3.5 percent) from 2017 (table FP.1). The second-largest import source was China, which supplied \$10.5 billion (22 percent) of U.S. imports. In contrast to the \$674 million (9.0 percent) decrease in U.S. exports to China, U.S. imports from China rose \$713 million (7.3 percent), which was faster than the rise of 3 percent in 2017 (table FP.1).

The roles of India, Indonesia, and South Korea as major U.S. forest products trading partners became more prominent in 2018. U.S. exports to India, Indonesia, and South Korea increased by 20.3 percent, 31.9 percent, and 7.7 percent, respectively. Moreover, U.S. imports from India, Indonesia, and South Korea increased by 26.7 percent, 39.0 percent, and 29.5 percent, respectively (table FP.1).

U.S. Exports

U.S. exports of forest products grew \$1.2 billion (3.2 percent) to \$39.4 billion in 2018. The growth rate was lower than the growth rate of 5 percent from the previous year (table FP.2). The product groups with the largest absolute increases included paperboard, wood pulp and recovered paper, logs and rough wood products, and paper bags and boxes. The largest absolute decreases were in printing and writing papers and lumber.

² Carmichael, "[Slowing Wood Demand Reduces Global Trade](#)," January 15, 2019; Lauriat, "Tariffs—A Knotty Problem," September 24, 2018.

Table FP.2 Forest products: Leading changes in U.S. exports and imports, 2014–18

Industry/commodity group (USITC code)	Million \$					Absolute change, 2017 to 2018	% change, 2018 from 2017
	2014	2015	2016	2017	2018		
U.S. domestic exports:							
Increases:							
Paperboard (FP011A)	6,848	6,601	6,402	7,088	7,863	775	10.9
Wood pulp and recovered paper (FP009)	8,702	8,483	8,289	8,625	9,280	655	7.6
Logs and rough wood products (FP001)	3,390	3,105	3,046	3,420	3,595	175	5.1
Paper boxes and bags (FP010)	1,864	1,904	1,869	1,908	1,944	36	1.9
Decreases:							
Printing and writing papers (FP013)	1,212	982	907	1,126	947	-179	-15.9
Lumber (FP002)	3,609	3,216	3,403	3,888	3,764	-123	-3.2
Newsprint (FP012)	312	246	149	142	108	-35	-24.3
All other	13,592	12,939	12,164	11,935	11,878	-58	-0.5
Total	39,529	37,476	36,228	38,132	39,378	1,246	3.3
U.S. general imports:							
Increases:							
Wood veneer and wood panels (FP004)	4,806	5,227	5,729	6,139	7,028	890	14.5
Lumber (FP002)	5,731	5,447	6,609	7,100	7,199	99	1.4
Decreases:							
Newsprint (FP012)	1,316	1,068	979	907	877	-30	-3.3
All other	30,360	30,647	29,797	30,676	33,591	2,915	9.5
Total	42,213	42,390	43,115	44,822	48,696	3,874	8.6

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note: Import values are based on U.S. customs value; export values are based on free alongside ship value, U.S. port of export. Calculations are based on unrounded data.

Industrial papers and paperboards continued to be the largest U.S. paper products export, growing by \$832 million (8.6 percent) to \$10.3 billion in 2018.³ The vast majority of the increase was in exports of paperboard, which rose by \$775 million or 10.9 percent; exports of industrial paper rose by only \$2 million or 0.3 percent. Paperboard is thicker than paper and has many uses because of its sturdiness, including for packaging; high-quality graphic printing for books, magazine covers, and postcards; and building paper-based sculptures. With continued global economic growth, U.S. exports of paperboard have had steady growth in recent years due to increased demand for a wide range of uses, particularly packaging.⁴

Wood pulp and recovered paper is a broad and diverse group within the forest products sector. U.S. exports of goods in this group increased modestly due to continued foreign demand for inputs for all types of paper products. Of particular note is the story behind a small increase in exports of waste and scrap paper. The United States has long been the world's largest exporter of waste and scrap paper (also known as "recovered paper"). China had been the leading growth market for U.S. exports of recovered paper for many years. However, in 2018 China revised its contamination and pollution rules on waste

³ USITC DataWeb/USDOC, digest FP011A and digest FP011C (accessed May 15, 2019).

⁴ Mordor, "Paper Packaging Market—Growth, Trends, and Forecast," 2019.

and scrap imports, effectively banning imports of these products⁵ and producing other ripple effects.⁶ U.S. exports of recovered paper and paperboard to China dropped by 3.3 million metric tons (mt) (31 percent) to 7.6 million mt in 2018.⁷ At the same time, prices for recovered paper dropped dramatically.⁸

Despite the decrease in exports to China, in 2018 U.S. exports of the broadest category of recovered paper increased modestly, rising in terms of quantity by 781,000 mt (4 percent)⁹ and in terms of value by \$119 million (4 percent). This occurred as U.S. exports shifted to other countries, particularly India, Mexico, and Indonesia, which sought higher volumes of inputs for their growing recycling businesses. U.S. exports of recovered paper to India increased by 1.4 million mt (73 percent) to 3.3 million mt; to Mexico, by 103,000 mt (7 percent) to 1.7 million mt; and to Indonesia, by 727,000 mt (166 percent) to 1.2 million mt.¹⁰

U.S. exports of logs and rough wood products increased by \$175 million (5.1 percent) to \$3.6 billion in 2018 (table FP.2).¹¹ However, exports to China—the largest export destination—declined by \$76 million (5 percent).¹² China’s share of these exports dropped from 41 percent to 37 percent. Nevertheless, China’s total global imports of logs and rough wood were larger in 2018 than in 2017.¹³ China’s diminishing purchases of U.S. exports of logs and rough wood were reportedly consequences of both the additional duties China placed on U.S. wood exports and a slowing Chinese economy.¹⁴

U.S. exports of wood pellets¹⁵ continued to be robust. European Union (EU) climate change policies have designated biomass as a renewable energy under the EU Renewable Energy Directive (RED). This designation has incentivized growth in the wood pellet industry, particularly in the United States, the world’s largest producer and exporter.¹⁶ In 2018, U.S. exports of wood pellets increased by 900 million kilograms (18 percent) in volume and \$146 million (22 percent) by value.¹⁷ The United Kingdom continued to be the main destination: U.S. wood pellet exports there increased by 596 million kilograms (15 percent) to 4.7 billion kilograms, representing 78 percent of total U.S. exports by volume. Exports to Belgium, the second-largest destination, increased 8 percent to 580 million kilograms; those to Denmark, the third-largest destination, increased 26 percent to 473 million kilograms.

⁵ Katz, “Piling Up,” March 7, 2019.

⁶ Because of the strengthened Chinese environmental regulations and lower worldwide prices, it has become more expensive for U.S. municipalities to transfer recovered paper to U.S. businesses that sell and ship it abroad. This had led some municipalities to close or reduce their recycling centers and send more paper waste and scraps to public landfills or incinerators. See, for example, Corkery, “As Costs Skyrocket,” March 16, 2019.

⁷ USITC DataWeb/USDOC, HTS 4707 (accessed May 13, 2019).

⁸ RISI Fastmarkets, Recovered Paper North America data (accessed July 30, 2019).

⁹ USITC DataWeb/USDOC, HTS 4707 (accessed May 13, 2019).

¹⁰ USITC DataWeb/USDOC, HTS 4707 (accessed May 13, 2019).

¹¹ USITC DataWeb/USDOC, digest FP1 (accessed May 13, 2019).

¹² USITC DataWeb/USDOC, digest FP1 (accessed May 13, 2019).

¹³ Wood Markets, “China’s Demand for Logs and Lumber Grew,” February 15, 2019.

¹⁴ Hancock Timberland Investor, “U.S. Hardwood Markets React to Tariffs,” December 2018; *Bloomberg News*, “As China’s Economy Slows,” March 5, 2019; Mellnik, Shapiro, and Rabinowitz, “The First Round of China Tariffs,” May 16, 2019.

¹⁵ Wood pellets are a biomass product that generate energy when burned and are manufactured from various sources, including forestry residue, wood waste, and additional harvesting of mature trees.

¹⁶ Ireland, “International Trade in Wood Pellets,” September 2018.

¹⁷ USITC DataWeb/USDOC, HTS 4401.31.00 (accessed May 13, 2019).

Growth in U.S. exports of paper boxes and paper bags,¹⁸ which totaled \$1.9 billion in 2018, slowed slightly from the previous year.¹⁹ Several headwinds are affecting production of and trade in paper boxes and paper bags. First, for environmental reasons, an increasing number of jurisdictions worldwide are taxing the use of paper and plastic bags to curtail their usage, or are banning them outright.²⁰ Second, e-commerce giant Amazon is implementing a packaging efficiency strategy²¹ that includes increasing the proportion of lightweight plastic mailers it uses, as opposed to boxes and paperboard mailers.²²

Lumber has long been one of the largest U.S. forest product exports. U.S. exports of lumber declined by \$123 million (3.2 percent) to \$3.8 billion in 2018, after growing in each of the preceding three years (table FP.2).²³ The decline primarily reflects reduced exports to China, which fell \$235 million (14 percent). Sources indicate that the reasons for the decrease include China's imposition of additional duties on certain U.S. exports, including wood products;²⁴ a slowing Chinese economy; and reduced Chinese investment in housing.²⁵ In contrast to China, U.S. exports to Canada increased modestly, rising by \$26 million (5 percent). China, however, remained by far the largest export destination, accounting for 45 percent of total U.S. lumber exports, while Canada, as the second-largest export destination, accounted for 15 percent of the total.²⁶

Newsprint exports, which have been declining for many years due to the digital revolution,²⁷ continued this pattern, dropping by \$35 million (24.3 percent) to \$142 million.²⁸

U.S. Imports

U.S. imports of forest products increased \$3.9 billion (8.6 percent) to \$48.7 billion in 2018 (table FP.2). The growth rate was more than twice the growth rate of 4 percent for the previous year. The rise in forest products imports was largely due to continued U.S. economic growth that demanded a modest increase in inputs for industries such as housing construction, housing remodeling, and furniture.²⁹

The largest absolute increase in imports was for imports of wood veneer and wood panels (table FP.2), which rose by \$890 million (14.5 percent) to \$7.0 billion in 2018.³⁰ The relatively stable U.S. housing and housing remodeling market likely contributed to this increase. Canada is the largest source of U.S.

¹⁸ Paper boxes are, among other purposes, used for shipping products purchased on the internet, while paper bags are often used by consumers to carry groceries and other retail items.

¹⁹ USITC DataWeb/USDOC, digest FP10 (accessed May 14, 2019).

²⁰ Homonoff et al., "Skipping the Bag," September 2018.

²¹ RISI Fastmarkets, "Corrugated: Amazon Cutting Back on 'Re-packaging,'" January 18, 2019, 7–8.

²² Young, "Why Amazon's New Streamlined Packaging Is Jamming Up," February 11, 2019.

²³ USITC DataWeb/USDOC, digest FP2 (accessed May 13, 2019).

²⁴ Skerritt, "China's Tariffs on U.S. Hardwood Exports," August 3, 2018.

²⁵ *American Journal of Transportation*, "Global Softwood Lumber Trade Fell 7% in 2018," March 19, 2019.

²⁶ See table FP.1; USITC DataWeb/USDOC, digest FP2 (accessed May 13, 2019).

²⁷ Pew Research Center, "State of the News Media 2016," 2016.

²⁸ USITC DataWeb/USDOC, digest FP11 (accessed May 15, 2019).

²⁹ UNECE, "United States Forest Products Annual Market Review," 2018.

³⁰ USITC DataWeb/USDOC, digest FP4 (accessed May 13, 2019).

imports of these wood products; it accounted for 56 percent of the total, a 14 percent increase over 2017.³¹

Due to its importance to the U.S. economy, lumber has long been the largest import sector group for forest products. In 2018, U.S. imports of lumber rose slightly by \$99 million (1.4 percent) to \$7.2 billion, well below the growth rate of 8 percent for the previous year.³² This was due to slightly slower growth in the U.S. economy and in new housing construction.³³ Canada accounted for 79 percent of all U.S. lumber imports for consumption in 2018, a decline from 83 percent in 2017.³⁴

Newsprint imports decreased by \$30 million (3.3 percent)³⁵ because of the long-term shrinkage in the number of consumers that read paper newspapers.³⁶ Canada has long provided the vast majority of U.S. newsprint imports, accounting for 99 percent of the total in 2018.³⁷

³¹ USITC DataWeb/USDOC, digest FP4 (accessed May 13, 2019).

³² USITC DataWeb/USDOC, digest FP2 (accessed May 13, 2019).

³³ CNN Business, "Where Is the US Housing Market Headed?" August 28, 2018.

³⁴ USITC DataWeb/USDOC, digest FP2 (accessed May 13, 2019).

³⁵ USITC DataWeb/USDOC, digest FP12 (accessed May 15, 2019).

³⁶ USITC DataWeb/USDOC, digest FP12 (accessed May 15, 2019).

³⁷ USITC DataWeb/USDOC, digest FP12 (accessed May 15, 2019).

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