United States
International Trade Commission

Shifts in U.S. Merchandise Trade 2013

October 2014
Publication Number: 4493
Investigation Number: 332-345

United States International Trade Commission

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Part I
U.S. Merchandise Trade and Overall Economic Performance

This section of the report provides an overview of the economic performance of the United States during 2013. It also summarizes overall U.S. merchandise trade performance in broad industry categories in 2013 and compares it with that of previous years.

Overall Economic Performance

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The U.S. economy grew at a rate of 1.9 percent in 2013. This growth rate was lower than the 2.8 percent increase in 2012, but similar to the 2011 growth rate. [1] Various factors slowed economic growth in 2013, including the U.S. federal government shutdown in early October and a decrease in private investment. U.S. gross domestic product (GDP) growth in 2013 was driven by private domestic investment and increased production. [2]

Total industrial production in the United States rose by 2.6 percent during 2013. Although industrial production increased in almost all sectors, it grew most strongly in the natural gas distribution and mining sectors, falling only in the textiles, paper, printing, and primary metal sectors. [3] Unemployment in the United States decreased from 7.9 percent of the labor force in January 2013 to 6.7 percent in December 2013. [4]

U.S. trade flows were affected by the relative strength of the U.S. dollar. The nominal trade-weighted value of the dollar appreciated by 1.3 percent between 2012 and 2013 relative to the currencies of the Broad dollar index, [5] generally lowering the cost of imported inputs and making U.S. exports more expensive in foreign markets.

One key determinant of the demand for U.S. exports is the performance of other economies. Overall, other advanced economies grew at a slower rate than the United States. The average GDP growth rate for advanced economies in 2013 was 1.3 percent (table US.1). [6] While Canada, the United States' largest export market, matched its previous year's growth at 1.7 percent, the United States' second-largest export market, the European Union, experienced a slow growth rate of only 0.2 percent. (The European Union accounts for 23 percent of world GDP). [7] In contrast, growth in emerging markets and developing economies in 2013 was stronger than

[1] USDOC, BEA, "Gross Domestic Product: Fourth Quarter and Annual," February 28, 2014.
[2] Ibid.
[3] Federal Reserve System, Board of Governors, G.17 Industrial Production and Capacity Utilization (accessed April 11, 2014).
[4] USDOL, BLS, Current Population Survey (CPS) database (accessed April 11, 2014).
[5] The broad index is a weighted average of the foreign exchange values of the U.S. dollar against the currencies of a large group of major U.S. trading partners. Federal Reserve System, Foreign Exchange Rates—H.10 (accessed March 20, 2014).
[6] IMF, *Is the Tide Rising?* January 2014. This document is the source for the rest of this paragraph.
[7] World Bank, World Development Indicators database (accessed April 11, 2014).

Table US.1 Real gross domestic product, change from previous year, (%)

Region	2012	2013
World output	3.1	3.0
Advanced economies	1.5	1.3
United States	2.8	1.9
European Union	-0.3	0.2
Mexico	3.9	1.1
China	7.7	7.7
Japan	1.5	1.5
Developing Asia	6.7	6.5
Latin America and the Caribbean	3.1	2.7
Central and Eastern Europe	1.4	2.7

Source: International Monetary Fund (IMF), World Economic Outlook database (accessed May 2, 2014).

U.S. growth. China's economy grew by 7.7 percent, and China is the fourth-largest export destination for U.S. goods. The Developing Asia [8] region grew by 6.5 percent on average.

The countries of Latin America and the Caribbean [9] also grew faster than the United States, at 2.7 percent on average, although Mexico's growth was below the mean at 1.1 percent. Mexico is the United States' third-largest export market. Countries in the Central and Eastern European region also performed relatively well, with average GDP growth of 2.7 percent in 2013.

[8] IMF country grouping, composed of 27 countries: Afghanistan, Bangladesh, Bhutan, Brunei Darussalam (Brunei), Cambodia, China, Fiji, India, Indonesia, Kiribati, Laos, Malaysia, the Maldives, Burma, Nepal, Pakistan, Papua New Guinea, the Philippines, Samoa, the Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam.

[9] IMF country grouping, composed of 32 countries: Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

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U.S. Trade by Industry, Sector, and Selected Trading Partners

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U.S. Trade Balance[10]

In 2013, 9 of the 10 U.S. merchandise sectors addressed in this report—all except the agricultural sector—registered trade deficits. Additionally, 8 of the 10 sectors experienced greater trade deficits or declines in trade surpluses. The chemicals and related products and the energy-related products sectors were the exceptions. In fact, the energy-related products sector experienced a substantial decline in its trade deficit, lowering the deficit in this sector by $55.9 billion (22 percent) (table US.2). The change in this sector was a major factor in the $30.1 billion (3 percent) decline in the overall U.S. trade deficit to $867.7 billion in 2013 (figure US.1). All of the sectoral deficits expanded by less than $6 billion, and none grew by more than 8 percent. Although the agricultural products sector recorded a trade surplus in 2013, its trade surplus declined by $430 million (2 percent) to $26.5 billion.

The energy-related products sector continued to perform well in 2013, as U.S. production of crude petroleum reached levels not seen since the 1990s and refineries produced at levels last reached in 2000. This increased production, combined with the continued gradual decline in U.S. consumption of these products, supported more exports and reduced the need for imports.

[10] Throughout this report, unless specifically noted otherwise, export data consist of data on U.S. domestic exports and import data consist of data on U.S. imports for consumption, both as reported by Census. The merchandise trade balance derived on this basis may differ from another measure of the merchandise trade balance, defined as total exports minus general imports, which is generally reported by Census and other federal agencies (see definitions of trade terms at http://www.census.gov/foreign-trade/reference/definitions). Note that imports for consumption may include re-exports—goods that are imported into the United States and then exported without any substantial alteration—while domestic exports do not. As a result, when trade deficits with certain partners are calculated as U.S. domestic exports minus U.S. imports for consumption, they may be larger than the deficits calculated using total exports minus general imports. This difference is most notable in bilateral trade with Canada and Mexico.

Table US.2 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
Agricultural products	103,184	121,473	145,724	149,293	152,162	2,869	1.9
Forest products	30,489	36,381	39,274	38,309	39,244	935	2.4
Chemicals and related products	165,948	197,026	213,983	217,452	218,078	626	0.3
Energy-related products	59,827	85,468	134,088	142,294	152,652	10,358	7.3
Textiles and apparel	14,653	17,350	19,433	19,211	19,754	543	2.8
Footwear	620	728	832	824	789	-36	-4.3
Minerals and metals	84,351	109,910	140,640	140,516	133,749	-6,767	-4.8
Machinery	85,427	104,379	115,193	122,404	122,269	-135	-0.1
Transportation equipment	194,082	222,403	257,589	285,772	293,023	7,251	2.5
Electronic products	142,938	159,833	164,537	167,003	166,976	-27	([a])
Miscellaneous manufactures	24,765	25,542	26,759	27,914	29,843	1,929	6.9
Special provisions	30,460	41,638	41,123	42,218	43,501	1,283	3.0
Total	936,745	1,122,131	1,299,176	1,353,211	1,372,039	18,827	1.4
U.S. imports for consumption							
Agricultural products	87,301	97,572	115,585	122,400	125,699	3,299	2.7
Forest products	31,511	35,749	36,271	37,116	39,966	2,850	7.7
Chemicals and related products	182,515	218,020	254,229	252,153	250,484	-1,669	-0.7
Energy-related products	260,878	338,184	430,796	398,441	352,853	-45,588	-11.4
Textiles and apparel	90,581	104,199	113,611	113,507	117,225	3,718	3.3
Footwear	17,666	20,710	22,559	23,745	24,612	868	3.7
Minerals and metals	117,025	156,199	192,550	194,712	190,474	-4,238	-2.2
Machinery	110,061	130,469	154,948	166,237	169,113	2,876	1.7
Transportation equipment	199,808	266,946	306,579	358,409	371,548	13,138	3.7
Electronic products	311,420	377,617	400,592	413,767	417,226	3,459	0.8
Miscellaneous manufactures	84,437	97,346	99,415	104,443	109,412	4,970	4.8
Special provisions	55,960	55,600	59,815	66,105	71,137	5,032	7.6
Total	1,549,163	1,898,610	2,186,951	2,251,035	2,239,750	-11,285	-0.5

See footnote(s) at end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
Agricultural products	15,883	23,901	30,139	26,893	26,464	-430	-1.6
Forest products	-1,022	632	3,003	1,193	-723	-1,915	([b])
Chemicals and related products	-16,567	-20,994	-40,246	-34,701	-32,406	2,294	6.6
Energy-related products	-201,051	-252,716	-296,708	-256,147	-200,201	55,946	21.8
Textiles and apparel	-75,928	-86,849	-94,178	-94,297	-97,472	-3,175	-3.4
Footwear	-17,046	-19,982	-21,728	-22,920	-23,824	-903	-3.9
Minerals and metals	-32,674	-46,288	-51,910	-54,196	-56,725	-2,529	-4.7
Machinery	-24,634	-26,090	-39,755	-43,833	-46,844	-3,011	-6.9
Transportation equipment	-5,726	-44,543	-48,989	-72,637	-78,525	-5,888	-8.1
Electronic products	-168,483	-217,784	-236,055	-246,764	-250,250	-3,486	-1.4
Miscellaneous manufactures	-59,672	-71,804	-72,656	-76,529	-79,570	-3,041	-4.0
Special provisions	-25,500	-13,962	-18,692	-23,887	-27,635	-3,749	-15.7
Total	-612,419	-776,479	-887,775	-897,824	-867,712	30,112	3.4

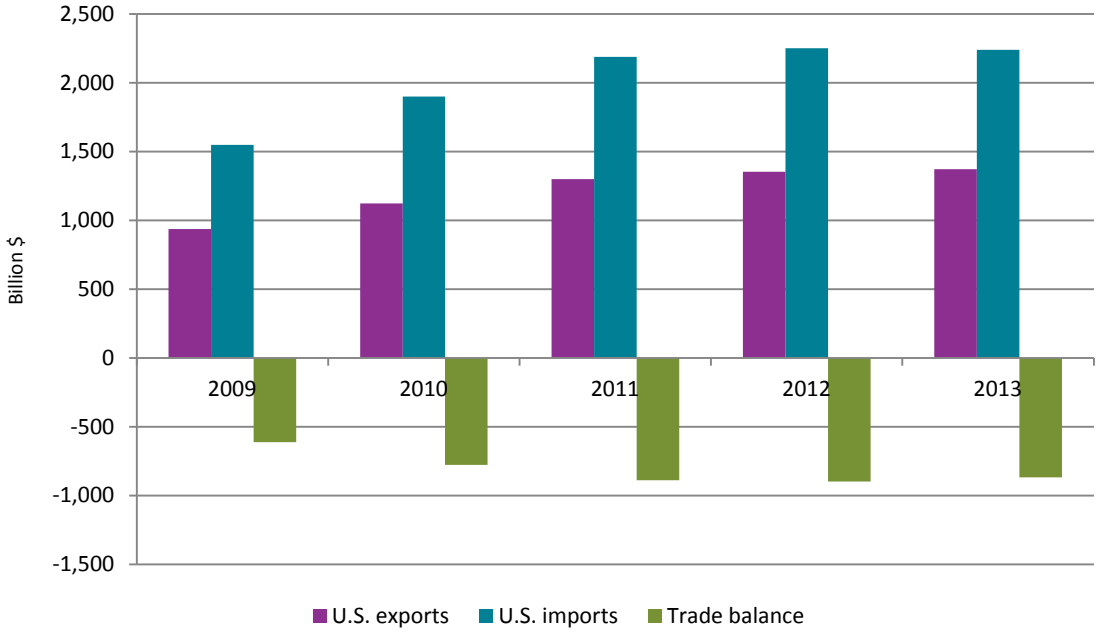
Source: Compiled from official statistics of the U.S. Department of Commerce.

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Less than 0.05 percent.

[b]Not meaningful for purposes of comparison.

Figure US.1 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, 2009–13



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

U.S. Exports

In 2013, U.S. exports increased by $18.8 billion (1 percent) to $1,372.0 billion, as exports in 6 of the 10 sectors reviewed in this report increased. The energy-related products sector recorded the greatest increase in both absolute ($10.4 billion) and percentage (7 percent) terms. In addition to the changes in domestic production and consumption of energy-related products noted above, continued strong global demand for distillate fuel oils also contributed to increased U.S. exports in this sector.

U.S. exports of transportation equipment and minerals and metals experienced the next-largest shifts in 2013. Exports of aircraft equipment and motor vehicles increased by $13.6 billion, driving the transportation equipment sector's overall $7.3 billion rise in exports (table US.3).

Increased domestic consumption of natural and synthetic stones and decreased interest in holding precious metals led to a decline in U.S. minerals and metals exports (down $6.7 billion, or 5 percent). In anticipation of greater U.S. demand for jewelry, the U.S. industry exported fewer stones for cutting and processing overseas.

U.S. Imports

In 2013, the value of total U.S. imports fell 0.5 percent to $2,239.8 billion, with the largest absolute shifts occurring in energy-related products (down $45.6 billion to $352.9 billion), transportation equipment (up $13.1 billion to $371.5 billion), and minerals and metals (down $4.2 billion to $190.5 billion). Significant reductions in imports of energy-related products (down $45.6 billion, or 11 percent) drove the contraction in the value of overall U.S. imports. Lower domestic consumption of crude petroleum and higher U.S. production of this commodity contributed to these reductions.

Mexican suppliers accounted for most of the growth in U.S. imports of transportation equipment in 2013. Benefiting from proximity to the United States, lower labor costs than the United States, and duty-free access under the North American Free Trade Agreement (NAFTA), Mexico's exports to the United States increased by $7.2 billion (9 percent) even as exports to the U.S. market from Canada and Japan declined.

Table US.3 All merchandise sectors: Leading changes in U.S. exports and imports, 2009–13

Item	Million $					Absolute change, 2012–13	Percent change, 2012–13
	2009	2010	2011	2012	2013		
U.S. EXPORTS							
Increases							
Transportation equipment	77,700	73,949	82,028	95,210	104,881	9,671	10.2
Aircraft, spacecraft, and related equipment (TE013)							
Motor vehicles (TE009)	35,963	48,940	59,454	65,669	69,557	3,888	5.9
Energy-related products	42,048	61,131	100,425	111,355	119,700	8,345	7.5
Petroleum products (EP005)							
Natural gas and components (EP006)	5,270	7,805	10,394	9,225	13,039	3,814	41.3
Crude petroleum (EP004)	1,620	1,384	1,460	2,184	4,818	2,635	120.6
Animal feeds (AG013)	8,498	9,677	10,103	12,476	14,525	2,050	16.4
Decreases							
Construction and mining equipment (TE004)	19,777	22,010	27,971	29,959	23,729	-6,230	-20.8
Coal, coke, and related chemical products (EP003)	8,079	12,612	19,471	17,779	13,665	-4,115	-23.1
Precious metals and non-numismatic coins (MM020)	20,699	28,033	42,230	42,762	38,868	-3,893	-9.1
Oilseeds (AG032)	16,780	18,936	17,875	25,040	21,794	-3,245	-13.0
All other	700,312	837,653	927,765	941,554	947,462	5,908	0.6
Total	936,745	1,122,131	1,299,176	1,353,211	1,372,039	18,827	1.4
U.S. IMPORTS							
Increases							
Transportation equipment	94,348	132,471	144,426	171,556	180,005	8,449	4.9
Motor vehicles (TE009)							
Aircraft, spacecraft, and related equipment (TE013)	18,339	18,931	21,546	24,107	29,080	4,973	20.6
Certain motor-vehicle parts (TE010)	35,296	51,903	59,875	69,605	71,969	2,364	3.4
Telecommunications equipment (EL002)	60,299	74,065	79,771	83,831	89,161	5,330	6.4
Natural and synthetic gemstones (MM019)	13,608	19,730	23,625	21,597	24,733	3,136	14.5
Apparel (TX005)	69,457	78,501	85,668	84,962	87,658	2,696	3.2
Decreases:							
Energy-related products	150,809	196,862	246,894	228,944	195,487	-33,457	-14.6
Crude petroleum (EP004)							
Petroleum products (EP005)	72,581	97,889	135,170	129,773	118,136	-11,638	-9.0
Steel mill products (MM025)	16,995	22,928	30,765	34,303	29,065	-5,238	-15.3
Consumer electronics (EL003)	47,186	51,031	46,343	47,714	42,936	-4,779	-10.0
Medicinal chemicals (CH019)	82,417	86,603	92,732	88,771	85,477	-3,294	-3.7
Construction and mining equipment (TE004)	6,345	8,213	12,935	16,302	13,727	-2,576	-15.8
All other	881,484	1,059,482	1,207,200	1,249,571	1,272,318	22,747	1.8
Total	1,549,163	1,898,610	2,186,951	2,251,035	2,239,750	-11,285	-0.5

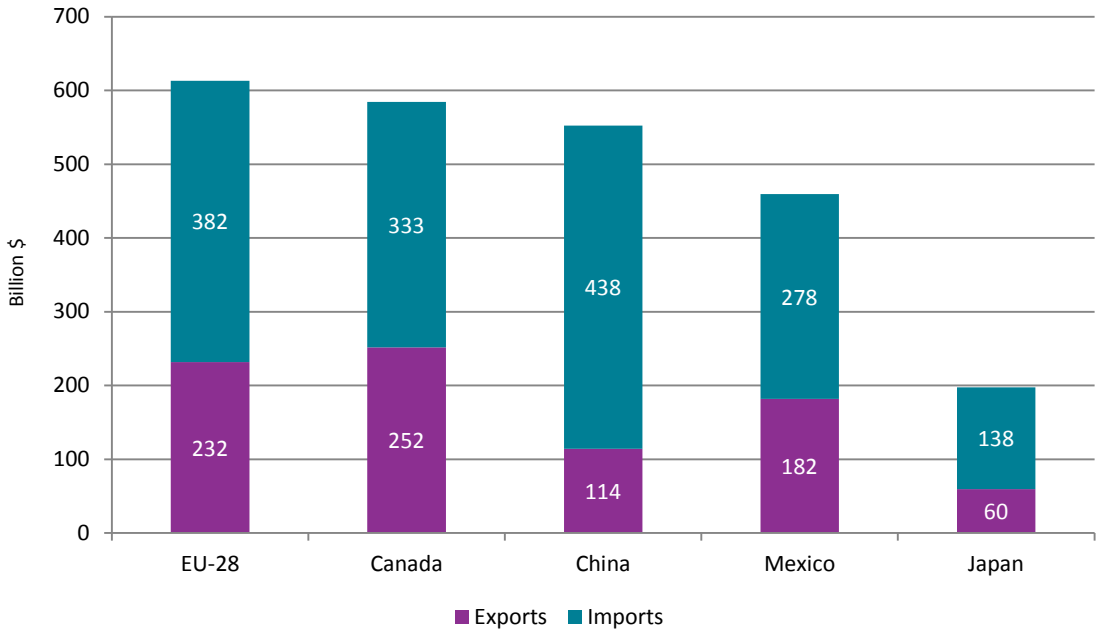
Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the transportation equipment sector.

Shifts in U.S. Bilateral/Multilateral Trade Among Leading Trading Partners

In 2013, the United States' top five trading partners continued to be the 28 members of the European Union (EU-28), Canada, China, Mexico, and Japan (figure US.2). U.S. trade deficits increased with the EU-28 (up $11.3 billion to $149.9 billion), China (up $2.5 billion to $323.8 billion), and Canada (up $1.5 billion to $81.2 billion), but fell with Japan (down $1.7 billion to $78.3 billion) and Mexico (down $5.3 billion to $96.0 billion) (table US.4). Together, these trading partners accounted for 67 percent of total U.S. trade with the world. The U.S. trade deficit with these countries was equivalent to 84 percent of the total U.S. trade deficit.

The largest trade balance shift in 2013 occurred with the members of the Organization of Petroleum Exporting Countries (OPEC): [11] the collective U.S. trade deficit with this group fell by $31.5 billion (33 percent) to $63.4 billion. The United States reduced its imports of energy-related products from several individual OPEC members by $5–$7 billion each. The combined effect on U.S. trade with OPEC and on the overall U.S. trade balance was substantial.

Figure US.2 Total trade between the United States and its five largest trading partners, 2013



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

[11] There are currently 12 OPEC member countries: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

Table US.4 All merchandise sectors: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
Canada	171,695	205,956	233,774	244,199	251,685	7,486	3.1
China	65,124	85,746	96,898	103,508	114,313	10,806	10.4
Mexico	105,718	131,602	159,910	175,159	181,690	6,531	3.7
Japan	47,074	55,727	61,409	64,599	59,689	-4,910	-7.6
Germany	40,229	44,391	44,240	43,676	42,372	-1,304	-3.0
Korea	27,074	36,836	41,311	40,004	39,008	-996	-2.5
United Kingdom	41,990	44,005	49,984	48,293	41,228	-7,065	-14.6
France	24,367	24,421	25,361	27,491	28,351	859	3.1
Brazil	22,135	30,157	37,275	37,252	37,627	375	1.0
Saudi Arabia	10,235	10,712	12,823	16,935	17,656	721	4.3
All other	381,104	452,578	536,192	552,096	558,419	6,324	1.1
Total	936,745	1,122,131	1,299,176	1,353,211	1,372,039	18,827	1.4
EU-28	202,581	217,629	241,587	235,916	231,676	-4,240	-1.8
OPEC	46,750	50,050	59,461	75,855	77,801	1,946	2.6
Latin America	205,299	256,600	312,562	340,366	346,893	6,527	1.9
Asia	238,447	307,077	345,014	349,499	360,224	10,725	3.1
Sub-Saharan Africa	14,638	16,437	20,298	21,573	22,969	1,396	6.5
U.S. imports for consumption							
Canada	224,584	275,536	316,397	323,925	332,887	8,962	2.8
China	295,545	364,047	398,467	424,874	438,147	13,273	3.1
Mexico	176,309	228,824	262,671	276,408	277,664	1,255	0.5
Japan	96,002	119,938	127,901	144,538	137,954	-6,584	-4.6
Germany	69,790	80,886	96,539	105,084	112,233	7,149	6.8
Korea	38,770	47,914	56,006	57,874	61,979	4,105	7.1
United Kingdom	47,019	49,293	51,045	54,497	52,165	-2,332	-4.3
France	33,961	38,241	39,596	41,099	44,697	3,598	8.8
Brazil	19,612	23,402	30,368	31,720	26,861	-4,860	-15.3
Saudi Arabia	21,366	30,911	45,130	52,306	46,576	-5,730	-11.0
All other	526,207	639,620	762,832	738,710	708,589	-30,121	-4.1
Total	1,549,163	1,898,610	2,186,951	2,251,035	2,239,750	-11,285	-0.5
EU-28	278,355	315,213	362,856	374,570	381,591	7,021	1.9
OPEC	109,883	147,136	184,730	170,756	141,246	-29,510	-17.3
Latin America	283,049	358,048	429,290	443,139	429,634	-13,505	-3.0
Asia	583,910	718,322	792,540	844,754	860,554	15,800	1.9
Sub-Saharan Africa	47,159	64,351	74,019	49,591	39,419	-10,173	-20.5

See footnote(s) at end of table.

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
Canada	-52,889	-69,580	-82,623	-79,726	-81,202	-1,476	-1.9
China	-230,421	-278,301	-301,569	-321,367	-323,834	-2,467	-0.8
Mexico	-70,591	-97,222	-102,761	-101,249	-95,973	5,276	5.2
Japan	-48,928	-64,211	-66,492	-79,939	-78,265	1,674	2.1
Germany	-29,561	-36,495	-52,299	-61,408	-69,861	-8,452	-13.8
Korea	-11,696	-11,077	-14,695	-17,870	-22,971	-5,100	-28.5
United Kingdom	-5,030	-5,288	-1,060	-6,204	-10,937	-4,733	-76.3
France	-9,593	-13,819	-14,236	-13,608	-16,346	-2,739	-20.1
Brazil	2,523	6,755	6,907	5,532	10,767	5,235	94.6
Saudi Arabia	-11,131	-20,199	-32,307	-35,371	-28,920	6,451	18.2
All other	-145,103	-187,042	-226,640	-186,614	-150,169	36,445	19.5
Total	-612,419	-776,479	-887,775	-897,824	-867,712	30,112	3.4
EU-28	-75,774	-97,584	-121,269	-138,654	-149,915	-11,260	-8.1
OPEC	-63,133	-97,086	-125,268	-94,901	-63,445	31,455	33.1
Latin America	-77,750	-101,448	-116,729	-102,772	-82,741	20,031	19.5
Asia	-345,463	-411,246	-447,526	-495,255	-500,330	-5,075	-1.0
Sub-Saharan Africa	-32,521	-47,915	-53,721	-28,019	-16,450	11,569	41.3

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

The U.S. trade deficit with China—the largest source of U.S. imports by value—grew by $2.5 billion (0.8 percent) to $323.8 billion in 2013. Electronic products, comprising computers, peripherals, and telecommunications equipment, continued to account for 40 percent of U.S. merchandise imports from China.

Overall trade with Japan—the fourth-largest source of U.S. imports by value—contracted by over 5 percent in 2013. Declines occurred in both exports (down by $4.9 billion, or 8 percent) and imports (down by $6.6 billion, or 5 percent) and were distributed across many sectors. The U.S. trade deficit with Japan fell by 2 percent in 2013.

Part II
Bilateral Trade

This section of the report analyzes U.S. merchandise trade with three selected trading partners—Brazil, China, and Vietnam. U.S. merchandise trade with all three of these countries changed significantly from 2012 to 2013. The section also examines bilateral U.S. trade with the Organization of Petroleum Exporting Countries (OPEC), a group of 12 countries that accounted for 41 percent of world total crude petroleum production in 2013.

Brazil

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Change in 2013 from 2012:

U.S. trade surplus: Increased by $5.2 billion (95 percent) to $10.8 billion
U.S. exports: Increased by $375 million (1 percent) to $37.6 billion
U.S. imports: Decreased by $4.9 billion (15 percent) to $26.9 billion

The U.S. trade surplus with Brazil increased by $5.2 billion in 2013 (95 percent), owing almost entirely to a $4.9 billion reduction in the value of U.S. imports (table BR.1 and figure BR.1). While four of the U.S. industry sectors reviewed in this report recorded a trade deficit with Brazil in 2013, [12] substantial trade surpluses in chemicals and related products and energy-related products largely accounted for the overall increase in the United States' trade surplus with Brazil. The main contributors to the growth in the trade surplus were the significant decline in the value of U.S. imports of energy-related products from Brazil coupled with the increase in U.S. exports of agricultural products to Brazil.

Brazil's gross domestic product (GDP) rose 2.5 percent in 2013. The Brazilian economy is relatively stable, and changes in the U.S. trade balance with Brazil were not a result of movements in the Brazilian economy. Rather, the change was largely the result of falling global prices for energy-related products, which caused the value of U.S. imports from Brazil to drop significantly.

U.S. Exports

The value of U.S. exports to Brazil increased by just 1 percent (about $375 million) to $37.6 billion in 2013, with increased exports of agricultural products driving the growth. Agricultural product exports grew by $1.3 billion, fueled mostly by increases in cereals exports (table BR.2).

U.S. exports of cereals to Brazil grew by $1.2 billion (over 7,000 percent) in 2013. This sharp increase was driven by a surge in U.S. wheat exports. The United States exported almost 3.5 million metric tons (mmt) in 2013, the largest amount in 30 years, fueled by a spike in Brazilian demand and a record U.S. wheat crop. [13] While Brazil, a large net wheat importer,

[12] These sectors include agricultural products; forest products; footwear; and minerals and metals.
[13] USDA, FAS, U.S. Wheat Exports to Brazil Highest in 30 Years, February 19, 2014, 1–2.

Table BR.1 Brazil: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
Agricultural products	349	564	1,892	695	1,952	1,257	180.8
Forest products	359	445	481	418	388	-30	-7.2
Chemicals and related products	5,714	7,815	8,875	8,987	9,818	831	9.2
Energy-related products	2,022	4,368	6,501	7,382	6,712	-669	-9.1
Textiles and apparel	188	246	271	284	254	-30	-10.4
Footwear	1	2	4	2	2	-1	-30.1
Minerals and metals	784	1,140	1,177	1,257	1,330	73	5.8
Machinery	2,144	3,061	3,516	3,794	3,961	166	4.4
Transportation equipment	6,407	7,205	9,140	8,997	8,132	-865	-9.6
Electronic products	3,474	4,325	4,320	4,382	4,079	-304	-6.9
Miscellaneous manufactures	184	218	291	263	227	-36	-13.7
Special provisions	510	768	807	790	773	-17	-2.2
Total	22,135	30,157	37,275	37,252	37,627	375	1.0
U.S. imports for consumption							
Agricultural products	2,632	3,201	4,643	4,924	4,675	-249	-5.1
Forest products	1,300	1,790	1,793	1,802	2,159	357	19.8
Chemicals and related products	1,883	2,705	3,191	3,157	2,514	-643	-20.4
Energy-related products	6,118	7,000	8,918	8,631	4,869	-3,762	-43.6
Textiles and apparel	259	238	117	111	117	6	5.1
Footwear	382	360	253	210	200	-10	-4.8
Minerals and metals	2,458	3,346	5,554	5,603	5,214	-389	-6.9
Machinery	969	1,062	1,231	1,279	1,081	-198	-15.5
Transportation equipment	2,066	2,221	2,949	3,325	3,325	([a])	([b])
Electronic products	321	305	288	323	254	-68	-21.2
Miscellaneous manufactures	387	376	381	418	454	36	8.6
Special provisions	836	798	1,049	1,937	1,999	62	3.2
Total	19,612	23,402	30,368	31,720	26,861	-4,860	-15.3

See footnotes at end of table.

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
Agricultural products	-2,284	-2,637	-2,751	-4,229	-2,723	1,506	35.6
Forest products	-941	-1,345	-1,311	-1,384	-1,771	-387	-28.0
Chemicals and related products	3,831	5,110	5,684	5,830	7,303	1,474	25.3
Energy-related products	-4,096	-2,633	-2,417	-1,250	1,843	3,093	([c])
Textiles and apparel	-71	8	154	173	137	-35	-20.5
Footwear	-381	-358	-249	-207	-198	9	4.5
Minerals and metals	-1,673	-2,206	-4,377	-4,345	-3,883	462	10.6
Machinery	1,174	1,999	2,285	2,516	2,880	365	14.5
Transportation equipment	4,341	4,985	6,190	5,672	4,808	-865	-15.2
Electronic products	3,153	4,020	4,033	4,060	3,824	-236	-5.8
Miscellaneous manufactures	-203	-158	-90	-155	-227	-72	-46.2
Special provisions	-326	-30	-242	-1,147	-1,226	-79	-6.9
Total	2,523	6,755	6,907	5,532	10,767	5,235	94.6

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

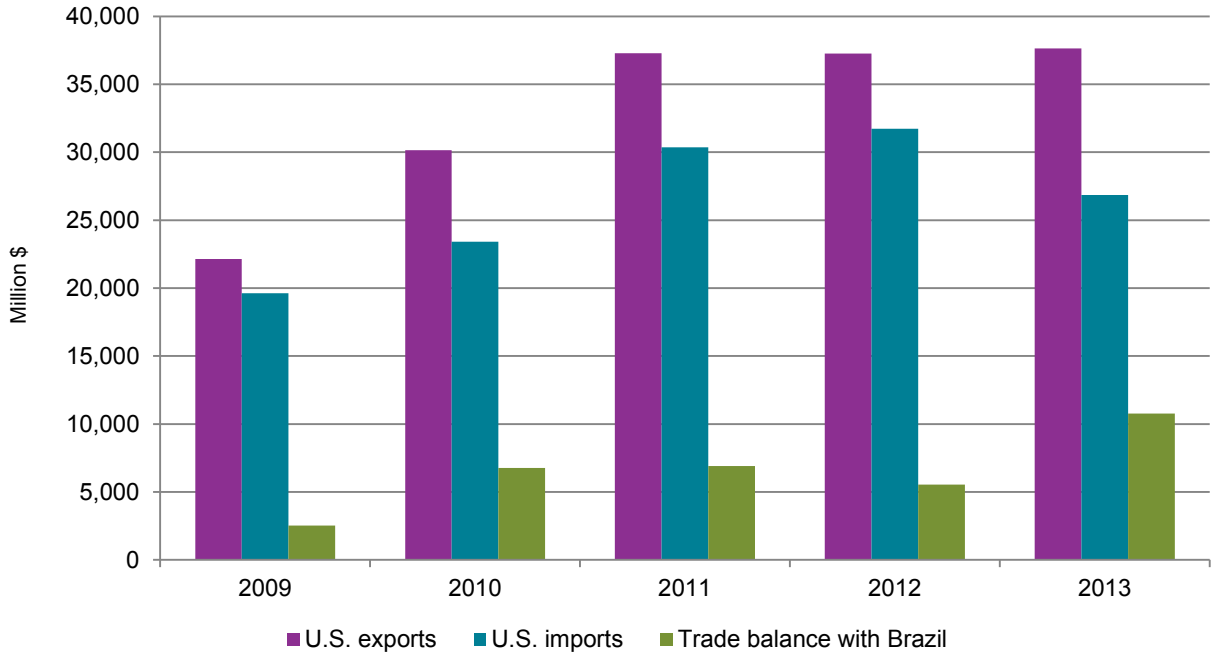
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Less than $500,000.

[b]Less than 0.05 percent.

[c]Not meaningful for purposes of comparison.

Figure BR.1 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, 2009–13



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

Table BR.2 Brazil: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS							
Increases							
Cereals (AG030)	41	128	31	15	1,248	1,232	7,975.2
Decreases							
Petroleum products (EP005)	1,026	2,778	4,315	5,684	4,972	-711	-12.5
All other	21,068	27,250	32,928	31,553	31,408	-145	-0.5
Total	22,135	30,157	37,275	37,252	37,627	375	1.0
U.S. IMPORTS							
Increases							
Aircraft, spacecraft, and related equipment (TE013)	722	697	872	985	1,742	757	76.8
Oilseeds (AG032)	1	[a]	[a]	[a]	184	183	42,525.7
Decreases							
Energy-related products	4,661	5,188	6,498	5,374	2,659	-2,715	-50.5
Crude petroleum (EP004)							
Petroleum products (EP005)	1,150	1,367	1,783	2,633	1,918	-715	-27.2
All other	13,079	16,149	21,214	22,728	20,358	-2,370	-10.4
Total	19,612	23,402	30,368	31,720	26,861	-4,860	-15.3

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the transportation equipment sector.

[a]Less than $500,000.

generally purchases its wheat from neighboring Argentina, shortages in Argentine production drove up its wheat prices. [14] The Argentine government imposed an export ban on wheat, leaving Brazilian consumers to find alternate sources of supply. [15] While U.S. wheat is usually subject to a 10 percent import duty in Brazil, [16] this common external tariff (CET) was waived through the summer of 2013 in order to lower the cost of imported wheat for Brazilian customers. [17] Although Argentina's export restriction on wheat is not permanent, the U.S. wheat industry views it as an opportunity for further export growth to Brazil in the future. [18]

The increase in agricultural exports to Brazil was largely offset by export declines in several other sectors, including exports of energy-related products and transportation equipment, which fell by over $0.5 billion each (although these represented decreases of less than 10 percent from the previous year). In 2013, the quantity of U.S. exports of petroleum products to Brazil increased by 6 percent, from 60.7 million barrels in 2012 to 64.5 million barrels. However, the value of such exports decreased by 13 percent compared with 2012. This rise in volume but decline in value was caused by a drop in world prices of crude petroleum, the feedstock for the production of petroleum products. Average world prices for crude petroleum decreased by about 3 percent to $108 per barrel in 2013. Brazil's 13 refineries have a capacity of 1.9 million barrels per day of crude petroleum and are currently operating at full capacity. The refining industry in Brazil is not able to fully process the nation's production of heavy crudes and, because of this capacity constraint, Brazil must import petroleum products to meet domestic demand. [19] Brazil accounts for only about 5 percent of total U.S. petroleum product exports, with Argentina being Brazil's primary source of these imports.

U.S. Imports

The value of U.S. imports from Brazil fell by $4.9 billion (15 percent) to $26.9 billion in 2013. This decline was driven by a large decrease (almost $3.8 billion) in both the value and the quantity of U.S. imports from Brazil of energy-related products.

U.S. imports of crude petroleum from Brazil decreased by 50 percent in value and by about 33 percent in terms of quantity. Although the United States is Brazil's primary market for crude petroleum, Brazil is not a major supplier to the U.S. market, accounting for less than 2 percent of total U.S. crude petroleum imports. Most of Brazil's crude production is heavy crude, which

[14] Sjerven, "Brazil Emerges as Major Market for U.S. Wheat," August 28, 2013.
[15] In addition to a drought in Argentina, which depressed wheat output during the 2012–13 season, the Argentinian government's June announcement that it would not authorize wheat shipments likely lowered wheat production further, as growers switched to other crops. Southern states in Argentina plant wheat later in July and August, and the knowledge that the export market was limited by the government caused some producers to plant barley in lieu of wheat. Sjerven, "Brazil Emerges as Major Market for U.S. Wheat," August 28, 2013.
[16] The 10 percent duty is applied to all countries outside the Mercado Común del Sur (Common Market of the South) exporting wheat to Brazil. Sjerven, "Brazil Emerges as Major Market for U.S. Wheat," August 28, 2013.
[17] Brazil previously lifted a CET on wheat in 2008. This action, though temporary, also led to a surge of U.S wheat exports to this market. U.S. Wheat Associates, "Wheat Exports Grow As Brazil Waives Tariff," April 11, 2013.
[18] U.S. Wheat Associates, "Wheat Exports Grow As Brazil Waives Tariff," April 11, 2013.
[19] USDOE, EIA, "Country Analysis: Brazil," October 2013.

yields fewer of the higher-valued petroleum products than light crudes do. During 2013, U.S. production of crude petroleum increased, while consumption decreased as a result of economic conditions.

U.S. imports of petroleum products from Brazil dropped by about 28 percent in terms of value and by about 3 percent in terms of quantity. The United States is not a major importer of petroleum products, as the U.S. domestic industry refines lighter crudes to satisfy most U.S. demand for petroleum products. Brazil supplied only about 1 percent of total U.S. imports of petroleum products in 2013.

Though energy-related products drove the overall decrease in U.S. imports from Brazil, U.S. imports of several product categories notably increased. U.S. imports of aircraft, spacecraft, and related equipment from Brazil increased by over $750 billion (77 percent) to about $1.7 billion. This growth reflected U.S. airlines' and business jet operators' investments in new regional jets and single-aisle aircraft produced by Embraer in Brazil. [20] Embraer also increased production of its small Phenom jet at its facility in Melbourne, Florida, which uses many parts produced in Brazil. [21]

Additionally, the United States imported oilseeds valued at $184 million from Brazil in 2013, compared to less than $0.5 million worth in 2012. U.S. imports of soybeans constituted most of this increase. The United States usually imports only a small amount of soybeans and was a large net exporter to the world in 2013. However, in 2012, the Midwestern states experienced a drought, while global demand for soybeans remained high. The United States and Brazil are generally able to satisfy global demand for soybeans, but delays and problems at Brazilian ports limited Brazil's ability to export soybeans, and as a result the United States exported for a longer time period than usual. U.S. soybean processors still needed to maintain their crush rate (the share of soybeans that are crushed) in order to provide soy oil and meal to consumers, and U.S. domestic stocks were getting smaller and more expensive. By the summer of 2013, the price difference between domestically produced soybeans and imported soybeans from Brazil was so low that many U.S. processors chose to import the oilseed from Brazil. [22]

[20] Reuters, "Embraer Seeks to Maintain Profit Margin," February 26, 2014.
[21] Trimble, "Embraer Announces Melbourne Expansion," October 29, 2013; Thalji, "Aircraft Parts Have Port of Tampa Flying High," February 9, 2013.
[22] Government representative, email message to USITC staff, February 28, 2014; industry representative, email message to USITC staff, February 28, 2014.

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China

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $2.5 billion (1 percent) to $323.8 billion
U.S. exports: Increased by $10.8 billion (10 percent) to $114.3 billion
U.S. imports: Increased by $13.3 billion (3 percent) to $438.1 billion

The U.S. trade deficit with China increased by $2.5 billion (1 percent) in 2013, as U.S. exports to China rose by $10.8 billion and U.S. imports rose by $13.3 billion (figure CN.1 and table CN.1). The increasing trade deficit resulted from rising deficits with China in machinery (up by $2.7 billion), electronic products (up by $2.3 billion), chemicals and related products (up by $1.5 billion), and textiles and apparel (up by $1.1 billion). Growth in the U.S. trade deficit with China was limited by a higher U.S. trade surplus in transportation equipment (up by $6.6 billion). Two other U.S. industry sectors that had trade surpluses with China in 2013 were agricultural products and energy-related products. China's real GDP grew by 7.7 percent in both 2012 and 2013. [23]

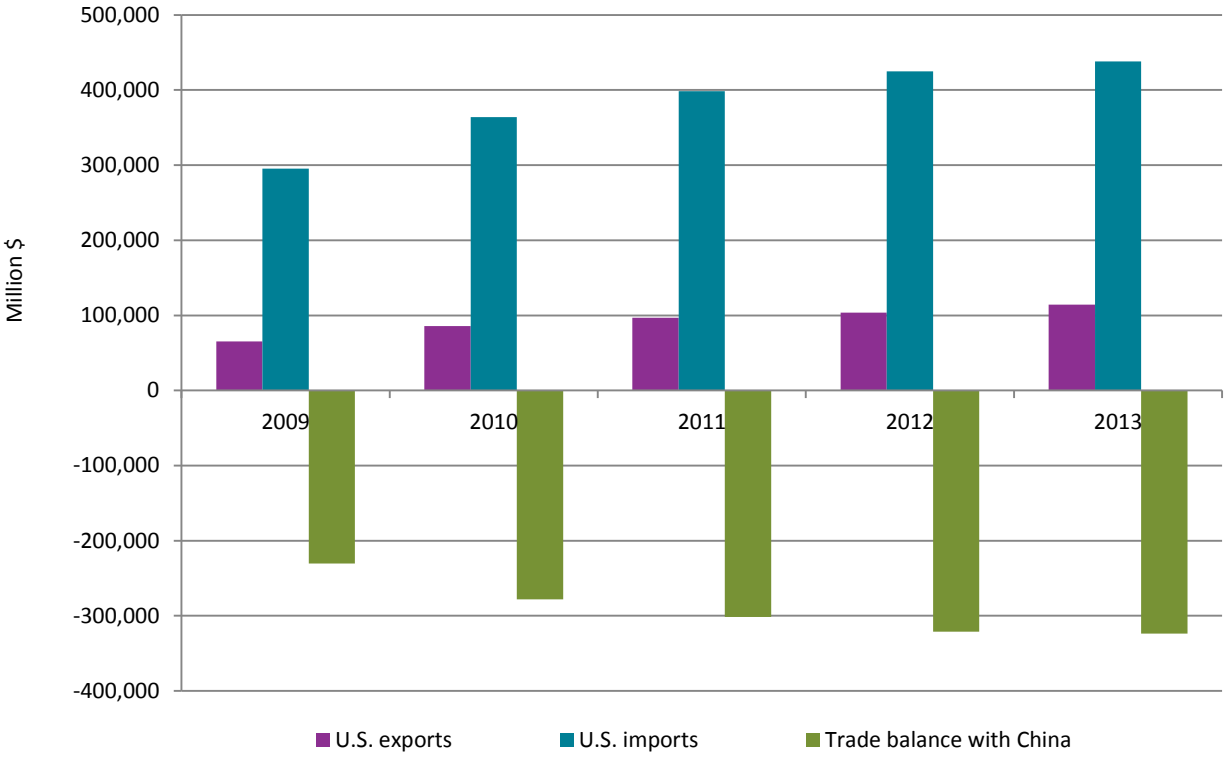
U.S. Exports

U.S. merchandise exports to China increased by $10.8 billion (or 10 percent) to $114.3 billion in 2013. The four sectors that contributed the most to the growth of U.S. merchandise exports to China in 2013 were transportation equipment (up by $7.6 billion), electronic products (up by $1.8 billion), forest products (up by $583 million), and machinery (up by $546 million) (table CN.1).

The transportation equipment sector accounted for the second-largest share (22 percent) of all U.S. merchandise exports to China in 2013, but represented the largest increase in U.S. exports to China (figure CN.2). Sector exports rose because of significant increases in 2013 of U.S. exports of aircraft, spacecraft, and related equipment (up by 53 percent, or $4.2 billion) and motor vehicles (up by 51 percent, or $2.8 billion) (table CN.2).

[23] IMF, *World Economic Outlook*, January 2014.

Figure CN.1 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, 2009–13



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

Table CN.1 China: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
Agricultural products	13,762	18,232	20,089	27,266	27,176	-89	-0.3
Forest products	3,720	5,050	6,722	6,208	6,791	583	9.4
Chemicals and related products	10,643	13,344	15,021	14,205	14,128	-76	-0.5
Energy-related products	708	1,619	2,308	2,785	3,057	272	9.8
Textiles and apparel	846	1,083	1,240	1,243	1,412	169	13.6
Footwear	44	55	56	47	44	-3	-5.7
Minerals and metals	8,703	10,791	13,489	12,099	11,998	-101	-0.8
Machinery	5,424	7,903	8,946	8,539	9,085	546	6.4
Transportation equipment	9,193	12,519	15,827	17,494	25,038	7,544	43.1
Electronic products	11,133	13,493	11,889	12,331	14,123	1,792	14.5
Miscellaneous manufactures	362	354	425	458	508	50	10.9
Special provisions	585	1,301	886	834	954	120	14.3
Total	65,124	85,746	96,898	103,508	114,313	10,806	10.4
U.S. imports for consumption							
Agricultural products	4,850	5,653	6,498	7,043	6,967	-76	-1.1
Forest products	6,281	7,123	7,333	8,080	8,277	197	2.4
Chemicals and related products	17,510	21,319	25,637	27,975	29,445	1,470	5.3
Energy-related products	305	495	620	390	498	108	27.7
Textiles and apparel	35,083	42,095	44,798	44,949	46,239	1,289	2.9
Footwear	13,415	15,727	16,677	17,026	16,876	-151	-0.9
Minerals and metals	19,146	22,208	25,258	26,890	27,616	726	2.7
Machinery	25,995	32,326	36,534	40,730	44,024	3,294	8.1
Transportation equipment	8,553	11,850	15,284	16,866	17,813	947	5.6
Electronic products	110,794	143,716	158,671	171,159	175,212	4,053	2.4
Miscellaneous manufactures	49,892	57,635	57,041	59,339	60,574	1,235	2.1
Special provisions	3,721	3,900	4,116	4,425	4,606	181	4.1
Total	295,545	364,047	398,467	424,874	438,147	13,273	3.1

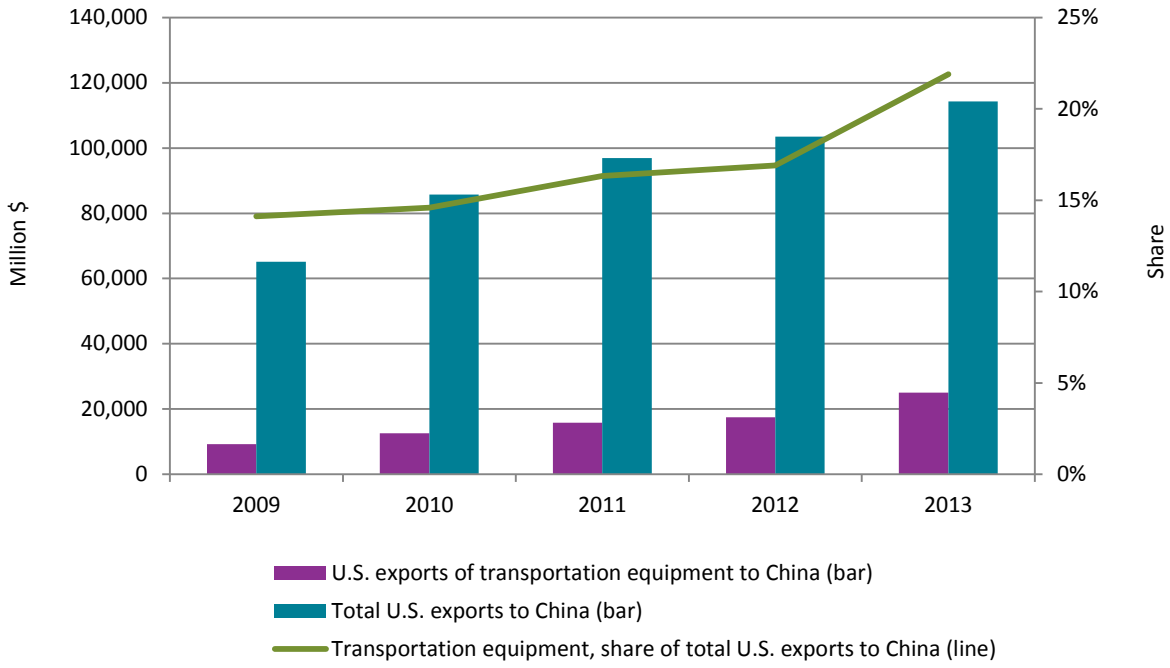
See footnotes at end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
Agricultural products	8,913	12,579	13,591	20,223	20,210	-13	-0.1
Forest products	-2,561	-2,073	-612	-1,872	-1,486	386	20.6
Chemicals and related products	-6,867	-7,975	-10,616	-13,771	-15,316	-1,546	-11.2
Energy-related products	403	1,125	1,689	2,395	2,559	164	6.8
Textiles and apparel	-34,237	-41,013	-43,558	-43,707	-44,827	-1,120	-2.6
Footwear	-13,371	-15,671	-16,622	-16,979	-16,831	148	0.9
Minerals and metals	-10,443	-11,416	-11,769	-14,792	-15,619	-827	-5.6
Machinery	-20,571	-24,423	-27,588	-32,191	-34,939	-2,748	-8.5
Transportation equipment	640	669	543	628	7,225	6,597	1,050.5
Electronic products	-99,661	-130,223	-146,782	-158,828	-161,089	-2,260	-1.4
Miscellaneous manufactures	-49,530	-57,281	-56,616	-58,881	-60,067	-1,185	-2.0
Special provisions	-3,136	-2,599	-3,230	-3,592	-3,653	-61	-1.7
Total	-230,421	-278,301	-301,569	-321,367	-323,834	-2,467	-0.8

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

Figure CN.2 China: Total U.S. exports, U.S. exports of transportation equipment, and share of total U.S. exports of transportation equipment



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

Table CN.2 China: Leading changes in U.S. exports and imports, 2009–13

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change 2012–13
U.S. EXPORTS							
Increases							
Transportation equipment Aircraft, spacecraft, and related equipment (TE013)	5,308	5,712	6,330	7,881	12,076	4,195	53.2
Motor vehicles (TE009)	951	3,105	5,008	5,479	8,285	2,806	51.2
Agricultural products Cereals (AG030)	142	337	1,013	1,535	2,676	1,141	74.3
Animal feeds (AG013)	286	883	731	1,091	2,040	949	86.9
Semiconductors and integrated circuits (EL015)	4,164	5,198	3,486	2,659	3,561	902	33.9
Decreases							
Agricultural products Oilseeds (AG032)	9,222	10,824	10,454	14,973	13,372	-1,601	-10.7
Cotton, not carded or combed (AG049)	824	2,064	2,562	3,422	2,181	-1,240	-36.3
All other	44,228	57,622	67,313	66,467	70,121	3,654	5.5
Total	65,124	85,746	96,898	103,508	114,313	10,806	10.4
Increases							
Telecommunications equipment (EL002)	22,615	30,637	37,254	49,102	53,983	4,881	9.9
Household appliances, including commercial applications (MT004)	6,858	8,331	8,778	9,671	11,090	1,419	14.7
Decreases							
Electronic products Consumer electronics (EL003)	20,554	21,734	17,892	18,037	16,942	-1,095	-6.1
Computers, peripherals, and parts (EL017)	50,873	68,148	75,392	76,291	75,645	-646	-0.8
Fabricated structurals (MM027)	428	382	477	615	211	-404	-65.6
All other	194,217	234,816	258,675	271,159	280,276	9,117	3.4
Total	295,545	364,047	398,467	424,874	438,147	13,273	3.1

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the transportation equipment sector.

In 2013, China was the largest single-country market for U.S. exports of aircraft, spacecraft, and related equipment, accounting for almost 12 percent of such exports. In 2013, China was a significant market for commercial aircraft. [24] The growth in U.S. exports of these products in 2013 was most likely due to deliveries of commercial aircraft and spare parts for Boeing aircraft. In 2013, Boeing delivered 143 planes to China, and expects to deliver a similar number there in 2014. [25]

Industry foresees significant potential for the business jet market. Although it felt that Chinese airspace regulations prevented the sharp rise in deliveries originally anticipated for 2013, the U.S. industry expects Chinese aviation and other regulatory authorities to expand Chinese airspace to accommodate more business jets in 2014. [26]

Transportation equipment exports to China also rose because of an increase in U.S. exports of motor vehicles to China in 2013 (table CN.2). Comprising passenger automobiles, tractors, trucks, and motorcycles, these exports rose from 167,251 units in 2012 to 247,976 in 2013, or from $5.5 billion to $8.3 billion. [27] In addition, U.S. exports of certain motor-vehicle parts to China rose in value by $623 million to almost $1.4 billion in 2013.

The increase in U.S. motor vehicle exports was driven primarily by exports of passenger automobiles. Since 2010, China has become the largest export market for U.S. passenger automobiles. Although the market is largely served by Chinese production, [28] relatively competitive cost structures have enabled U.S.- and foreign-owned automobile manufacturers to export from their U.S. manufacturing operations. [29]

The second-largest sectoral increase in exports to China was in electronic products. The increase occurred chiefly in exports of semiconductors and integrated circuits (up $902 million to $3.6 billion) that are incorporated into electronic products assembled or manufactured in China. U.S. exports of measuring, testing, and controlling instruments (up $516 million to $3.8 billion)—principally instruments and apparatus for measuring or checking electrical quantities specially designed for telecommunications—also contributed to the rise in these sectoral exports.

U.S. exports of agricultural products, which experienced the largest sector increase from 2011 to 2012, showed a minor decrease in 2013. Nonetheless, agricultural products remained the largest U.S. export sector to China in 2013, valued at $27.2 billion and accounting for almost 24 percent of U.S. exports to China. In 2013, U.S. exports to China of cereals rose $1.1 billion, while exports of animal feeds rose $949 million. Such increases, however, were offset by

[24] Boeing Co., "Long-Term Market, Current Market Outlook," n.d. (accessed March 24, 2014).
[25] Bloomberg News, "Boeing Expects to Deliver 140 Planes," January 21, 2014.
[26] Fang and Miller, "Small Jet Makers See Big Chance," December 26, 2013.
[27] USITC DataWeb/USDOC (April 17, 2014).
[28] Based on new passenger-car registrations. EIU, "Industry Report: Automotive, China," January 2014, 2.
[29] Arnsdorf, "U.S. Car Revival Boosts Shipping," December 13, 2013. A certain amount of U.S. exports are likely to be gray market exports (i.e., exports and sales outside of automobile manufacturers' normal sales channels) of luxury automobiles. Barris, "$50,000 in the US; $149,000 in China," *ChinaDaily USA,* December 6, 2013.

declines in exports of oilseeds (down $1.6 billion) and cotton, not carded or combed (down $1.2 billion), as shown in table CN.2.

U.S. Imports

In 2013, U.S. imports of merchandise from China increased by $13.2 billion, or 3 percent, over 2012. The increase in U.S. imports from China was principally driven by the electronic products sector, although the machinery and chemicals and related products sectors also registered high import growth (table CN.1).

The electronic products sector accounted for 40 percent of total U.S. imports from China in 2013. Imports in this sector rose by $4.1 billion (2 percent), a much slower rate of increase than during 2011–12 (8 percent). Computers, peripherals, and parts accounted for 43 percent of imports in this sector, followed by telecommunications equipment (31 percent), consumer electronics (10 percent), and other industries, such as medical goods and semiconductors and integrated circuits (16 percent).

The largest increase in imports of electronic products was in the telecommunications equipment group. The majority of these imports were cellphones manufactured in China, U.S. imports of which rose by $3.8 billion to reach $36.6 billion in 2013 (table CN.1). [30] In 2013, China remained the largest supplier of U.S. imports in the telecommunications equipment industry, accounting for almost 61 percent of total U.S. imports from all sources in this industry.

The large increase in imports of telecommunications equipment from China was partially offset by a decline in imports of computers, peripherals, and parts, which fell by $646 million (almost 1 percent) to $75.6 billion in 2013. The decline was due to falling demand from consumers and corporations for personal computers and servers, as consumers shifted towards mobile devices. [31] There was also a decline in imports of consumer electronics [32] from China, which fell by $1.1 billion (6 percent) to $16.9 billion in 2013, as U.S. consumers reduced spending on these consumer electronics, particularly television cameras and camcorders, and radios. [33]

Machinery sector imports from China rose in 2013, principally due to increased imports of household appliances, up $1.4 billion (15 percent) to $11.1 billion in 2013. Within the group of household appliances, imports of washing machines from China rose by $553 million. [34] One possible reason for the increase in U.S. imports of washing machines was a shift in production of these goods to China following issuance of antidumping duty orders on imports of large residential washers from the Republic of Korea (Korea) and Mexico and a countervailing duty

[30] NPD Group, "Apple Leads US Consumer Smartphone Sales," February 20, 2014.
[31] EIU, "Telecoms and Technology Report," May 28, 2013, 1.
[32] The category of consumer electronics EL003 in Table CN.2 includes radios, amplifiers, turntables, television camcorders, and televisions, but not electronic products such as computers, tablets, and cellular telephones.
[33] CEA, "U.S. Consumer Electronics Sales & Forecasts 2009–2014," January 2014, 16.
[34] NPD Group, "The NPD Group Reports Consumers Spent $46B," February 14, 2014.

order on large residential washers from Korea, issued in February 2013. [35] Imports from China of small household appliances, such as food processors and vacuum cleaners, also rose in 2013. Other groups in the machinery sector that had import increases from China in 2013 were the electrical transformers, static converters, and inverters category, as well as nonautomotive insulated electrical wire and related equipment.

The fourth-largest increase in sector imports from China occurred in chemicals and related products. Imports in this sector were up by almost $1.5 billion (5 percent) in 2013. Imports of miscellaneous plastic products, tires and tubes, and organic chemicals registered significant increases in 2013.

The United States imposed trade remedies in 2012 and 2013 on two types of renewable energy products from China. U.S. imports of utility-scale wind towers for wind turbines from China declined by $404 million in 2013. This followed the imposition of U.S. antidumping and countervailing duty orders in February 2013. [36] The U.S. Department of Commerce also issued antidumping and countervailing duty orders in December 2012 on certain crystalline silicon photovoltaic solar panels from China. [37] The Harmonized Tariff Schedule of the United States (HTS) categorizes this type of solar photovoltaic product under the semiconductors and integrated circuits subheading. The trade figures for this subheading show a decline of $342 million in U.S. imports from China in 2013.

[35] Wolf, "ITC Imposes Duties on Imported Washers," January 23, 2013. See also USITC, *Certain Large Residential Washers from Korea and Mexico, Investigation Nos. 701-TA-488 and 731-TA-1199-1200 (Final)*, Publication 4378, February 2013.
[36] 78 Fed. Reg. 11146 (February 15, 2013) and 78 Fed. Reg. 11152 (February 15, 2013). See also USITC, *Utility Scale Wind Towers from China and Vietnam: Investigation Nos. 701-TA-486 and 731-TA-1195-1196 (Final)*, Publication 4372, February 2013.
[37] 77 Fed. Reg. 73017 (December 7, 2012) and 77 Fed. Reg. 73018 (December 7, 2012).

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Yan, Fang, and Matthew Miller. “Small Jet Makers See Big Chance As China Prepares to Open Skies.” Reuters, December 26, 2013. http://www.reuters.com/article/2013/12/26/aviation-china-privatejet-idUSL3N0JZ28C20131226 (accessed March 10, 2014).

Vietnam

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $3.9 billion (25 percent) to $19.7 billion
U.S. exports: Increased by $400 million (8 percent) to $4.7 billion
U.S. imports: Increased by $4.3 billion (21 percent) to $24.4 billion

The U.S. trade deficit with Vietnam increased by $3.9 billion in 2013, as a $4.3 billion increase in U.S. imports was only partially offset by a $400 million increase in U.S. exports (figure VN.1 and table VN.1). This shift principally reflects Vietnam's increasing ability to compete with other U.S. import sources. During 2013, the Vietnamese economy expanded by 5 percent, and exports and foreign direct investment were major factors in this growth. Exports grew by 15 percent, while Vietnam's exports-to-GDP ratio rose to 75 percent in 2013 from 56 percent in 2009. Disbursed foreign direct investment increased 10 percent, and pledged foreign direct investment rose 55 percent.

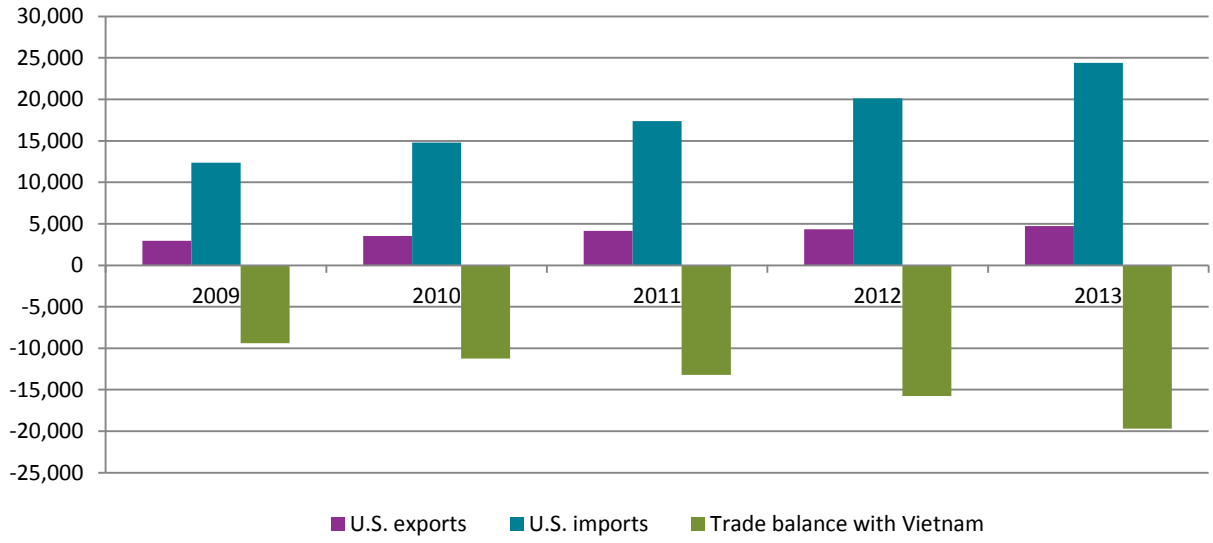
U.S. Exports

U.S. exports to Vietnam increased by $400 million to $4.7 billion in 2013 (up 8 percent from 2012). U.S. exports to Vietnam grew in seven of the sectors shown in table VN.1, with one sector, agricultural products, accounting for most of the overall increase in exports (table VN.2).

U.S. exports of agricultural products increased by $500 million, due to a combination of higher domestic Vietnamese consumption of animal feed and an increase in Vietnamese imports of edible nuts. U.S. exports of animal feed to Vietnam rose by $171 million (74 percent) in 2013. Changes in Vietnamese eating habits, coinciding with recent economic growth, have spurred growth in the domestic livestock sector. Domestic and foreign investment have increased Vietnamese capacity for animal feed production, [38] but this growth was insufficient to meet the rapid rise in feed demand in 2013. [39] As a result, Vietnam increased its imports of U.S. animal feed, including corn, wheat, and soybeans.

[38] USDA, FAS, "Vietnam: Oilseeds and Products Annual, 2013," April 5, 2012, 17–18.
[39] USDA, FAS, "Vietnam: Grain and Feed Annual, 2013," April 3, 2013, 2.

Figure VN.1 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance with Vietnam, 2009–13



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

Table VN.1 Vietnam: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
Agricultural products	968	1,390	1,756	1,746	2,248	502	28.8
Forest products	166	227	236	263	291	27	10.4
Chemicals and related products	356	351	494	483	557	73	15.2
Energy-related products	7	13	12	11	15	4	31.1
Textiles and apparel	37	41	43	67	62	-5	-6.9
Footwear	25	47	54	39	60	21	54.3
Minerals and metals	293	348	283	292	316	24	8.3
Machinery	199	240	312	275	268	-7	-2.5
Transportation equipment	632	490	501	312	215	-97	-31.1
Electronic products	221	313	404	800	626	-174	-21.8
Miscellaneous manufactures	21	18	22	22	19	-3	-13.0
Special provisions	42	62	35	34	37	2	6.2
Total	2,967	3,540	4,153	4,345	4,714	369	8.5
U.S. imports for consumption							
Agricultural products	1,377	1,779	2,270	2,418	2,760	342	14.2
Forest products	125	163	162	191	228	37	19.3
Chemicals and related products	371	437	500	523	524	2	0.3
Energy-related products	596	334	341	305	471	166	54.6
Textiles and apparel	5,290	6,177	7,081	7,499	8,564	1,065	14.2
Footwear	1,323	1,616	2,019	2,388	2,898	510	21.4
Minerals and metals	326	396	634	850	799	-51	-6.0
Machinery	130	213	316	496	506	10	2.0
Transportation equipment	175	259	347	610	699	90	14.7
Electronic products	879	1,102	1,219	1,666	3,191	1,525	91.5
Miscellaneous manufactures	1,694	2,251	2,402	3,083	3,621	539	17.5
Special provisions	79	57	73	76	132	57	74.5
Total	12,367	14,784	17,364	20,105	24,397	4,292	21.3

See footnotes at end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
Agricultural products	-409	-389	-514	-672	-512	160	23.8
Forest products	41	64	75	72	62	-9	-13.2
Chemicals and related products	-15	-86	-5	-40	32	72	[a]
Energy-related products	-589	-321	-330	-294	-456	-163	-55.5
Textiles and apparel	-5,254	-6,136	-7,038	-7,432	-8,502	-1,070	-14.4
Footwear	-1,298	-1,569	-1,965	-2,349	-2,838	-489	-20.8
Minerals and metals	-33	-48	-351	-558	-483	75	13.5
Machinery	69	26	-4	-221	-238	-17	-7.6
Transportation equipment	457	231	154	-298	-484	-187	-62.7
Electronic products	-659	-790	-815	-866	-2,565	-1,699	-196.2
Miscellaneous manufactures	-1,674	-2,234	-2,381	-3,061	-3,602	-541	-17.7
Special provisions	-37	5	-38	-41	-96	-54	-131.3
Total	-9,400	-11,245	-13,211	-15,760	-19,683	-3,923	-24.9

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. Sectors are ordered by the level of processing of the products classified therein.

[a]Not meaningful for purposes of comparison.

In 2013, U.S. exports to Vietnam of edible nuts rose by $173 million (106 percent). Much of this increase was in peanuts, with exports increasing by $97 million (an over 80-fold rise). In part, this reflects global trends in the peanut market: the U.S. had its largest crop ever, [40] while two other leading exporters, India and Argentina, had smaller crops than in 2012. [41] China also supplied fewer peanuts to the global market in 2013, owing to increased domestic demand for peanuts (used to produce peanut oil). [42] In fact, U.S. exports to Vietnam included purchases in Vietnam to supply the Chinese market. [43] This practice was reportedly halted in April by Chinese authorities, [44] but likely contributed to the increase in U.S. exports to Vietnam for 2013.

U.S. exports of cotton, not carded or combed, increased $153 million (62 percent). During 2013, Vietnamese imports of cotton increased as demand rose, driven by an increase in yarn production capacity. India, typically a major cotton exporter, produced less cotton than expected in 2012, opening opportunities for U.S. cotton exporters in Vietnam. Yarn produced in Vietnam is both exported directly and consumed domestically by the export-oriented textile and apparel industries. [45]

U.S. Imports

U.S. imports from Vietnam rose by $4.29 billion (21 percent) to $24.4 billion in 2013. Three sectors—electronic products, textiles and apparel, and footwear—accounted for $2.6 billion of this increase. A common set of competitive factors, including low labor costs, a large labor pool, and proximity to existing supply chains, enabled Vietnam to increase its share of U.S. imports compared to other sources. [46] Specifically, multiyear increases in labor costs in China, which is the largest U.S. import source in these sectors, provided an incentive for foreign investors to also locate some production facilities in other nearby countries. [47] Vietnam was a primary beneficiary of this trend. [48]

U.S. imports of electronic products from Vietnam increased by $1.53 billion (92 percent) to $3.2 billion, while U.S. imports of electronic products from all sources rose by 0.8 percent. Much of the increase in imports from Vietnam resulted from investment in production facilities

[40] U.S. peanut exports to all countries increased by 109 percent in 2013.
[41] Floyd, "Chinese Market Softer for U.S. Grown Peanuts," June 5, 2013; Archer, "U.S. Export Market Developments," July 27, 2013.
[42] Archer, "U.S. Export Market Developments," July 27, 2013.
[43] Floyd, "Chinese Market Softer for U.S. Grown Peanuts," June 5, 2013.
[44] Archer, "U.S. Export Market Developments," July 27, 2013.
[45] Cleveland, "Strong U.S. Exports Bolster Cotton Market," February 7, 2014.
[46] *Taipei Times*, "Samsung Moves Factories from China to Vietnam," December 13, 2013; Leong, "Vietnam's High-Tech Boom," February 24, 2014; Textile World, "Vietnam: A Small Tiger Is Growing Up," September/October 2012; Kenneally, "Vietnam Continues to Dominate TPP Debate," October 8, 2013.
[47] Bloomberg, "China Wages Seen Jumping in 2014," January 6, 2014. Accenture, "Wage Increases in China," 2011.
[48] Bloomberg, "China Wages Seen Jumping in 2014," January 6, 2014.

Table VN.2 Vietnam: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS							
Increases							
Agricultural products	34	43	88	163	336	173	105.6
Edible nuts (AG020)							
Animal feeds (AG013)	178	291	217	231	402	171	73.9
Cotton, not carded or combed (AG049)	171	253	369	248	401	153	61.8
All other	2,583	2,954	3,479	3,703	3,575	-128	-3.5
Total	2,967	3,540	4,153	4,345	4,714	369	8.5
U.S. IMPORTS:							
Increases							
Apparel (TX005)	5,121	5,910	6,726	7,183	8,226	1,043	14.5
Computers, peripherals, and parts (EL017)	328	514	535	808	1,821	1,013	125.3
Footwear (FW001)	1,323	1,616	2,019	2,388	2,898	510	21.4
All other	5,595	6,745	8,084	9,726	11,452	1,726	17.7
Total	12,367	14,784	17,364	20,105	24,397	4,292	21.3

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

by multinational companies. The importance of foreign direct investment is demonstrated in mobile phones, where Samsung accounted for 98 percent of Vietnam's 2013 exports. [49]

U.S. imports of textiles and apparel from all sources increased by 3 percent in 2013. U.S. imports of textiles and apparel from Vietnam, however, increased by 14 percent ($1.1 billion) to $8.6 billion, and Vietnam's share of total U.S. imports in this sector increased from 6.6 percent to 7.3 percent. Vietnam's textile and apparel industry benefits from low labor costs relative to other exporting countries. [50]

U.S. imports of footwear from Vietnam increased by $510 million (21 percent) to $2.9 billion. U.S. imports of footwear from all sources increased 4 percent, while Vietnam's share of U.S. imports increased from 10 percent to 12 percent. As with textiles and apparel, the Vietnamese footwear industry benefits from comparatively low labor costs. [51] Vietnamese operations associated with foreign direct investment accounted for an estimated 76 percent of Vietnam's total exports in the footwear sector. [52]

[49] *Taipei Times*, "Samsung Moves Factories from China to Vietnam," December 13, 2013.
[50] AmCham Vietnam, "Vietnam-U.S. Trade Status 2013," December 1, 2013.
[51] Xinhua, "Vietnam's Footwear Export Hits Record High in 2013," January 7, 2014.
[52] *Viet Nam News*, "Footwear Industry Heads for Record Year," November 7, 2013.

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Organization of Petroleum Exporting Countries (OPEC)

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Change in 2013 from 2012:

U.S. trade deficit: Decreased by $31.4 billion (33 percent) to $63.4 billion
U.S. exports: Increased by $1.9 billion (3 percent) to $77.8 billion
U.S. imports: Decreased by $29.5 billion (17 percent) to $141.2 billion

The OPEC [53] countries collectively accounted for 7 percent of the total U.S. trade deficit in 2013 (table OP.1). Energy-related products accounted for 85 percent of U.S. imports from OPEC member countries in 2013. Crude petroleum imports from OPEC countries declined from $88.3 billion in 2012 to $65.2 billion in 2013, due principally to flat U.S. consumption and increasing U.S. production.

OPEC member countries coordinate and unify their petroleum policies with a view to ensuring the stability of prices in international oil markets. [54] OPEC collectively accounted for 73 percent of the world's reserves of crude petroleum and 41 percent of the world's total production in 2013. [55] Saudi Arabia supplied 31 percent of OPEC's crude production in 2013, followed by Venezuela (8 percent) and Nigeria (6 percent).

[53] There are currently 12 OPEC member countries: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.
OPEC was founded in September 1930 by five countries: Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela. They were later joined by Qatar (1961), Indonesia (1962), Libya (1962), the United Arab Emirates (1967), Algeria (1969), Nigeria (1971), Ecuador (1973), Gabon (1975) and Angola (2007). From December 1992 until October 2007, Ecuador suspended its membership. Gabon terminated its membership in 1995. Indonesia suspended its membership effective January 2009.
[54] The stated mission of OPEC is to "coordinate and unify the petroleum policies of its Member Countries and ensure the stabilization of oil markets in order to secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers and a fair return on capital for those investing in the petroleum industry." http://www.opec.org/opec_web/en/about_us/23.htm (accessed March 5, 2014).
[55] *Oil and Gas Journal,* "Forecast and Review," January 6, 2014.

Table OP.1 U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by major industry/commodity sectors, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
Agricultural products	4,301	5,092	6,908	6,690	6,947	257	3.8
Forest products	685	883	1,009	918	940	22	2.4
Chemicals and related products	4,130	5,175	6,272	6,685	6,720	35	0.5
Energy-related products	2,652	3,585	4,500	7,665	9,273	1,608	21.0
Textiles and apparel	331	377	450	483	469	-14	-3.0
Footwear	32	37	53	50	41	-9	-18.0
Minerals and metals	2,222	2,172	3,077	3,670	4,452	782	21.3
Machinery	6,487	7,055	7,224	8,869	8,786	-84	-0.9
Transportation equipment	18,164	17,730	20,677	29,266	27,735	-1,531	-5.2
Electronic products	5,460	5,269	6,103	7,614	7,750	136	1.8
Miscellaneous manufactures	1,237	1,394	1,855	2,416	3,030	613	25.4
Special provisions	1,049	1,282	1,332	1,528	1,657	129	8.4
Total	46,750	50,050	59,461	75,855	77,801	1,946	2.6
U.S. imports for consumption							
Agricultural products	1,679	1,692	2,031	1,972	2,074	102	5.2
Forest products	68	80	77	78	76	-2	-2.7
Chemicals and related products	8,071	12,136	15,120	16,087	15,558	-530	-3.3
Energy-related products	98,097	130,793	163,728	148,520	119,390	-29,131	-19.6
Textiles and apparel	173	220	147	152	146	-6	-3.7
Footwear	1	1	1	(a)	(a)	(a)	-23.7
Minerals and metals	707	1,261	2,286	2,461	2,131	-330	-13.4
Machinery	73	95	120	146	146	(a)	0.1
Transportation equipment	25	35	48	60	182	122	202.6
Electronic products	25	27	40	45	73	29	63.5
Miscellaneous manufactures	40	35	40	57	58	1	2.4
Special provisions	924	761	1,093	1,177	1,412	235	20.0
Total	109,883	147,136	184,730	170,756	141,246	-29,510	-17.3

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
Agricultural products	2,623	3,400	4,878	4,718	4,874	155	3.3
Forest products	617	803	933	840	864	24	2.9
Chemicals and related products	-3,941	-6,960	-8,848	-9,403	-8,838	565	6.0
Energy-related products	-95,445	-127,208	-159,228	-140,855	-110,117	30,738	21.8
Textiles and apparel	157	156	303	331	323	-9	-2.6
Footwear	32	36	52	49	40	-9	-18.0
Minerals and metals	1,515	911	792	1,209	2,321	1,112	92.0
Machinery	6,414	6,959	7,104	8,724	8,640	-84	-1.0
Transportation equipment	18,139	17,695	20,629	29,206	27,553	-1,652	-5.7
Electronic products	5,435	5,242	6,063	7,569	7,677	108	1.4
Miscellaneous manufactures	1,198	1,359	1,815	2,360	2,972	612	25.9
Special provisions	125	520	239	351	245	-106	-30.2
Total	-63,133	-97,086	-125,268	-94,901	-63,445	31,455	33.1

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. Sectors are ordered by the level of processing of the products classified within a sector.

[a]Less than $500,000.

U.S. Exports

In 2013, U.S. exports of goods to the OPEC member countries accounted for only 6 percent of total U.S. exports. The primary products exported included transportation equipment, energy-related products, and certain drilling equipment.

There was a major shift in U.S. exports of energy-related products to OPEC countries, which rose by 21 percent in 2013 (table OP.2). The increase is accounted for by rising prices of petroleum products, primarily jet fuels to Nigeria and distillate and residual fuel oils to Ecuador, Venezuela, and Nigeria. Although Nigeria has four refineries, their capacity utilization rates hover around 16–18 percent due to operational failures, fires, and sabotage (mainly of pipelines leading from the wellhead to the refineries). As a result, the four refineries do not meet domestic demand. [56] Ecuador is a net importer of petroleum products, and its three refineries, which are small and operate well below capacity, likewise do not meet domestic demand. [57] Most of Venezuela's crude petroleum is refined outside of the country; 40 percent is refined along the U.S. Gulf Coast and is dedicated to the U.S. market. During 2013, Venezuela was unable to meet its domestic demand for distillate and residual oils because its domestic refineries were operating at about 50 percent capacity, and much of that capacity was slated for export to neighboring countries under long-term contracts. As a result, Venezuela imported distillate and residual fuel oils from U.S. refineries. [58]

Transportation equipment was the largest U.S. export to the OPEC countries in 2013, accounting for 36 percent of the total. U.S. exports of ships, tugs, and pleasure boats increased by nearly 183 percent to $113 million in 2013, while exports of construction and mining equipment more than doubled, reaching $14.2 million. The United Arab Emirates is a major market for U.S. exports of these products and acts as a regional entry point for U.S. firms seeking access to the Middle East's markets. In addition, the country is rapidly adding to its stock of civil aircraft and undertaking significant infrastructure projects, which boosted import demand for construction equipment in 2013. [59]

[56] USDOE, EIA, "Country Analysis Brief: Nigeria," December 30, 2013.
[57] USDOE, EIA, "Country Analysis: Ecuador," January 16, 2014; *Oil and Gas Journal,* "Western Europe Leads Global Refining Contraction," December 2, 2013.
[58] USDOE, EIA, "Country Analysis Brief: Venezuela," October 3, 2012; *Oil and Gas Journal,* "Western Europe Leads Global Refining Contraction," December 2, 2013.
[59] USDOC, "Export Countries of Interest for North Carolina" (accessed March 12, 2014).

Table OP.2 OPEC: Leading changes in U.S. exports and imports, 2009–13

Item	Million $					Absolute change, 2012–13	Percent change, 2012–13
	2009	2010	2011	2012	2013		
U.S. EXPORTS							
Increases							
Petroleum products (EP005)	2,386	3,233	4,228	7,273	8,738	1,465	20.1
Precious metals and non-numismatic coins (MM020)	30	163	548	880	1,555	675	76.7
Navigational instruments and remote control apparatus (EL005)	104	105	144	448	1,060	613	136.9
Aircraft, spacecraft, and related equipment (TE013)	6,495	5,193	6,681	11,198	11,374	176	1.6
Decreases							
Electric motors, generators, and related equipment (MT023)	812	1,561	1,069	1,614	1,034	-580	-35.9
Transportation equipment	4,649	6,543	7,625	10,740	10,246	-494	-4.6
Motor vehicles (TE009)							
Construction and mining equipment (TE004)	2,730	2,131	2,231	2,544	2,124	-420	-16.5
Aircraft engines and gas turbines (TE001)	2,065	1,652	1,634	1,700	1,377	-323	-19.0
Certain motor-vehicle parts (TE010)	868	855	988	1,170	876	-293	-25.1
All other	26,611	28,614	34,314	38,289	39,416	1,127	2.9
Total	46,750	50,050	59,461	75,855	77,801	1,946	2.6
U.S. IMPORTS							
Increases							
Chemicals and related products	1,816	2,457	3,546	3,889	4,040	151	3.9
Fertilizers (CH010)							
Certain organic chemicals (CH006)	295	546	787	739	784	45	6.0
Precious metals and non-numismatic coins (MM020)	33	87	56	492	627	134	27.3
Coal, coke, and related chemical products (EP003)	1,598	2,034	3,007	2,869	2,973	103	3.6
Shellfish (AG009)	388	462	583	604	706	102	16.9
Decreases							
Energy-related product	65,832	86,188	103,226	88,291	65,195	-23,095	-26.2
Crude petroleum (EP004)							
Petroleum products (EP005)	22,937	32,655	44,961	44,100	38,777	-5,323	-12.1
Natural gas and components (EP006)	7,730	9,916	12,533	13,261	12,445	-816	-6.2
Major primary olefins (CH001)	4,266	6,727	7,509	7,541	6,952	-589	-7.8
All other	4,988	6,063	8,520	8,971	8,749	-222	-2.5
Total	109,883	147,136	184,730	170,756	141,246	-29,510	-17.3

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the transportation equipment sector.

U.S. Imports

U.S. imports of energy-related products from OPEC countries decreased by 20 percent to $119.4 billion between 2012 and 2013, with Saudi Arabia, Venezuela, and Nigeria being the principal OPEC sources. Energy-related products accounted for nearly the entire shift in U.S. imports from OPEC countries in 2013 and accounted for 85 percent of total U.S. imports from these countries. Crude petroleum was the largest import category in 2013, accounting for about 46 percent of the total value of U.S. imports from OPEC, followed by petroleum products (27 percent). The United States imports very little natural gas and coal from OPEC countries.

The quantity of U.S. imports of crude petroleum from OPEC declined by 14 percent to 1.4 billion barrels in 2013. The drop in imports of crude resulted from increased U.S. production, stagnant U.S. demand, and supply disruptions in both Venezuela and Nigeria.

U.S. imports of crude petroleum from Saudi Arabia declined by 3 percent to 484.8 million barrels in 2013, while imports from Venezuela declined by 17 percent to 291.0 million barrels. While Venezuela has been decreasing its exports to the United States in recent years in an effort to diversify its markets, the United States remains Venezuela's primary market. Venezuela exports heavy crude, which can be refined into petroleum products in refineries on the U.S. Gulf Coast that were specifically designed for this type of crude. Other markets for Venezuela's crude include China, the Caribbean, and the European Union.

The quantity and the share of U.S. imports from Nigeria have fallen substantially during the past few years. Such imports declined by 37 percent in 2013 to a new low of 102.6 million barrels. Some of this decline can be attributed to the growth in U.S. crude petroleum production from the Bakken and Eagle Ford formations, both of which are of similar quality and as a result partially displaced Nigeria's crude. [60] Also, Nigerian crude as a share of U.S. imports has fallen as a result of the idling of two U.S. East Coast refineries in late 2011 and early 2012 that were significant purchasers of Nigerian crude; the two refineries reopened in 2013, but are primarily refining domestically produced crude. [61]

U.S. imports of petroleum products from OPEC also declined in 2013, by $5.3 billion (12 percent) to $38.8 billion. In terms of quantity, these imports declined from 87.8 million barrels to 79.3 million barrels (or by 10 percent). The decline is largely attributed to lower U.S. demand for these products. Also, U.S. refineries, which generally satisfy over 90 percent of domestic consumption, increased their capacity utilization rates in 2013 and thereby domestic production, [62] further reducing demand for imports. OPEC accounted for 10 percent of total U.S. imports of petroleum products in 2013, with Algeria (4 percent), Venezuela (2 percent), and Saudi Arabia (less than 1 percent) being the leading OPEC sources.

[60] The Bakken and Eagle Ford formations are "shale plays." These are areas with "'fine grained, organic rich, sedimentary rocks. The shales are both the source of and the reservoir for natural gas' and oil." When the rock is fractured or "fracked," the trapped natural gas and oil are released and can be extracted from the ground. The Bakken formation is in North Dakota; the Eagle Ford formation is in Texas. USDOE, EIA, *Review of Emerging Resources*, July 2011, vii.

[61] USDOE, EIA, "U.S. Imports of Nigerian Crude Oil," April 10, 2012.

[62] USDOE, EIA, "Short-Term Energy Outlook," February 11, 2014.

The primary petroleum products imported from Algeria include distillate and residual fuel oils shipped to the U.S. northeastern states. Algeria's three coastal refineries produce a surplus of petroleum products, and the United States is the market for about 50 percent of this surplus. [63] U.S. imports of petroleum products from Venezuela continued to decline from the low levels witnessed in 2012. The drop in 2012 was due to the massive gas explosion that occurred at the Paraguaná refinery in August of that year, which resulted in its total closure; the refinery is still not fully operational. [64] U.S. imports of petroleum products from Saudi Arabia tend to be specialty naphthas, which have a high unit value. These imports fluctuate, entering the U.S. market in response to refinery maintenance needs. [65]

[63] USDOE, EIA, "Country Analysis Brief: Algeria," May 20, 2013.
[64] *Oil and Gas Journal,* "Western Europe Leads Global Refining Contraction," December 2, 2013.
[65] USDOE, EIA, "Country Analysis Brief: Saudi Arabia," February 26, 2014.

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Part III
Commodities

This part of the report examines shifts in trade for 10 merchandise sectors: agricultural products; chemicals and related products; electronic products; energy-related products; footwear; forest products; minerals and metals; machinery; textiles and apparel; and transportation equipment.

Agricultural Products

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Change in 2013 from 2012:

U.S. trade surplus: Decreased by $430 million (2 percent) to $26.5 billion
U.S. exports: Increased by $2.9 billion (2 percent) to $152.2 billion
U.S. imports: Increased by $3.3 billion (3 percent) to $125.7 billion

The U.S. trade surplus in agricultural products fell by 2 percent to $26.5 billion in 2013, as an increase in U.S. agricultural exports was offset by somewhat higher growth in imports (table AG.1). Three commodity groups led the growth in U.S. exports—animal feed, dairy products, and edible nuts, all of which had annual export increases in excess of $1 billion. Income growth in developing countries drove the increased demand for these products. [66] However, these gains were partially offset by decreased exports in other commodities, especially the $3.3 billion dollar decline in oilseed exports.

The picture was similarly mixed in terms of U.S. imports. In particular, a 13 percent increase in the value of shellfish imports, driven by higher shrimp prices, was a major contributor to the growth in the value of U.S. agricultural imports. This growth was somewhat offset by declines, due to lower prices, in the value of imports in two commodity groups—miscellaneous vegetable substances (e.g., guar gum, pectins, and seaweed) and coffee and tea.

Leading export markets for U.S. agricultural products in 2013 were the same as in 2012—China, Canada, Mexico, and Japan. Exports to China were flat, while exports to Canada increased slightly (4 percent). Exports to Mexico and Japan declined by 4 percent and 10 percent, respectively. In 2013, the United States was a net importer from both Canada and Mexico, historically its leading suppliers of imported agricultural products. U.S. imports from both countries increased by more than 7 percent in 2013, reflecting in part increased imports of wheat from Canada and sugar from Mexico.

[66] Trostle and Seely, "Developing Countries Dominate World Demand," August 5, 2013.

Table AG. 1 Agricultural products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
Canada	16,571	17,996	20,637	22,285	23,087	802	3.6
Mexico	12,911	14,594	18,425	18,981	18,258	-723	-3.8
China	13,762	18,232	20,089	27,266	27,176	-89	-0.3
Japan	12,249	12,934	15,277	14,585	13,174	-1,411	-9.7
Brazil	349	564	1,892	695	1,952	1,257	180.8
Korea	4,199	5,626	7,366	6,516	5,686	-830	-12.7
Indonesia	1,784	2,215	2,805	2,483	2,808	325	13.1
Italy	869	936	1,144	996	1,361	366	36.7
India	673	799	732	865	873	9	1.0
Chile	243	421	572	698	899	201	28.8
All other	39,574	47,157	56,784	53,924	56,887	2,962	5.5
Total	103,184	121,473	145,724	149,293	152,162	2,869	1.9
EU-28	8,593	10,387	12,066	12,019	13,554	1,535	12.8
OPEC	4,301	5,092	6,908	6,690	6,947	257	3.8
Latin America	22,009	25,002	32,094	31,817	32,805	989	3.1
Asia	43,002	52,249	61,571	66,438	65,954	-484	-0.7
Sub-Saharan Africa	1,956	2,304	3,043	2,670	2,640	-30	-1.1
U.S. imports for consumption:							
Canada	17,136	18,999	21,893	23,203	24,913	1,710	7.4
Mexico	12,460	14,690	17,122	17,732	19,066	1,334	7.5
China	4,850	5,653	6,498	7,043	6,967	-76	-1.1
Japan	687	716	759	780	766	-14	-1.8
Brazil	2,632	3,201	4,643	4,924	4,675	-249	-5.1
Korea	393	450	510	558	636	78	13.9
Indonesia	1,967	2,149	2,494	2,507	2,793	286	11.4
Italy	3,197	3,291	3,759	3,904	4,192	287	7.4
India	1,314	1,806	3,105	5,790	4,444	-1,346	-23.2
Chile	2,887	2,909	3,289	3,509	4,281	772	22.0
All other	39,778	43,709	51,513	52,449	52,966	517	1.0
Total	87,301	97,572	115,585	122,400	125,699	3,299	2.7
EU-28	15,550	16,724	18,917	19,926	20,833	906	4.5
OPEC	1,679	1,692	2,031	1,972	2,074	102	5.2
Latin America	28,912	32,571	40,012	41,463	43,041	1,578	3.8
Asia	16,926	19,893	24,669	27,204	25,693	-1,511	-5.6
Sub-Saharan Africa	1,459	1,846	2,102	1,921	1,958	37	1.9

See footnote(s) at the end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
Canada	-565	-1,003	-1,255	-918	-1,826	-908	-98.9
Mexico	452	-96	1,303	1,249	-808	-2,057	[a]
China	8,913	12,579	13,591	20,223	20,210	-13	-0.1
Japan	11,562	12,218	14,519	13,805	12,408	-1,397	-10.1
Brazil	-2,284	-2,637	-2,751	-4,229	-2,723	1,506	35.6
Korea	3,806	5,175	6,856	5,958	5,050	-907	-15.2
Indonesia	-182	66	311	-24	15	39	[a]
Italy	-2,328	-2,355	-2,616	-2,909	-2,830	79	2.7
India	-641	-1,007	-2,372	-4,925	-3,571	1,354	27.5
Chile	-2,644	-2,488	-2,717	-2,811	-3,382	-571	-20.3
All other	-204	3,448	5,271	1,476	3,921	2,445	165.7
Total	15,883	23,901	30,139	26,893	26,464	-430	-1.6
EU-28	-6,957	-6,337	-6,851	-7,907	-7,279	628	7.9
OPEC	2,623	3,400	4,878	4,718	4,874	155	3.3
Latin America	-6,904	-7,569	-7,918	-9,646	-10,236	-590	-6.1
Asia	26,076	32,356	36,903	39,234	40,261	1,027	2.6
Sub-Saharan Africa	497	459	941	749	682	-66	-8.9

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Not meaningful for purposes of comparison.

U.S. Exports

Increases in U.S. agricultural exports in 2013 were led by animal feed, dairy products, and edible nuts (table AG.2). Animal feed exports increased by 16 percent to $14.5 billion. This commodity group covers a wide range of products, but the two largest for U.S. producers were "soybean oilcake and other solids" and "brewing/distilling dregs and waste." These two products together accounted for almost 50 percent of all animal feed exports in 2013 and were major contributors to the increase in exports in this group. [67] Most of the growth in exports was driven by increasing demand for animal feed in China, Vietnam, and Turkey. [68] As incomes rise in these developing countries, consumer demand grows for animal protein, which in turn increases demand for animal feed.

U.S. dairy exports have also increased significantly in recent years. Nearly 80 percent of the year-over-year $1.6 billion increase in U.S. dairy exports came from four products—skim milk powder (also known as nonfat dry milk), cheese, whey and whey products, and butter. The fastest-growing export markets for U.S. dairy products are in Asia and North Africa. Rising global demand, especially in rapidly developing economies, increased both export prices and volumes for U.S. dairy products in 2013.

U.S. exports of edible nuts rose by 22 percent to $8.3 billion in 2013. [69] The 28 members of the European Union (EU-28) and Hong Kong are the biggest markets for U.S. exports; in-shell almonds and in-shell pistachios account for the largest share of exports to these partners. [70] The biggest absolute growth in U.S. exports of nuts came from shelled almonds (up $708 million) and was largely caused by higher prices. [71] Prices of these tree nuts have generally risen along with global demand because supply is constrained. Nut trees are limited to specific climate zones and often require many years to reach their full production capacity. [72] Many factors contribute to the growth of demand (manifested in consumer willingness to pay higher prices) for tree nuts, including consumer perception that nuts are a healthy snack, rising demand in

[67] Exports of soybean oilcake and other solids (HTS 2304.00.00) increased $551 million (16 percent); of brewing/distilling dregs (HTS 2303.30.00), $856 million (41 percent). Prices and export volumes for both products increased during 2013. USITC DataWeb/USDOC (accessed February 12, 2014).

[68] USITC DataWeb/USDOC (accessed February 26, 2013).

[69] Edible nuts cover a variety of products, including almonds, pistachios, walnuts, and peanuts.

[70] In 2013, the EU accounted for 30 percent of exports (by value); Hong Kong accounted for 14 percent, although some were likely reexported to other markets. USITC DataWeb/DOC (accessed February 26, 2014); USDA, FAS, *Hong Kong: Product Brief—Tree Nuts*, August 23, 2013, 3.

[71] USITC Dataweb/USDOC (accessed February 12, 2014). Between 2012 and 2013, shelled almond exports grew about 1 percent by quantity: average unit export value grew 27 percent.

[72] Depending on the type of nut, full bearing is reached sometime between 5 to 20 years after planting.

Table AG.2 Agricultural products: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Animal feeds (AG013)	8,498	9,677	10,103	12,476	14,525	2,050	16.4
Dairy products (AG010)	2,020	3,441	4,490	4,810	6,382	1,572	32.7
Edible nuts (AG020)	4,024	4,756	5,679	6,870	8,345	1,475	21.5
Infant formulas, malt extracts, and other edible preparations (AG036)	3,786	4,174	4,815	5,415	6,065	650	12.0
Decreases:							
Oilseeds (AG032)	16,780	18,936	17,875	25,040	21,794	-3,245	-13.0
Animal or vegetable fats and oils (AG033)	3,354	4,484	4,729	4,433	3,591	-842	-19.0
All other	64,721	76,005	98,032	90,250	91,460	1,210	1.3
Total	103,184	121,473	145,724	149,293	152,162	2,869	1.9
U.S. IMPORTS:							
Increases:							
Shellfish (AG009)	6,587	7,469	8,704	8,055	9,140	1,085	13.5
Fresh, chilled, or frozen vegetables (AG018)	4,800	5,846	6,490	6,513	7,366	854	13.1
Decreases:							
Miscellaneous vegetable substances (AG017)	1,280	1,465	2,349	5,042	3,426	-1,617	-32.1
Coffee and tea (AG028)	4,509	5,469	8,666	7,618	6,441	-1,177	-15.4
Sugar (AG012A)	1,246	2,046	2,867	2,351	1,678	-673	-28.6
All other	68,878	75,277	86,509	92,821	97,648	4,827	5.2
Total	87,301	97,572	115,585	122,400	125,699	3,299	2.7

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

developing countries, and nuts' status as a gift or special snack for holidays in some Asian markets. [73]

By contrast, U.S. oilseed exports fell by $3.2 billion, the largest absolute decline of any U.S. agricultural product in 2013. Soybean exports, which make up about three-quarters of U.S. oilseed exports, fell 13 percent by value and 8 percent by quantity. [74] When U.S. prices reached near-record highs in the summer of 2013, importing countries switched to Brazil, which had a large supply of soybeans due to a bountiful harvest. [75] U.S. oilseed exports declined in almost every market. Exports to China showed the largest decline in absolute terms, falling $1.6 billion (11 percent) from 2012. [76]

In 2013, U.S. agricultural exports to Brazil rose sharply, increasing 181 percent to almost $2.0 billion, about two-thirds of which was wheat. The value of wheat exports increased from $13 million in 2012 to $1.2 billion in 2013, a 30-year high. [77] Brazil's traditional supplier, Argentina, experienced its worst wheat harvest in a century and was unable to meet Brazilian demand due to a ban on wheat exports imposed by the Argentine government. As a result, Brazil lowered its tariff on U.S. wheat from 10 percent to zero during April–December 2013, which made it less costly to import U.S. product. These circumstances created an opportunity for U.S. exporters, who benefited from record U.S. wheat production in 2013. [78]

In 2013, U.S. agricultural exports to Japan fell more in absolute terms ($1.4 billion) than those to any other market. This was driven by a $1.2 billion (41 percent) fall in corn exports, primarily because of a 38 percent decline in feed corn volumes. Japan's global feed corn imports fell about 15 percent by value and 10 percent by volume as it substituted some corn with lower-priced sorghum and wheat in animal feed. In addition, since late 2012, Brazilian feed corn has had a price advantage over U.S. feed corn; in 2013, average Japanese import values for this commodity from Brazil were $309 per metric ton, compared to $341 from the United States. [79] As a result of this price discrepancy, Japan's imports from the United States fell more sharply than the average, and Brazil replaced the United States as Japan's largest feed corn supplier.

[73] USDA, FAS, *Hong Kong: Product Brief—Tree Nuts*, August 23, 2013, 1, 5; USDA, FAS, *EU-28: Tree Nuts Annual*, September 13, 2013; International Nut and Dried Fruit Council, News and Media (accessed February 27, 2014) http://www.nutfruit.org/en/news_7119; industry officials, farm tours, California, August 3–9, 2013.
[74] Based on HTS 120190. U.S. oilseed exports fell by $3.2 billion and 4.4 million metric tons. USITC DataWeb/DOC (accessed February 25, 2014).
[75] O'Brien, "Soybean Market Outlook in September 2013," September 20, 2013; Thiesse, "September 2013 USDA Crop Production Summary," September 17, 2013; U.S. government official, email to USITC staff, February 28, 2014.
[76] USITC DataWeb/USDOC (accessed February 26, 2014).
[77] Ibid.
[78] USDA, FAS, *Brazil: U.S. Wheat Exports to Brazil*, February 19, 2014, 1–2.
[79] Japan's imports from the United States fell by about 59 percent in both volume and value between 2012 and 2013. GTIS, GTA (accessed February 26, 2014); USDA, FAS, *Japan: Grain and Feed Update*, July 26, 2013.

U.S. Imports

Shellfish led the increase in the value of U.S. agricultural imports in 2013, accounting for about one-third of the total increase in value. In 2013, U.S. imports of shellfish grew by 14 percent to $9.1 billion. Two-thirds of this growth can be attributed to a 26 percent increase in the value of imports of certain shrimp and prawns. [80] Prices rose as shrimp production fell in major producing regions of East and Southeast Asia, a result of an outbreak of early mortality syndrome (EMS) disease starting in late 2012. [81]

The United States has large agricultural trade flows (imports and exports) with its North American Free Trade Agreement (NAFTA) partners, Canada and Mexico, but was a net importer in this category from these two countries in 2013. U.S. imports from both Canada and Mexico reached their highest levels ever in 2013, at $24.9 billion and $19.1 billion, respectively. Mexico and Canada benefit from their proximity to the United States, which gives them logistical advantages over other U.S. import suppliers, and from preferential trade access under NAFTA.

In 2013, the largest absolute increase in U.S. agricultural imports from Canada were of live cattle (not for breeding), which grew 22 percent to $1.3 billion, and wheat (non-durum), which grew 37 percent to $779 million. Both increases were driven by higher import quantities, although prices also increased. [82] A major factor contributing to increased U.S. imports of Canadian cattle was the closure of a beef slaughter plant in Quebec, resulting in higher volumes of Canadian cattle delivered for slaughter in the United States. In addition, low prices in late 2012 caused some U.S. producers to wait until 2013 to deliver cattle for slaughter, and a slaughter plant in Alberta closed for a week, causing a temporary increase in cattle shipments to the United States. [83] The United States imported more Canadian wheat in 2013 because some U.S.-produced wheat was diverted to Brazil (see above). Canada was able to make up the shortfall in the U.S. market because of a good harvest and limited competition from other producing regions like Australia, which had lower production levels in 2013 than the year before. [84]

The U.S. agricultural imports from Mexico with the largest absolute increases in 2013 from 2012 levels were raw cane sugar and avocados. The value of U.S. imports of raw cane sugar rose by $314 million to $415 million; the import quantity increased sevenfold. [85] U.S. refiners can import Mexican sugar duty free and quota free under NAFTA. [86] U.S. imports of Mexican avocados grew by $230 million to $992 million in 2013 because of both higher prices and increased quantities shipped. [87] Rising demand (both globally and within the United States) and

[80] Import volumes declined slightly (less than 1 percent). USITC DataWeb/USDOC (accessed February 24, 2014).
[81] FAO, "GlobeFish: Shrimp," August 2013; FAO, "GlobeFish: Shrimp," September 2013.
[82] USITC DataWeb/USDOC (accessed March 4, 2014).
[83] USDA, FAS, Canada: Livestock and Products Annual, September 1, 2013, 5.
[84] USDA, FAS, *Canada: Grain and Feed Update*, July 26, 2013, 2.
[85] USITC DataWeb/USDOC (accessed March 4, 2014).
[86] USDA, FAS, *Mexico: Sugar Semi-annual*, September 24, 2013; USDA, ERS, *Sugar and Sweeteners Outlook* , August 16, 2013.
[87] USITC DataWeb/USDOC (accessed March 4, 2014).

the timing of Mexico's shipments, which led to tighter supplies in the U.S. market late in the year compared to 2012, forced U.S. import prices for avocados higher in 2013. [88] In addition, U.S. per capita consumption of avocados more than doubled between 2010–13 because of multiple factors, including a promotional campaign by the U.S. industry and avocados' wider availability at restaurants. [89]

U.S. imports of miscellaneous vegetable substances in 2013 fell by $1.6 billion (32 percent) from 2012. [90] About half of these were mucilages and thickeners derived from guar seeds, also known as guar gum. Imports of guar gum fell by $1.8 billion (52 percent), largely because of lower prices rather than lower imported volumes. [91] Guar gum is used in oil and shale gas exploration, and as a thickener in certain processed foods. The vast majority of guar gum is imported from India (97 percent in 2013). [92] In 2012, guar gum prices were high because fears of production shortages in India, which accounts for about 80 percent of global guar gum production, drove a speculative bubble. [93] In 2013, prices fell because (1) the Indian government, which had banned guar gum futures trading between March 2012 and May 14, 2013, issued guidelines aimed at reducing speculation on guar gum, and (2) guar gum production in India increased as farmers devoted more acreage to guar seed. [94]

The value of U.S. imports of coffee and tea fell by 15 percent to $6.4 billion. This decline was primarily the result of lower prices for certain Arabica coffee imports, which fell 23 percent ($956 million) by value in spite of a 5 percent (40,379 metric tons) rise in quantity. [95] Lower prices drove down the value of U.S. imports of Arabica coffee from almost every supplier, and five suppliers had declines of over $100 million each—Brazil ($209 million), Guatemala ($146 million), Indonesia ($124 million), Honduras ($117 million), and Mexico ($106 million). [96]

[88] USDA, FAS, *Mexico: Avocado Annual*, December 19, 2013; Boyd, "After Rocky Start, Mexican Avocado Season Stabilizes," November 4, 2013.
[89] Karst, "Avocado Consumption: Still on the Rise?" June 24, 2012; Polis, "Mexican Hass Avocado Industry," June 19, 2012.
[90] Mucilages and thickeners are used in food and manufacturing to thicken, bind, and enhance volume.
[91] Import quantity fell about 34,015 metric tons (12 percent) compared to 2012. USITC DataWeb/USDOC (accessed February 12, 2014).
[92] Mukherjee, **"**Is Guar Gum's Dream Run Nearing Its End?" November 4, 2013; Ghosal, "Foreign Guar Gum Buyers Return," November 7, 2013.
[93] Guar gum prices were 900 percent higher in 2012 than in 2011. USITC, *Shifts in U.S. Merchandise Trade 2012*, 2013, AG-7.
[94] Sharma, "India to Raise 2013 Output of Fracking Ingredient," May 29, 2013; Ghosal, "Foreign Guar Gum Buyers Return," November 7, 2013; Mukherjee, **"**Is Guar Gum's Dream Run Nearing Its End?" November 4, 2013.
[95] Based on HTS 0901.11.0025. USITC DataWeb/USDOC (accessed February 12, 2014, and March 3, 2014).
[96] Lower prices were the main reason import values fell for almost every supplier. The volume of U.S. imports from some suppliers also fell, but less sharply than the values. USITC DataWeb/USDOC (accessed March 12, 2014).

Arabica coffee prices fell because of a large harvest in Brazil for the second year in a row, as well as higher production in Colombia after a successful replanting program beginning in 2010. [97]

[97] McFarlane, "Coffee Drinkers Treated to More Arabica," October 30, 2013; Agrimoney.com, "Arabica Coffee Prices," December 31, 2013; USDA, FAS, *Coffee: World Markets and Trade*, December 2013; USDA, FAS, *Colombia: Coffee Semi-annual*, November 15, 2010, 1; Tepper, "As Coffee Rust Devastates Latin America," March 25, 2013; USDA, FAS, *Colombia: Coffee Annual*, May 24, 2011. Colombia has struggled with coffee rust disease and coffee cherry borer (broca) infestations since 2010.

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Chemicals and Related Products

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Change in 2013 from 2012:

U.S. trade deficit: Decreased by $2.3 billion (6.6 percent) to $32.4 billion
U.S. exports: Increased by $626 million (0.3 percent) to $218.1 billion
U.S. imports: Decreased by $1.7 billion (1 percent) to $250.5 billion

The U.S. trade deficit in chemicals and related products decreased by $2.3 billion (6.6 percent) to $32.4 billion in 2013. U.S. exports remained relatively flat compared to 2012, increasing by only $626 million (0.3 percent) in 2013, while U.S. imports decreased by $1.7 billion (0.7 percent). Medicinal chemicals accounted for the largest share of trade in this sector, with $85.5 billion in U.S. imports and $48.2 billion in U.S. exports in 2013. The largest change in value for U.S. exports in this sector was for miscellaneous plastic products, for which U.S. exports increased by $813 million. Medicinal chemicals recorded the largest change in U.S. imports, decreasing by $3.9 billion.

The EU-28 and Canada are the largest trading partners for the United States in the chemicals sector (table CH.1). In 2013, U.S. exports of chemicals and related products to the EU-28 and Canada totaled $54 billion and $36 billion respectively. U.S. trade with both trading partners remained relatively unchanged compared to 2012. U.S. exports to the EU-28 decreased by $76 million (0.1 percent) but increased to Canada by $16 million (less than 0.1 percent). U.S. imports from the EU-28 totaled $86 billion in 2013, a decrease of $292 million (0.3 percent) from 2012. U.S. imports from Canada totaled $34 billion in 2013, a decrease of $399 million (1 percent) from 2012.

Table CH.1 Chemicals and related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
Canada	26,743	31,281	35,319	36,027	36,043	16	([a])
China	10,643	13,344	15,021	14,205	14,128	-76	-0.5
Mexico	20,313	23,869	27,670	30,652	31,736	1,085	3.5
Germany	10,580	10,830	7,806	7,500	7,140	-360	-4.8
Ireland	1,732	2,147	1,987	2,194	2,480	286	13.0
Japan	7,958	10,741	11,609	12,201	10,745	-1,456	-11.9
Belgium	8,568	10,431	11,715	12,281	13,050	769	6.3
United Kingdom	7,488	8,116	8,756	8,449	6,886	-1,563	-18.5
Switzerland	2,804	2,849	2,927	2,349	2,651	302	12.8
Brazil	5,714	7,815	8,875	8,987	9,818	831	9.2
All other	63,405	75,602	82,297	82,607	83,399	792	1.0
Total	165,948	197,026	213,983	217,452	218,078	626	0.3
EU-28	51,138	55,332	53,679	54,470	54,394	-76	-0.1
OPEC	4,130	5,175	6,272	6,685	6,720	35	0.5
Latin America	37,042	45,653	53,373	56,985	58,906	1,921	3.4
Asia	37,564	49,179	54,955	53,034	51,351	-1,682	-3.2
Sub-Saharan Africa	1,459	1,596	1,916	2,048	2,050	1	0.1
U.S. imports for consumption:							
Canada	25,021	30,037	34,515	34,161	33,762	-399	-1.2
China	17,510	21,319	25,637	27,975	29,445	1,470	5.3
Mexico	5,767	7,059	8,374	9,101	9,686	586	6.4
Germany	14,922	15,368	17,885	19,992	21,639	1,647	8.2
Ireland	19,953	25,260	30,795	24,715	22,235	-2,481	-10.0
Japan	9,985	12,013	12,269	12,433	12,138	-295	-2.4
Belgium	5,209	5,160	4,752	3,886	5,018	1,132	29.1
United Kingdom	15,004	12,655	11,170	10,022	8,658	-1,364	-13.6
Switzerland	5,892	7,497	9,158	10,123	11,133	1,011	10.0
Brazil	1,883	2,705	3,191	3,157	2,514	-643	-20.4
All other	61,368	78,946	96,482	96,589	94,256	-2,332	-2.4
Total	182,515	218,020	254,229	252,153	250,484	-1,669	-0.7
EU-28	77,653	83,783	91,738	86,566	86,274	-292	-0.3
OPEC	8,071	12,136	15,120	16,087	15,558	-530	-3.3
Latin America	12,927	16,974	22,187	22,739	23,138	399	1.8
Asia	45,795	56,492	67,964	71,499	70,953	-546	-0.8
Sub-Saharan Africa	988	2,081	2,349	1,540	1,326	-214	-13.9

See footnote(s) at the end of table.

Item	Million $					Absolute change, 2012–13	Percent change, 2012–13
	2009	2010	2011	2012	2013		
U.S. merchandise trade balance:							
Canada	1,722	1,244	804	1,866	2,281	415	22.2
China	-6,867	-7,975	-10,616	-13,771	-15,316	-1,546	-11.2
Mexico	14,546	16,810	19,296	21,551	22,050	499	2.3
Germany	-4,342	-4,538	-10,079	-12,492	-14,498	-2,007	-16.1
Ireland	-18,221	-23,114	-28,808	-22,521	-19,754	2,767	12.3
Japan	-2,028	-1,272	-660	-232	-1,393	-1,161	-500.4
Belgium	3,359	5,272	6,963	8,396	8,032	-363	-4.3
United Kingdom	-7,516	-4,539	-2,414	-1,572	-1,772	-199	-12.7
Switzerland	-3,088	-4,648	-6,231	-7,773	-8,482	-709	-9.1
Brazil	3,831	5,110	5,684	5,830	7,303	1,474	25.3
All other	2,037	-3,344	-14,185	-13,982	-10,857	3,125	22.3
Total	-16,567	-20,994	-40,246	-34,701	-32,406	2,294	6.6
EU-28	-26,515	-28,451	-38,059	-32,096	-31,880	216	0.7
OPEC	-3,941	-6,960	-8,848	-9,403	-8,838	565	6.0
Latin America	24,115	28,679	31,186	34,246	35,768	1,522	4.4
Asia	-8,232	-7,313	-13,009	-18,466	-19,602	-1,136	-6.2
Sub-Saharan Africa	472	-485	-432	508	723	215	42.3

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Less than 0.05 percent.

U.S. Exports

U.S. exports of chemicals and related products remained relatively level, growing by only $626 million (0.3 percent) in 2013. The largest increases in U.S. exports were of miscellaneous plastic products and commodity organic chemicals. U.S. exports of miscellaneous plastic products rose by $0.8 billion (3 percent), owing to increased exports of plastic boxes, cases, crates, and similar articles and plastic articles not elsewhere specified or included (table CH.2). Among commodity organic chemicals, U.S. exports of styrene showed the highest growth, fueled by rising demand in Latin America as well as by global production problems, including an unplanned shutdown of Shell's styrene monomer plant in Alberta, Canada. [98]

U.S. exports of synthetic rubber decreased by $661 million in 2013. The decline in the value of synthetic rubber exports was largely the result of high stocks and low prices of natural rubber, a substitute for synthetic rubber used in the production of vehicle tires and other products. [99] Additionally, new synthetic rubber production facilities began operations in China in 2013, further reducing demand for U.S. exports of synthetic rubber. [100]

U.S. exports of fertilizers decreased by $511 million in 2013. U.S. fertilizer exports dropped, in part, due to lower exports of certain phosphate fertilizers to India. India started 2013 with high stocks of these fertilizers and consumed less throughout the year because of decreased and delayed subsidy payments to farmers, as well as a weaker rupee that made U.S fertilizers more expensive. [101]

[98] Balboa, "US Styrene to Remain Tight in 2014," January 13, 2014.
[99] Liu and Richardson, "China Butadiene and Synthetic Rubber in Crisis," July 1, 2013.
[100] Liu and Richardson, "China Butadiene and Synthetic Rubber in Crisis," July 1, 2013.
[101] *Chemical Week,* "India Cuts Phosphate and Potash Subsidies," May 13, 2013, 8; PotashCorp., *Q4 2013 Market Analysis Report*, December 10, 2013, 16.

Table CH.2 Chemicals and related products: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Miscellaneous plastic products (CH033)	17,719	21,235	23,108	23,755	24,568	813	3.4
Organic commodity chemicals (CH004)	3,633	5,073	6,047	6,499	7,134	636	9.8
Decreases:							
Synthetic rubber (CH031)	2,697	3,734	4,792	4,637	3,976	-661	-14.3
Fertilizers (CH010)	3,684	3,941	5,429	4,984	4,473	-511	-10.3
Medicinal chemicals (CH019)	46,359	47,304	45,928	48,673	48,232	-441	-0.9
All other	91,856	115,739	128,680	128,904	129,694	791	0.6
Total	165,948	197,026	213,983	217,452	218,078	626	0.3
U.S. IMPORTS:							
Increases:							
Miscellaneous plastic products (CH033)	19,328	22,956	25,279	27,344	28,821	1,477	5.4
Miscellaneous chemicals and specialties (CH023)	3,507	4,310	5,202	4,997	6,154	1,157	23.2
Decreases:							
Medicinal chemicals (CH019)	82,417	86,603	92,732	88,771	85,477	-3,294	-3.7
Major primary olefins (CH001)	5,931	10,496	13,079	11,148	9,258	-1,889	-16.9
All other	71,332	93,654	117,937	119,893	120,774	881	0.7
Total	182,515	218,020	254,229	252,153	250,484	-1,669	-0.7

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

U.S. Imports

U.S. imports decreased by $1.7 billion in 2013, largely because of declines in imports of pharmaceuticals and primary olefins. The value of pharmaceuticals imported in 2013 fell by $3.3 billion compared to 2012. The decrease in value of pharmaceutical imports likely stemmed from the replacement of high-cost brand-name medicines by cheaper generic medicines, as patent terms expired for blockbuster drugs such as atorvastatin (brand name Lipitor) and clopidogrel (brand name Plavix). U.S. imports of primary olefins decreased by $1.9 billion because of increases in domestic production of olefins such as ethylene and propylene.

U.S. imports of miscellaneous plastic products and miscellaneous chemicals and specialties increased in 2013. U.S. imports of miscellaneous plastic products grew by $1.5 billion, in part because of increased imports of plastic floor tiles and plastic tubes, which are used in new-home construction. U.S. imports of miscellaneous chemicals and specialties increased by $1.2 billion, primarily the result of increased imports of biodiesel from Argentina and Indonesia. Argentine and Indonesian exporters of biodiesel were seeking new markets after the EU-28 imposed antidumping duties on biodiesel from these countries in 2013. [102] At the same time, the United States government reinstated the $1 per gallon tax credit for biodiesel through the end of 2013, increasing demand for biodiesel in the U.S. market. [103]

[102] European Commission, "EU to Impose Definitive Anti-Dumping Duties," November 21, 2013.
[103] Reuters, "U.S. Biodiesel Tax Credit Revived through 2013 by Congress," January 2, 2013.

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Electronic Products

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $3.5 billion (1 percent) to $250.3 billion
U.S. exports: Decreased by $27 million (less than 0.1 percent) to $167.0 billion
U.S. imports: Increased by $3.5 billion (1 percent) to $417.2 billion

The U.S. trade deficit in electronic products rose by $3.5 billion to $250.3 billion in 2013 (1 percent). The slight increase was driven by growing deficits in telecommunications equipment as well as circuit apparatus assemblies. U.S. exports of electronic products declined marginally, by less than 0.1 percent, while imports increased by 0.8 percent.

China continued to be the largest contributor to the U.S. deficit in electronic products trade; China's share of the deficit was $161.1 billion in 2013 (table EL.1). China is a leading producer of semiconductors and computers (the former being an input for the latter) as well as peripheral products. [104] Along with the emerging economies of Malaysia and Thailand, China has benefited from the shift of production capacity away from countries with high manufacturing costs, such as the United States and Japan. [105]

[104] The World Trade Organization's *International Trade Statistics 2011* reports that in 2010, China established itself as the largest manufacturer of computer hardware products in the world, accounting for over one-third of world trade in these goods.
[105] IBISWorld, *Global Computer Hardware Manufacturing,* March 2013, 14; Standard & Poor's, "Industry Surveys: Semiconductors," April 2013, 9.

Table EL.1 Electronic products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
China	11,133	13,493	11,889	12,331	14,123	1,792	14.5
Mexico	14,901	16,537	16,733	18,945	20,737	1,792	9.5
Japan	8,521	9,661	10,631	11,264	10,419	-844	-7.5
Canada	15,217	16,692	18,207	18,455	17,731	-724	-3.9
Malaysia	4,889	6,451	5,807	4,709	4,533	-176	-3.7
Korea	5,437	6,378	7,158	7,172	6,714	-458	-6.4
Germany	7,639	8,183	8,203	7,954	7,964	10	0.1
Taiwan	3,732	4,659	4,929	3,735	3,520	-215	-5.8
Thailand	1,855	2,496	2,294	2,152	2,226	75	3.5
Singapore	4,709	6,131	5,716	4,836	4,647	-189	-3.9
All other	64,905	69,150	72,971	75,450	74,360	-1,090	-1.4
Total	142,938	159,833	164,537	167,003	166,976	-27	([a])
EU-28	35,484	36,546	36,630	35,134	34,836	-298	-0.8
OPEC	5,460	5,269	6,103	7,614	7,750	136	1.8
Latin America	29,098	31,812	32,908	35,908	37,482	1,574	4.4
Asia	50,161	61,228	61,588	59,538	58,747	-791	-1.3
Sub-Saharan Africa	1,285	1,205	1,217	1,351	1,347	-4	-0.3
U.S. imports for consumption:							
China	110,794	143,716	158,671	171,159	175,212	4,053	2.4
Mexico	50,325	62,049	61,996	65,344	63,627	-1,716	-2.6
Japan	22,917	26,757	26,697	26,213	24,216	-1,997	-7.6
Canada	9,626	9,449	9,758	9,513	9,074	-439	-4.6
Malaysia	17,142	17,892	16,602	17,100	19,165	2,065	12.1
Korea	15,662	18,011	17,953	14,543	16,560	2,017	13.9
Germany	9,717	11,227	13,399	13,512	13,532	20	0.1
Taiwan	14,221	17,977	20,990	17,214	16,130	-1,084	-6.3
Thailand	7,900	9,514	9,556	10,983	11,558	575	5.2
Singapore	6,788	8,060	8,039	7,879	6,387	-1,492	-18.9
All other	46,330	52,964	56,930	60,308	61,766	1,458	2.4
Total	311,420	377,617	400,592	413,767	417,226	3,459	0.8
EU-28	32,519	37,113	40,863	41,589	42,091	502	1.2
OPEC	25	27	40	45	73	29	63.5
Latin America	55,269	69,861	70,940	76,083	74,300	-1,783	-2.3
Asia	203,564	251,509	268,258	275,697	280,774	5,077	1.8
Sub-Saharan Africa	81	87	108	98	98	([b])	-0.4

See footnote(s) at the end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
China	-99,661	-130,223	-146,782	-158,828	-161,089	-2,260	-1.4
Mexico	-35,424	-45,511	-45,263	-46,398	-42,890	3,508	7.6
Japan	-14,395	-17,095	-16,066	-14,949	-13,797	1,152	7.7
Canada	5,591	7,243	8,448	8,942	8,657	-285	-3.2
Malaysia	-12,253	-11,441	-10,795	-12,391	-14,632	-2,241	-18.1
Korea	-10,225	-11,633	-10,795	-7,371	-9,845	-2,474	-33.6
Germany	-2,078	-3,044	-5,196	-5,558	-5,568	-10	-0.2
Taiwan	-10,489	-13,318	-16,061	-13,478	-12,610	868	6.4
Thailand	-6,045	-7,019	-7,262	-8,831	-9,332	-501	-5.7
Singapore	-2,079	-1,929	-2,323	-3,043	-1,740	1,304	42.8
All other	18,575	16,187	16,041	15,143	12,595	-2,548	-16.8
Total	-168,483	-217,784	-236,055	-246,764	-250,250	-3,486	-1.4
EU-28	2,965	-568	-4,233	-6,455	-7,255	-800	-12.4
OPEC	5,435	5,242	6,063	7,569	7,677	108	1.4
Latin America	-26,171	-38,050	-38,032	-40,175	-36,818	3,356	8.4
Asia	-153,403	-190,281	-206,670	-216,159	-222,028	-5,868	-2.7
Sub-Saharan Africa	1,204	1,117	1,109	1,253	1,250	-4	-0.3

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Less than 0.05 percent.

[b]Less than $500,000.

U.S. Exports

U.S. exports of electronic products decreased by $27 million (less than 0.1 percent) in 2013, against the backdrop of a sluggish global economy. [106] Despite this overall decline, U.S. exports increased in a number of subsectors, namely telecommunications equipment, navigational instruments and remote control apparatus, and circuit apparatus assemblies. The leading destinations for U.S. exports of electronic products were the United States' NAFTA partners, Mexico ($20.7 billion) and Canada ($17.7 billion). Together, Mexico and Canada accounted for 23 percent of sector exports. They were followed by China ($14.1 billion) and Japan ($10.4 billion), which together accounted for 15 percent of U.S. exports in this sector. In 2013, exports increased to 4 of the United States' top 10 export destinations but declined to the remaining six.

In 2013, the major markets for U.S. telecommunications equipment exports, which totaled $16.3 billion, were Mexico, Canada, and Hong Kong. U.S. exports of telecommunications equipment rose by $1.1 million (7 percent) in 2013 (table EL.2). This increase was driven by a number of factors, including growing reliance worldwide on communications networks, expanding 4G/LTE networks, increasing mobile broadband access in developing countries, and the continuing

[106] Standard & Poor's, "Industry Surveys: Semiconductors," April 2013, 1.

Table EL.2 Electronic products: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Telecommunications equipment (EL002)	13,421	13,605	14,619	15,156	16,260	1,105	7.3
Navigational instruments and remote control apparatus (EL005)	2,558	2,768	3,317	3,356	3,830	474	14.1
Circuit apparatus assemblies (EL012)	2,206	2,427	2,788	3,338	3,798	460	13.8
Decreases:							
Computers, peripherals, and parts (EL017)	19,837	20,592	20,332	21,086	20,111	-975	-4.6
Semiconductors and integrated circuits (EL015)	25,058	31,267	29,188	26,436	26,075	-361	-1.4
Blank and prerecorded media (EL004)	3,567	3,560	3,371	3,464	3,215	-248	-7.2
Consumer electronics (EL003)	3,965	4,785	5,092	4,794	4,553	-242	-5.0
All other	72,325	80,829	85,831	89,374	89,133	-241	-0.3
Total	142,938	159,833	164,537	167,003	166,976	-27	([a])
U.S. IMPORTS:							
Increases:							
Telecommunications equipment (EL002)	60,299	74,065	79,771	83,831	89,161	5,330	6.4
Medical goods (EL022)	25,928	29,219	31,796	32,639	34,131	1,492	4.6
Circuit apparatus assemblies (EL012)	4,228	5,446	6,216	7,471	8,589	1,118	15.0
Semiconductors and integrated circuits (EL015)	21,190	29,134	37,624	37,358	38,025	667	1.8
Decreases:							
Consumer electronics (EL003)	47,186	51,031	46,343	47,714	42,936	-4,779	-10.0
All other	152,590	188,721	198,842	204,753	204,385	-369	-0.2
Total	311,420	377,617	400,592	413,767	417,226	3,459	0.8

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

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

[a]Less than 0.05 percent.

attempt by operators to capture revenue from services and content delivered over their own networks. [107] U.S. exports of navigational instruments and remote control devices continued their steady rise, growing from $3.4 billion in 2012 to $3.8 billion (14 percent) in 2013. As the economy has gradually improved, increases in research and development budgets have led to advances in both navigational instruments and remote control devices. [108] The new products (e.g., electricity measuring and testing instruments and medical and bioscience diagnostic equipment) have enabled the U.S. industry to remain competitive amid rising foreign competition and changing demand in downstream markets. Additionally, growth in customer industries such as aircraft manufacturing, shipbuilding, and construction has provided strong demand for various instruments and devices. [109] The leading markets for U.S. exports of various related instruments and devices were the United Arab Emirates (accounting for 24 percent of U.S. exports), Japan (11 percent), and Canada (10 percent).

Exports of circuit apparatus assemblies [110] have increased in each of the past five years, growing from $2.2 billion in 2009 to $3.8 billion in 2013, and by $460 million (14 percent) from 2012 to 2013. The rise reflects continuing growth in global demand for downstream products, such as telecommunications equipment and measuring, testing, and controlling instruments. Growing demand for telecommunications equipment was driven by the continuing expansion of 4G/LTE: the number of commercial networks increased from 49 in 29 countries in January 2012 to 260 in 93 countries by the end of 2013. [111] Global demand for measuring, testing, and controlling instruments rose due to requirements for higher-precision instruments with stricter quality, safety, and environmental standards. The Canadian Environmental Assessment Act of 2012, for example, strengthens assessments related to nuclear safety, energy, and the environment. [112] The leading markets for U.S. exports of circuit apparatus assemblies were Canada (23 percent), Mexico (15 percent), and China (9 percent).

U.S. exports of computers, peripherals, and parts as well as semiconductors declined in 2013. The $975 million (5 percent) decrease in computers, peripherals, and parts exports was caused by the slow economic recovery in foreign markets. [113] Exports of semiconductors and integrated circuits decreased $361 million (1 percent), marking the third consecutive year of declines. Semiconductor fabrication operations continued to expand in Asia, where 9 of the top 10

[107] EIU, "Telecoms and Technology Report," May 28, 2013, 2.
[108] IBISWorld, Navigational Instrument Manufacturing in the U.S., February 2014, 9.
[109] IBISWorld, Navigational Instrument Manufacturing in the U.S., February 2014, 8. More robust export growth has been limited by the appreciating dollar, as industry products become more expensive on the world market; exchange rates can be found on the Federal Reserve website.
[110] Circuit apparatus assemblies include products like control panels, switch assemblies, and remote controls.
[111] EIU, "Telecoms and Technology Report," May 28, 2013, 5.
[112] Canadian Environmental Assessment Agency website, http://www.ceaa-acee.gc.ca/default.asp?lang=En&n=CE87904C-1#ws96301A7E (accessed March 11, 2014).
[113] Standard & Poor's, "Industry Surveys: Semiconductors," April 2013, 1.

semiconductor production foundries are located. Likewise, the Pacific Rim trading partners, especially Taiwan, have seen their chip foundry [114] businesses grow steadily. [115]

U.S. exports of blank and prerecorded media also decreased in 2013, from $3.5 billion to $3.2 billion (7 percent), largely as an indirect result of cloud computing. The popularity of readily accessible and cost-effective online operating and application services (software-as-a-service) is increasingly leading companies and individuals to forego purchasing compact discs. Instead, they are accessing software online. In addition, exports of consumer electronics [116] fell $242 million (5 percent) in 2013, while exports of television receivers and monitors fell $160 million (11.6 percent). The declines—a continuation of a trend for both types of products that commenced in 2010—reflect the evolving role of mobile devices and personal computers in accessing music, television programming, and other media content for global consumers. [117] Mobile devices, which were initially restricted to telephony and short text messaging, are increasingly powerful. Although they remain slower than computers in connecting to and transmitting information over the Internet, "apps" [118] enable such devices to access a wide range of movies, television shows, music, games, and sports. [119]

U.S. Imports

U.S. imports of electronic products increased marginally by $3.5 billion (1 percent) to reach a record $417.2 billion in 2013. As has been the case since 2009, the leading supplying countries were China and Mexico. U.S. imports from China reached $175.2 billion, and were more than double the value of imports of the next largest supplier, Mexico ($63.6 billion). The largest increases in U.S. imports came from Korea (up 14 percent) and Malaysia (up 12 percent). Korea had the largest gains in printing and related machinery, while Malaysia had the largest gains in computers, peripherals, and parts; and electrical sound and visual signaling apparatus.

U.S. imports of telecommunications equipment and medical goods registered the largest increases by value in 2013. U.S. imports of telecommunications equipment rose from $83.8 billion to $89.2 billion (6 percent), with China and Korea posting the greatest increases of 9 percent and 8 percent, respectively. This growth was driven by the introduction of new products with increased functionality, very few of which are produced in the United States. [120] For example, increasingly sophisticated mobile devices are replacing stereos, televisions, and

[114] A chip foundry manufactures chips for other companies.
[115] Standard & Poor's, "Industry Surveys: Semiconductors," April 2013, 9.
[116] The definition of "consumer electronics" increasingly varies as new products are developed and existing ones converge. Before the introduction of home computers, "consumer electronics" generally referred to audio and video products, such as radios, television receivers, record players, and tape recorders.
[117] Marketwired, "Vuclip Releases a Sequel," March 19, 2014.
[118] "App" is an abbreviation for a software application that can run on the Internet, a computer, a phone, or another electronic device.
[119] Marketwired, "Vuclip Releases a Sequel," March 19, 2014. One industry source reports that 38 percent of smartphone owners regularly watch videos on their devices, and 10 percent watch full-length television programs on them. EIU, "Telecommunications World Industry Outlook," November 2013, 8.
[120] EIU, "Telecoms and Technology Report," May 28, 2013, 1. According to this report, the United States has outspent the rest of the world in telecommunications equipment each of the past five years, and is forecast to continue doing so through 2017.

other entertainment electronics, resulting in increased imports of computers and telecommunications equipment and decreased imports of consumer electronics. The personal computer, in particular, is becoming a hub for a wide array of consumer electronic devices, ranging from mobile phones and digital music players to cameras and smartphones. [121]

U.S. imports of medical goods in 2013 increased from $32.6 billion to $34.1 billion (5 percent). The aging Baby Boom population, with an increasing need for medical goods, drove this increase, along with the introduction of new cardiovascular and neurological devices. [122] The largest increases occurred with respect to imports from Ireland and China (up by 9 percent from each country); these countries remained the United States' second- and fourth-largest suppliers of medical devices in 2013. Ireland is a global leader in the production of various cardiac devices, and growing U.S. demand for these goods reflects the high rate of U.S. heart-related afflictions. [123] Imports from China were mostly hospital supplies, instruments, and other low-value-added, low-cost devices. [124]

[121] EIU, "Telecoms and Technology Report," May 28, 2013, 1.
[122] *Today's Medical Developments,* "Entering the Medical-Manufacturing Crossroads," February 2013.
[123] CDC, "Heart Disease Facts," February 19, 2014.
[124] See table CH.1 in part 1.

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Energy-Related Products

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Change in 2013 from 2012:

U.S. trade deficit: Decreased by $55.9 billion (22 percent) to $200.2 billion
U.S. exports: Increased by $10.4 billion (7 percent) to $152.7 billion
U.S. imports: Decreased by $45.6 billion (11 percent) to $352.9 billion

The U.S. trade deficit in the energy-related products sector [125] fell by 22 percent (table EP.1) in 2013, continuing the 13 percent decline experienced in 2012. Crude petroleum is the primary energy product in this sector, accounting for 95 percent of the total U.S. trade deficit in energy-related products in 2013. However, the trade deficit in crude petroleum decreased in 2013 (by 16 percent), reaching its lowest level since 2009. This decrease was due to falling U.S. imports resulting from higher domestic production coupled with reduced U.S. consumption. Also, U.S. exports of petroleum products (particularly distillate and residual fuel oils) and natural gas (primarily from oil shale deposits in the Bakken formation) continued to increase in 2013, more than offsetting a drop in U.S. exports of coal (figure EP.1 and table EP.2).

In addition to changes in U.S. supply and demand for energy products, global price changes also impacted U.S. trade, albeit to a much smaller extent. During 2012–13, prices for most energy-related products followed the trends in crude petroleum prices, increasing by an average of 4 percent except for coal, which declined slightly by 2 percent (figure EP.2). The world benchmark price for a barrel of crude petroleum increased slightly in 2013 in response to rising global consumption (particularly in China) and supply disruptions in certain members of the Organization of Petroleum Exporting Countries (OPEC). U.S. natural gas prices increased in 2013 as production from less profitable wells decreased. [126] Global coal prices declined in 2013 as electric utilities (which have been the primary consumers of coal) continued switching to cleaner-burning natural gas.

[125] The quantity and price data presented in this chapter are derived primarily from official statistics of the U.S. Department of Energy.
[126] U.S. Department of Energy, Energy Information Administration, *Short-Term Energy Outlook,"* February 11, 2014.

Table EP.1 Energy-related products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
Canada	10,127	12,436	17,437	18,204	24,720	6,516	35.8
Mexico	7,948	14,471	23,652	24,152	23,386	-766	-3.2
Saudi Arabia	70	70	153	135	182	46	34.2
Venezuela	797	654	768	3,653	2,902	-751	-20.6
Colombia	1,244	2,311	2,791	3,601	5,582	1,980	55.0
Russia	103	187	135	104	141	36	34.6
Netherlands	5,304	5,926	11,632	11,532	11,814	282	2.4
Nigeria	325	617	631	1,005	2,125	1,120	111.5
Ecuador	1,028	2,077	2,371	2,604	3,159	555	21.3
Brazil	2,022	4,368	6,501	7,382	6,712	-669	-9.1
All other	30,858	42,351	68,017	69,923	71,931	2,008	2.9
Total	59,827	85,468	134,088	142,294	152,652	10,358	7.3
EU-28	12,636	14,371	26,597	25,703	26,437	734	2.9
OPEC	2,652	3,585	4,500	7,665	9,273	1,608	21.0
Latin America	23,444	39,593	60,883	69,932	70,962	1,030	1.5
Asia	8,146	12,229	16,760	16,492	16,544	52	0.3
Sub-Saharan Africa	1,166	1,493	1,959	2,107	3,601	1,493	70.9
U.S. imports for consumption:							
Canada	64,367	82,587	103,749	103,042	109,739	6,697	6.5
Mexico	24,214	33,102	44,475	39,375	34,126	-5,248	-13.3
Saudi Arabia	18,916	26,278	38,738	45,245	39,583	-5,663	-12.5
Venezuela	25,044	28,901	35,326	30,237	22,754	-7,483	-24.7
Colombia	6,490	10,337	14,826	17,396	14,937	-2,459	-14.1
Russia	12,768	18,248	24,757	21,617	19,329	-2,288	-10.6
Netherlands	3,458	3,750	5,296	5,437	3,965	-1,472	-27.1
Nigeria	19,136	29,148	33,310	18,838	11,774	-7,064	-37.5
Ecuador	3,436	5,538	7,316	6,937	8,570	1,633	23.5
Brazil	6,118	7,000	8,918	8,631	4,869	-3,762	-43.6
All other	76,930	93,295	114,086	101,687	83,206	-18,480	-18.2
Total	260,878	338,184	430,796	398,441	352,853	-45,588	-11.4
EU-28	18,970	22,157	26,706	27,033	24,012	-3,021	-11.2
OPEC	98,097	130,793	163,728	148,520	119,390	-29,131	-19.6
Latin America	73,035	92,230	122,221	110,576	90,498	-20,078	-18.2
Asia	4,223	7,214	8,805	8,137	9,996	1,860	22.9
Sub-Saharan Africa	37,674	51,266	58,816	36,467	26,393	-10,074	-27.6

See footnote(s) at the end of table.

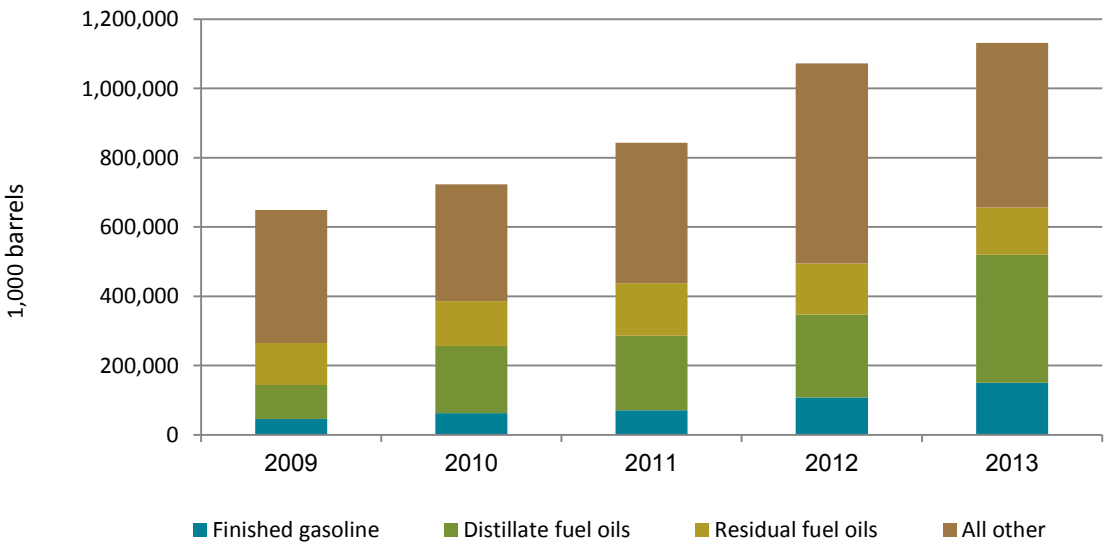
Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
Canada	-54,239	-70,151	-86,312	-84,837	-85,019	-182	-0.2
Mexico	-16,267	-18,631	-20,823	-15,223	-10,740	4,483	29.4
Saudi Arabia	-18,846	-26,208	-38,585	-45,110	-39,401	5,709	12.7
Venezuela	-24,248	-28,247	-34,558	-26,585	-19,852	6,732	25.3
Colombia	-5,247	-8,026	-12,034	-13,795	-9,356	4,439	32.2
Russia	-12,664	-18,061	-24,622	-21,513	-19,189	2,324	10.8
Netherlands	1,847	2,177	6,336	6,094	7,848	1,754	28.8
Nigeria	-18,811	-28,531	-32,678	-17,833	-9,649	8,184	45.9
Ecuador	-2,408	-3,462	-4,944	-4,333	-5,411	-1,078	-24.9
Brazil	-4,096	-2,633	-2,417	-1,250	1,843	3,093	([a])
All other	-46,072	-50,944	-46,070	-31,764	-11,275	20,489	64.5
Total	-201,051	-252,716	-296,708	-256,147	-200,201	55,946	21.8
EU-28	-6,333	-7,786	-108	-1,330	2,426	3,756	([a])
OPEC	-95,445	-127,208	-159,228	-140,855	-110,117	30,738	21.8
Latin America	-49,591	-52,637	-61,337	-40,644	-19,535	21,108	51.9
Asia	3,923	5,015	7,955	8,355	6,547	-1,808	-21.6
Sub-Saharan Africa	-36,508	-49,773	-56,857	-34,360	-22,792	11,567	33.7

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Not meaningful for purposes of comparison.

Figure EP.1 U.S. exports of petroleum products have increased four years in a row



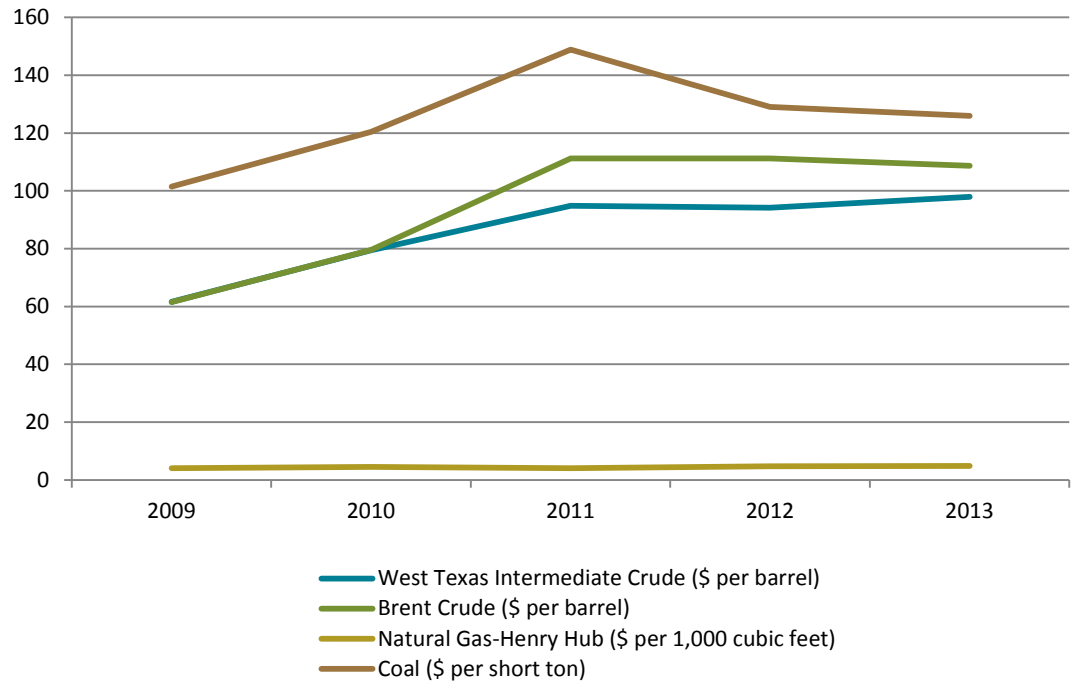
Source: Derived from official statistics of the U.S. Department of Energy.

Table EP.2 Energy-related products: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Petroleum products (EP005)	42,048	61,131	100,425	111,355	119,700	8,345	7.5
Crude petroleum (EP004)	1,620	1,384	1,460	2,184	4,818	2,635	120.6
Decreases:							
Coal, coke, and related chemical products (EP003)	8,079	12,612	19,471	17,779	13,665	-4,115	-23.1
Nuclear materials (EP002)	2,235	1,886	1,948	1,518	1,103	-416	-27.4
Electrical energy (EP001)	575	648	391	233	327	94	40.5
Natural gas and components (EP006)	5,270	7,805	10,394	9,225	13,039	3,814	41.3
Total	59,827	85,468	134,088	142,294	152,652	10,358	7.3
U.S. IMPORTS:							
Decreases:							
Crude petroleum (EP004)	150,809	196,862	246,894	228,944	195,487	-33,457	-14.6
Petroleum products (EP005)	72,581	97,889	135,170	129,773	118,136	-11,638	-9.0
Coal, coke, and related chemical products (EP003)	4,123	5,335	7,076	5,447	4,796	-650	-11.9
Nuclear materials (EP002)	4,454	5,025	4,943	4,171	3,845	-325	-7.8
Natural gas and components (EP006)	26,840	31,001	34,616	28,193	28,296	103	0.4
Electrical energy (EP001)	2,071	2,071	2,096	1,914	2,293	380	19.8
Total	260,878	338,184	430,796	398,441	352,853	-45,588	-11.4

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

Figure EP.2 Trends in energy prices



Source: Derived from official statistics of the U.S. Department of Energy.

U.S. Exports

U.S. exports of energy-related products increased by 7 percent to $152.7 billion in 2013, with the largest growth seen in exports to Canada, Colombia, and Nigeria. The dominant energy-related goods exported from the United States in 2013 continued to be petroleum products. Natural gas, coal, and crude petroleum were also exported, but with much smaller values. [127]

Petroleum Products

The value of U.S. exports of petroleum products increased by 7.5 percent ($8.3 billion) to $119.7 billion in 2013 as exports continued to surge. In 2012, for the first time in over 60 years, the United States exported a larger volume of petroleum products than it imported. In 2013, export volumes rose again, increasing by about 9 percent over 2012 levels to 1.3 billion barrels.

[127] U.S. exports of crude petroleum have been prohibited since 1973, except as approved by the U.S. government. Canada has been the only consistent market for these exports, which are part of a commercial exchange agreement between U.S. and Canadian refiners that has been approved by the secretary of the Department of Energy. In May 1996, the President determined that allowing export of Alaskan North Slope (ANS) crude was in the national interest, thus ending the 23-year ban on ANS crude exports. However, the President can impose new export restrictions if severe crude petroleum supply shortages occur.

While distillate and residual fuels continued to be the leading petroleum exports (with the EU-28 being the primary market), the product mix changed from the previous year, as it normally does. [128] Most of the increase in the quantity of U.S. exports of petroleum products is attributed to the following factors: (1) reduced domestic demand for motor fuels, due in part to a still-lagging economy and more fuel-efficient cars; (2) increased U.S. production of crude petroleum (the feedstock for petroleum products), particularly increased supplies of crude petroleum from North Dakota's Bakken formation; and (3) high demand for distillate and residual fuel oils on the world market.

Particularly strong increases were seen in U.S. exports of petroleum products to France, Colombia, and Nigeria. U.S. exports to France increased by 47 percent to $4.8 billion in 2013This increase was due to the multiweek shutdown of all three of Total's [129] refineries (caused by a workers' strike that began in early 2013), along with maintenance problems. The shutdown resulted in the removal of about 1.2 million barrels per day of distillation capacity during the third quarter of 2013, and much of the fourth quarter as well. [130] U.S. exports to Colombia increased by 56 percent to $5.6 billion because of refining declines at the largest Colombian oil refiner, Cartagena Oil Refinery, caused by worker strikes, which began in September 2012 and lasted through most of 2013. [131] Exports to Nigeria experienced the largest increase, as U.S. exports of fuel oils increased to meet demand. Although Nigeria has four refineries, their capacity utilization rates hover around 16–18 percent due to operational failures, fires, and sabotage, mainly on pipelines leading from the wellhead to the refineries. As a result, the four refineries cannot meet domestic demand. [132]

Coal, Coke, and Other Carbonaceous Materials

In 2013, U.S. exports of coal, coke, and other related products decreased in value by 23 percent to $13.7 billion and in quantity by 6 percent to 117.7 million short tons. The decline in U.S. exports is attributed to the continued economic downturn in the EU-28, the largest regional importer of U.S. coal; decreased Asian demand; and increased coal production in other coal-exporting countries (primarily Australia, which has now fully recovered mining operations following the Queensland floods of 2011–12). In addition, there has been a growing international interest in moving away from coal in favor of cleaner-burning energy sources such as natural gas and certain renewable fuels. [133]

[128] Refineries do not produce only one product from a barrel of crude petroleum; they produce a variety of products, such as gasoline, heating oils, and diesel and bunker fuels. Ultimately, there is a market for all of these products, whether domestic or foreign. Petroleum products are traded globally, and the United States has a long history of exporting certain petroleum products and importing others to balance refinery output and global demand. *Oil and Gas Journal*, "Refining Report," April 15, 2013.
[129] Total is a multinational energy company headquartered in France.
[130] *Oil and Gas Journal,* "Western Europe Leads Global Refining Contraction," December 2, 2013.
[131] Ibid.
[132] U.S. Department of Energy, Energy Information Administration, *Country Analysis Brief—Nigeria*, December 30, 2013.
[133] USDOE, EIA, *Short-Term Energy Outlook,* February 11, 2014.

Natural Gas and Components

The quantity of U.S. natural gas exports (in gaseous form) decreased by 10 percent to 1.5 trillion cubic feet in 2013, but the value increased by 34 percent to $5.8 billion owing to the rise in natural gas prices. [134] U.S. exports of natural gas in gaseous form are transported via pipeline, and the United States' NAFTA partners, Canada and Mexico, are the only U.S. markets. Trade generally fluctuates from year to year based on market size along the pipeline. The price of U.S. exports of pipeline natural gas increased from $2.79 per thousand cubic feet in 2012 to $3.94 per thousand cubic feet in 2013, a 41 percent rise.

The volume of U.S. exports of liquefied natural gas (LNG) continued to decrease, dropping from 28.3 billion cubic feet in 2012 to about 7.3 billion cubic feet in 2013 primarily as a result of increased consumption of natural gas in the United States and decreased exports to Japan. U.S. exports of LNG to Japan fell from 14.0 billion cubic feet in 2012 to 4.3 billion cubic feet in 2013. [135] The decline occurred primarily because Japanese power plants that use natural gas as their fuel source were still operating well below capacity, if at all, due to damage from the March 2011 earthquake and tsunami. Also, during 2013, there was a limited U.S. supply of natural gas from the mature North Cook Inlet gas field, which is liquefied in Kenai, Alaska, solely for export to Japan.

In 2012, for the first time, the United States became a net exporter of liquefied petroleum gases (LPGs) [136], and these exports further increased by 69 percent to 121 million barrels in 2013. In terms of value, U.S. exports of LPGs rose by 78 percent to $4.9 billion, with the strongest export growth to the Netherlands, Brazil, and Japan. This increase was the result of increased production from shale deposits in the Marcellus formation and other areas producing shale gas and tight crude [137]. The U.S. supply of propane and other LPGs is expected to increase as pipeline infrastructure from these shale areas to refineries and natural gas processing plants is built. [138]

U.S. Imports

In 2013, U.S. imports of energy-related products decreased by 11 percent to $352.9 billion. Canada remained the leading source of U.S. imports of energy-related products, with Saudi

[134] Unlike petroleum prices, which are largely set on the world market, U.S. domestic natural gas prices are based on supply and demand in the NAFTA countries, which are connected via pipelines. For the last several years, these prices have ranged below those in Asia and Europe. The difference between domestic and international prices is in part explained by transportation costs, as liquefying and shipping natural gas involves significant costs. Constraints on the industry's capacity to handle liquefied natural gas is another factor driving up international prices.
[135] USDOE, EIA, *Short-Term Energy Outlook,* February 11, 2014.
[136] LPG are a group of hydrocarbon gases or hydrocarbon gas liquids, primarily propane, normal butane, and isobutane, derived from crude petroleum refining or natural gas processing. These gases may be marketed individually or mixed. They can be liquefied through pressurization (without requiring cryogenic refrigeration) for convenience of transportation or storage. These products are primarily used for heating and cooking, as well as chemical conversion.
[137] Tight crude is crude oil extracted from rock formations with low permeability deep below the earth's surface.
[138] USDOE, EIA, "U.S. Exports of Liquefied Petroleum Gases," May 2, 2013.

Arabia, Mexico, Venezuela, Russia, and Nigeria being the other major U.S. import suppliers. However, there were significant shifts in importance among the suppliers; in particular, imports of crude petroleum from Nigeria, Venezuela, Mexico, and Saudi Arabia registered large declines, while Canada was the only supplier to see increased imports. Crude petroleum continued to be the primary energy product the United States imported in 2013, accounting for 55 percent of the total value of sector imports; petroleum products accounted for 33 percent, and natural gas for 8 percent. However, U.S. imports of crude petroleum and petroleum products saw significant declines, while imports of natural gas remained essentially unchanged.

Crude Petroleum

The United States is the second-largest world importer of crude petroleum, being outpaced only by China in 2013. However, the value of U.S. imports of crude petroleum declined by 15 percent to $195.5 billion in 2013, and the quantity declined by 10 percent to 2.8 billion barrels as U.S. production increased by 15 percent to its highest level since 1990. At the same time, U.S. consumption remained at about 2012 levels.

Canada has been the leading U.S. import source of crude petroleum for decades and continued to be so in 2013. U.S. crude imports from Canada increased to 887.7 million barrels valued at $74 billion in 2013, or by 6.5 percent for both quantity and value. Large multinational energy companies operate in both countries and exchange crude and petroleum products across the border. An integrated system of shared pipelines crossing the U.S.-Canada border makes it easy and cost efficient to transport crude petroleum from the wellhead to refineries.

U.S. imports of crude petroleum from all other major sources declined in 2013. Crude petroleum from OPEC, which accounted for 46 percent of the total quantity (33 percent of the value) of crude petroleum imported, declined in 2013 as the share of the U.S. market accounted for by Saudi Arabia, Venezuela, and Nigeria fell. U.S. imports from OPEC declined by 13 percent in quantity to 1.3 billion barrels in 2013. The decreases in imports of crude are due to increased U.S. production, stagnant U.S. demand, and supply disruptions in both Venezuela and Nigeria.

With respect to Nigeria, U.S. imports of crude declined by 37 percent in 2013 to a recent low of 102.6 million barrels. Some of this decline can be attributed to the growth in U.S. crude petroleum production from the Bakken and Eagle Ford shale formations, both of which produce

crude similar in quality to Nigeria's crude. [139] U.S. imports of Nigeria crude as a share of U.S. imports have also fallen as a result of the idling of two U.S. East Coast refineries in late 2011 and early 2012 that were significant purchasers of Nigerian crude; the two refineries reopened in 2013, but are primarily refining domestically produced crude petroleum. [140]

Petroleum Products

The value of U.S. petroleum product imports fell by 9 percent in 2013, while the quantity fell by about 1 percent to 753.0 million barrels. This decrease was due primarily to a small reduction in demand for residual fuel oils, which are used to generate electricity for large industrial complexes; many of these consumers have switched to natural gas, as it is a cleaner-burning and less expensive fuel. [141] Additionally, U.S. refineries, which generally satisfy over 90 percent of domestic consumption, increased their capacity utilization rates in 2013, [142] further reducing demand for imports.

Non-OPEC import sources continue to be the primary suppliers of petroleum products to the United States, accounting for 90 percent of total U.S. imports in 2013. Canada remained the primary source of U.S. imports of petroleum products; imports from Canada increased by 6 percent to 203.1 million barrels in 2013 and accounted for 50 percent of total U.S. imports of these products. [143] Imports from Mexico increased by 13 percent and accounted for 8 percent of total U.S. imports. Imports from most other sources declined, including those from OPEC, which declined 10 percent. Among OPEC countries, imports from Venezuela continued to decline from the low levels witnessed in 2012 because of the massive gas explosion that occurred in August 2012 at the Paraguaná refinery, which resulted in its total closure; the refinery is still not fully operational. [144] Also, U.S. imports of petroleum products from Brazil decreased by about 28 percent in terms of value and by about 3 percent in terms of quantity. Brazil's refineries are already operating at full capacity and cannot meet their own domestic demand; as a result, Brazil nearly ceased all exports of petroleum products in 2013. [145]

Natural Gas and Components

The value of U.S. imports of natural gas increased by 0.4 percent to $28.3 billion in 2013, while the volume of imports fell by 10 percent to 2.6 trillion cubic feet. The increased value of natural

[139] The Bakken and Eagle Ford formations are "shale plays." These are areas with "'fine grained, organic rich, sedimentary rocks. The shales are both the source of and the reservoir for natural gas' and oil." When the rock is fractured or "fracked," the trapped natural gas and oil are released and can be extracted from the ground. The Bakken formation is in North Dakota; the Eagle Ford formation is in Texas. USDOE, EIA, *Review of Emerging Resources*, July 2011, vii.
[140] USDOE, EIA, "U.S. Imports of Nigerian Crude Oil," April 10, 2012.
[141] USDOE, EIA, *Short-Term Energy Outlook,* February 11, 2014.
[142] Ibid.
[143] U.S. imports of refined petroleum products from Canada are mostly distillate and residual fuel oils and gasoline (including stocks for blending motor fuel).
[144] *Oil and Gas Journal,* "Western Europe Leads Global Refining Contraction," December 2, 2013.
[145] Ibid.

gas imports resulted from higher prices for both pipeline natural gas and LNG. Canada remains the primary U.S. supplier, accounting for 99 percent of pipeline natural gas imports, which decreased by 6 percent to 2.8 trillion cubic feet in 2013. This quantity decrease is due to two main factors: (1) a 4 percent increase in U.S. natural gas production, and (2) normal trade fluctuations that occur regularly between the United States and Canada based on changes in market supply and demand along the pipelines.

The quantity of U.S. imports of LNG also declined in 2013, falling by 45 percent to 96.9 million cubic feet, largely due to reduced imports of LNG from Trinidad and Tobago. One reason for the decline was that the price of LNG from Trinidad and Tobago was more than double the price of natural gas imported via pipeline from Canada or produced in the United States. Trinidad and Tobago also diversified export markets for LNG, including entering into long-term contracts with certain Latin American and Caribbean countries. [146] In 2013, the United States fell from being the primary market for LNG from Trinidad and Tobago to ranking as the fourth-largest market behind Spain, Chile, and Argentina.

[146] *Oil and Gas Journal*, "Trinidad and Tobago Energy Minister," October 29, 2012.

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Footwear

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $903 million (4 percent) to $23.8 billion
U.S. exports: Decreased by $36 million (4 percent) to $789 million
U.S. imports: Increased by $868 million (4 percent) to $24.6 billion

In 2013, the U.S. trade deficit in footwear (a category that also includes footwear parts) grew by $903 million (4 percent) as U.S. imports rose by $868 million and U.S. exports fell by $36 million (table FW.1. U.S. exports declined for a second consecutive year from a five-year peak of $832 million in 2011. Although U.S. exports to most leading export destinations fell in 2013, U.S. exports to Vietnam (primarily footwear parts) rose $21 million (up by 54 percent), while those to Canada rose $9 million (8 percent).

Imports supplied over 98 percent of domestic demand in 2013. [147] China remained by far the largest supplier of footwear to the United States, accounting for 69 percent of all U.S. footwear imports. China's share was down from 72 percent in 2012 as other Asian producers, particularly Vietnam and Indonesia, increased their respective shares of the U.S. market at China's expense.

[147] U.S. industry representative, email message to USITC staff, March 24, 2014.

Table FW.1 Footwear: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
China	44	55	56	47	44	-3	-5.7
Vietnam	25	47	54	39	60	21	54.3
Italy	6	4	6	4	4	(a)	-11.0
Indonesia	6	7	12	12	9	-3	-25.5
Mexico	63	79	65	57	44	-13	-23.2
India	5	4	4	4	3	-1	-20.8
Dominican Rep	22	23	26	26	20	-5	-20.4
Brazil	1	2	4	2	2	-1	-30.1
Spain	2	3	4	2	2	-1	-32.0
Canada	83	87	94	116	125	9	7.7
All other	363	417	507	514	476	-39	-7.5
Total	620	728	832	824	789	-36	-4.3
EU-28	54	57	56	56	60	4	7.2
OPEC	32	37	53	50	41	-9	-18.0
Latin America	176	218	230	216	194	-22	-10.1
Asia	229	287	347	336	321	-15	-4.4
Sub-Saharan Africa	34	29	35	27	24	-4	-13.5
U.S. imports for consumption:							
China	13,415	15,727	16,677	17,026	16,876	-151	-0.9
Vietnam	1,323	1,616	2,019	2,388	2,898	510	21.4
Italy	771	896	1,113	1,198	1,323	125	10.4
Indonesia	446	593	764	940	1,158	219	23.3
Mexico	254	319	371	492	548	56	11.3
India	164	180	196	264	290	26	9.7
Dominican Rep	121	167	207	244	269	25	10.2
Brazil	382	360	253	210	200	-10	-4.8
Spain	106	115	142	164	186	22	13.3
Canada	66	66	55	49	47	-1	-2.8
All other	617	671	762	771	818	48	6.2
Total	17,666	20,710	22,559	23,745	24,612	868	3.7
EU-28	1,093	1,283	1,568	1,683	1,860	177	10.5
OPEC	1	1	1	(a)	(a)	(a)	-23.7
Latin America	780	871	878	1,003	1,062	59	5.8
Asia	15,658	18,414	19,979	20,921	21,546	625	3.0
Sub-Saharan Africa	1	1	2	9	21	12	126.9

See footnote(s) at the end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
China	-13,371	-15,671	-16,622	-16,979	-16,831	148	0.9
Vietnam	-1,298	-1,569	-1,965	-2,349	-2,838	-489	-20.8
Italy	-765	-892	-1,107	-1,194	-1,320	-125	-10.5
Indonesia	-440	-586	-752	-927	-1,149	-222	-23.9
Mexico	-191	-239	-307	-435	-504	-69	-15.9
India	-159	-176	-192	-260	-286	-26	-10.1
Dominican Rep	-99	-144	-180	-219	-249	-30	-13.8
Brazil	-381	-358	-249	-207	-198	9	4.5
Spain	-104	-113	-138	-161	-184	-23	-14.0
Canada	18	21	39	68	78	10	15.3
All other	-254	-254	-255	-256	-343	-87	-33.8
Total	-17,046	-19,982	-21,728	-22,920	-23,824	-903	-3.9
EU-28	-1,040	-1,227	-1,512	-1,627	-1,800	-173	-10.7
OPEC	32	36	52	49	40	-9	-18.0
Latin America	-604	-653	-648	-787	-868	-80	-10.2
Asia	-15,429	-18,127	-19,632	-20,585	-21,225	-639	-3.1
Sub-Saharan Africa	33	27	33	18	2	-16	-86.4

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Less than $500,000.

U.S. consumer spending on footwear rose by 2 percent between 2012 and 2013, [148] and sales at U.S. shoe stores increased 1.3 percent during the same period, down from 5 percent growth between 2011 and 2012. [149] Industry sources report that expenditures on fashion footwear categories—namely outdoor and men's casual shoes—experienced the largest growth, at 10 percent and 7 percent, respectively. [150] The boost in sales of casual shoes reflects an apparent style trend "from business and dress attire to an 'anything goes' look with work attire." [151]

U.S. Exports

Canada, Korea, and Vietnam were the top three export markets for U.S. producers; these countries accounted for 16 percent, 11 percent, and 8 percent, respectively, of U.S. exports of footwear by value in 2013. U.S. exports of footwear to Vietnam rose by the largest percentage and amount, up by $21.1 million (54 percent) to $60.1 million. However, virtually all of the U.S. footwear exported to Vietnam consisted of footwear parts used to assemble footwear for the U.S. market. [152] U.S. exports of footwear to Canada grew by $9 million (8 percent) to $125 million, whereas U.S. exports to Korea fell for the first time since 2009, down sharply by $17.6 million (17 percent) to $83.7 million. Other significant markets for U.S. footwear exports in 2013 were Japan, China, and Mexico. U.S. exports to all three of these markets fell in 2013. [153]

Exports account for a significant source of revenue for domestic footwear manufacturers, totaling an estimated 32 percent of industry revenues in 2013. [154] U.S. production of footwear is concentrated in niche markets—rubber/fabric footwear, men's work shoes, and plastic/protective footwear. [155] In addition, U.S. footwear manufacturers compete on the basis of non-price factors such as specialized types of footwear (e.g., hard-to-find sizes/widths and hand-sewn items), quality, design, exclusive channels of distribution, new product introductions, and brand differentiation. American-made shoes have developed a reputation for high quality and value (high-end athletic shoes, for example) that in recent years has enabled them to make inroads into Asian markets such as Korea. [156] In contrast, footwear parts, including removable insoles, heel cushions, and gaiters, which made up just slightly over one fourth of U.S. exports in 2013, are generally used in low-cost countries (such as China and Vietnam) to assemble final goods that are imported back into the United States.

[148] USDOL, BEA, *Personal Consumption Expenditures,* January 2014, table 4.5U.
[149] USDOC, Census, Monthly Retail Trade and Food Services: Shoe Stores, February 2014, table 4482.
[150] NPD Group, "Sales Growth of Men's Fashion Footwear," February 12, 2014.
[151] Ibid.
[152] Vietnam has become a leading source of footwear manufacturing for U.S. footwear firms such as NIKE, Inc. Nike, "Form 10-K," July 19, 2013. (Nike's fiscal year 2013 ended on May 31, 2013.)
[153] Compiled from official statistics of the U.S. Department of Commerce. These countries do not appear in table FW.1 because the table was generated based on U.S. imports, which far exceed U.S. exports.
[154] IBISWorld, *Shoe and Footwear Manufacturing,* September 2013, 9.
[155] AAFA, "ShoeStats 2013," December 2013, 12.
[156] IBISWorld, *Shoe and Footwear Manufacturing,* September 2013, 11, 15, 16.

U.S. Imports

U.S. imports of footwear increased by $868 million (4 percent) to $24.6 billion in 2013 as the U.S. economy continued to strengthen. [157] Demand growth was filled primarily by low-cost imports from Asia, which increased by $625 million between 2012 and 2013. U.S. imports of footwear also grew from Italy (up $125 million) and Mexico (up $56 million).

Most of the growth in Asian imports in 2013 came from Vietnam and Indonesia. Imports from these suppliers rose by $510 million (21 percent) and $219 million (23 percent), respectively, with a small portion of that increase perhaps reflected in a $151 million (0.9 percent) decrease in U.S. imports from China in 2013. Vietnam's General Statistics Office and the Vietnam Leather, Footwear, and Handbag Association reported that Vietnam's total footwear exports reached a record high in 2013, which likely can be attributed to Vietnam's relatively low labor costs compared to other footwear exporters and to the expansion of footwear production by foreign investors in anticipation of expected benefits from the TPP. [158]

Although China remains the largest supplier of footwear imports to the United States, U.S. imports of footwear from China fell by $151 million (1 percent) in 2013. U.S. footwear firms continued to move to a "China plus one" sourcing strategy to diversify away from China and offset rising costs. [159]

Because footwear production is highly labor intensive, U.S. producers have moved much of their production and sourcing of footwear to low-cost suppliers abroad, focusing on branding and design in the United States. [160] For example, Nike manufactured 98 percent of its footwear overseas using independent contract manufacturers in Vietnam, China, and Indonesia. [161] As U.S. producers have increasingly relied on foreign sources for footwear, the U.S. industry has continued to shrink. Between 2008 and 2013, the number of domestic footwear manufacturing establishments fell from 302 to 276 and the workforce decreased from 14,222 to 13,948. [162]

Whereas Asian producers largely supply inexpensive shoes, manufacturers in Italy specialize in making high-quality, high-value leather designer footwear. [163] Italy remains an important supplier to the high-end U.S. market and was the third-largest supplier of footwear to the United States in 2013. Mexico has also expanded as a supplier of footwear to the U.S. market in

[157] U.S. industry representative, email message to USITC staff, March 24, 2014.
[158] *Global Times,* "Vietnam's Footwear Export Hits Record High," January 7, 2014; Yen, "Vietnam Investment Review: Foreign Footwear Companies," December 17, 2013.
[159] AAFA, "ShoeStats 2013," December 2013, 5.
[160] IBISWorld, *Shoe and Footwear Manufacturing,* September 2013, 4. New Balance is the only remaining U.S. producer of athletic footwear that manufactures a portion (25 percent) of its products domestically.
[161] Nike, "Form 10-K," July 31, 2013 (Nike's fiscal year 2013 ended May 31, 2013).
[162] The 2013 data are based on preliminary statistics from the U.S. Department of Labor. USDOL, BLS, "Quarterly Census of Employment and Wages" (accessed February 25, 2014).
[163] IBISWorld, *Shoe and Footwear Manufacturing,* September 2013, 12; Igedo Company, "Shoe Industry Comparisons in Western European Countries," n.d. (accessed May 21, 2013); Italian Trade Commission, "Footwear 2011," (accessed May 21, 2013).

recent years, garnering a reputation for innovative designer shoes. [164] U.S. imports of footwear from Mexico rose by $56 million (11 percent) in 2013 from 2012.

[164] World Footwear, "Mexico Will Host the 5th World Footwear Congress," September 30, 2013; RNCOS Business Consultancy Service, "Mexican Designer Footwear Gaining Traction," November 27, 2013.

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Forest Products

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Change in 2013 from 2012:

U.S. trade balance: Decreased by $1.9 billion to a deficit of $0.7 billion
U.S. exports: Increased by $0.9 billion (2 percent) to $39.2 billion
U.S. imports: Increased by $2.9 billion (8 percent) to $40.0 billion

After three consecutive years of trade surpluses in the forest products sector, the United States swung into a trade deficit in 2013 as a small increase in exports was more than offset by a significant increase in imports. Continued recovery in the U.S. housing market during 2013 drove an increase in demand for imports of wood products such as lumber, wood veneer and wood panels, and moldings, millwork, and joinery. Strengthening construction markets in China led to greater demand for U.S. exports of wood building products.

With an abundance of forest resources, proximity to the United States, and a long-established forest products industry, Canada has traditionally been the largest trading partner of the United States in forest products. In 2013, Canada accounted for 26 percent of the value of U.S. forest products exports and 45 percent of the value of U.S. imports (table FP.1). The U.S. trade deficit with Canada in forest products increased irregularly between 2009 and 2013, from $5.6 billion to $7.8 billion. China is the second-largest trading partner of the United States in this sector and in 2013 accounted for 17 percent of the value of U.S. forest products exports and 21 percent of the value of U.S. imports. The U.S. trade deficit with China in forest products, while fluctuating, has decreased overall from $2.6 billion in 2009 to $1.5 billion in 2013. Other large trading partners of the United States in forest products include Mexico, Japan, and Brazil.

Table FP.1 Forest products: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
Canada	9,142	10,150	10,249	10,236	10,257	21	0.2
China	3,720	5,050	6,722	6,208	6,791	583	9.4
Mexico	4,162	4,891	5,067	5,239	5,391	152	2.9
Japan	1,712	1,992	2,209	2,156	2,218	62	2.9
Brazil	359	445	481	418	388	-30	-7.2
United Kingdom	1,117	1,214	1,277	1,453	1,520	66	4.6
Germany	762	846	794	782	736	-47	-6.0
Korea	765	938	962	845	856	11	1.3
Italy	727	921	928	762	802	39	5.2
Chile	149	225	226	234	239	5	2.3
All other	7,874	9,709	10,359	9,976	10,047	71	0.7
Total	30,489	36,381	39,274	38,309	39,244	935	2.4
EU-28	4,477	5,140	5,244	5,111	5,071	-40	-0.8
OPEC	685	883	1,009	918	940	22	2.4
Latin America	6,647	8,028	8,288	8,363	8,584	221	2.6
Asia	8,284	10,652	12,844	12,000	12,780	780	6.5
Sub-Saharan Africa	206	267	317	284	274	-10	-3.4
U.S. imports for consumption:							
Canada	14,781	16,544	16,521	16,464	18,088	1,624	9.9
China	6,281	7,123	7,333	8,080	8,277	197	2.4
Mexico	1,201	1,369	1,490	1,525	1,651	126	8.3
Japan	482	554	517	531	474	-57	-10.8
Brazil	1,300	1,790	1,793	1,802	2,159	357	19.8
United Kingdom	478	518	545	552	555	3	0.5
Germany	1,055	1,132	1,146	1,158	1,110	-48	-4.1
Korea	373	493	523	516	539	23	4.5
Italy	307	319	349	354	365	11	3.0
Chile	542	558	624	618	764	146	23.6
All other	4,712	5,349	5,429	5,516	5,985	469	8.5
Total	31,511	35,749	36,271	37,116	39,966	2,850	7.7
EU-28	3,975	4,341	4,560	4,528	4,742	214	4.7
OPEC	68	80	77	78	76	-2	-2.7
Latin America	3,384	4,068	4,235	4,271	4,912	641	15.0
Asia	8,693	9,982	10,134	10,981	11,256	274	2.5
Sub-Saharan Africa	79	87	109	122	135	13	10.7

See footnote(s) at the end of table.

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
Canada	-5,639	-6,394	-6,272	-6,228	-7,831	-1,603	-25.7
China	-2,561	-2,073	-612	-1,872	-1,486	386	20.6
Mexico	2,961	3,522	3,577	3,714	3,740	26	0.7
Japan	1,230	1,438	1,692	1,625	1,745	119	7.4
Brazil	-941	-1,345	-1,311	-1,384	-1,771	-387	-28.0
United Kingdom	639	696	732	901	965	64	7.1
Germany	-293	-286	-352	-376	-375	1	0.3
Korea	392	445	439	329	317	-12	-3.7
Italy	421	602	579	408	437	29	7.0
Chile	-393	-333	-398	-385	-525	-140	-36.5
All other	3,162	4,360	4,930	4,459	4,062	-398	-8.9
Total	-1,022	632	3,003	1,193	-723	-1,915	([a])
EU-28	502	800	684	583	330	-254	-43.5
OPEC	617	803	933	840	864	24	2.9
Latin America	3,264	3,960	4,054	4,092	3,672	-420	-10.3
Asia	-410	670	2,710	1,018	1,524	506	49.7
Sub-Saharan Africa	127	181	208	162	140	-23	-14.0

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Not meaningful for purposes of comparison.

U.S. Exports

U.S. exports of forest products rose by 2 percent between 2012 and 2013, from $38.3 billion to $39.2 billion. Most of this increase was accounted for by growth in U.S. exports of logs and rough wood products and lumber, primarily to China (table FP.2). U.S. exports of logs and rough wood products to China rose from $819 million in 2012 to $1.2 billion in 2013, and U.S. exports of lumber to China grew from $743 million in 2012 to $1.0 billion in 2013. Strong construction markets in China increased both demand and prices in these two product categories. [165] Export prices for two commodity grades of U.S. logs increased by 11 percent and 16 percent in 2013 over 2012 levels. [166] The average unit value of U.S. lumber exports to China rose by 3 percent between 2012 and 2013.

U.S. Imports

U.S. imports of forest products grew by 8 percent, from $37.1 billion in 2012 to $40.0 billion in 2013. U.S. imports of lumber, wood veneer and wood panels, and moldings, millwork, and joinery accounted for most of this increase, and within these three product categories, imports from Canada accounted for most of the growth. Imports from Brazil of wood veneer and wood panels and moldings, millwork, and joinery accounted for a smaller portion of this growth. During 2013, the continued recovery in the U.S. housing market strengthened demand and prices for these products. Canadian and Brazilian suppliers participated in this recovery, as did Chinese and Mexican suppliers, to a lesser extent.

U.S. imports of lumber increased by more than $1 billion (27 percent) in 2013 compared to 2012, largely because of demand for single-family housing units. U.S. housing starts increased by 18 percent between 2012 and 2013, from 781,000 starts to 923,000 starts. U.S. housing starts in 2013 were 67 percent higher than during the 2009 trough, when housing starts bottomed out as a result of the financial crisis and subsequent recession. [167] In 2013, U.S. housing starts reached their highest level since 2008. The largest category within U.S. housing starts, single-family starts, experienced a 15 percent gain between 2012 and 2013. [168] Single-family starts consume a higher proportion of lumber to total building materials than multi-family starts. [169] Strong U.S. demand in 2013 pushed up prices for commodity grades of lumber by more than 10 percent over 2012. [170]

[165] IBIS World, *Building Construction in China,* September 2013, 37.
[166] Weyerhaeuser, "Form 10-K," February 28, 2014, 7, 8, 36.
[167] USDOC, Census, New Residential Construction (accessed February 18, 2014).
[168] U.S. housing starts are categorized as 1 unit, 2 to 4 units, and 5 units or more.
[169] Canfor Corporation, "Management's Discussion and Analysis 2013," 2013, 5.
[170] West Fraser, "2013 Management's Discussion and Analysis," 2013, 5.

Table FP.2 Forest products: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Logs and rough wood products (FP001)	1,716	2,236	2,624	2,545	3,117	573	22.5
Lumber (FP002)	1,593	2,256	2,607	2,681	3,130	449	16.7
Decreases:							
Wood pulp and recovered paper (FP009)	6,751	8,788	9,816	9,006	8,768	-239	-2.7
Printed matter (FP016)	5,162	5,405	5,371	5,313	5,094	-219	-4.1
All other	15,267	17,695	18,856	18,764	19,135	371	2.0
Total	30,489	36,381	39,274	38,309	39,244	935	2.4
U.S. IMPORTS:							
Increases:							
Lumber (FP002)	2,639	3,391	3,366	3,961	5,036	1,075	27.1
Wood veneer and wood panels (FP004)	2,961	3,413	3,263	3,931	4,605	673	17.1
Moldings, millwork, and joinery (FP003)	2,125	2,316	2,229	2,478	2,853	375	15.2
Decreases:							
Printed matter (FP016)	3,952	4,282	4,174	4,237	4,181	-56	-1.3
Newsprint (FP012)	1,442	1,377	1,464	1,344	1,290	-54	-4.0
All other	18,392	20,969	21,775	21,164	22,001	836	4.0
Total	31,511	35,749	36,271	37,116	39,966	2,850	7.7

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

Demand for Canadian and Brazilian wood veneer and wood panels and moldings, millwork, and joinery also increased because of U.S. housing starts. Prices for many of these products increased, too. For example, prices for a commodity grade of medium-density fiberboard rose by 7 percent in 2013 over 2012. [171]

[171] West Fraser, "2013 Management's Discussion and Analysis," 2014, 7.

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Machinery

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $3.0 billion (7 percent) to $46.8 billion
U.S. exports: Decreased by $0.1 billion (0.1 percent) to $122.3 billion
U.S. imports: Increased by $2.9 billion (2 percent) to $169.1 billion

In 2013, the U.S. merchandise trade deficit for machinery rose by $3.0 billion to $46.8 billion, a 7 percent increase. Higher U.S. imports of machinery were attributable in part to increased residential and commercial construction in the United States, which boosted demand for several machinery product groups (see figure MT.1).

The United States maintained trade deficits for machinery with most major trading partners except for Canada, Taiwan, and Brazil (table MT.1). In 2013, the machinery trade deficit with China increased by $2.7 billion (9 percent) to $34.9 billion, while the deficit with Japan decreased by $1.8 billion (10 percent) to $15.6 billion.

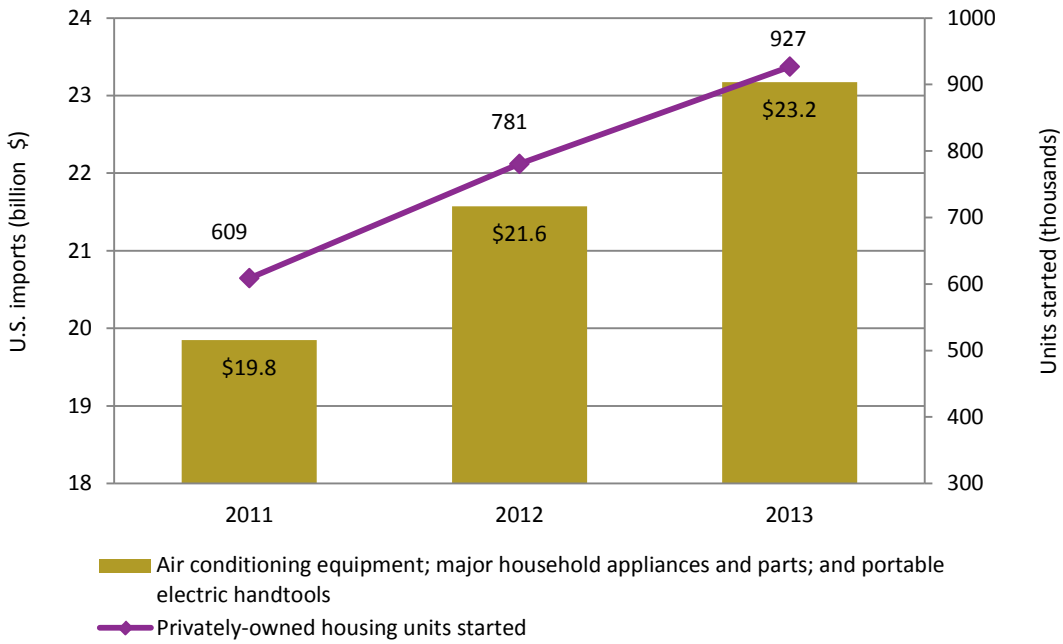
U.S. Exports

U.S. exports of machinery decreased slightly, falling by $135 million (0.1 percent) to $122.3 billion in 2013. Major shifts occurred in taps, cocks, valves, and similar devices; farm and garden machinery and equipment; electric motors and generators; and metal rolling mills (table MT.2). By destination, Mexico, China, and Japan accounted for the largest increases in the value of U.S. exports of machinery (table MT.1). The largest decline in U.S. exports was to Canada.

The largest absolute increase in machinery exports occurred in exports of taps, cocks, valves, and similar devices, which increased by $1.2 billion (13 percent) to $10.2 billion in 2013. Global demand for this product group—which is often used in oil and gas applications—has expanded steadily since 2010, as the petroleum refining and pipeline industries have rebounded following the economic recession. [172] Increased exports to Korea, China, Mexico, and Singapore accounted for 55 percent of the total increase in U.S. exports in 2013.

[172] IBISWorld, *Valve Manufacturing,* November 2013, 8.

Figure MT.1 U.S. residential construction and imports of certain machinery product groups



Source: USITC DataWeb/USDOC (accessed March 10, 2014); USDOC, Census, "New Privately Owned Housing Units Started," n.d. (accessed March 10, 2014).

Table MT.1 Machinery: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise							
China	5,424	7,903	8,946	8,539	9,085	546	6.4
Mexico	10,442	11,655	13,450	15,508	16,491	983	6.3
Canada	17,437	20,324	23,025	24,938	24,658	-280	-1.1
Japan	2,588	2,992	3,467	3,068	3,409	340	11.1
Germany	2,869	3,734	4,213	4,029	3,996	-33	-0.8
Korea	3,454	5,659	5,499	5,632	5,584	-48	-0.9
Taiwan	3,276	5,856	4,529	4,602	4,691	89	1.9
Italy	918	977	1,066	1,012	1,091	79	7.8
United Kingdom	2,426	2,756	2,893	2,971	3,043	72	2.4
France	1,699	1,754	1,898	1,965	1,982	17	0.9
All other	34,893	40,769	46,207	50,140	48,240	-1,900	-3.8
Total	85,427	104,379	115,193	122,404	122,269	-135	-0.1
EU-28	13,568	15,539	17,249	16,939	17,344	404	2.4
OPEC	6,487	7,055	7,224	8,869	8,786	-84	-0.9
Latin America	19,467	23,545	26,475	29,814	29,917	103	0.3
Asia	22,218	31,970	32,827	32,444	32,731	287	0.9
Sub-Saharan Africa	1,834	1,990	2,108	2,396	2,425	30	1.2
U.S. imports for consumption							
China	25,995	32,326	36,534	40,730	44,024	3,294	8.1
Mexico	16,584	20,548	23,144	25,280	26,292	1,011	4.0
Canada	10,352	10,899	12,511	13,350	13,521	171	1.3
Japan	11,633	15,202	19,014	20,461	18,986	-1,475	-7.2
Germany	11,063	12,286	15,302	15,767	16,542	775	4.9
Korea	4,786	5,675	6,379	6,824	6,572	-252	-3.7
Taiwan	2,324	2,810	3,487	3,908	3,942	34	0.9
Italy	4,492	4,369	5,872	6,045	6,258	213	3.5
United Kingdom	2,818	2,953	3,651	3,877	3,932	55	1.4
France	1,966	2,282	2,790	3,095	3,390	295	9.5
All other	18,047	21,118	26,265	26,899	25,654	-1,245	-4.6
Total	110,061	130,469	154,948	166,237	169,113	2,876	1.7
EU-28	29,338	31,803	40,246	41,167	41,564	397	1.0
OPEC	73	95	120	146	146	([a])	0.1
Latin America	17,885	21,966	24,913	27,145	27,835	690	2.5
Asia	48,807	61,488	72,020	79,232	80,673	1,441	1.8
Sub-Saharan Africa	226	319	362	361	344	-17	-4.6

See footnote(s) at the end of table.

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance							
China	-20,571	-24,423	-27,588	-32,191	-34,939	-2,748	-8.5
Mexico	-6,142	-8,893	-9,695	-9,773	-9,801	-28	-0.3
Canada	7,085	9,425	10,514	11,588	11,137	-451	-3.9
Japan	-9,045	-12,209	-15,546	-17,393	-15,577	1,816	10.4
Germany	-8,193	-8,552	-11,089	-11,738	-12,547	-809	-6.9
Korea	-1,331	-17	-880	-1,192	-988	203	17.1
Taiwan	952	3,045	1,042	694	749	55	8.0
Italy	-3,574	-3,392	-4,806	-5,033	-5,167	-134	-2.7
United Kingdom	-392	-198	-757	-906	-889	17	1.8
France	-268	-528	-892	-1,130	-1,408	-278	-24.6
All other	16,845	19,651	19,943	23,241	22,586	-655	-2.8
Total	-24,634	-26,090	-39,755	-43,833	-46,844	-3,011	-6.9
EU-28	-15,770	-16,264	-22,998	-24,228	-24,220	8	([b])
OPEC	6,414	6,959	7,104	8,724	8,640	-84	-1.0
Latin America	1,581	1,578	1,562	2,668	2,082	-586	-22.0
Asia	-26,589	-29,518	-39,193	-46,787	-47,941	-1,154	-2.5
Sub-Saharan Africa	1,608	1,671	1,746	2,035	2,081	46	2.3

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Less than $500,000.

[b]Less than 0.05 percent.

Table MT.2 Machinery: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Taps, cocks, valves, and similar devices (MT020)	5,929	7,071	8,421	9,077	10,248	1,171	12.9
Decreases:							
Farm and garden machinery and equipment (MT009)	7,667	8,653	11,234	13,147	11,645	-1,501	-11.4
Electric motors, generators, and related equipment (MT023)	6,743	7,584	7,897	9,321	8,297	-1,024	-11.0
Metal rolling mills (MT014)	486	524	442	430	347	-83	-19.3
Non-metalworking machine tools (MT018)	582	730	704	688	615	-73	-10.5
All other	64,020	79,815	86,496	89,742	91,117	1,374	1.5
Total	85,427	104,379	115,193	122,404	122,269	-135	-0.1
U.S. IMPORTS:							
Increases:							
Household appliances, including commercial applications (MT004)	16,608	19,731	20,524	21,542	22,763	1,221	5.7
Air-conditioning equipment and parts (MT002)	8,576	10,695	12,810	14,045	14,977	932	6.6
Portable electric handtools (MT025)	2,140	2,431	2,648	2,787	3,081	293	10.5
Boilers, turbines, and related machinery (MT022)	1,899	1,614	1,464	1,299	1,480	181	13.9
Metal rolling mills (MT014)	523	382	425	373	489	117	31.3
Decreases:							
Semiconductor manufacturing equipment and robotics (MT019)	5,914	9,335	13,791	12,711	11,502	-1,209	-9.5
Electric motors, generators, and related equipment (MT023)	10,075	10,338	12,055	13,189	12,103	-1,085	-8.2
Metal cutting machine tools (MT015)	2,173	2,529	4,509	5,822	5,106	-716	-12.3
Pulp, paper, and paperboard machinery (MT011)	830	950	1,033	1,260	981	-278	-22.1
All other	61,323	72,464	85,688	93,209	96,630	3,421	3.7
Total	110,061	130,469	154,948	166,237	169,113	2,876	1.7

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

The largest absolute decrease in machinery exports was in farm and garden machinery, exports of which decreased by $1.5 billion (11 percent) to $11.6 billion. Following a surge in exports in 2011 and 2012 resulting from strong farm incomes, high food prices, and a weak U.S. dollar, exports decreased in 2013 to all major markets except Canada. [173] Slower economic growth, falling food prices, and a stronger U.S. dollar contributed to export declines to several leading markets, such as Brazil, Russia, and South Africa. [174] The export decline to Australia may be attributable to Australian farmers' struggles with serious drought and a strong Australian dollar, which hurt demand for Australian farm exports. [175] The largest decrease in this product group occurred in track-laying tractors, exports of which fell by 54 percent to $805 million in 2013. U.S. exports of this product group to Canada, on the other hand, increased by $330 million (9 percent) to $4.2 billion in 2013. North American farmers were reportedly in a financial position that allowed them to upgrade their equipment. [176]

U.S. exports of motors, generators, and related equipment fell by $1.0 billion (11 percent) to $8.3 billion in 2013. This primarily reflects an $811 million (35 percent) decline in exports of other generating sets, with the largest decline in exports to Venezuela and Australia. There are significant annual fluctuations in U.S. exports of these products, with export volumes and destinations often correlated with orders for individual power plants. [177]

U.S. exports of metal rolling mills declined by $83 million (19 percent) to $347 million in 2013. Exports to China of this product group decreased by $41 million (29 percent) to $101 million in 2013, the lowest level of such exports in recent years. Most of the decline was in exports of parts for rolling mills. The decrease may have been due to improved capabilities of the Chinese industry to manufacture its own rolling mills and parts.

U.S. Imports

In 2013, U.S. imports of machinery increased by $2.9 billion (2 percent) to $169.1 billion. Major shifts occurred in household appliances; air conditioning equipment and parts; portable electric hand tools; boilers, turbines, and related machinery; metal rolling mills; semiconductor manufacturing equipment; electric motors, generators, and related equipment; metal cutting machine tools; and pulp, paper, and paperboard machinery. By origin, China, Mexico, and Germany accounted for the largest increases, while Japan accounted for the largest decrease in the value of U.S. machinery imports.

[173] Deere & Co, "Form 10-K," December 17, 2012, 23.
[174] IMF, "Table 3," March 6, 2014; BBC News, "Brazil's Economy Shrinks 0.5%," December 3, 2013; Zaks, "Russia Economy Chief Says Dire 2013 Was 'Low Point,'" January 31, 2014.
[175] Tcktcktck, "Australian Farmers Suffer through Drought," May 1, 2013.
[176] Kanicki, "Dealers View 2014 with 'Tempered' Confidence," October 2013; Canada's Farm Progress Show, "Canada's Farm Show Rolls Out Red Carpet," March 18, 2013.
[177] For an example of the extent to which demand for these products can fluctuate annually and by region, see *Diesel and Gas Turbine Worldwide,* "37th Power Generation Order Survey," May 2013, 3–4, and *Diesel and Gas Turbine Worldwide,* "36th Power Generation Order Survey," May 2012, 3–4.

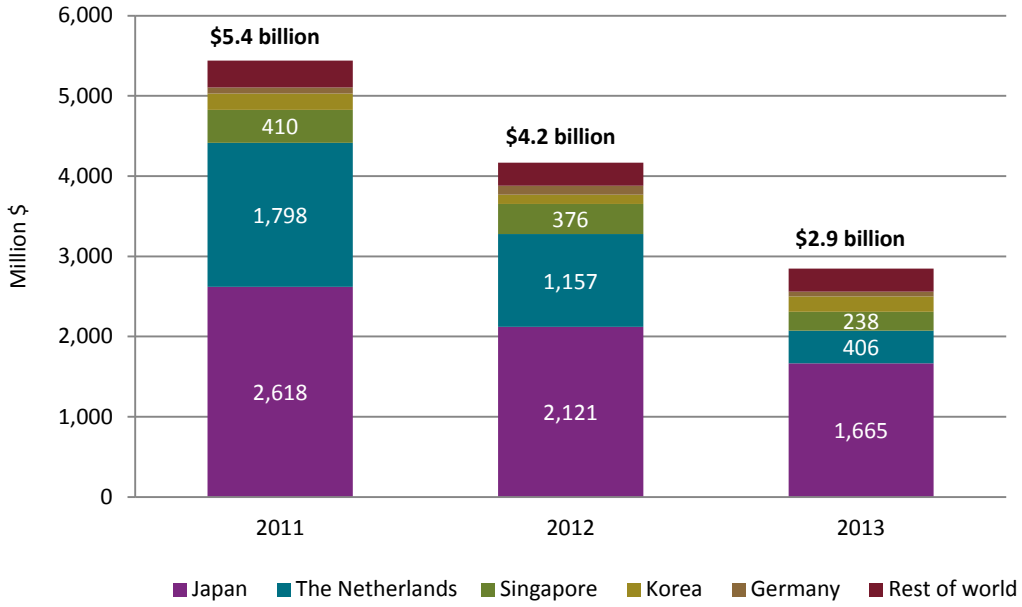
The largest absolute increase in machinery imports in 2013 came from imports of household appliances, which increased $1.2 billion (6 percent) to $22.8 billion. The increase was largely composed of greater imports of combined refrigerator-freezers from China and Mexico (up by $399 million), along with food processors (up by $200 million) and other motorized appliances. The increase in imports is attributable to growth in residential construction, which is one of the largest drivers of demand for household appliances. [178] Imports of household appliances from China rose by $1.4 billion in 2013; such imports have grown every year since 2010, as more companies have located their overseas facilities in China to access low labor costs. [179]

The second-largest absolute increase involved imports of air-conditioning equipment and parts, which increased by $932 million (7 percent) to $15.0 billion. The import growth largely came from Mexico (up by $618 million), China ($183 million), and Korea ($105 million). Growth in residential and commercial construction and home improvements spurred demand for this product group, [180] which is increasingly produced overseas. The increase in imports is part of a trend since 2010, as manufacturers moved some of their facilities for this product group to Mexico, China, and other markets during the economic recession. [181]

The largest absolute decrease in U.S. imports came in semiconductor manufacturing equipment and robotics, which fell by $1.2 billion (10 percent) to $11.5 billion in 2013. The decrease in 2013 followed a $1.1 billion decrease in 2012. The decline was driven primarily by a $1.3 billion decline in U.S. imports of machines and apparatus for the manufacture of semiconductor devices or electronic integrated circuits. Imports from the top five U.S. partners for these products—Japan, the Netherlands, Singapore, Korea, and Germany—fell by $1.3 billion in 2013 (see figure MT.2). The decrease in 2013 likely indicates a shift away from demand for larger, high-capital machinery investments, as the construction of a number of large new semiconductor wafer fabrication facilities concluded in the United States. However, despite the fall in import values, U.S. import quantities of semiconductor manufacturing equipment more than doubled in 2013, indicating an increase in imports of lower-value parts, components, and machinery. Import values for semiconductor manufacturing equipment have fluctuated frequently over the past decade due to changes in the capacity needs of the domestic semiconductor manufacturing industry. [182]

[178] IBISWorld, Major Household Appliance Manufacturing, December 2013, 5.
[179] Ibid., 10.
[180] IBISWorld, Heating and Air Conditioning Equipment Manufacturing, October 2013, 17.
[181] Ibid., 20.
[182] Lineback et al., *The McClean Report,* 2013.

Figure MT.2 Imports of certain semiconductor machinery



Source: USITC DataWeb/USDOC (accessed March 10, 2013).

U.S. imports of electric motors, generators, and related equipment fell $1.1 billion (8 percent) to $12.1 billion in 2013. The decline was likely due to decreased wind turbine demand linked to the expected expiration of a long-standing production tax credit (PTC)—the main tax credit for the wind sector—at the end of 2012. While the PTC was ultimately renewed, the late timing of the renewal motivated managers to schedule project activities for 2012 that might otherwise have been left for 2013; the uncertainty also limited project development activity going into 2013. [183] As a result, U.S. wind turbine installations declined from 13,131 megawatts (MW) in 2012 to 1,084 MW in 2013. [184] This led to a $952 million decline in U.S. imports of wind-powered generating sets, [185] a $159 million decline in imports of generators for wind turbines, and a $95 million decline in imports of parts of wind turbine generators.

Imports of metal-cutting machine tools decreased by $716 million (12 percent) to $5.1 billion in 2013. Much of the decline came in the form of reduced imports of machining centers and lathes, which are widely used in the motor vehicle, aerospace, and medical devices industries. U.S. consumers of machine tools tend to purchase these large capital machines every three to five years. The decrease in 2013 thus reflects typical industry trends, as imports of this product

[183] USITC, Renewable Energy and Related Services, August 2013, 4-8 to 4-9.
[184] AWEA, "AWEA U.S. Wind Industry Fourth Quarter," January 30, 2014, 3.
[185] Wind-powered generating sets include nacelles and any items imported with the nacelle, such as the blades or hub. If these components are imported or exported separately from the nacelle, they are included in different Harmonized System subheadings.

group increased by $3.3 billion from 2010 to 2012. By market, imports from Japan fell by $362 million (15 percent) in 2013, followed by those from Taiwan ($129 million, or 25 percent), Germany ($119 million, or 12 percent), and Korea ($115 million, or 25 percent). The drop in imports from Japan was due to Japanese companies increasing their U.S.-based production beginning in late 2012: one producer opened a new U.S factory in 2013, and another expanded its existing U.S. operations. [186]

[186] *Metalworking Production and Purchasing,* "Mazak Rolls Out 30,000th Kentucky-Built Machine," September 10, 2013; DMG Mori Seiki Manufacturing, "About Us," http://www.dmgmoriseikimfgusa.com/about-us (accessed March 10, 2014).

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Minerals and Metals

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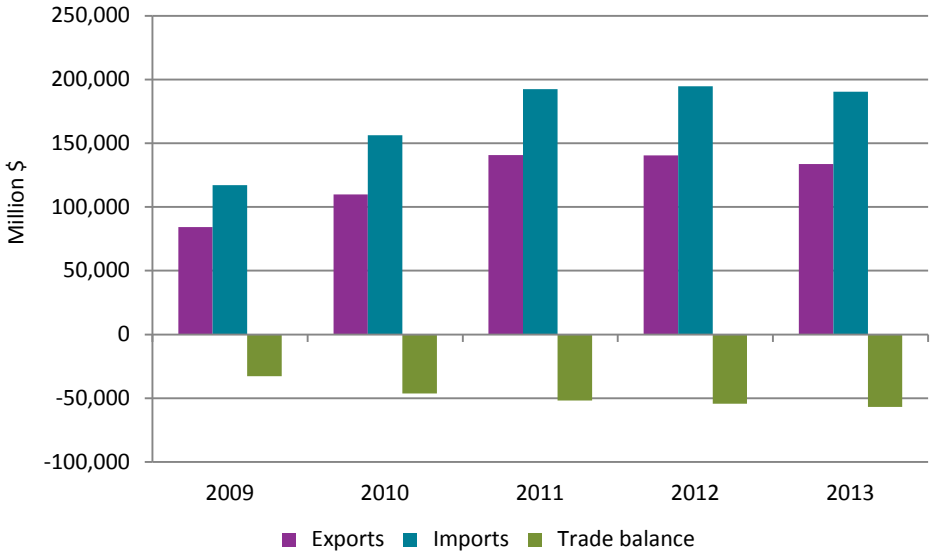
Change in 2013 from 2012:

U.S. trade deficit: Increased by $2.5 billion (4.7 percent) to $56.7 billion
U.S. exports: Decreased by $6.8 billion (4.8 percent) to $133.7 billion
U.S. imports: Decreased by $4.2 billion (2.2 percent) to $190.5 billion

In 2013, both U.S. exports and U.S. imports of minerals and metals decreased, and since the decline in exports exceeded the decline in imports, the U.S. trade deficit in this category continued to widen. The United States has maintained a trade deficit in minerals and metals in each successive year since 2009 (figure MM.1). During this five-year period, the U.S. trade deficit widened the most with China (by $5.2 billion), followed by India ($4.7 billion), Israel ($3.3 billion), and Canada ($2.2 billion) (table MM.1). Leading shifts among U.S. imports and exports of minerals and metals over 2009—13 (table MM.2) reflected the economic performance of the major downstream consuming industries. Of particular importance were recovering construction activity, [187] varying growth rates among individual durable-goods manufacturing industries, [188] and continued rising energy production. [189] Such shifts also resulted from shortfalls in domestic mine resources for many critical raw materials and generally lower commodity prices. [190]

[187] USDOC, Census, "December 2013 Construction at $930.5 Billion Annual Rate," February 3, 2014, table 1, "Value of Construction Put in Place in the Place in the United States, Not Seasonally Adjusted," 1 and 3.
[188] USDOC, Census, "Full Report on Manufacturers' Shipments," February 4, 2014, table 1, "Value of Manufacturers' Shipments for Industry Groups," 2.
[189] USDOE, EIA, "Crude Oil and Natural Gas Resource Development," February 25, 2014, 75–80.
[190] USDOI, USGS, "Significant Events, Trends, and Issues," January 2013, 7.

Figure MM.1 Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, for minerals and metals, 2009–13



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

Table MM.1 Minerals and metals: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
Canada	18,907	24,978	28,710	28,691	27,585	-1,106	-3.9
China	8,703	10,791	13,489	12,099	11,998	-101	-0.8
Mexico	9,603	12,450	15,764	17,766	18,918	1,152	6.5
Switzerland	7,035	10,196	13,227	14,622	13,413	-1,209	-8.3
India	2,176	3,159	2,835	4,645	2,640	-2,004	-43.2
Hong Kong	1,347	2,536	7,848	8,855	11,770	2,915	32.9
Germany	2,371	3,710	4,338	3,903	4,047	143	3.7
Japan	2,043	3,026	3,670	3,088	3,213	125	4.0
Israel	737	700	1,156	1,903	857	-1,045	-54.9
Korea	2,658	3,176	4,170	3,829	3,674	-155	-4.1
All other	28,771	35,188	45,433	41,116	35,633	-5,483	-13.3
Total	84,351	109,910	140,640	140,516	133,749	-6,767	-4.8
EU-28	17,343	21,354	26,493	23,126	16,737	-6,389	-27.6
OPEC	2,222	2,172	3,077	3,670	4,452	782	21.3
Latin America	13,399	17,199	21,300	23,641	24,707	1,066	4.5
Asia	21,194	28,616	40,118	39,286	40,241	955	2.4
Sub-Saharan Africa	789	1,136	1,407	1,520	1,922	402	26.5
U.S. imports for consumption:							
Canada	22,533	31,382	35,358	32,529	33,380	851	2.6
China	19,146	22,208	25,258	26,890	27,616	726	2.7
Mexico	12,142	16,236	21,944	21,997	19,257	-2,740	-12.5
Switzerland	1,102	1,259	1,667	1,642	1,364	-278	-16.9
India	5,136	7,714	9,149	8,668	10,286	1,618	18.7
Hong Kong	304	384	457	544	579	35	6.5
Germany	4,496	6,221	7,722	7,726	7,540	-187	-2.4
Japan	4,468	5,752	6,971	8,024	7,362	-662	-8.3
Israel	5,966	8,242	9,741	8,817	9,375	559	6.3
Korea	2,387	3,466	5,038	5,878	5,539	-340	-5.8
All other	39,347	53,334	69,244	71,997	68,175	-3,822	-5.3
Total	117,025	156,199	192,550	194,712	190,474	-4,238	-2.2
EU-28	18,316	23,555	29,028	30,107	29,061	-1,046	-3.5
OPEC	707	1,261	2,286	2,461	2,131	-330	-13.4
Latin America	22,469	29,944	41,802	44,226	40,534	-3,692	-8.3
Asia	36,410	46,351	55,319	59,271	60,477	1,206	2.0
Sub-Saharan Africa	3,813	5,702	6,519	5,523	5,334	-189	-3.4

See footnote(s) at the end of table.

Item	Million $					Absolute change, 2012–13	Percent change, 2012–13
	2009	2010	2011	2012	2013		
U.S. merchandise trade balance:							
Canada	-3,625	-6,404	-6,649	-3,838	-5,795	-1,957	-51.0
China	-10,443	-11,416	-11,769	-14,792	-15,619	-827	-5.6
Mexico	-2,540	-3,786	-6,180	-4,230	-339	3,892	92.0
Switzerland	5,933	8,937	11,560	12,980	12,049	-931	-7.2
India	-2,959	-4,555	-6,314	-4,023	-7,646	-3,622	-90.0
Hong Kong	1,043	2,152	7,392	8,311	11,191	2,880	34.7
Germany	-2,125	-2,511	-3,384	-3,823	-3,493	330	8.6
Japan	-2,425	-2,726	-3,301	-4,936	-4,149	787	16.0
Israel	-5,229	-7,542	-8,585	-6,914	-8,518	-1,604	-23.2
Korea	272	-290	-868	-2,049	-1,865	185	9.0
All other	-10,576	-18,146	-23,812	-30,881	-32,542	-1,661	-5.4
Total	-32,674	-46,288	-51,910	-54,196	-56,725	-2,529	-4.7
EU-28	-973	-2,201	-2,534	-6,981	-12,324	-5,344	-76.5
OPEC	1,515	911	792	1,209	2,321	1,112	92.0
Latin America	-9,070	-12,745	-20,502	-20,585	-15,827	4,758	23.1
Asia	-15,216	-17,735	-15,201	-19,986	-20,236	-250	-1.3
Sub-Saharan Africa	-3,024	-4,565	-5,113	-4,003	-3,411	592	14.8

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

Table MM.2 Minerals and metals: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Miscellaneous products of base metal (MM031)	5,997	7,087	8,066	8,817	9,318	502	5.7
Pipes and tubes of carbon and alloy steels (MM025L)	2,565	3,042	3,204	3,895	4,179	284	7.3
Industrial fasteners of base metal (MM032)	1,962	2,446	2,854	3,133	3,380	247	7.9
Cement, stone, and related products (MM009)	2,069	2,703	3,070	3,245	3,442	197	6.1
Decreases:							
Precious metals and non-numismatic coins (MM020)	20,699	28,033	42,230	42,762	38,868	-3,893	-9.1
Iron and steel waste and scrap (MM023)	7,125	8,399	11,398	9,449	7,595	-1,854	-19.6
Natural and synthetic gemstones (MM019)	2,447	3,303	3,684	3,623	2,356	-1,267	-35.0
Plates, sheets, and strips of carbon and alloy steels (MM025B)	3,940	5,137	5,976	5,744	5,320	-424	-7.4
Bars, rods, and light shapes of carbon and alloy steels (MM025C)	989	1,536	1,860	1,826	1,483	-343	-18.8
Unrefined and refined copper (MM036A)	452	579	243	754	508	-247	-32.7
Metal construction components (MM028)	1,147	1,227	1,428	1,802	1,562	-240	-13.3
Ingots, blooms, billets, and slabs of carbon and alloy steels (MM025A)	459	474	818	632	409	-223	-35.3
Unwrought aluminum (MM037)	2,673	3,930	4,977	4,418	4,200	-218	-4.9
Angles, shapes, and sections of carbon and alloy steels (MM025D)	459	659	1,007	1,112	922	-190	-17.1
All other	31,369	41,357	49,825	49,305	50,206	902	1.8
Total	84,351	109,910	140,640	140,516	133,749	-6,767	-4.8
U.S. IMPORTS:							
Increases:							
Natural and synthetic gemstones (MM019)	13,608	19,730	23,625	21,597	24,733	3,136	14.5
Cement, stone, and related products (MM009)	4,536	5,066	5,498	5,840	6,482	643	11.0
Unrefined and refined copper (MM036A)	3,403	4,489	5,840	4,938	5,453	515	10.4
Primary and secondary aluminum (MM037A)	5,021	6,163	7,471	6,839	7,249	410	6.0
Certain builders' hardware (MM045)	3,119	3,646	3,848	4,026	4,379	353	8.8
Refined lead (MM039A)	213	258	299	344	692	347	100.9
Miscellaneous products of base metal (MM031)	9,686	11,889	13,630	14,938	15,209	271	1.8
Nonpowered handtools (MM042)	3,628	4,786	5,445	6,088	6,344	256	4.2
Cooking and kitchen ware (MM033)	2,180	2,683	2,676	2,781	3,023	243	8.7
Ceramic floor and wall tiles (MM012)	964	1,025	1,078	1,184	1,412	228	19.3
Unwrought zinc (MM040A)	1,076	1,449	1,605	1,318	1,543	225	17.0

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
Decreases:							
Pipes and tubes of carbon and alloy steels (MM025L)	6,718	6,798	8,952	11,324	8,919	-2,405	-21.2
Precious metals and non-numismatic coins (MM020)	16,287	23,701	33,423	32,257	30,181	-2,075	-6.4
Certain base metals and chemical elements (MM041)	3,822	6,106	7,563	6,744	5,830	-914	-13.6
Fabricated structurals (MM027)	1,366	1,215	1,211	1,893	1,025	-868	-45.8
Plates, sheets, and strips of carbon and alloy steels (MM025B)	4,480	6,133	7,934	8,726	7,896	-830	-9.5
Ingots, blooms, billets, and slabs of carbon and alloy steels (MM025A)	891	2,535	4,192	4,109	3,397	-712	-17.3
Ferroalloys (MM022)	1,062	2,668	2,930	2,899	2,380	-519	-17.9
Primary iron products (MM021)	1,184	2,149	2,916	2,925	2,474	-452	-15.4
Plates, sheets, and strips of stainless steels (MM025G)	670	1,423	1,830	1,771	1,354	-417	-23.6
Bars, rods, and light shapes of carbon and alloy steels (MM025C)	1,472	2,362	3,110	3,466	3,111	-355	-10.2
Iron ores and concentrates (MM003)	375	703	841	757	426	-331	-43.7
Industrial ceramics (MM010)	712	1,241	1,815	1,700	1,464	-237	-13.9
All other	30,553	37,980	44,816	46,249	45,497	-752	-1.6
Total	117,025	156,199	192,550	194,712	190,474	-4,238	-2.2

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

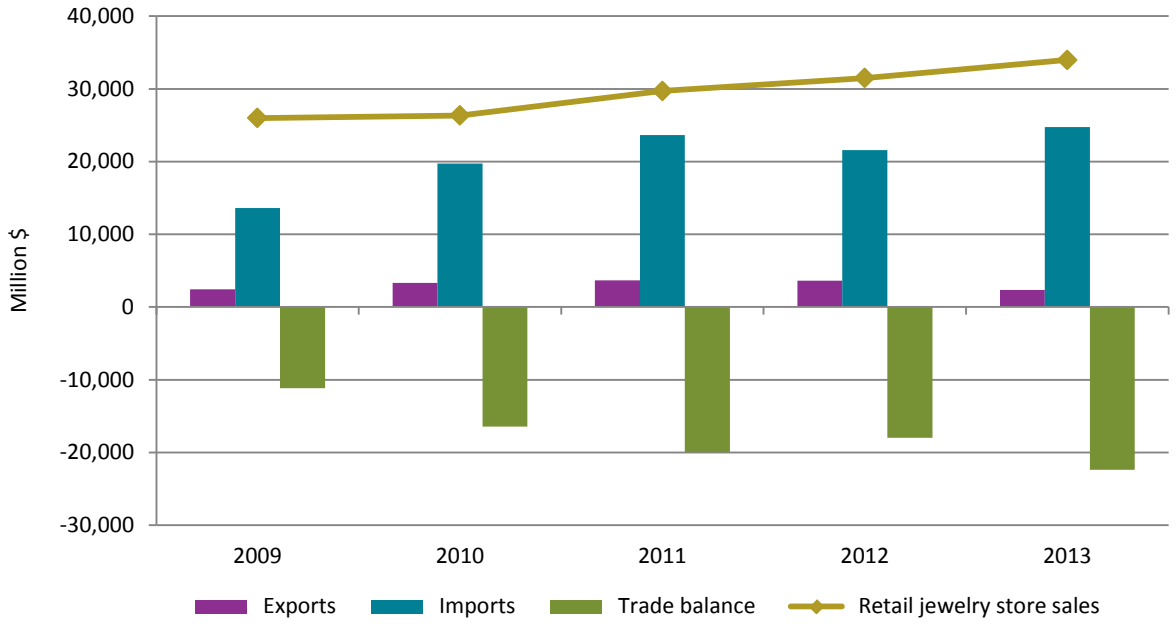
Among the leading changes for U.S. trade in minerals and metals in 2012–13 were significant shifts in both U.S. exports and U.S. imports of natural and artificial gemstones and precious metals and non-numismatic coins (table MM.2). U.S. trade in natural and artificial gemstones significantly contributed to widening the U.S. trade deficit for minerals and metals between 2012 and 2013; the deficit grew by $4.4 billion (24 percent) to $22.4 billion (figure MM.2). On the one hand, U.S. exports of natural and artificial gemstones decreased by $1.3 billion (35 percent) to $2.4 billion in 2013, with the largest decreases recorded to Israel, followed by India. On the other hand, U.S. imports of these goods increased by $3.1 billion (15 percent) to $24.7 billion, with the largest increases recorded from India, followed by Israel and Belgium. India is one of the world's largest centers for the processing (cutting and polishing) of diamond and colored gemstones and for the making of precious jewelry, and Israel and Belgium are both major diamond processing and trading centers.

Nonindustrial (gem-quality) diamonds—worked, but not mounted or set—accounted for most of the U.S. trade shifts for gemstones. The decrease of $1.2 billion in the value of exports reflected lower quantities shipped, while the increase of $3.0 billion in the value of imports reflected higher imports of higher-priced, larger diamonds (weighing more than 0.5 carat each) rather than lower-priced, smaller ones (not more than 0.5 carat each). [191]

Industry observers' anticipation in first quarter 2013 that U.S. retail sales of precious jewelry and watches would continue growing from 2012 levels [192] was fulfilled by reports of robust year-end holiday sales. [193] Lacking domestic mined-diamond resources, the United States was almost totally dependent upon imports to meet increased downstream consumption needs of precious jewelry manufacturers. [194]

[191] USITC DataWeb/USDOC (accessed March 10, 2014).
[192] Munn, *U.S. Retail Jewelry Industry Update 2013*, n.d. (accessed March 11, 2014).
[193] Bates, "Jewelry Will Be among Holiday Season's Top-Selling Categories," December 3, 2013; Ford, "Report: U.S. Jewelry and Watch Sales," December 24, 2013; Cavale, "Discounts, Promotions Spur Sales," December 26, 2013. U.S. consumer demand for gold, in the form of precious jewelry, increased by 14 metric tons (13 percent) to 123 metric tons in 2013. WGC, "Gold Demand Trends Full Year 2013," February 18, 2014, 21, table 11, "Consumer Demand in Selected Countries: Four-Quarter Totals (Tonnes)."
[194] Hence, U.S. diamond exports are reexports of recut stones or recovered stones (e.g., from disposal of precious jewelry). Olson, "Gemstones," February 2014, 62.

Figure MM.2 U.S. trade flows of natural and synthetic gemstones and retail jewelry store sales, 2009–13



Source: Compiled from official statistics of the U.S. Department of Commerce; USDOC, Census, *Monthly Retail Trade and Food Services*, Jewelry Stores (accessed March 26, 2014).
Note: Retail jewelry stores (NAICS 44831) sell any combination of precious (fine) jewelry, sterling ware, and watches. Inclusion of department stores sales of these items would more than double these values.

U.S. Exports

Although U.S. exports of minerals and metals decreased by $6.8 billion (4.8 percent) to $133.7 billion in 2013, certain products recorded increased exports (table MM.2). The leading U.S. export was miscellaneous products of base metal, which increased by $502 million (6 percent) to $9.3 billion. The United States' NAFTA partners (Canada and Mexico) were the leading U.S. destination markets for these products in 2013, with Mexico recording the largest increase in exports, up $205 million (8 percent) to $2.7 billion. U.S. exports to NAFTA partners reflect the extensive integration of the North American manufacturing industry through production-sharing arrangements and cross-border ties. Specific products in this category that recorded the largest export increases included miscellaneous iron or steel articles (up by $246 million); miscellaneous aluminum articles (up by $147 million); and base-metal hinges, castors, mountings, and fittings (up by $135 million). U.S. exports of miscellaneous base-metal products increased concurrently with the growth in shipment values reported by durable-goods

manufacturers, either of finished base-metal products or of downstream products that contain intermediate base-metal products. [195]

Precious metals and non-numismatic coins recorded the leading U.S. export decrease by value, down $3.9 billion (9 percent) to $38.9 billion. The largest decreases in exports were to the United Kingdom and Switzerland—major global centers for refining, fabricating, and trading of all precious metals—and India, a major precious-jewelry fabricating and consuming market. Gold accounted for most of this export decline, as exports of unwrought gold (as unrefined doré and refined bullion) decreased by $1.8 billion, while gold waste and scrap exports decreased by $1.4 billion.

In addition to the smaller quantity of gold exported in 2013, [196] the price for gold also decreased in 2013, [197] further reducing the value of gold exports. Some financial-market observers attributed the decrease in gold prices to the fact that investors were less concerned about potential inflation. [198]

As the world's largest and most highly industrialized economy, with a well-established, nationwide scrap recovery infrastructure, the United States is the world's leading generator of ferrous (iron and steel) scrap, with production levels far exceeding domestic consumption needs. [199] However, the value of U.S. exports of iron and steel waste and scrap decreased by $1.9 billion (20 percent) to $7.6 billion. This decline reflected both lower quantities exported [200] and weaker prices. [201] The lower export quantities were attributed by industry observers to competition with scrap production in foreign markets; the weaker prices, to overcapacity among domestic scrap generation and processing operations. [202] Turkey, followed by Taiwan, India, Korea, China, and Malaysia, accounted for the largest decreases in U.S. exports (in excess of $100 million each). All six trading partners have large steel industries, [203] and each is highly

[195] U.S. manufacturers of durable goods reported a 3.4 percent increase of their shipments in 2013 compared to the previous year. USDOC, Census, "Full Report on Manufacturers' Shipments, Inventories and Orders, December 2013," February 4, 2014, table 1, "Value of Manufacturers' Shipments for Industry Groups," 2.
[196] U.S. exports of the gold contained in doré, bullion, and waste and scrap decreased by 135 metric tons (14 percent) to 812 metric tons. USITC DataWeb/USDOC, March 10 and 12, 2014.
[197] The London Bullion Market Association's "p.m. gold fix" (the world price for gold announced each afternoon in London) averaged $1,411.23 per troy ounce in 2013, which was $257.75 (15 percent) below the 2012 annual average price. LBMA, "Historic Statistics, Gold Fixings, Daily Prices," March 5, 2014.
[198] Berthelsen, Wessel, and Zuckerman, "Gold Plunges As Fears over Inflation Fade," April 16, 2013.
[199] In 2012 (the most recent year for which information was available), the United States exported 21 million metric tons (21 percent) of the 103 million metric tons of ferrous waste and scrap exported worldwide. WSD, "Table 49: Exports of Scrap," *Steel Statistical Yearbook 2013*, November 15, 2013, 102–3.
[200] The United States exported 19 million metric tons of ferrous waste and scrap in 2013, nearly 3 million metric tons (14 percent) less than the amount in the previous year. USITC DataWeb/USDOC, March 6, 2014.
[201] Average annual U.S. ferrous scrap prices declined by $23.95 per long ton (6 percent) to $375.17 per long ton in 2013. Calculated from the annual averages of weekly prices for no. 1 bushelings, no. 1 heavy melting steel, and shredded automobile scrap. AMM, "AMM's Pricing Section," February 6, 2014.
[202] Fenton, "Iron and Steel Scrap," February 2014, 81.
[203] WSD, "The Largest Steel Producing Countries," January 22, 2014.

dependent upon foreign sources of ferrous scrap for their steelmaking industries. [204] However, all six trading partners imported less ferrous scrap from the world in 2013 than in the previous year, [205] although their reasons varied: crude-steel output decreased in Turkey and Korea, but crude-steel producers in Taiwan, India, China, and Malaysia shifted to other types of ferrous raw materials [206] for their increased output. [207]

U.S. Imports

Overall, U.S. imports of minerals and metals declined by $4.2 billion (2.2 percent) to $190.5 billion in 2013. Contributing significantly to this decline were imports of pipes and tubes of carbon and alloy steels (table MM.2), which decreased by $2.4 billion (21 percent) to $8.9 billion. Japan, followed by Germany, Canada, the UK, India, Russia, and China, accounted for the largest decreases in U.S. imports (in excess of $100 million each) in 2013. This decrease reflected both weaker prices and lower import quantities [208] during a period when U.S. domestic consumption of steel pipe and tube also decreased. [209] Lower activity levels in the leading end-use markets were cited by some industry observers as dampening domestic demand for line

The value of U.S. imports of precious metals and non-numismatic coins fell by $2.1 billion (6 percent) to $30.2 billion, with the largest decreases recorded from Mexico, followed by Colombia, Bolivia, and South Africa—all major precious-metal mining countries. Gold accounted for most of this decline, with the value of imports of unwrought gold down by $1.8 billion and that of imports of gold waste and scrap down by $354 million. As the quantity of gold imports actually increased in 2013, the decreased value of U.S. imports was caused solely by significantly lower gold prices. [210] The lower prices, combined with improved consumer sentiment, spurred increased U.S. consumer demand in 2013 for precious jewelry and investment items (in the forms of bullion bars and non-numismatic coins), the largest end-use sectors for gold consumption. [211]

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[204] For information about quantities of ferrous scrap imported by these steelmakers in 2012, see WSD, "Table 50: Imports of Scrap," *Steel Statistical Yearbook 2013*, November 15, 2013, 104–5.

[205] Import quantities of HS 7204: ferrous waste and scrap; remelting scrap ingots of iron or steel. GTIS, Global Trade Atlas, March 10, 2014.

[206] Other ferrous raw materials for steelmaking can include iron ore, directly reduced iron, domestically generated ferrous scrap, inventoried ferrous scrap of domestic and foreign origin, etc.

[207] WSD, "The Largest Steel Producing Countries," January 22, 2014.

[208] U.S. imports of pipes and tubes of carbon and alloy steels fell by 816,700 metric tons (11 percent) to less than 7 million metric tons in 2013. USITC DataWeb/USDOC, March 8, 2014.

[209] U.S. domestic consumption of pipes and tubes of carbon and alloy steel decreased by 525,700 short tons (3 percent) to 18 million short tons in 2013. Preston, "All Pipe and Tube Market Analysis," February 2014, 27, 62; Preston, "All Pipe and Tube Market Analysis," February 2013, 60.

[210] U.S. imports of the gold contained in these forms increased by 157 metric tons (35 percent) to 599 metric tons. USITC DataWeb/USDOC, March 10 and 12, 2014.

[211] U.S. consumer demand for gold, in the forms of precious jewelry, bullion bars, and non-numismatic coins, increased by 28 metric tons (18 percent) to 190 metric tons in 2013. WGC, "Gold Demand Trends Full Year 2013," February 18, 2014, 21, table 11, "Consumer Demand in Selected Countries: Four-Quarter Totals (Tonnes)."

U.S. imports of certain base metals and chemical elements (minor metals) decreased by $914 million (14 percent) to $5.8 billion. Nickel accounted for the largest import decrease (down by $505 million), with the largest decline from major mined-nickel producer Russia, followed by Australia. [212] Import declines in 2013 reflected both lower quantities [213] (owing to reduced domestic consumption [214]) and weaker global prices, the result of reduced Chinese demand for ferronickel, European manufacturing cutbacks, and record accumulations of nickel in commodity exchange warehouses. [215] Titanium accounted for the second-largest decrease (down by $182 million), with the largest decline from major unwrought (sponge) titanium producer Japan, followed by Kazakhstan and China. [216] The value of U.S. titanium sponge imports declined, despite higher global sponge prices, [217] because of lower import quantities [218] caused by declining domestic demand for sponge as firms increasingly sought titanium scrap as a substitute. [219]

[212] Kuck, "Nickel," February 2014, 109.
[213] U.S. import quantities of nickel and articles thereof in various forms decreased by 12,600 metric tons (8 percent) to 157,600 metric tons in 2013. USITC DataWeb/USDOC, March 10, 2014.
[214] Despite increased production of nickel-bearing stainless steels, reported domestic consumption of nickel by all downstream consuming sectors decreased by 14,000 metric tons (6 percent) to 202,000 metric tons in 2013. Kuck, "Nickel," February 2014, 108.
[215] Kuck, "Nickel," February 2014, 109.
[216] Bedinger, "Titanium and Titanium Dioxide," February 2014, 171.
[217] Ibid., 170.
[218] U.S. import quantities of titanium and articles thereof in various forms fell by nearly 7,800 metric tons (16 percent) to 40,100 metric tons in 2013. USITC DataWeb/USDOC, March 10, 2014.
[219] Reported domestic consumption of titanium sponge declined by 10,500 metric tons (30 percent) to 24,600 metric tons in 2013. Recycling of titanium metal scrap increased by 10,000 metric tons (29 percent) to 45,000 metric tons. Bedinger, "Titanium and Titanium Dioxide," February 2014, 170; Bedinger, "Titanium and Titanium Dioxide," January 2013, 172.

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Textiles and Apparel

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $3.2 billion (3 percent) to $97.5 billion
U.S. exports: Increased by $543 million (3 percent) to $19.8 billion
U.S. imports: Increased by $3.7 billion (3 percent) to $117.2 billion

In 2013, the U.S. trade deficit in textiles and apparel rose to $97.5 billion, the result of a substantial ($3.7 billion) increase in U.S. imports that outweighed the small increase in U.S. exports (table TX.1). Imports supplied about 98 percent of U.S. consumer demand for textiles and apparel in 2013. [220] Compared to the small decline in U.S. imports in 2012, the significant growth in U.S. imports in 2013 reflected the strengthening U.S. economy. [221] Imports in four categories—shirts and blouses, home furnishings, women's and girls' trousers, and men's and boys' trousers—together accounted for 48 percent of U.S. imports of textiles and apparel in 2013 (table TX.2). U.S. exports of fabrics continued to lead sector exports, rising 3 percent to $6.5 billion. These exports were followed by U.S. exports of fibers and yarns (excluding raw cotton and raw wool), which also rose 3 percent to $5.2 billion. [222]

[220] AAFA, "ApparelStats 2013," December 2013, 4.
[221] U.S. apparel industry representatives, email message to USITC staff, March 4, 2014.
[222] USITC DataWeb/USDOC (accessed February 24, 2014).

Table TX.1 Textiles and apparel: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
China	846	1,083	1,240	1,243	1,412	169	13.6
Mexico	3,109	3,680	4,075	4,162	4,419	258	6.2
Vietnam	37	41	43	67	62	-5	-6.9
India	114	141	162	168	166	-1	-0.8
Canada	3,063	3,386	3,675	3,873	3,849	-24	-0.6
Indonesia	132	113	131	142	180	37	26.3
Bangladesh	20	8	20	28	22	-6	-20.2
Honduras	1,073	1,469	1,848	1,464	1,408	-56	-3.8
Pakistan	55	55	40	32	40	8	26.1
Cambodia	5	6	6	7	8	1	14.8
All other	6,199	7,369	8,192	8,026	8,187	161	2.0
Total	14,653	17,350	19,433	19,211	19,754	543	2.8
EU-28	1,666	1,987	2,140	2,073	2,125	51	2.5
OPEC	331	377	450	483	469	-14	-3.0
Latin America	6,409	7,769	9,034	8,600	8,761	161	1.9
Asia	2,517	3,035	3,327	3,352	3,606	254	7.6
Sub-Saharan Africa	199	236	261	278	281	3	1.1
U.S. imports for consumption:							
China	35,083	42,095	44,798	44,949	46,239	1,289	2.9
Mexico	5,177	5,537	5,881	5,782	5,826	43	0.8
Vietnam	5,290	6,177	7,081	7,499	8,564	1,065	14.2
India	4,991	5,833	6,447	6,397	6,865	468	7.3
Canada	1,972	2,225	2,320	2,413	2,323	-91	-3.8
Indonesia	4,214	4,858	5,562	5,416	5,457	41	0.8
Bangladesh	3,557	4,104	4,719	4,639	5,112	473	10.2
Honduras	2,133	2,499	2,726	2,696	2,562	-134	-5.0
Pakistan	2,861	3,166	3,487	3,143	3,201	58	1.8
Cambodia	1,888	2,234	2,627	2,560	2,588	28	1.1
All other	23,416	25,472	27,962	28,013	28,489	476	1.7
Total	90,581	104,199	113,611	113,507	117,225	3,718	3.3
EU-28	3,983	4,513	5,259	5,376	5,640	264	4.9
OPEC	173	220	147	152	146	-6	-3.7
Latin America	13,321	14,673	15,996	15,777	15,808	32	0.2
Asia	66,826	77,998	84,873	84,703	88,088	3,385	4.0
Sub-Saharan Africa	943	814	929	891	965	74	8.3

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
China	-34,237	-41,013	-43,558	-43,707	-44,827	-1,120	-2.6
Mexico	-2,068	-1,857	-1,806	-1,621	-1,406	214	13.2
Vietnam	-5,254	-6,136	-7,038	-7,432	-8,502	-1,070	-14.4
India	-4,877	-5,692	-6,285	-6,230	-6,699	-469	-7.5
Canada	1,091	1,161	1,355	1,460	1,526	67	4.6
Indonesia	-4,082	-4,745	-5,431	-5,274	-5,278	-4	-0.1
Bangladesh	-3,537	-4,096	-4,699	-4,611	-5,090	-479	-10.4
Honduras	-1,060	-1,030	-878	-1,232	-1,154	78	6.3
Pakistan	-2,806	-3,111	-3,447	-3,111	-3,160	-50	-1.6
Cambodia	-1,882	-2,227	-2,621	-2,553	-2,580	-27	-1.1
All other	-17,217	-18,103	-19,770	-19,987	-20,302	-315	-1.6
Total	-75,928	-86,849	-94,178	-94,297	-97,472	-3,175	-3.4
EU-28	-2,316	-2,526	-3,119	-3,302	-3,515	-213	-6.5
OPEC	157	156	303	331	323	-9	-2.6
Latin America	-6,912	-6,904	-6,962	-7,177	-7,048	129	1.8
Asia	-64,309	-74,963	-81,546	-81,351	-84,482	-3,131	-3.8
Sub-Saharan Africa	-744	-577	-667	-614	-685	-71	-11.5

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

Table TX.2 Textiles and apparel: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Miscellaneous textile products (TX006)	2,134	2,474	2,740	2,798	3,010	212	7.6
Fabrics (TX002)	4,917	5,878	6,285	6,346	6,548	202	3.2
Fibers and yarns, except raw cotton and raw wool (TX001)	3,496	4,444	5,610	5,059	5,201	143	2.8
Decreases:							
Other wearing apparel (TX005S)	370	415	458	476	457	-20	-4.1
Hosiery (TX005J)	291	315	284	275	258	-17	-6.3
All other	3,446	3,824	4,056	4,257	4,279	23	0.5
Total	14,653	17,350	19,433	19,211	19,754	543	2.8
U.S. IMPORTS:							
Increases:							
Shirts and blouses (TX005E)	21,962	24,728	26,728	26,030	27,254	1,224	4.7
Home furnishings (TX004)	7,553	9,058	9,208	9,253	10,037	784	8.5
Women's and girls' trousers (TX005D)	8,043	8,663	8,965	9,082	9,736	653	7.2
Men's and boys' trousers (TX005C)	6,805	7,496	8,277	8,267	8,640	373	4.5
Decreases:							
Women's and girls' suits, skirts, and coats (TX005G)	4,739	5,121	5,465	5,125	4,896	-229	-4.5
Gloves, including gloves for sports (TX005M)	3,234	3,874	4,517	4,709	4,577	-132	-2.8
Men's and boys' coats and jackets (TX005B)	2,299	2,636	3,183	2,970	2,839	-131	-4.4
All other	35,946	42,622	47,268	48,072	49,248	1,176	2.4
Total	90,581	104,199	113,611	113,507	117,225	3,718	3.3

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

The United States continued to register a trade deficit in textiles and apparel with several of its top trading partners. The largest trade deficit increases were with China ($1.1 billion), Vietnam ($1.1 billion), and India ($480 million). Continuing a trend that began in 2009, the U.S. trade deficit with Mexico shrank in 2013, falling by $214 million (13 percent) to $1.4 billion as the $258 million increase in U.S. exports to Mexico outpaced the $43 million increase in U.S. imports from that country. China remained the largest supplier of U.S. imports of textiles and apparel in 2013, accounting for almost 40 percent of U.S. imports of these products.

U.S. Exports

U.S. exports of textiles and apparel rose by $543 million (3 percent) to $19.8 billion in 2013. U.S. exports in this sector are largely composed of textile articles, which accounted for 83 percent of all U.S. exports of textiles and apparel in 2013. [223] Of these textile articles, fibers and yarns (excluding raw cotton and raw wool) were the second-largest export group (table TX.2). Exports of these products are used primarily as intermediate inputs for finished products manufactured abroad, which are then imported back into the United States. In 2013, the top U.S. export markets for textile inputs continued to be Mexico and Canada—partner countries in NAFTA—and Honduras, a partner country in the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA-DR). These countries collectively accounted for almost half (48 percent) of U.S. exports of textile inputs in 2013.

U.S. Imports

U.S. imports of textiles and apparel rebounded from a modest decline in 2012, rising by $3.7 billion (3 percent) in 2013. The recovery in U.S. sector imports likely reflects a strengthening of the U.S. economy and a rise in U.S. consumers' confidence in the economy in 2013. [224] Although consumers reportedly were more frugal in purchasing clothing relative to expenditures on other goods or services in 2013, [225] the value of U.S. apparel retail sales grew by almost 3 percent, [226] reflecting growth of $6.9 billion in consumer spending on garments. [227]

U.S. imports of textiles and apparel are principally composed of apparel, which represented slightly more than three-fourths of all U.S. sector imports by value in 2013. By quantity, total U.S. apparel imports rose by 5 percent between 2012 and 2013. This increase was largely driven by a 5 percent growth in U.S. imports of manmade-fiber apparel, which outpaced the 2 percent growth in U.S. imports of cotton apparel. [228] The continued rise in demand for products made of manmade fibers reflects consumers' growing preference for the functional and performance

[223] USITC DataWeb/USDOC (accessed February 24, 2014).
[224] Barclays, "2013: A Year of 'Cautious Confidence,'" December 10, 2013.
[225] Barclays, "2013: A Year of 'Cautious Confidence,'" December 10, 2013; Moore, "U.S. Economic Indicators Improve in 2013," January 4, 2014.
[226] USDOC, Census, Monthly Retail Trade and Food Services: Clothing Stores, February 2014, table 4481.
[227] USDOL, BEA, *Personal Consumption Expenditures,* February 2014, table 4.5.U.
[228] USDOC, ITA, OTEXA, "Major Shippers Report," March 6, 2013.

properties (i.e., moisture management, wearing comfort, elasticity, and recovery) that manmade fibers offer that natural fibers do not. [229]

U.S. imports from Asia, the largest regional supplier—accounting for three-quarters of all sector imports—rose by $3.4 billion (4 percent) to $88.1 billion. A significant share of the increase in U.S. imports of textiles and apparel in 2013 was accounted for by a $1.3 billion increase in imports from China, by far the leading supplier of textiles and apparel to the United States. Almost as substantial was the $1.1 billion growth (14 percent) in imports from Vietnam, the second-leading supplier of these products to the United States.

Despite stated efforts in recent years by U.S. retailers to diversify their supply chains, China still dominates as a supplier of textiles and apparel to the United States and is expected to remain the leading sourcing country. [230] Although China's textile and apparel production costs have been rising, [231] industry sources report such costs have been offset by gains in productivity. [232] China maintains significant advantages over other suppliers in economies of scale, infrastructure, efficiency, expertise, and stability. [233] China's share of U.S. imports of textiles and apparel by quantity grew to 48 percent of the total in 2013, up from 47 percent in 2012. [234] This exceeded by more than seven times the volume of imports from India, the next leading supplier of textiles and apparel to the United States.

In 2013, U.S. imports of textiles and apparel from Vietnam grew by 14 percent to $8.6 billion. Led by cotton and manmade-fiber knit shirts/blouses and slacks/pants, these imports have grown rapidly in recent years. Reasons for this trend include the country's relatively low labor costs; the industry's focus on specialization, modernization, and increasing added value; and the government of Vietnam's incentives to attract foreign investment for development. [235] In 2013, several new textile and garment plants began production in Vietnam. In addition, the anticipation of the proposed Trans-Pacific Partnership (TPP) reportedly prompted the implementation of numerous fiber and textile projects to prepare for the possibility of greater market access. [236] Also in 2013, significant investments were made to build several new textile and apparel facilities, including a $40 million factory to produce cotton yarn in Vietnam's southern province of Binh Doung, a new spandex production facility in the province of Dong Nai, and a $100 million denim plant in the northeastern province of Quang Nkinh. [237]

U.S. imports from South Asian suppliers Bangladesh and India also experienced significant growth, rising by $473 million (10 percent) and $468 million (7 percent), respectively, in 2013. Despite political uncertainty, factory safety problems, and labor disturbances in 2013, U.S.

[229] Donaldson, "Demand for Man-made Fibers Up and Growing," December 29, 2013.
[230] Beron, "Opportunities and Challenges in Asia's Apparel," February 12, 2014.
[231] Donaldson, "Rising Chinese Apparel Production Costs," December 3, 2013.
[232] Barrie, "US Apparel Imports from China," February 12, 2014.
[233] Beron, "Opportunities and Challenges in Asia's Apparel," February 12, 2014.
[234] USDOC, ITA, OTEXA, "Major Shippers Report," February 18, 2014.
[235] Textiles Intelligence, "Vietnam Aims to Become One of the Top Five," January 2, 2013.
[236] Barrie, "Vietnam: Textile and Garment Exports Soared," January 9, 2014.
[237] Fibre2Fashion, "Vietnamese Textile Sector Attracts Investment in 2013," January 16, 2014.

imports from Bangladesh continued to grow because the country's low labor costs help it to meet the global market's demand for competitively priced apparel. As a result, the Bangladesh textiles and apparel sector has been attracting business from international apparel brands and retailers such as Wal-Mart, JC Penney, the Gap, and others. [238] The growth in U.S. sector imports from India likely reflects the industry in India's efforts to upgrade its technology, focus on innovation in product and design, and improve training. [239]

[238] Islam, "Bangladesh: Apparel Exports Soars 20% in H1," January 14, 2014.
[239] Smith, "India: Garment Exports Continued to Rise," December 12, 2013.

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Transportation Equipment

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Change in 2013 from 2012:

U.S. trade deficit: Increased by $5.9 billion (8 percent) to $78.5 billion
U.S. exports: Increased by $7.3 billion (3 percent) to $293.0 billion
U.S. imports: Increased by $13.1 billion (4 percent) to $371.5 billion

In 2013 the U.S. trade deficit in transportation equipment increased for the fifth straight year, as import growth exceeded export growth by $5.9 billion (table TE.1). The expansion of the sectoral deficit was principally fueled by increased imports of motor vehicles and of aircraft, spacecraft, and related equipment (aircraft and related equipment), coupled with a $6.2 billion drop in exports of construction and mining equipment.

The United States maintained a trade deficit within the transportation equipment sector with four of its top five trading partners, including Canada, Mexico, Japan, and Germany; China was the lone exception. In 2013, the U.S. bilateral trade surplus with China for transportation equipment increased by $6.6 billion (more than 1,000 percent) to $7.2 billion, reflecting China's rapidly growing demand for aircraft and related equipment and, to a lesser extent, motor vehicles.

Table TE.1 Transportation equipment: U.S. exports of domestic merchandise, imports for consumption, and merchandise trade balance, by selected countries and country groups, 2009–13

	Million $						
Item	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. exports of domestic merchandise:							
Canada	44,447	57,243	63,354	67,427	68,452	1,025	1.5
Mexico	16,804	22,528	27,130	31,213	33,695	2,482	8.0
Japan	7,095	7,535	7,748	11,463	10,046	-1,417	-12.4
Germany	11,659	11,312	13,118	13,507	12,589	-917	-6.8
China	9,193	12,519	15,827	17,494	25,038	7,544	43.1
Korea	3,238	4,704	4,807	5,578	6,180	602	10.8
United Kingdom	8,208	8,818	9,933	9,574	10,932	1,358	14.2
France	9,161	7,677	7,828	8,261	8,524	263	3.2
Brazil	6,407	7,205	9,140	8,997	8,132	-865	-9.6
United Arab Em	5,487	4,136	6,245	10,647	9,298	-1,349	-12.7
All other	72,384	78,726	92,459	101,611	100,136	-1,475	-1.5
Total	194,082	222,403	257,589	285,772	293,023	7,251	2.5
EU-28	44,387	41,935	48,299	48,020	47,955	-65	-0.1
OPEC	18,164	17,730	20,677	29,266	27,735	-1,531	-5.2
Latin America	34,594	41,802	50,207	56,535	55,601	-934	-1.7
Asia	35,712	42,824	48,467	55,032	65,581	10,549	19.2
Sub-Saharan Africa	4,969	5,330	7,043	7,926	7,406	-520	-6.6
U.S. imports for consumption:							
Canada	43,301	58,922	64,420	73,230	71,358	-1,873	-2.6
Mexico	37,697	57,439	67,167	77,547	84,769	7,222	9.3
Japan	40,241	52,674	55,569	69,277	67,368	-1,909	-2.8
Germany	20,809	27,458	32,826	38,113	41,855	3,742	9.8
China	8,553	11,850	15,284	16,866	17,813	947	5.6
Korea	9,059	11,397	15,542	18,899	21,368	2,469	13.1
United Kingdom	7,690	9,367	10,859	12,667	12,943	276	2.2
France	9,478	10,588	10,638	11,494	12,618	1,123	9.8
Brazil	2,066	2,221	2,949	3,325	3,325	([a])	([b])
United Arab Em	7	13	29	37	159	122	328.5
All other	20,908	25,017	31,295	36,954	37,973	1,019	2.8
Total	199,808	266,946	306,579	358,409	371,548	13,138	3.7
EU-28	48,053	59,853	71,357	82,400	88,148	5,748	7.0
OPEC	25	35	48	60	182	122	202.6
Latin America	40,391	60,576	71,230	82,097	89,466	7,369	9.0
Asia	63,267	82,566	93,389	113,831	114,874	1,043	0.9
Sub-Saharan Africa	1,549	1,713	2,318	2,167	2,318	151	7.0

See footnote(s) at end of table.

Item	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. merchandise trade balance:							
Canada	1,146	-1,679	-1,065	-5,804	-2,906	2,898	49.9
Mexico	-20,892	-34,912	-40,037	-46,334	-51,074	-4,740	-10.2
Japan	-33,146	-45,138	-47,821	-57,814	-57,322	492	0.9
Germany	-9,150	-16,146	-19,707	-24,606	-29,265	-4,659	-18.9
China	640	669	543	628	7,225	6,597	1,050.5
Korea	-5,821	-6,694	-10,735	-13,321	-15,188	-1,867	-14.0
United Kingdom	518	-549	-926	-3,093	-2,011	1,081	35.0
France	-317	-2,911	-2,811	-3,233	-4,094	-861	-26.6
Brazil	4,341	4,985	6,190	5,672	4,808	-865	-15.2
United Arab Em	5,479	4,123	6,216	10,610	9,139	-1,471	-13.9
All other	51,476	53,709	61,164	64,657	62,164	-2,493	-3.9
Total	-5,726	-44,543	-48,989	-72,637	-78,525	-5,888	-8.1
EU-28	-3,665	-17,918	-23,058	-34,380	-40,193	-5,813	-16.9
OPEC	18,139	17,695	20,629	29,206	27,553	-1,652	-5.7
Latin America	-5,797	-18,774	-21,023	-25,562	-33,864	-8,303	-32.5
Asia	-27,555	-39,742	-44,923	-58,799	-49,293	9,507	16.2
Sub-Saharan Africa	3,420	3,618	4,725	5,759	5,088	-672	-11.7

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. The countries shown are those with the largest total U.S. trade (U.S. imports plus U.S. exports) in these products in the current year.

[a]Less than $500,000.

[b]Less than 0.05 percent.

Table TE.2 Transportation equipment: Leading changes in U.S. exports and imports, 2009–13

Item	Million $						
	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
U.S. EXPORTS:							
Increases:							
Aircraft, spacecraft, and related equipment (TE013)	77,700	73,949	82,028	95,210	104,881	9,671	10.2
Motor vehicles (TE009)	35,963	48,940	59,454	65,669	69,557	3,888	5.9
Decreases:							
Construction and mining equipment (TE004)	19,777	22,010	27,971	29,959	23,729	-6,230	-20.8
Ships, tugs, pleasure boats, and similar vessels (TE014)	1,946	2,525	2,420	3,387	2,591	-796	-23.5
All other	58,697	74,979	85,716	91,548	92,265	717	0.8
Total	194,082	222,403	257,589	285,772	293,023	7,251	2.5
U.S. IMPORTS:							
Increases:							
Motor vehicles (TE009)	94,348	132,471	144,426	171,556	180,005	8,449	4.9
Aircraft, spacecraft, and related equipment (TE013)	18,339	18,931	21,546	24,107	29,080	4,973	20.6
Decreases:							
Construction and mining equipment (TE004)	6,345	8,213	12,935	16,302	13,727	-2,576	-15.8
Motors and engines, except internal combustion, aircraft, or electric (TE015)	2,240	2,431	3,358	4,466	3,629	-837	-18.7
All other	78,536	104,900	124,314	141,978	145,107	3,129	2.2
Total	199,808	266,946	306,579	358,409	371,548	13,138	3.7

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

Note: Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the transportation equipment sector.

U.S. Exports

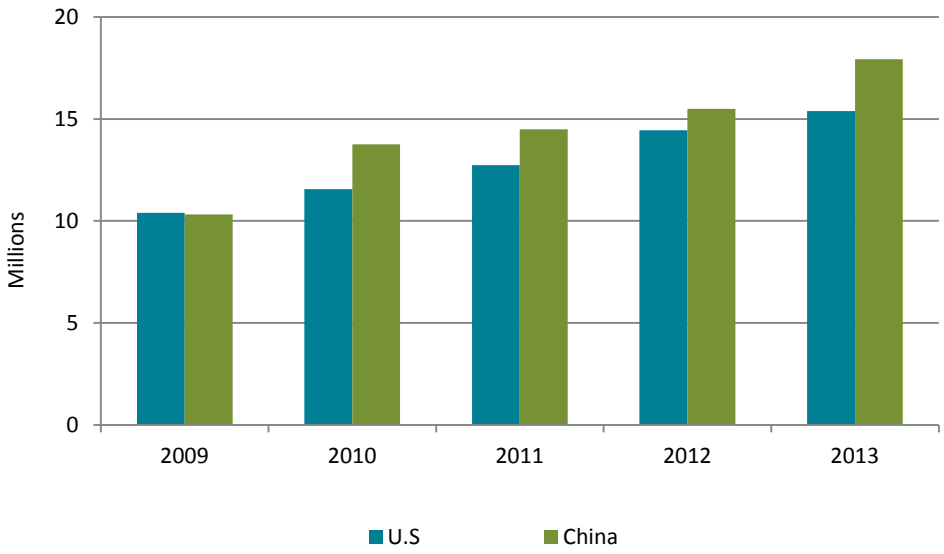
The $7.3 billion (3 percent) increase in U.S. transportation equipment exports in 2013 to $293.0 billion was driven by a $9.7 billion increase in aircraft and related equipment, along with a $3.9 billion increase in motor vehicles (table TE.2). Exports of aircraft and related equipment, which represented more than one-third of total sectoral exports, primarily reflected U.S.-based Boeing's near-record global deliveries of jets and civil aircraft in 2013. The company delivered 648 jets in 2013, eclipsing its previous record of 620 from 1999. [240] The aircraft delivered in 2013 had been ordered by airlines and leasing companies in previous years, as the production time and waitlist for large civil aircraft can stretch from many months to several years. (While companies account for the sales differently, the trade value is registered only when the plane is delivered.) Airlines have been ordering more aircraft because of increasing traffic, as measured by revenue passenger miles. [241] Carriers have also taken advantage of lower borrowing costs to replace existing fleets with more fuel-efficient planes; Boeing is one of the world's leading manufacturers of these aircraft. [242]

China remained the largest export market for U.S. aircraft equipment in 2013. It registered both the largest absolute growth in aircraft equipment imports from the United States ($12.1 billion) and the largest percentage increase (53 percent). The country is already the world's second-largest aircraft market, and growing travel demand from within the country, along with an increase in air cargo, is translating into rapid growth in demand for aircraft. About half of China's new aircraft are supplied by Boeing. [243]

The growth in U.S. exports of motor vehicles principally resulted from increased demand for passenger vehicles in China, which has the world's largest passenger vehicle market. The $2.8 billion (51 percent) increase in U.S. exports of passenger vehicles to China during 2012–13 was the largest value gain recorded during the five-year period 2009–13 (see part II, "China," figure CN.2). In quantity, the United States exported 80,597 more passenger vehicles in 2013 than in 2012—a 49 percent increase–to reach 246,915 vehicles exported to China. China registered 17,929,000 passenger vehicles in 2013 (figure TE.1), so U.S. imports accounted for just over 1 percent of the Chinese market. Passenger car registrations in China increased 16 percent from the previous year and 74 percent over the 2009–13 period, as shown in figure TE.1, reflecting the country's increased wealth, better roads, and greater access to financing options. [244] Albeit from a small base, sales of U.S. vehicles in China increased by nearly 50 percent in 2013, as Chinese consumers began to choose U.S.-made vehicles over Japanese ones; sales of Japanese vehicles in China have declined since 2012, owing to an ongoing dispute over territory in the East China Sea. [245] Exports of motor vehicles to regional partners Canada

[240] Gates, "Boeing's 2013 Deliveries," January 6, 2014.
[241] IATA, "Passenger Demand Maintains Historic Growth Rates," February 6, 2014. "Revenue passenger miles" are calculated by multiplying the number of paying passengers by the length of the trip for each flight.
[242] IATA, "Passenger Demand Maintains Historic Growth Rates," February 6, 2014.
[243] Foley, "Boeing Turns," September 7, 2013.
[244] EIU, "Industry Report: Automotive, China," January 2014.
[245] Ibid.

Figure TE.1 Million of passenger car registrations: China overtook the U.S. to become the world's largest passenger car market during 2009–13



Source: EIU, "China: Automotive Report," January, 2014.

and Mexico also increased slightly, although these increases totaled only a combined $1.7 billion and remained consistent with growth during the previous five years. These markets remained significant destinations for U.S. motor vehicles, owing to the integration of the motor vehicle industry in North America stemming from NAFTA.

Strong export growth in the aircraft and motor vehicles sectors was tempered by a $6.2 billion (21 percent) reduction in U.S. exports of construction and mining equipment. These exports dropped to $23.7 billion in 2013, as exports to four of the United States' five leading markets fell by a combined $4.4 billion; more than two-thirds of this decline occurred in Australia and Canada. Reasons for the decrease varied, but included difficulties in securing skilled labor in these two markets in particular, along with rising input costs and a focus on completing projects delayed by the recent global economic recession. [246]

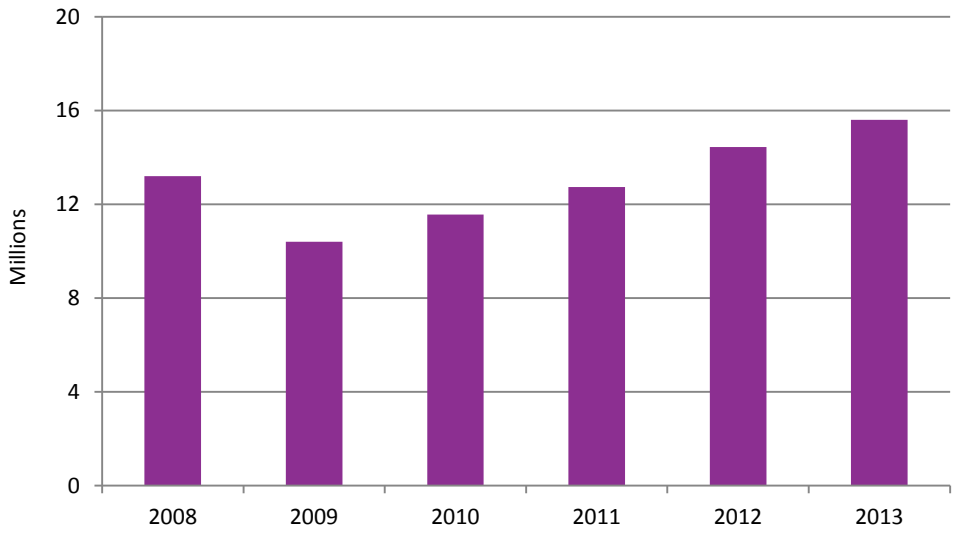
U.S. Imports

The largest contributors to the growth in U.S. imports of transportation equipment in 2013, in terms of absolute value, were the motor vehicle and aircraft equipment industries. Imports of the former rose by $8.4 billion (5 percent) to $180.0 billion, while imports of the latter grew by $5.0 billion (21 percent) to $29.0 billion. Relatively strong U.S. motor vehicle imports resulted,

[246] KPMG, *Global Construction Survey 2013*, 2013; ACA, AI, "Construction Outlook," October 2013.

in part, from wider access to credit; increased consumer confidence, stemming from the ongoing economic recovery; and improved household wealth, owing to declining unemployment rates and stock market gains. [247] In particular, sales of light motor vehicles in the United States increased by 8 percent to 15.6 million units during 2013, the highest level recorded since the economic recession [248] (figure TE.2).

Figure TE.2 New passenger vehicle registrations reached a four-year high in 2013



Source: EIU, "United States of America: Automotive Report," January, 2014.

Imported motor vehicles from Mexico and Germany, the United States' second- and fourth-leading suppliers of these goods in 2013, increased by 14 and 10 percent, respectively. Mexico has emerged as one of the leading destinations for motor vehicle production, due in large part to the country's relatively low labor costs and proximity to the large U.S. market, which imports these goods duty-free under NAFTA. Many of the world's largest manufacturers have recently established manufacturing facilities within the country, including Nissan, Mazda, and Honda. [249] German-based manufacturers enjoyed success in the United States during 2013 due to increased marketing campaigns and greater investments in new dealerships. These efforts may have translated into the nearly threefold increase seen in purchases of these vehicles—especially Volkswagens. [250]

[247] Isidore, "Car Sales," January 3, 2014.
[248] EIU, "Industry Report: Automotive, United States of America," January 2014.
[249] *Economist*, "Steaming Hot," November 15, 2013.
[250] EIU, "Industry Report: Automotive, United States of America," January, 2014.

Increased U.S. imports of aircraft and related equipment resulted from domestic carriers replacing their fleets with more fuel-efficient aircraft types. Many of these aircraft were produced by Airbus in Europe and Embraer in Brazil, and then exported to the United States. [251]

[251] Schlangenstein, "JetBlue Defers," October 29, 2013.

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Part IV
Special Topic Chapter

The use of value added offers researchers an innovative method for analyzing trade flows. This section gives an overview of the concept of value added as a measurement of trade, as well as relevant data sources. It also discusses how this information can help business officials, government representatives, and others gain new insights into the economics of global production as well as the sources and destinations of value in trade.

Value Added as a Measurement of Trade

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Most trade statistics, including those found earlier in this report, represent trade between countries on a "gross" basis. Under this approach, both the exporting country and the importing country simply record the total value of a good that has been traded. Statistics produced using this method are both the easiest to find and the easiest to understand, and they do accurately reflect total imports and exports between nations for many purposes.

However, such statistics do not fully account for global supply chains—in particular, for the way slices of value—goods or services—are added at each step of increasingly international manufacturing processes. These inputs, also known as "intermediates," may be anything from a circuit board added to a product, to the further processing of a half-assembled car, to the work of a testing service ensuring that a food ingredient meets national standards. It is not uncommon for one intermediate to be added in Country A, a second in Country B, and a third in Country C.

Because goods often cross multiple borders, intermediates may be counted several times when the gross method is used to calculate global trade flows. Analysts have recognized that attributing the entire export value to the last exporting country does not provide people with information on the source of value in global trade. In contrast, "value-added" international trade statistics reflect the value added at each step of the supply chain across national borders. The use of value-added statistics has become more routine for analyzing trade flows, although challenges remain—including a lack of data broken out at an intermediate input level by industry or country, as well as difficulties getting timely data. A brief introduction to the concept and its uses is presented below.

Definition of Value Added and Findings from Its Use in Trade Data

"Value added" can be defined at both the microeconomic and the macroeconomic levels. At the microeconomic level, it is defined as "the amount by which the value of a good . . . increases at a specific step in a production process." At the macroeconomic level, in the context of measuring exports, it is defined as "the value of national work performed (i.e., the contribution of all national factors of production) in a country's exports." [252] Export values calculated using the value-added method differ from official reported export values, which do not distinguish between "national" (domestic) inputs into a product and foreign inputs into that

[252] Sposi and Koech. "Value-Added Data Recast the U.S.-China Trade Deficit," July 2013; Benedetto, "Implications and Interpretations," July 2012. See also Maurer, "Trade in Value Added," April 14, 2011.

product. [253] For example, one microeconomic analysis attempted to calculate the percentage of contributions from Japan, the United States, and the Republic of Korea (Korea) contained in an Apple iPod music player sold in the United States after being assembled in China. The analysis estimated that at least 82 percent of the factory cost originated in Japan, the United States, and Korea, with China's contribution estimated at only 4 percent of the value. This breakdown would be reflected in trade statistics that are based on value-added calculations. Gross trade statistics, however, show 100 percent of the iPod's import value originating in China. [254]

One breakdown of the (macroeconomic) elements that make up a country's gross exports identifies three types of value added: (1) domestic (national) value added that will never reenter the domestic market, (2) domestic (national) value added that will eventually reenter in the form of imports, and (3) foreign value added that is incorporated into domestic exports. In contrast, a country's value-added export figures capture only the domestic value added that does not reenter the domestic market. [255] Under this definition, value-added imports are only the part of a country's imports that is foreign value added. The difference between gross and value-added measures of trade is that only the latter can reflect the actual supply chain processes in which goods cross national boundaries several times during a multinational production process.

Measuring trade in terms of value added leads to several discoveries. First, it reveals export values for some countries, including China, to be smaller than reported, because the value of imported inputs, which is included in official export figures, is now excluded. [256] In addition, it shows which countries account for the final demand for the production of each country (for use in consumption, investment, and government expenditures), because the value of production is traced through various stages across countries to its ultimate destination. [257] (It is often useful to distinguish such "final destination" countries from countries that import a good only to incorporate it into a product which they will then export.) Finally, the value-added approach provides more information on the contribution of various sectors to production for export. [258]

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[253] OECD and WTO, "Trade in Value-Added: Concepts, Methodologies and Challenges." See also Maurer, "Trade in Value Added," April 14, 2011.

[254] Dedrick, Kraemer, and Linden, "Who Profits From Innovation?" May 2008. See also Varian, "An iPod Has Global Value," June 28. 2007, and Dedrick, "Who Profits from Innovation?" March 21, 2012. Even the iPod packaging may have originated in the United States in the form of paper waste exported to China for reprocessing; McCormack, "U.S. Continues to Import," September 28, 2012.

There have been some critiques of the assumptions underlying the manufacturing locations of the iPod components examined in the study. See McMillion, "China Trade Apologists Know a 'Reality,'" October 21, 2011; Benedetto, "Implications and Interpretations of Value-Added Trade Balances," July 2012.

[255] Benedetto, "Implications and Interpretations of Value-Added Trade Balances," July 2012. See also Koopman et al., "Give Credit Where Credit Is Due," September 2010.

[256] CBO, "How Changes in the Value of the Chinese Currency," July 17, 2008.

[257] See Jones, Powers, and Ubee, "Making Global Value Chain Research More Accessible," October 2013.

[258] USITC, *The Economic Effects of Significant U.S. Import Restraints: Seventh Update*, 2011. See also Fujii-Gambero and Cervantes-Martínez, "Indirect Value Added in Mexico's Manufacturing Exports," March 2013.

Data and Data Sources for Value Added

A primary source for value-added trade data is the Trade in Value Added (TiVA) database, the product of a joint initiative of the Organisation for Economic Co-operation and Development (OECD) and the World Trade Organization (WTO). [259] As of May 2013, it had gathered data on more than 57 countries and economic entities and zones, such as the European Union (EU) and the Association of Southeast Asian Nations, and on 18 economic activities, such as mining and electrical equipment. TiVA takes its underlying data from highly aggregated input-output tables issued by the participating countries and economic entities; these tables reflect how much of the value of the industry's output is represented by inputs purchased from another industry. [260] The World Input-Output Database (WIOD) is another project that publishes global and national input-output tables using a set format. [261] Studies of high-visibility bilateral trade relationships have also benefited from using input-output tables made available by individual markets, including the United States, [262] China, [263] Japan, [264] and the EU and certain EU members. [265]

The Need for Value-Added Data and Challenges in its Use

Measuring trade on a value-added basis provides valuable insights to the sometimes intricate workings of global supply chains. This approach makes it easier to describe and analyze the various inputs and factors that result in products generated by the contemporary global supply chain. However, it is important to understand the limits on the underlying trade data when applying a value-added analysis. For example, while the TiVA database contains the most recently available data, most country's data are from 2011, thus yielding a lag of several years in the timeliness of the raw data and a still longer lag in the timeliness of data analysis. The gap widens further if analysis involves national input-output tables from countries with an even longer data lag. As a result, conclusions drawn from the data, and even ways in which the data can be analyzed, can be dated by anywhere from 3 to10 years, depending on the framework

[259] Lewis, "Trade in Value-Added," December 3, 2013. See OECD, "OECD-WTO Database on Trade in Value-Added," n.d. (accessed various dates).

[260] CBO, "How Changes in the Value of the Chinese Currency," July 17, 2008. The OECD defines input-output tables as describing "the sale and purchase relationships between producers and consumers within an economy." OECD, "Measuring Trade in Value Added" (accessed various dates).

[261] Timmer, "The World Input-Output Database (WIOD)," April 2012. See http://www.wiod.org/new_site/database/wiots.htm.

[262] For input-output tables through 2012 produced by the Bureau of Economic Analysis in the U.S. Department of Commerce and the Bureau of Labor Statistics in the U.S. Department of Labor, see www.bea.gov/industry/index.htm and http://www.bls.gov/emp/ep_data_input_output_matrix.htm.

[263] For data through 2007, see http://www.purpleculture.net/china-inputoutput-tables-2007-p-4346/. See also Koopman, Wang, and Wei, "How Much of Chinese Exports," March 2008.

[264] For data through 2005, see http://www.stat.go.jp/english/data/io/index.htm.

[265] For data through 2011, see http://epp.eurostat.ec.europa.eu/portal/page/portal/esa95_supply_use_input_tables/data/database. See also Cappariello, "Domestic Value Added Content of Exports," February 2012.

and the purpose of the analysis. [266] For goods with dynamic supply chains, such a lag may result in analytic conclusions that no longer reflect current trade trends or policy initiatives.

In addition, difficulties exist in gathering value-added statistics. These include the reluctance of certain sources to release data that may be commercially sensitive; the lack of a common statistical framework; data assumptions that may understate the effects of international engagement on a domestic economy; and challenges in distinguishing between inputs and final goods. [267] A recent paper proposes a framework for addressing some of the data issues systematically, but considerable work remains to be done. [268]

Nevertheless, even analysis of the data currently available yields benefits in terms of a clearer understanding of bilateral trade. For example, a country's *global* trade balance is the same whether it is considered in light of gross trade statistics or value-added ones. [269] Measures of *bilateral* trade balances, though, can differ greatly, depending on the method used to calculate them. For example, the U.S. bilateral trade deficit with China is smaller when measured in trade in value added than when measured in gross trade, because China buys so many of the inputs for its exports from other countries. [270] However, U.S. bilateral trade deficits with many of those other countries are larger (or U.S. trade surpluses with them are smaller) when measured in trade in value added, since many U.S. imports from China incorporate the value of inputs originating in these countries. [271] Given the attention routinely accorded the U.S.-China trade deficit, a more detailed understanding of that deficit would enhance any analysis involving it.

Applying the value-added approach to trade in services might also suggest different levels of trade flows for goods and services trade than traditional measures show. An analysis using the TiVA database finds that trade in a particular good may have a sizable component of trade in related services affecting the data. Measuring trade in manufactured goods using the value-added method, the U.S. trade deficit in manufactured goods is significantly lower than the gross measure, although the overall U.S. trade deficit (in goods and services together) remains

[266] *Economist*, "Value-Added Trade," January 19, 2013.
[267] Derviş, Meltzer, and Foda, "Value-Added Trade and Its Implications," April 2, 2013; Powers, "The Value of Value Added," November 2012. Some analysis has taken place that uses certain firm-level transaction data, such as that from the Annual Surveys of Industrial Firms conducted by China's National Bureau of Statistics, which covers all Chinese state-owned enterprises and non-state-owned companies that have sales of more than ¥5 million [$775,000] in a given year. See Kee and Tang, "Domestic Value Added in Chinese Exports," September 2012.
[268] Koopman, Wang, and Wei, "Tracing Value-Added and Double Counting," February 2014, 459–94.
[269] Benedetto, "Implications and Interpretations of Value-Added Trade Balances," July 2012.
[270] See Ma, Wang, and Zhu, "Domestic Value Added in China's Exports," May 2013.
[271] Derviş, Meltzer, and Foda, "Value-Added Trade and Its Implications," April 2, 2013. For examples of inputs to Chinese production, see Horowitz and Riker, "Measuring Shifts in Brazil's Trade," 2014; Wang, Powers, and Wei, "Value Chains in East Asian Production Networks," October 2009. See also Benedetto, "Implications and Interpretations of Value-Added Trade Balances," July 2012 (noting that the U.S. trade deficit with China would not greatly shrink if calculated using value added).

unchanged. [272] The lower calculated trade deficit in value added for manufactured goods results from foreign services that contribute to trade in manufactured goods, such as transportation, distribution, and finance services, which were previously categorized as manufactured imports but are now service sector imports in value-added terms. At the same time, the study found that the value created by services in the United States and incorporated directly or indirectly as inputs represented 27 percent of the total domestic value added in U.S. gross manufactured exports in 2009. For certain industrial classifications, such as wood and paper; food, beverages, and tobacco; and transport equipment, it is estimated that "more than one-third of the domestic value-added in exports comes from the services sector." [273]

Another analysis from a different perspective cautions against the use of value-added trade data when analyzing U.S. trade with China. The analysis contends that those data do not account in a timely fashion for the rapidly increasing domestic content in China's exports and may be affected by China's currency policies. [274]

[272] At the same time, under a value-added calculation, the U.S. surplus in trade in services becomes a deficit. The standard method calculates that in 2009 there was a 61-34 split among U.S. gross exports between the manufacturing sector and the services sector; using the alternative method, this becomes a 42-52 split. The change occurs because of the services used to facilitate and improve the links in the global production chain. Xu, "A Value-Added Perspective on U.S. International Trade," January 9, 2014.

[273] Xu, "A Value-Added Perspective on U.S. International Trade," January 9, 2014, section 3, "The Rising Role of Services in Manufacturing Trade."

[274] Scott, "Value-Added Analysis of Trade with China," June 27, 2013.

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Appendix A
U.S. Trade by Industry Group and Subgroup

Table A.1 Agricultural products: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG001 Certain miscellaneous animals and meats							
Exports	2,308	2,500	2,916	2,808	2,990	182	6.5
Imports	1,747	1,738	2,020	2,099	2,234	134	6.4
Trade balance	561	762	896	709	757	48	6.8
AG002 Cattle and beef							
Exports	2,817	3,873	5,222	5,627	6,089	462	8.2
Imports	3,784	4,314	4,457	5,353	5,417	64	1.2
Trade balance	-967	-442	766	273	672	399	145.9
AG003 Swine and pork							
Exports	3,645	4,003	5,263	5,498	5,116	-381	-6.9
Imports	1,020	1,292	1,367	1,354	1,499	145	10.7
Trade balance	2,625	2,711	3,895	4,144	3,617	-527	-12.7
AG004 Sheep and meat of sheep							
Exports	34	28	27	20	21	1	4.5
Imports	434	512	659	552	568	15	2.8
Trade balance	-400	-484	-632	-532	-546	-14	-2.7
AG005 Poultry							
Exports	4,297	4,298	5,009	5,535	5,594	59	1.1
Imports	263	301	310	373	403	30	8.1
Trade balance	4,034	3,997	4,699	5,162	5,191	29	0.6
AG006 Fresh or frozen fish							
Exports	2,326	2,649	3,343	3,185	3,275	90	2.8
Imports	4,880	5,432	5,981	6,396	6,670	274	4.3
Trade balance	-2,554	-2,783	-2,638	-3,211	-3,395	-185	-5.7
AG007 Canned fish							
Exports	251	234	264	269	279	10	3.8
Imports	1,090	1,215	1,334	1,557	1,548	-9	-0.6
Trade balance	-839	-981	-1,069	-1,287	-1,268	19	1.5
AG008 Cured and other fish							
Exports	194	229	243	273	288	15	5.5
Imports	443	468	518	548	537	-11	-2.0
Trade balance	-249	-239	-275	-274	-248	26	9.5

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG009 Shellfish							
Exports	1,035	1,179	1,489	1,501	1,500	-1	[a]
Imports	6,587	7,469	8,704	8,055	9,140	1,085	13.5
Trade balance	-5,552	-6,290	-7,215	-6,555	-7,640	-1,085	-16.6
AG010 Dairy products							
Exports	2,020	3,441	4,490	4,810	6,382	1,572	32.7
Imports	1,977	1,984	2,277	2,503	2,425	-78	-3.1
Trade balance	43	1,457	2,213	2,307	3,957	1,650	71.5
AG011 Eggs							
Exports	347	358	408	483	610	127	26.4
Imports	30	40	42	43	42	-1	-2.8
Trade balance	317	319	366	440	568	128	29.2
AG012 Sugar and other sweeteners							
Exports	687	1,101	1,334	1,484	1,351	-132	-8.9
Imports	1,905	2,744	3,734	3,311	2,707	-604	-18.2
Trade balance	-1,218	-1,643	-2,400	-1,827	-1,356	471	25.8
AG012A Sugar							
Exports	137	231	273	259	270	11	4.2
Imports	1,246	2,046	2,867	2,351	1,678	-673	-28.6
Trade balance	-1,109	-1,815	-2,594	-2,092	-1,408	684	32.7
AG012B High fructose corn sweetener							
Exports	257	511	597	784	616	-167	-21.4
Imports	92	104	108	120	134	13	11.2
Trade balance	165	407	489	664	483	-181	-27.3
AG013 Animal feeds							
Exports	8,498	9,677	10,103	12,476	14,525	2,050	16.4
Imports	1,290	1,472	2,067	2,671	2,910	239	9.0
Trade balance	7,208	8,204	8,036	9,805	11,616	1,811	18.5
AG014 Live plants							
Exports	190	197	208	218	242	24	11.1
Imports	487	524	549	525	552	28	5.2
Trade balance	-297	-327	-341	-307	-310	-3	-1.1
AG015 Seeds							
Exports	1,190	1,292	1,460	1,559	1,644	86	5.5
Imports	792	813	941	1,302	1,542	240	18.4
Trade balance	398	479	519	257	103	-154	-60.0

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG015A Grass Seed							
Exports	315	357	454	447	475	28	6.2
Imports	141	124	142	164	184	20	12.2
Trade balance	173	234	312	284	291	8	2.8
AG015B Fruit Seed							
Exports	51	55	66	53	50	-3	-5.7
Imports	41	46	56	66	68	2	3.0
Trade balance	10	8	10	-13	-18	-5	-37.7
AG015C Vegetable Seeds							
Exports	457	490	519	495	473	-23	-4.6
Imports	309	340	409	495	486	-9	-1.9
Trade balance	148	150	110	[b]	-13	-13	[c]
AG015D Grain Seeds							
Exports	255	235	275	343	423	79	23.1
Imports	253	240	262	469	671	202	43.1
Trade balance	1	-5	12	-126	-249	-123	-97.5
AG015E Sugar Beet Seed							
Exports	4	4	5	5	4	-1	-17.2
Imports	[b]	1	5	[b]	[b]	[b]	-8.4
Trade balance	3	4	[b]	5	4	-1	-18.0
AG015F Oilseed Seeds							
Exports	107	148	139	213	218	5	2.4
Imports	46	62	65	106	132	26	24.6
Trade balance	61	86	73	107	86	-21	-19.7
AG015G Tobacco Seeds							
Exports	2	2	2	2	2	[b]	-3.7
Imports	1	[b]	1	2	[b]	-1	-68.7
Trade balance	2	2	1	[b]	1	1	495.4
AG016 Cut flowers							
Exports	39	37	33	26	23	-3	-11.4
Imports	768	847	881	968	1,000	32	3.3
Trade balance	-728	-810	-848	-942	-978	-35	-3.7
AG017 Miscellaneous vegetable substances							
Exports	822	872	902	1,007	915	-92	-9.1
Imports	1,280	1,465	2,349	5,042	3,426	-1,617	-32.1
Trade balance	-458	-593	-1,447	-4,035	-2,510	1,525	37.8

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG018 Fresh, chilled, or frozen vegetables							
Exports	2,005	2,179	2,338	2,265	2,471	206	9.1
Imports	4,800	5,846	6,490	6,513	7,366	854	13.1
Trade balance	-2,796	-3,668	-4,151	-4,247	-4,895	-648	-15.3
AG019 Prepared or preserved vegetables, mushrooms, and olives							
Exports	2,446	2,567	2,794	3,197	3,426	229	7.2
Imports	2,736	2,894	3,199	3,430	3,379	-51	-1.5
Trade balance	-290	-327	-405	-233	47	280	[c]
AG020 Edible nuts							
Exports	4,024	4,756	5,679	6,870	8,345	1,475	21.5
Imports	1,275	1,463	1,865	1,998	1,997	-1	[a]
Trade balance	2,749	3,293	3,815	4,872	6,348	1,475	30.3
AG021 Tropical fruit							
Exports	70	101	107	153	174	21	13.6
Imports	3,130	3,301	3,836	3,974	4,376	402	10.1
Trade balance	-3,060	-3,201	-3,729	-3,821	-4,202	-381	-10.0
AG022 Citrus fruit							
Exports	832	998	1,115	1,136	1,146	10	0.8
Imports	683	776	838	862	969	107	12.4
Trade balance	149	222	277	274	177	-97	-35.6
AG023 Deciduous fruit							
Exports	1,396	1,550	1,771	2,040	1,989	-51	-2.5
Imports	372	424	392	373	461	88	23.6
Trade balance	1,024	1,126	1,379	1,667	1,528	-139	-8.3
AG024 Other fresh fruit							
Exports	1,326	1,435	1,640	1,782	1,920	139	7.8
Imports	2,302	2,803	2,659	2,941	3,236	295	10.0
Trade balance	-976	-1,368	-1,019	-1,160	-1,316	-156	-13.4
AG025 Dried fruit other than tropical							
Exports	533	608	710	689	674	-15	-2.2
Imports	180	183	207	218	214	-4	-1.7
Trade balance	353	426	503	471	460	-11	-2.4
AG026 Frozen fruit							
Exports	130	148	191	210	217	7	3.4
Imports	348	393	526	624	631	6	1.0
Trade balance	-218	-244	-335	-414	-413	1	0.2

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG027 Prepared or preserved fruit							
Exports	365	412	515	522	582	60	11.4
Imports	1,213	1,320	1,523	1,631	1,779	148	9.1
Trade balance	-848	-909	-1,008	-1,109	-1,197	-88	-7.9
AG028 Coffee and tea							
Exports	819	945	1,206	1,352	1,305	-47	-3.5
Imports	4,509	5,469	8,666	7,618	6,441	-1,177	-15.4
Trade balance	-3,690	-4,524	-7,460	-6,266	-5,137	1,130	18.0
AG029 Spices							
Exports	117	122	131	148	153	5	3.4
Imports	729	872	1,124	1,197	1,275	78	6.5
Trade balance	-612	-750	-992	-1,048	-1,122	-73	-7.0
AG030 Cereals							
Exports	17,240	19,930	28,110	20,347	19,866	-481	-2.4
Imports	1,808	1,610	1,930	2,637	3,437	799	30.3
Trade balance	15,432	18,320	26,180	17,709	16,429	-1,280	-7.2
AG031 Milled grains, malts, and starches							
Exports	824	736	769	817	767	-51	-6.2
Imports	957	982	1,089	1,114	1,271	157	14.1
Trade balance	-132	-246	-319	-297	-504	-208	-70.0
AG032 Oilseeds							
Exports	16,780	18,936	17,875	25,040	21,794	-3,245	-13.0
Imports	668	647	870	843	1,418	576	68.3
Trade balance	16,112	18,289	17,005	24,197	20,376	-3,821	-15.8
AG033 Animal or vegetable fats and oils							
Exports	3,354	4,484	4,729	4,433	3,591	-842	-19.0
Imports	3,779	4,306	6,558	5,965	5,813	-152	-2.5
Trade balance	-425	177	-1,829	-1,532	-2,222	-691	-45.1
AG034 Pasta, cereals, and other bakery goods							
Exports	2,489	2,708	3,024	3,382	3,642	260	7.7
Imports	3,971	4,415	4,888	5,127	5,381	254	5.0
Trade balance	-1,482	-1,706	-1,863	-1,745	-1,739	6	0.4
AG035 Sauces, condiments, and soups							
Exports	1,172	1,285	1,412	1,575	1,740	166	10.5
Imports	964	1,030	1,156	1,229	1,282	52	4.2
Trade balance	208	255	256	345	459	114	32.9

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG036 Infant formulas, malt extracts, and other edible preparations							
Exports	3,786	4,174	4,815	5,415	6,065	650	12.0
Imports	1,615	1,930	2,109	2,267	2,464	197	8.7
Trade balance	2,171	2,244	2,706	3,148	3,602	453	14.4
AG037 Cocoa, chocolate, and confectionery							
Exports	1,384	1,530	1,799	1,976	2,174	198	10.0
Imports	4,659	5,599	6,096	5,578	5,717	139	2.5
Trade balance	-3,275	-4,069	-4,296	-3,602	-3,543	59	1.7
AG038 Fruit and vegetable juices							
Exports	990	1,084	1,247	1,212	1,233	20	1.7
Imports	1,357	1,402	1,944	1,844	1,854	10	0.5
Trade balance	-367	-317	-697	-632	-621	11	1.7
AG039 Nonalcoholic beverages, excluding fruit and vegetable juices							
Exports	887	886	1,024	1,169	1,302	133	11.4
Imports	1,626	1,789	2,030	2,406	2,589	183	7.6
Trade balance	-739	-902	-1,006	-1,237	-1,287	-50	-4.0
AG040 Malt beverages							
Exports	306	327	365	446	517	71	15.8
Imports	3,325	3,493	3,551	3,683	3,685	2	0.1
Trade balance	-3,020	-3,166	-3,187	-3,236	-3,168	68	2.1
AG041 Wine and certain other fermented beverages							
Exports	860	1,064	1,293	1,336	1,555	219	16.4
Imports	4,039	4,306	4,901	5,151	5,353	202	3.9
Trade balance	-3,180	-3,242	-3,608	-3,816	-3,799	17	0.4
AG042 Distilled spirits							
Exports	1,051	1,175	1,361	1,501	1,533	32	2.1
Imports	4,810	5,218	5,770	6,067	6,417	350	5.8
Trade balance	-3,759	-4,042	-4,409	-4,566	-4,883	-318	-7.0
AG043 Unmanufactured tobacco							
Exports	1,160	1,167	1,149	1,098	1,141	43	3.9
Imports	900	720	737	885	952	67	7.6
Trade balance	260	447	412	213	189	-24	-11.1
AG044 Cigars and certain other manufactured tobacco							
Exports	76	83	105	166	197	31	19.0
Imports	475	532	590	673	765	92	13.7
Trade balance	-399	-450	-484	-508	-568	-61	-12.0

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
AG045 Cigarettes							
Exports	414	371	383	317	288	-28	-8.9
Imports	156	137	125	137	147	10	7.2
Trade balance	258	234	258	179	141	-38	-21.2
AG046 Hides, skins, and leather							
Exports	1,812	2,827	3,248	3,156	3,662	506	16.0
Imports	450	593	609	674	699	24	3.6
Trade balance	1,362	2,233	2,639	2,482	2,964	482	19.4
AG047 Furskins							
Exports	182	265	397	575	665	90	15.7
Imports	102	142	166	207	265	58	28.2
Trade balance	80	123	230	368	400	32	8.6
AG048 Wool and other animal hair							
Exports	21	24	24	18	24	6	32.3
Imports	20	20	35	34	28	-6	-18.1
Trade balance	2	3	-11	-16	-4	12	74.7
AG049 Cotton, not carded or combed							
Exports	3,384	5,746	8,424	6,246	5,589	-657	-10.5
Imports	[b]	1	16	7	7	[b]	-1.2
Trade balance	3,384	5,744	8,408	6,239	5,582	-657	-10.5
AG050 Ethyl alcohol for nonbeverage purposes							
Exports	245	883	3,260	1,927	1,567	-359	-18.6
Imports	564	326	903	1,839	1,412	-427	-23.2
Trade balance	-318	556	2,357	87	155	68	77.4

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

[a]Less than 0.05 percent.

[b]Less than $500,000.

[c]Not meaningful for purposes of comparison.

Table A.2 Chemicals and related products: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
CH001 Major primary olefins							
Exports	439	587	887	620	659	39	6.3
Imports	5,931	10,496	13,079	11,148	9,258	-1,889	-16.9
Trade balance	-5,493	-9,909	-12,192	-10,527	-8,599	1,928	18.3
CH002 Other olefins							
Exports	430	623	676	629	535	-93	-14.8
Imports	375	473	630	696	686	-10	-1.4
Trade balance	56	150	47	-67	-150	-83	-124.5
CH003 Primary aromatics							
Exports	531	816	1,161	1,053	738	-315	-29.9
Imports	2,054	2,992	3,951	4,524	4,705	181	4.0
Trade balance	-1,523	-2,176	-2,790	-3,472	-3,968	-496	-14.3
CH004 Organic commodity chemicals							
Exports	3,633	5,073	6,047	6,499	7,134	636	9.8
Imports	2,104	3,139	3,811	3,414	3,858	444	13.0
Trade balance	1,529	1,935	2,236	3,085	3,277	192	6.2
CH005 Organic specialty chemicals							
Exports	6,956	9,739	9,449	9,396	9,421	24	0.3
Imports	7,805	8,580	10,620	11,111	12,019	909	8.2
Trade balance	-849	1,160	-1,171	-1,714	-2,599	-884	-51.6
CH006 Certain organic chemicals							
Exports	13,339	17,679	20,754	20,315	20,302	-14	-0.1
Imports	6,663	9,072	11,261	10,659	10,894	235	2.2
Trade balance	6,675	8,607	9,493	9,656	9,408	-248	-2.6
CH007 Miscellaneous inorganic chemicals							
Exports	9,059	11,379	12,613	12,822	12,458	-365	-2.8
Imports	6,388	8,314	11,000	10,218	9,352	-866	-8.5
Trade balance	2,671	3,066	1,613	2,604	3,106	502	19.3
CH008 Inorganic acids							
Exports	535	657	909	849	891	43	5.0
Imports	496	529	679	735	676	-59	-8.1
Trade balance	38	128	230	113	215	102	90.0

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
CH009 Chlor-alkali chemicals							
Exports	1,601	1,583	2,123	2,393	2,362	-31	-1.3
Imports	453	355	487	405	427	22	5.5
Trade balance	1,149	1,228	1,637	1,988	1,935	-53	-2.7
CH010 Fertilizers							
Exports	3,684	3,941	5,429	4,984	4,473	-511	-10.3
Imports	7,373	11,801	16,763	16,791	15,549	-1,242	-7.4
Trade balance	-3,689	-7,860	-11,334	-11,807	-11,076	731	6.2
CH011 Paints, inks, and related items, and certain components thereof							
Exports	5,195	6,937	8,185	7,542	7,166	-376	-5.0
Imports	2,151	2,744	3,168	3,377	3,491	114	3.4
Trade balance	3,044	4,193	5,017	4,165	3,676	-489	-11.8
CH012 Synthetic organic pigments							
Exports	329	445	425	375	336	-39	-10.5
Imports	330	494	526	530	532	2	0.4
Trade balance	-1	-48	-101	-155	-197	-42	-26.8
CH013 Synthetic dyes and azoic couplers							
Exports	300	379	414	391	452	61	15.6
Imports	260	380	367	390	397	8	2.0
Trade balance	40	-1	47	1	54	53	4,461.8
CH014 Synthetic tanning agents							
Exports	19	24	22	23	24	1	3.3
Imports	6	8	9	9	10	1	13.9
Trade balance	13	16	13	14	14	[a]	-3.2
CH015 Natural tanning and dyeing materials							
Exports	67	78	81	88	83	-5	-5.9
Imports	122	138	146	186	182	-4	-2.0
Trade balance	-55	-60	-65	-98	-99	-1	-1.5
CH016 Photographic chemicals and preparations							
Exports	610	803	693	700	693	-7	-1.0
Imports	343	394	402	359	337	-22	-6.0
Trade balance	267	409	291	341	356	15	4.3
CH017 Pesticide products and formulations							
Exports	3,737	4,507	4,310	4,604	5,212	608	13.2
Imports	2,249	2,169	2,946	3,396	3,830	434	12.8
Trade balance	1,488	2,338	1,364	1,208	1,382	174	14.4

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
CH018 Adhesives and glues							
Exports	997	1,257	1,333	1,386	1,402	16	1.2
Imports	276	315	332	356	385	29	8.3
Trade balance	721	942	1,002	1,031	1,017	-13	-1.3
CH019 Medicinal chemicals							
Exports	46,359	47,304	45,928	48,673	48,232	-441	-0.9
Imports	82,417	86,603	92,732	88,771	85,477	-3,294	-3.7
Trade balance	-36,057	-39,299	-46,805	-40,098	-37,245	2,853	7.1
CH020 Essential oils and other flavoring materials							
Exports	1,816	2,055	2,216	2,355	2,459	104	4.4
Imports	2,940	3,141	3,395	3,376	3,675	299	8.9
Trade balance	-1,124	-1,085	-1,180	-1,021	-1,216	-195	-19.1
CH021 Perfumes, cosmetics, and toiletries							
Exports	5,911	6,600	6,892	7,495	7,897	402	5.4
Imports	4,738	5,492	6,237	6,864	7,574	710	10.3
Trade balance	1,173	1,108	655	631	324	-308	-48.7
CH022 Soaps, detergents, and surface-active agents							
Exports	4,409	5,115	5,566	5,809	5,927	118	2.0
Imports	1,737	2,026	2,269	2,480	2,620	140	5.6
Trade balance	2,672	3,089	3,298	3,329	3,307	-22	-0.7
CH023 Miscellaneous chemicals and specialties							
Exports	5,155	5,730	6,777	6,844	7,029	186	2.7
Imports	3,507	4,310	5,202	4,997	6,154	1,157	23.2
Trade balance	1,648	1,420	1,575	1,847	875	-971	-52.6
CH024 Explosives, propellant powders, and related items							
Exports	575	732	720	766	750	-16	-2.1
Imports	512	608	626	642	644	3	0.4
Trade balance	63	124	95	125	106	-19	-15.1
CH025 Polyethylene resins in primary forms							
Exports	6,236	6,959	7,495	7,370	7,736	367	5.0
Imports	2,454	3,330	4,118	3,812	4,257	445	11.7
Trade balance	3,781	3,630	3,377	3,557	3,479	-79	-2.2
CH026 Polypropylene resins in primary forms							
Exports	2,659	3,085	3,442	3,133	3,162	29	0.9
Imports	162	255	304	360	413	53	14.8
Trade balance	2,498	2,830	3,137	2,774	2,750	-24	-0.9

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
CH027 Polyvinyl chloride resins in primary forms							
Exports	2,228	3,149	3,500	3,402	3,376	-27	-0.8
Imports	247	368	472	452	432	-20	-4.3
Trade balance	1,981	2,781	3,028	2,950	2,943	-7	-0.2
CH028 Styrene polymers in primary forms							
Exports	1,000	1,307	1,441	1,437	1,413	-24	-1.7
Imports	653	862	989	1,145	1,168	23	2.0
Trade balance	347	446	452	292	245	-47	-16.1
CH029 Saturated polyester resins							
Exports	963	1,346	1,353	1,377	1,419	42	3.1
Imports	873	960	1,351	1,387	1,451	64	4.6
Trade balance	90	387	2	-10	-32	-22	-208.2
CH030 Other plastics in primary forms							
Exports	10,412	14,512	16,134	15,771	16,217	446	2.8
Imports	3,377	4,606	5,030	5,503	5,599	96	1.7
Trade balance	7,034	9,906	11,104	10,268	10,618	350	3.4
CH031 Synthetic rubber							
Exports	2,697	3,734	4,792	4,637	3,976	-661	-14.3
Imports	1,178	1,816	2,507	2,604	2,212	-392	-15.0
Trade balance	1,519	1,918	2,285	2,033	1,764	-269	-13.2
CH032 Tires and tubes							
Exports	3,799	4,385	5,423	5,891	5,465	-426	-7.2
Imports	8,229	10,806	13,411	14,752	14,687	-65	-0.4
Trade balance	-4,429	-6,421	-7,989	-8,861	-9,222	-361	-4.1
CH033 Miscellaneous plastic products							
Exports	17,719	21,235	23,108	23,755	24,568	813	3.4
Imports	19,328	22,956	25,279	27,344	28,821	1,477	5.4
Trade balance	-1,609	-1,721	-2,171	-3,589	-4,253	-664	-18.5
CH034 Miscellaneous rubber products							
Exports	2,442	3,121	3,500	3,880	3,936	56	1.4
Imports	3,331	4,491	5,153	5,713	5,849	135	2.4
Trade balance	-890	-1,370	-1,653	-1,833	-1,913	-80	-4.4
CH035 Gelatin							
Exports	62	65	88	100	109	9	8.9
Imports	179	181	205	265	305	40	15.1
Trade balance	-117	-116	-116	-165	-196	-31	-18.9

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
CH036 Natural rubber							
Exports	45	83	94	87	64	-22	-25.8
Imports	1,274	2,820	4,772	3,382	2,557	-825	-24.4
Trade balance	-1,228	-2,737	-4,678	-3,295	-2,492	803	24.4

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.
[a]Less than $500,000.

Table A.3 Electronic products: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
EL001 Office machines							
Exports	759	724	675	589	517	-73	-12.3
Imports	1,487	1,564	1,579	1,521	1,492	-30	-2.0
Trade balance	-727	-839	-904	-932	-975	-43	-4.6
EL002 Telecommunications equipment							
Exports	13,421	13,605	14,619	15,156	16,260	1,105	7.3
Imports	60,299	74,065	79,771	83,831	89,161	5,330	6.4
Trade balance	-46,878	-60,460	-65,152	-68,675	-72,900	-4,225	-6.2
EL003 Consumer electronics							
Exports	3,965	4,785	5,092	4,794	4,553	-242	-5.0
Imports	47,186	51,031	46,343	47,714	42,936	-4,779	-10.0
Trade balance	-43,221	-46,246	-41,251	-42,920	-38,383	4,537	10.6
EL003A Television receivers and video monitors							
Exports	1,223	1,540	1,718	1,374	1,214	-160	-11.6
Imports	29,751	31,125	27,552	27,560	24,235	-3,325	-12.1
Trade balance	-28,528	-29,585	-25,834	-26,186	-23,021	3,165	12.1
EL004 Blank and prerecorded media							
Exports	3,567	3,560	3,371	3,464	3,215	-248	-7.2
Imports	3,799	3,814	4,106	4,256	4,665	409	9.6
Trade balance	-232	-254	-736	-792	-1,449	-657	-83.0
EL005 Navigational instruments and remote control apparatus							
Exports	2,558	2,768	3,317	3,356	3,830	474	14.1
Imports	5,501	5,341	5,405	6,390	5,987	-403	-6.3
Trade balance	-2,943	-2,573	-2,088	-3,035	-2,157	877	28.9
EL006 Radio and television broadcasting equipment							
Exports	989	1,090	1,075	961	870	-91	-9.5
Imports	2,279	2,734	2,895	3,337	3,060	-277	-8.3
Trade balance	-1,290	-1,645	-1,820	-2,376	-2,190	186	7.8
EL007 Electric sound and visual signaling apparatus							
Exports	1,243	1,295	1,357	1,379	1,340	-39	-2.8
Imports	2,455	2,821	3,018	2,970	3,109	139	4.7
Trade balance	-1,212	-1,526	-1,662	-1,592	-1,769	-178	-11.2

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
EL008 Electrical capacitors and resistors							
Exports	1,172	1,254	1,204	1,291	1,317	27	2.1
Imports	1,586	2,296	2,323	2,322	2,428	107	4.6
Trade balance	-414	-1,042	-1,119	-1,031	-1,111	-80	-7.7
EL009 Printed circuits							
Exports	1,141	1,325	1,200	1,299	1,303	5	0.4
Imports	1,479	1,841	1,883	1,853	1,862	9	0.5
Trade balance	-338	-516	-683	-554	-559	-4	-0.8
EL010 Circuit apparatus exceeding 1000V							
Exports	576	649	748	785	748	-37	-4.7
Imports	465	523	687	775	708	-67	-8.7
Trade balance	111	126	61	9	40	31	326.6
EL011 Circuit apparatus not exceeding 1000V							
Exports	5,032	5,859	6,106	6,494	6,768	274	4.2
Imports	5,727	7,911	8,430	9,180	9,555	375	4.1
Trade balance	-694	-2,051	-2,324	-2,686	-2,788	-102	-3.8
EL012 Circuit apparatus assemblies							
Exports	2,206	2,427	2,788	3,338	3,798	460	13.8
Imports	4,228	5,446	6,216	7,471	8,589	1,118	15.0
Trade balance	-2,022	-3,019	-3,428	-4,133	-4,791	-658	-15.9
EL013 Parts of circuit apparatus							
Exports	1,864	2,442	2,679	2,851	2,837	-14	-0.5
Imports	1,424	2,037	2,402	2,662	2,767	105	3.9
Trade balance	440	405	276	189	70	-119	-62.8
EL014 Electron tubes							
Exports	262	320	273	242	220	-22	-9.0
Imports	267	294	348	343	309	-34	-9.9
Trade balance	-5	25	-76	-101	-89	12	11.8
EL015 Semiconductors and integrated circuits							
Exports	25,058	31,267	29,188	26,436	26,075	-361	-1.4
Imports	21,190	29,134	37,624	37,358	38,025	667	1.8
Trade balance	3,869	2,133	-8,437	-10,922	-11,950	-1,027	-9.4
EL016 Miscellaneous electrical equipment							
Exports	1,744	2,066	2,329	2,629	2,586	-43	-1.6
Imports	3,638	5,587	6,841	6,105	6,376	271	4.4
Trade balance	-1,894	-3,521	-4,512	-3,476	-3,790	-314	-9.0

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
EL017 Computers, peripherals, and parts							
Exports	19,837	20,592	20,332	21,086	20,111	-975	-4.6
Imports	95,391	118,898	121,300	123,283	121,329	-1,955	-1.6
Trade balance	-75,554	-98,306	-100,968	-102,198	-101,218	980	1.0
EL018 Photographic film and paper							
Exports	2,091	2,034	1,996	1,793	1,801	8	0.4
Imports	1,067	1,056	999	804	756	-48	-5.9
Trade balance	1,023	978	998	990	1,045	55	5.6
EL019 Optical fibers, optical fiber bundles and cables							
Exports	906	982	893	1,165	1,104	-61	-5.2
Imports	481	589	676	776	783	7	1.0
Trade balance	425	392	217	389	321	-68	-17.5
EL020 Optical goods, including ophthalmic goods							
Exports	4,447	5,489	5,636	5,460	5,477	17	0.3
Imports	6,632	8,095	8,805	9,275	9,466	191	2.1
Trade balance	-2,184	-2,606	-3,169	-3,814	-3,989	-174	-4.6
EL021 Photographic cameras and equipment							
Exports	1,301	1,550	1,578	1,511	1,452	-58	-3.9
Imports	842	928	891	873	853	-21	-2.4
Trade balance	459	622	687	638	600	-38	-5.9
EL022 Medical goods							
Exports	28,647	30,604	32,298	33,471	33,440	-31	-0.1
Imports	25,928	29,219	31,796	32,639	34,131	1,492	4.6
Trade balance	2,719	1,384	502	832	-691	-1,523	[a]
EL023 Watches and clocks							
Exports	356	381	453	396	356	-40	-10.1
Imports	3,000	3,592	4,372	4,643	4,833	189	4.1
Trade balance	-2,643	-3,211	-3,919	-4,247	-4,476	-229	-5.4
EL024 Drawing, drafting, and calculating instruments							
Exports	543	605	594	562	427	-134	-23.9
Imports	158	206	242	270	272	2	0.8
Trade balance	385	399	351	291	155	-137	-46.9

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
EL025 Measuring, testing, and controlling instruments							
Exports	19,251	22,161	24,738	26,496	26,569	73	0.3
Imports	14,912	18,592	21,639	23,115	23,777	662	2.9
Trade balance	4,339	3,569	3,099	3,381	2,793	-589	-17.4

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.
[a]Not meaningful for purposes of comparison.

Table A.4 Energy-related products: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
EP001 Electrical energy							
Exports	575	648	391	233	327	94	40.5
Imports	2,071	2,071	2,096	1,914	2,293	380	19.8
Trade balance	-1,495	-1,423	-1,705	-1,681	-1,966	-285	-17.0
EP002 Nuclear materials							
Exports	2,235	1,886	1,948	1,518	1,103	-416	-27.4
Imports	4,454	5,025	4,943	4,171	3,845	-325	-7.8
Trade balance	-2,219	-3,139	-2,996	-2,652	-2,743	-90	-3.4
EP003 Coal, coke, and related chemical products							
Exports	8,079	12,612	19,471	17,779	13,665	-4,115	-23.1
Imports	4,123	5,335	7,076	5,447	4,796	-650	-11.9
Trade balance	3,956	7,278	12,395	12,333	8,869	-3,464	-28.1
EP004 Crude petroleum							
Exports	1,620	1,384	1,460	2,184	4,818	2,635	120.6
Imports	150,809	196,862	246,894	228,944	195,487	-33,457	-14.6
Trade balance	-149,189	-195,478	-245,435	-226,760	-190,669	36,091	15.9
EP005 Petroleum products							
Exports	42,048	61,131	100,425	111,355	119,700	8,345	7.5
Imports	72,581	97,889	135,170	129,773	118,136	-11,638	-9.0
Trade balance	-30,533	-36,758	-34,745	-18,418	1,564	19,983	[a]
EP006 Natural gas and components							
Exports	5,270	7,805	10,394	9,225	13,039	3,814	41.3
Imports	26,840	31,001	34,616	28,193	28,296	103	0.4
Trade balance	-21,571	-23,196	-24,222	-18,968	-15,256	3,711	19.6

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

[a]Not meaningful for purposes of comparison.

Table A.5 Forest products: U.S. trade for industry/commodity groups and subgroups, 2009–13

	Million $						
USITC code and industry/commodity group	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
FP001 Logs and rough wood products							
Exports	1,716	2,236	2,624	2,545	3,117	573	22.5
Imports	398	423	427	459	483	24	5.3
Trade balance	1,317	1,813	2,197	2,085	2,634	549	26.3
FP002 Lumber							
Exports	1,593	2,256	2,607	2,681	3,130	449	16.7
Imports	2,639	3,391	3,366	3,961	5,036	1,075	27.1
Trade balance	-1,046	-1,135	-759	-1,280	-1,906	-626	-48.9
FP003 Moldings, millwork, and joinery							
Exports	549	648	702	711	736	25	3.5
Imports	2,125	2,316	2,229	2,478	2,853	375	15.2
Trade balance	-1,576	-1,668	-1,527	-1,767	-2,117	-351	-19.9
FP004 Wood veneer and wood panels							
Exports	833	1,065	1,060	1,113	1,140	26	2.4
Imports	2,961	3,413	3,263	3,931	4,605	673	17.1
Trade balance	-2,128	-2,348	-2,203	-2,818	-3,465	-647	-23.0
FP005 Wooden containers							
Exports	253	271	270	276	300	24	8.8
Imports	546	590	619	654	717	64	9.7
Trade balance	-293	-319	-349	-378	-417	-39	-10.5
FP006 Tools and tool handles of wood							
Exports	56	61	41	47	47	[a]	0.2
Imports	156	177	185	200	221	20	10.2
Trade balance	-100	-116	-144	-153	-174	-20	-13.3
FP007 Miscellaneous articles of wood							
Exports	216	221	267	212	204	-9	-4.1
Imports	981	1,068	1,122	1,200	1,301	101	8.4
Trade balance	-765	-847	-854	-988	-1,097	-109	-11.1
FP008 Cork and rattan							
Exports	54	46	43	40	38	-3	-7.0
Imports	561	618	715	741	737	-5	-0.6
Trade balance	-507	-571	-672	-701	-699	2	0.2

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
FP009 Wood pulp and recovered paper							
Exports	6,751	8,788	9,816	9,006	8,768	-239	-2.7
Imports	2,449	3,886	4,043	3,369	3,634	264	7.8
Trade balance	4,302	4,902	5,773	5,637	5,134	-503	-8.9
FP010 Paper boxes and bags							
Exports	1,483	1,669	1,744	1,757	1,836	79	4.5
Imports	1,596	1,796	1,920	1,990	2,085	95	4.8
Trade balance	-113	-127	-176	-233	-249	-17	-7.2
FP011 Industrial papers and paperboards							
Exports	7,265	8,574	9,338	9,085	9,378	293	3.2
Imports	4,621	5,256	5,397	5,301	5,578	277	5.2
Trade balance	2,644	3,318	3,941	3,784	3,799	16	0.4
FP011A Paperboard							
Exports	5,065	6,055	6,739	6,346	6,600	254	4.0
Imports	2,019	2,342	2,394	2,321	2,549	228	9.8
Trade balance	3,045	3,713	4,345	4,025	4,051	25	0.6
FP011B Tissue and tissue products							
Exports	1,589	1,774	1,801	1,944	2,033	89	4.6
Imports	1,946	2,176	2,178	2,130	2,201	72	3.4
Trade balance	-357	-402	-376	-186	-169	17	9.1
FP011C Industrial paper							
Exports	611	745	798	795	745	-50	-6.3
Imports	656	738	825	851	827	-23	-2.7
Trade balance	-44	7	-28	-56	-82	-27	-47.4
FP012 Newsprint							
Exports	317	440	535	454	445	-8	-1.9
Imports	1,442	1,377	1,464	1,344	1,290	-54	-4.0
Trade balance	-1,125	-937	-929	-890	-845	45	5.1
FP013 Printing and writing papers							
Exports	1,105	1,277	1,336	1,533	1,439	-93	-6.1
Imports	4,285	4,044	4,024	3,858	3,870	12	0.3
Trade balance	-3,180	-2,766	-2,688	-2,325	-2,431	-105	-4.5
FP014 Certain specialty papers							
Exports	1,389	1,526	1,476	1,336	1,297	-39	-2.9
Imports	835	905	935	922	943	22	2.3
Trade balance	554	621	540	414	354	-60	-14.6

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
FP015 Miscellaneous paper products							
Exports	1,749	1,898	2,043	2,199	2,276	77	3.5
Imports	1,964	2,207	2,388	2,470	2,432	-38	-1.5
Trade balance	-216	-309	-345	-270	-156	114	42.3
FP016 Printed matter							
Exports	5,162	5,405	5,371	5,313	5,094	-219	-4.1
Imports	3,952	4,282	4,174	4,237	4,181	-56	-1.3
Trade balance	1,210	1,123	1,197	1,075	913	-163	-15.1

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

[a]Less than $500,000.

Table A.6 Minerals and metals: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM001 Clays and related mineral products							
Exports	980	1,269	1,284	1,267	1,293	27	2.1
Imports	351	429	447	454	430	-24	-5.3
Trade balance	628	840	837	813	863	50	6.2
MM002 Fluorspar and miscellaneous mineral substances							
Exports	47	107	139	121	123	1	0.9
Imports	184	173	223	242	241	-2	-0.6
Trade balance	-138	-66	-85	-121	-118	3	2.2
MM003 Iron ores and concentrates							
Exports	356	1,092	1,327	1,436	1,483	47	3.3
Imports	375	703	841	757	426	-331	-43.7
Trade balance	-19	388	486	678	1,057	379	55.8
MM004 Copper ores and concentrates							
Exports	930	1,181	2,227	2,396	2,556	160	6.7
Imports	[a]	2	143	30	18	-12	-39.3
Trade balance	929	1,179	2,084	2,366	2,538	172	7.3
MM005 Lead ores, concentrates, and residues							
Exports	382	668	725	594	572	-23	-3.8
Imports	[a]	2	29	29	20	-9	-31.2
Trade balance	381	666	696	565	552	-14	-2.4
MM005A Lead ores and concentrates							
Exports	372	667	724	594	571	-23	-3.9
Imports	[a]	2	29	28	18	-10	-36.5
Trade balance	372	665	696	566	553	-13	-2.3
MM006 Zinc ores, concentrates, and residues							
Exports	674	934	1,062	885	989	103	11.7
Imports	76	63	64	41	22	-18	-45.1
Trade balance	598	871	998	845	966	122	14.4
MM006A Zinc ores and concentrates							
Exports	663	924	1,050	866	963	98	11.3
Imports	68	44	46	14	6	-8	-57.2
Trade balance	595	880	1,004	852	957	105	12.4

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM007 Certain ores, concentrates, ash, and residues							
Exports	768	1,225	1,609	1,276	1,202	-75	-5.8
Imports	1,696	1,747	2,184	2,336	2,255	-82	-3.5
Trade balance	-928	-522	-576	-1,060	-1,053	7	0.7
MM007A Molybdenum ores and concentrates							
Exports	631	1,055	1,446	1,119	1,032	-86	-7.7
Imports	150	314	460	299	297	-2	-0.7
Trade balance	481	741	986	820	736	-84	-10.3
MM008 Precious metal ores and concentrates							
Exports	204	249	413	321	395	74	22.9
Imports	36	62	156	57	25	-32	-56.4
Trade balance	168	187	257	264	370	106	40.0
MM008A Gold ores and concentrates							
Exports	68	158	299	271	340	68	25.1
Imports	33	58	125	43	18	-25	-57.8
Trade balance	35	100	174	228	321	93	40.7
MM008B Silver ores and concentrates							
Exports	134	81	110	48	41	-7	-14.0
Imports	(a)	(a)	1	8	3	-5	-56.9
Trade balance	134	81	110	40	38	-2	-5.4
MM009 Cement, stone, and related products							
Exports	2,069	2,703	3,070	3,245	3,442	197	6.1
Imports	4,536	5,066	5,498	5,840	6,482	643	11.0
Trade balance	-2,467	-2,364	-2,428	-2,595	-3,040	-446	-17.2
MM009A Cement							
Exports	109	169	190	233	233	(a)	-0.2
Imports	511	501	478	524	541	18	3.4
Trade balance	-402	-331	-288	-290	-308	-18	-6.2
MM010 Industrial ceramics							
Exports	807	1,146	1,292	1,271	1,309	37	2.9
Imports	712	1,241	1,815	1,700	1,464	-237	-13.9
Trade balance	95	-95	-523	-429	-155	274	63.9
MM011 Ceramic bricks and similar articles							
Exports	39	39	56	54	46	-7	-13.7
Imports	43	34	46	44	55	11	24.1
Trade balance	-5	5	10	10	-8	-18	[b]

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM012 Ceramic floor and wall tiles							
Exports	39	40	42	43	41	-3	-5.8
Imports	964	1,025	1,078	1,184	1,412	228	19.3
Trade balance	-926	-985	-1,036	-1,141	-1,372	-231	-20.3
MM013 Ceramic household articles							
Exports	100	97	99	107	109	3	2.4
Imports	1,181	1,490	1,487	1,500	1,583	83	5.5
Trade balance	-1,081	-1,393	-1,388	-1,394	-1,474	-81	-5.8
MM014 Flat glass							
Exports	1,785	2,310	2,478	2,435	2,600	166	6.8
Imports	1,474	1,784	1,825	1,822	1,835	13	0.7
Trade balance	311	526	653	613	765	153	24.9
MM015 Glass containers							
Exports	298	279	290	295	268	-27	-9.0
Imports	792	926	1,070	1,127	1,250	122	10.8
Trade balance	-494	-647	-780	-833	-981	-149	-17.9
MM016 Household glassware							
Exports	215	247	244	271	264	-7	-2.4
Imports	632	758	776	855	869	14	1.7
Trade balance	-417	-512	-533	-584	-605	-21	-3.6
MM017 Miscellaneous glass products							
Exports	686	877	886	833	897	64	7.6
Imports	789	954	1,049	1,066	1,116	50	4.7
Trade balance	-103	-77	-163	-233	-220	13	5.7
MM018 Fiberglass insulation products							
Exports	205	127	172	187	234	47	25.3
Imports	73	73	115	139	140	1	0.5
Trade balance	131	54	56	47	94	47	98.2
MM019 Natural and synthetic gemstones							
Exports	2,447	3,303	3,684	3,623	2,356	-1,267	-35.0
Imports	13,608	19,730	23,625	21,597	24,733	3,136	14.5
Trade balance	-11,161	-16,427	-19,942	-17,974	-22,377	-4,403	-24.5
MM020 Precious metals and non-numismatic coins							
Exports	20,699	28,033	42,230	42,762	38,868	-3,893	-9.1
Imports	16,287	23,701	33,423	32,257	30,181	-2,075	-6.4
Trade balance	4,412	4,332	8,808	10,505	8,687	-1,818	-17.3

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM020A Unrefined and refined gold							
Exports	11,918	14,698	24,134	33,339	31,585	-1,753	-5.3
Imports	7,928	11,647	14,330	15,912	14,124	-1,788	-11.2
Trade balance	3,990	3,052	9,805	17,426	17,462	35	0.2
MM021 Primary iron products							
Exports	7	18	38	12	7	-5	-40.0
Imports	1,184	2,149	2,916	2,925	2,474	-452	-15.4
Trade balance	-1,176	-2,131	-2,878	-2,913	-2,467	447	15.3
MM022 Ferroalloys							
Exports	128	165	171	143	126	-17	-12.1
Imports	1,062	2,668	2,930	2,899	2,380	-519	-17.9
Trade balance	-935	-2,503	-2,760	-2,756	-2,254	501	18.2
MM023 Iron and steel waste and scrap							
Exports	7,125	8,399	11,398	9,449	7,595	-1,854	-19.6
Imports	817	1,423	1,655	1,605	1,483	-122	-7.6
Trade balance	6,307	6,975	9,743	7,844	6,112	-1,732	-22.1
MM024 Abrasive and ferrous products							
Exports	528	774	855	806	843	37	4.7
Imports	745	1,039	1,218	1,184	1,190	6	0.5
Trade balance	-217	-265	-364	-378	-347	32	8.4
MM024A Abrasive products							
Exports	339	486	544	506	522	16	3.1
Imports	536	683	770	803	818	15	1.9
Trade balance	-197	-197	-226	-297	-296	([a])	0.1
MM025 Steel mill products							
Exports	10,648	14,086	16,647	16,965	16,017	-948	-5.6
Imports	16,995	22,928	30,765	34,303	29,065	-5,238	-15.3
Trade balance	-6,347	-8,842	-14,118	-17,337	-13,048	4,289	24.7
MM025A Ingots, blooms, billets, and slabs of carbon and alloy steels							
Exports	459	474	818	632	409	-223	-35.3
Imports	891	2,535	4,192	4,109	3,397	-712	-17.3
Trade balance	-432	-2,060	-3,375	-3,477	-2,989	489	14.1
MM025B Plates, sheets, and strips of carbon and alloy steels							
Exports	3,940	5,137	5,976	5,744	5,320	-424	-7.4
Imports	4,480	6,133	7,934	8,726	7,896	-830	-9.5
Trade balance	-540	-997	-1,958	-2,982	-2,576	405	13.6

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM025C Bars, rods, and light shapes of carbon and alloy steels							
Exports	989	1,536	1,860	1,826	1,483	-343	-18.8
Imports	1,472	2,362	3,110	3,466	3,111	-355	-10.2
Trade balance	-483	-825	-1,250	-1,640	-1,629	12	0.7
MM025D Angles, shapes, and sections of carbon and alloy steels							
Exports	459	659	1,007	1,112	922	-190	-17.1
Imports	394	516	631	573	648	75	13.2
Trade balance	65	143	376	539	274	-265	-49.2
MM025E Wire of carbon and alloy steels							
Exports	198	270	287	258	242	-16	-6.1
Imports	493	665	758	807	771	-36	-4.4
Trade balance	-295	-395	-471	-549	-529	20	3.6
MM025F Ingots, blooms, billets, and slabs of stainless steels							
Exports	101	97	159	173	134	-39	-22.6
Imports	204	355	505	513	352	-161	-31.5
Trade balance	-104	-258	-346	-340	-218	122	35.9
MM025G Plates, sheets, and strips of stainless steels							
Exports	841	1,365	1,441	1,282	1,377	95	7.4
Imports	670	1,423	1,830	1,771	1,354	-417	-23.6
Trade balance	171	-58	-389	-489	23	512	[b]
MM025H Bars, rods, and light shapes of stainless steels							
Exports	200	271	398	382	330	-52	-13.7
Imports	362	564	849	800	656	-143	-17.9
Trade balance	-162	-293	-451	-417	-326	91	21.8
MM025I Angles, shapes, and sections of stainless steels							
Exports	11	17	17	22	19	-3	-14.5
Imports	17	31	36	31	32	1	3.1
Trade balance	-6	-14	-19	-9	-13	-4	-45.8
MM025J Wire of stainless steels							
Exports	59	86	109	111	101	-10	-8.6
Imports	126	205	248	239	228	-11	-4.6
Trade balance	-67	-119	-138	-128	-127	1	1.1
MM025K Rails and accessories of carbon and alloy steels							
Exports	209	210	250	327	359	32	9.8
Imports	313	327	396	442	455	13	3.0
Trade balance	-104	-117	-146	-114	-96	19	16.4

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM025L Pipes and tubes of carbon and alloy steels							
Exports	2,565	3,042	3,204	3,895	4,179	284	7.3
Imports	6,718	6,798	8,952	11,324	8,919	-2,405	-21.2
Trade balance	-4,153	-3,756	-5,748	-7,429	-4,740	2,689	36.2
MM025M Pipes and tubes of stainless steels							
Exports	260	294	406	443	429	-14	-3.1
Imports	693	675	853	1,026	859	-167	-16.3
Trade balance	-433	-381	-447	-583	-430	153	26.3
MM025N Tool steels							
Exports	358	627	714	759	713	-46	-6.0
Imports	161	339	470	477	386	-91	-19.0
Trade balance	197	288	244	282	327	45	16.0
MM026 Steel pipe and tube fittings and certain cast products							
Exports	1,291	1,537	1,692	1,835	1,928	93	5.1
Imports	1,246	1,447	1,992	2,487	2,303	-183	-7.4
Trade balance	45	90	-299	-651	-375	276	42.4
MM027 Fabricated structurals							
Exports	420	500	582	727	799	72	9.9
Imports	1,366	1,215	1,211	1,893	1,025	-868	-45.8
Trade balance	-946	-714	-629	-1,166	-226	940	80.6
MM028 Metal construction components							
Exports	1,147	1,227	1,428	1,802	1,562	-240	-13.3
Imports	1,939	1,618	1,744	2,156	2,315	158	7.3
Trade balance	-792	-391	-317	-354	-753	-398	-112.4
MM029 Metallic containers							
Exports	1,333	1,479	1,592	1,648	1,782	135	8.2
Imports	1,288	1,038	1,193	1,408	1,414	6	0.4
Trade balance	45	441	399	240	368	129	53.7
MM030 Wire products of base metal							
Exports	1,124	1,413	1,629	1,755	1,906	151	8.6
Imports	1,731	2,105	2,499	2,792	2,723	-69	-2.5
Trade balance	-607	-692	-870	-1,037	-817	220	21.2
MM031 Miscellaneous products of base metal							
Exports	5,997	7,087	8,066	8,817	9,318	502	5.7
Imports	9,686	11,889	13,630	14,938	15,209	271	1.8
Trade balance	-3,689	-4,802	-5,564	-6,122	-5,891	231	3.8

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM032 Industrial fasteners of base metal							
Exports	1,962	2,446	2,854	3,133	3,380	247	7.9
Imports	2,561	3,490	4,234	4,679	4,575	-104	-2.2
Trade balance	-599	-1,044	-1,380	-1,545	-1,194	351	22.7
MM033 Cooking and kitchen ware							
Exports	221	253	256	284	292	9	3.1
Imports	2,180	2,683	2,676	2,781	3,023	243	8.7
Trade balance	-1,960	-2,430	-2,420	-2,497	-2,731	-234	-9.4
MM034 Metal and ceramic sanitary ware							
Exports	193	202	206	190	184	-5	-2.7
Imports	1,030	1,183	1,214	1,331	1,464	133	10.0
Trade balance	-836	-981	-1,008	-1,141	-1,280	-139	-12.2
MM035 Construction castings and other cast-iron articles							
Exports	53	64	85	80	82	3	3.4
Imports	139	168	229	253	231	-22	-8.6
Trade balance	-86	-104	-144	-174	-149	25	14.2
MM036 Copper and related articles							
Exports	4,636	7,189	8,841	8,738	8,303	-435	-5.0
Imports	6,125	8,609	11,158	9,735	10,181	446	4.6
Trade balance	-1,488	-1,420	-2,318	-997	-1,878	-881	-88.4
MM036A Unrefined and refined copper							
Exports	452	579	243	754	508	-247	-32.7
Imports	3,403	4,489	5,840	4,938	5,453	515	10.4
Trade balance	-2,951	-3,909	-5,597	-4,183	-4,946	-762	-18.2
MM036B Copper alloy plate, sheet, and strip							
Exports	193	263	288	275	316	41	15.0
Imports	119	225	255	254	298	43	16.9
Trade balance	73	38	32	20	19	-2	-9.2
MM037 Unwrought aluminum							
Exports	2,673	3,930	4,977	4,418	4,200	-218	-4.9
Imports	5,761	7,180	8,678	8,049	8,428	379	4.7
Trade balance	-3,089	-3,250	-3,701	-3,631	-4,228	-597	-16.4
MM037A Primary and secondary aluminum							
Exports	620	921	1,134	1,056	1,016	-40	-3.8
Imports	5,021	6,163	7,471	6,839	7,249	410	6.0
Trade balance	-4,401	-5,242	-6,337	-5,783	-6,233	-450	-7.8

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM038 Aluminum mill products							
Exports	3,671	4,235	5,305	5,526	5,705	179	3.2
Imports	3,330	4,397	4,712	4,572	4,493	-78	-1.7
Trade balance	341	-162	594	955	1,212	257	27.0
MM038A Aluminum bars, rods, and profiles							
Exports	431	534	654	736	874	138	18.8
Imports	783	899	531	620	643	24	3.8
Trade balance	-352	-365	124	116	231	115	98.7
MM038B Aluminum wire							
Exports	132	163	187	154	159	5	3.4
Imports	321	387	491	644	583	-61	-9.4
Trade balance	-189	-224	-304	-490	-424	66	13.4
MM038C Aluminum plate, sheet, and strip							
Exports	2,397	2,699	3,426	3,652	3,750	98	2.7
Imports	1,423	2,104	2,544	2,235	2,081	-154	-6.9
Trade balance	974	595	883	1,417	1,669	252	17.8
MM038D Aluminum foil							
Exports	460	538	714	603	513	-90	-14.9
Imports	591	751	867	795	902	107	13.5
Trade balance	-131	-213	-153	-192	-389	-197	-102.8
MM038E Aluminum tubes, pipes, and fittings							
Exports	226	269	296	365	390	25	6.8
Imports	190	210	232	231	238	7	3.1
Trade balance	36	59	64	134	152	17	13.0
MM039 Lead and related articles							
Exports	283	278	293	253	276	23	9.0
Imports	509	708	897	892	1,176	284	31.8
Trade balance	-225	-431	-604	-639	-900	-261	-40.9
MM039A Refined lead							
Exports	61	62	29	33	41	8	23.0
Imports	213	258	299	344	692	347	100.9
Trade balance	-152	-196	-269	-311	-651	-340	-109.3
MM040 Zinc and related articles							
Exports	185	289	315	312	303	-10	-3.2
Imports	1,254	1,703	1,966	1,611	1,806	195	12.1
Trade balance	-1,069	-1,414	-1,651	-1,298	-1,503	-205	-15.8

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MM040A Unwrought zinc							
Exports	3	4	20	15	11	-4	-26.6
Imports	1,076	1,449	1,605	1,318	1,543	225	17.0
Trade balance	-1,073	-1,445	-1,586	-1,303	-1,532	-229	-17.5
MM041 Certain base metals and chemical elements							
Exports	2,735	3,227	4,291	4,361	4,225	-137	-3.1
Imports	3,822	6,106	7,563	6,744	5,830	-914	-13.6
Trade balance	-1,087	-2,879	-3,272	-2,383	-1,606	777	32.6
MM041A Titanium ingot							
Exports	20	10	6	71	87	16	22.8
Imports	13	4	12	9	14	6	66.1
Trade balance	6	6	-6	62	73	10	16.9
MM042 Nonpowered handtools							
Exports	2,734	3,538	4,078	4,101	4,074	-27	-0.7
Imports	3,628	4,786	5,445	6,088	6,344	256	4.2
Trade balance	-894	-1,248	-1,368	-1,987	-2,270	-284	-14.3
MM043 Certain cutlery, sewing implements, and related products							
Exports	562	625	636	603	588	-14	-2.4
Imports	1,253	1,525	1,720	1,763	1,818	56	3.2
Trade balance	-691	-900	-1,084	-1,160	-1,230	-70	-6.0
MM044 Table flatware and related products							
Exports	26	22	28	26	24	-2	-6.6
Imports	444	530	560	523	587	64	12.1
Trade balance	-418	-508	-532	-498	-563	-65	-13.1
MM045 Certain builders' hardware							
Exports	942	1,002	1,053	1,113	1,183	70	6.3
Imports	3,119	3,646	3,848	4,026	4,379	353	8.8
Trade balance	-2,177	-2,644	-2,795	-2,913	-3,196	-283	-9.7

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

[a]Less than $500,000.

[b]Not meaningful for purposes of comparison.

Table A.7 Miscellaneous manufactures: U.S. trade for industry/commodity groups and subgroups, 2009–13

	Million $						
USITC code and industry/commodity group	2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MS001 Luggage, handbags, and flat goods							
Exports	449	461	524	539	581	42	7.7
Imports	6,395	7,917	8,893	9,880	10,372	491	5.0
Trade balance	-5,946	-7,456	-8,369	-9,341	-9,790	-450	-4.8
MS001A Luggage							
Exports	286	305	350	362	390	28	7.7
Imports	3,602	4,860	5,461	6,178	6,406	228	3.7
Trade balance	-3,316	-4,556	-5,111	-5,816	-6,016	-200	-3.4
MS001B Handbags							
Exports	117	111	120	111	125	13	12.0
Imports	2,131	2,274	2,519	2,723	2,903	180	6.6
Trade balance	-2,014	-2,163	-2,399	-2,611	-2,778	-167	-6.4
MS001C Flat goods							
Exports	35	32	42	52	54	2	4.0
Imports	621	748	871	947	1,015	68	7.2
Trade balance	-585	-716	-829	-894	-961	-66	-7.4
MS002 Certain other leather goods							
Exports	98	124	131	157	152	-5	-2.9
Imports	391	483	611	570	580	11	1.9
Trade balance	-293	-359	-480	-413	-428	-15	-3.7
MS003 Musical instruments and accessories							
Exports	599	618	713	739	692	-47	-6.4
Imports	1,075	1,204	1,234	1,264	1,251	-14	-1.1
Trade balance	-476	-586	-521	-525	-558	-34	-6.4
MS004 Umbrellas, whips, riding crops, and canes							
Exports	12	15	20	21	20	-1	-5.9
Imports	385	479	498	521	525	4	0.7
Trade balance	-372	-464	-479	-500	-505	-5	-1.0
MS005 Silverware and related articles of precious metal							
Exports	246	351	249	285	264	-21	-7.4
Imports	1,398	1,383	1,496	944	1,148	203	21.5
Trade balance	-1,152	-1,032	-1,246	-660	-884	-224	-34.0

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MS006 Precious jewelry and related articles							
Exports	3,931	4,327	4,781	4,817	5,178	361	7.5
Imports	5,755	6,945	7,725	7,443	8,114	671	9.0
Trade balance	-1,824	-2,618	-2,943	-2,626	-2,936	-310	-11.8
MS007 Costume jewelry and related articles							
Exports	148	167	179	191	201	9	4.9
Imports	1,379	1,719	1,799	1,964	1,931	-33	-1.7
Trade balance	-1,231	-1,551	-1,621	-1,773	-1,730	42	2.4
MS008 Bicycles and certain parts							
Exports	313	342	349	395	386	-9	-2.4
Imports	1,404	1,818	1,848	2,136	1,959	-177	-8.3
Trade balance	-1,092	-1,476	-1,499	-1,741	-1,573	167	9.6
MS009 Furniture							
Exports	3,392	3,872	4,226	4,766	4,807	41	0.9
Imports	20,057	24,005	24,659	26,914	28,590	1,675	6.2
Trade balance	-16,665	-20,132	-20,433	-22,149	-23,783	-1,634	-7.4
MS010 Writing instruments and related articles							
Exports	130	157	172	164	178	14	8.8
Imports	1,092	1,277	1,357	1,390	1,395	4	0.3
Trade balance	-962	-1,120	-1,185	-1,227	-1,217	10	0.8
MS011 Lamps and lighting fittings							
Exports	916	1,056	1,268	1,327	1,350	23	1.7
Imports	4,709	5,824	6,443	7,644	8,585	941	12.3
Trade balance	-3,793	-4,769	-5,175	-6,317	-7,235	-918	-14.5
MS012 Prefabricated buildings							
Exports	627	875	961	1,075	1,151	76	7.1
Imports	216	242	227	244	227	-17	-7.0
Trade balance	410	633	734	831	924	93	11.2
MS013 Toys and games							
Exports	2,435	2,450	2,462	2,562	2,398	-164	-6.4
Imports	21,256	22,387	19,974	18,923	18,339	-584	-3.1
Trade balance	-18,821	-19,936	-17,511	-16,361	-15,941	420	2.6
MS014 Sporting goods							
Exports	1,550	1,633	1,655	1,700	1,722	22	1.3
Imports	4,688	5,573	5,725	6,143	6,131	-12	-0.2
Trade balance	-3,138	-3,940	-4,070	-4,443	-4,409	34	0.8

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MS015 Smokers' articles							
Exports	85	88	112	122	123	2	1.4
Imports	188	229	244	228	275	47	20.8
Trade balance	-103	-141	-132	-106	-152	-46	-43.1
MS016 Brooms, brushes, and hair grooming articles							
Exports	266	290	296	308	316	7	2.4
Imports	1,292	1,473	1,561	1,686	1,734	49	2.9
Trade balance	-1,026	-1,184	-1,265	-1,377	-1,418	-41	-3.0
MS016A Brooms and brushes							
Exports	244	266	268	277	288	10	3.7
Imports	1,060	1,195	1,274	1,400	1,466	67	4.8
Trade balance	-816	-930	-1,006	-1,122	-1,179	-57	-5.0
MS016B Hair grooming articles, non-electric (except brushes)							
Exports	22	24	28	31	28	-3	-9.1
Imports	232	278	287	286	268	-18	-6.3
Trade balance	-211	-254	-260	-255	-240	15	6.0
MS017 Works of art and miscellaneous manufactured goods							
Exports	5,169	3,680	3,854	3,768	4,564	797	21.1
Imports	8,621	10,325	11,513	12,546	13,926	1,380	11.0
Trade balance	-3,452	-6,645	-7,659	-8,778	-9,361	-583	-6.6
MS018 Apparel fasteners							
Exports	109	143	155	125	168	43	34.4
Imports	60	77	82	89	88	-1	-0.7
Trade balance	48	67	73	36	79	44	122.1
MS019 Arms, ammunition, and armored vehicles							
Exports	4,292	4,892	4,652	4,854	5,592	739	15.2
Imports	4,076	3,988	3,526	3,915	4,243	328	8.4
Trade balance	216	905	1,126	939	1,349	410	43.7
MS019A Small arms and ammunition							
Exports	1,115	1,311	1,327	1,261	1,301	40	3.2
Imports	2,304	2,136	2,063	2,544	3,144	600	23.6
Trade balance	-1,189	-824	-736	-1,283	-1,843	-560	-43.6

Source: Compiled from official statistics of the U.S. Department of Commerce.
Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

Table A.8 Machinery: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MT001 Pumps for liquids							
Exports	4,238	5,073	6,189	7,085	7,385	300	4.2
Imports	3,746	4,915	6,356	7,216	7,150	-66	-0.9
Trade balance	492	158	-167	-131	235	366	[a]
MT002 Air-conditioning equipment and parts							
Exports	6,911	7,857	8,568	9,198	9,569	370	4.0
Imports	8,576	10,695	12,810	14,045	14,977	932	6.6
Trade balance	-1,665	-2,838	-4,242	-4,847	-5,409	-562	-11.6
MT003 Industrial thermal-processing equipment and furnaces							
Exports	3,489	3,993	4,430	4,634	4,517	-116	-2.5
Imports	3,648	3,365	3,790	4,120	3,961	-160	-3.9
Trade balance	-160	628	640	513	557	43	8.4
MT004 Household appliances, including commercial applications							
Exports	5,576	6,308	6,771	7,184	7,523	339	4.7
Imports	16,608	19,731	20,524	21,542	22,763	1,221	5.7
Trade balance	-11,031	-13,423	-13,753	-14,358	-15,240	-882	-6.1
MT004A Major household appliances and parts							
Exports	1,875	1,977	1,999	2,123	2,037	-86	-4.0
Imports	5,964	7,113	7,037	7,529	8,198	669	8.9
Trade balance	-4,089	-5,136	-5,038	-5,406	-6,161	-755	-14.0
MT005 Centrifuges and filtering and purifying equipment							
Exports	4,703	5,163	5,922	6,297	6,789	492	7.8
Imports	3,886	4,653	5,569	5,794	6,052	259	4.5
Trade balance	817	509	354	503	736	233	46.4
MT006 Wrapping, packaging, and can-sealing machinery							
Exports	722	758	869	832	822	-10	-1.2
Imports	1,625	1,808	2,343	2,241	2,421	180	8.1
Trade balance	-903	-1,050	-1,474	-1,409	-1,600	-191	-13.5
MT007 Scales and weighing machinery							
Exports	194	185	199	212	212	-1	-0.3
Imports	529	663	680	700	690	-10	-1.4
Trade balance	-336	-477	-481	-488	-479	9	1.9

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MT008 Mineral processing machinery							
Exports	1,193	1,405	1,721	1,842	1,666	-176	-9.5
Imports	656	752	1,097	1,232	1,264	33	2.6
Trade balance	537	653	624	610	402	-208	-34.1
MT009 Farm and garden machinery and equipment							
Exports	7,667	8,653	11,234	13,147	11,645	-1,501	-11.4
Imports	4,977	5,887	7,069	8,191	8,943	752	9.2
Trade balance	2,689	2,767	4,165	4,956	2,702	-2,254	-45.5
MT010 Industrial food-processing and related machinery							
Exports	763	877	1,008	1,063	1,073	10	1.0
Imports	741	825	1,027	1,071	1,286	215	20.1
Trade balance	23	52	-19	-8	-213	-205	-2,617.3
MT011 Pulp, paper, and paperboard machinery							
Exports	616	643	713	780	734	-47	-6.0
Imports	830	950	1,033	1,260	981	-278	-22.1
Trade balance	-214	-307	-320	-479	-248	232	48.4
MT012 Printing and related machinery							
Exports	1,431	1,651	1,699	1,587	1,469	-118	-7.5
Imports	1,372	1,251	1,420	1,388	1,388	[b]	[c]
Trade balance	59	400	279	199	81	-119	-59.5
MT013 Textile machinery							
Exports	642	800	741	712	700	-12	-1.7
Imports	843	1,190	1,292	1,221	1,360	139	11.4
Trade balance	-201	-389	-551	-509	-660	-151	-29.7
MT014 Metal rolling mills							
Exports	486	524	442	430	347	-83	-19.3
Imports	523	382	425	373	489	117	31.3
Trade balance	-37	143	17	57	-142	-200	([a])
MT015 Metal cutting machine tools							
Exports	1,524	1,883	2,357	2,438	2,410	-28	-1.2
Imports	2,173	2,529	4,509	5,822	5,106	-716	-12.3
Trade balance	-650	-646	-2,152	-3,384	-2,696	688	20.3
MT016 Machine tool accessories							
Exports	319	401	475	421	438	17	4.0
Imports	438	568	793	923	842	-81	-8.7
Trade balance	-119	-167	-317	-501	-404	97	19.4

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MT017 Metal forming machine tools							
Exports	938	1,190	1,418	1,399	1,319	-80	-5.7
Imports	816	847	1,177	1,418	1,543	124	8.8
Trade balance	121	343	241	-19	-224	-205	-1,077.6
MT018 Non-metalworking machine tools							
Exports	582	730	704	688	615	-73	-10.5
Imports	1,287	1,090	1,118	1,178	1,350	172	14.6
Trade balance	-705	-359	-415	-490	-735	-245	-49.9
MT019 Semiconductor manufacturing equipment and robotics							
Exports	8,414	16,533	14,694	13,570	13,606	36	0.3
Imports	5,914	9,335	13,791	12,711	11,502	-1,209	-9.5
Trade balance	2,500	7,198	903	859	2,104	1,245	144.9
MT019A Semiconductor manufacturing equipment							
Exports	8,005	16,136	14,200	13,137	13,126	-11	-0.1
Imports	5,510	8,772	13,077	11,998	10,752	-1,247	-10.4
Trade balance	2,495	7,364	1,122	1,138	2,374	1,236	108.6
MT020 Taps, cocks, valves, and similar devices							
Exports	5,929	7,071	8,421	9,077	10,248	1,171	12.9
Imports	7,542	9,661	11,667	12,977	13,538	561	4.3
Trade balance	-1,613	-2,590	-3,246	-3,901	-3,290	611	15.7
MT021 Mechanical power transmission equipment							
Exports	1,713	2,177	2,753	3,058	2,972	-87	-2.8
Imports	3,047	3,672	4,730	5,201	4,747	-455	-8.7
Trade balance	-1,334	-1,494	-1,977	-2,143	-1,775	368	17.2
MT022 Boilers, turbines, and related machinery							
Exports	1,773	1,643	1,930	1,736	1,846	110	6.3
Imports	1,899	1,614	1,464	1,299	1,480	181	13.9
Trade balance	-126	29	466	437	366	-71	-16.2
MT023 Electric motors, generators, and related equipment							
Exports	6,743	7,584	7,897	9,321	8,297	-1,024	-11.0
Imports	10,075	10,338	12,055	13,189	12,103	-1,085	-8.2
Trade balance	-3,332	-2,754	-4,158	-3,868	-3,807	61	1.6
MT024 Electrical transformers, static converters, and inductors							
Exports	2,416	2,759	2,991	3,118	3,303	184	5.9
Imports	7,577	8,999	9,585	10,053	10,582	529	5.3
Trade balance	-5,162	-6,240	-6,594	-6,934	-7,279	-344	-5.0

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
MT025 Portable electric handtools							
Exports	110	141	157	199	198	-1	-0.4
Imports	2,140	2,431	2,648	2,787	3,081	293	10.5
Trade balance	-2,031	-2,290	-2,492	-2,588	-2,882	-294	-11.4
MT026 Nonelectrically powered handtools							
Exports	814	917	927	948	897	-51	-5.4
Imports	1,017	1,404	1,570	1,673	1,742	68	4.1
Trade balance	-203	-487	-643	-725	-844	-119	-16.4
MT027 Electric lamps (bulbs) and portable electric lights							
Exports	668	752	738	715	729	14	1.9
Imports	2,281	2,705	2,809	2,973	3,185	211	7.1
Trade balance	-1,613	-1,953	-2,071	-2,258	-2,456	-198	-8.8
MT028 Welding and soldering equipment							
Exports	816	1,064	1,243	1,219	1,210	-9	-0.7
Imports	742	901	1,243	1,391	1,431	40	2.9
Trade balance	74	163	([b])	-172	-221	-49	-28.2
MT029 Nonautomotive insulated electrical wire and related products							
Exports	3,727	4,790	5,382	6,020	6,207	187	3.1
Imports	4,540	6,025	6,765	7,258	7,552	294	4.1
Trade balance	-813	-1,235	-1,384	-1,238	-1,346	-108	-8.7
MT030 Miscellaneous machinery							
Exports	8,510	9,011	10,535	11,281	11,379	98	0.9
Imports	7,717	8,668	10,503	11,446	11,608	163	1.4
Trade balance	793	343	33	-164	-229	-65	-39.4
MT031 Molds and molding machinery							
Exports	1,801	1,841	2,066	2,191	2,144	-46	-2.1
Imports	2,294	2,617	3,086	3,544	3,995	451	12.7
Trade balance	-494	-775	-1,020	-1,353	-1,850	-497	-36.7

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

[a]Not meaningful for purposes of comparison.

[b]Less than $500,000.

[c]Less than 0.05 percent.

Table A.9 Textiles, apparel, and footwear: U.S. trade for industry/commodity groups and subgroups, 2009–13

	Million $						
USITC code and industry/commodity group	**2009**	**2010**	**2011**	**2012**	**2013**	**Absolute change, 2012–13**	**Percent change, 2012–13**
TX001 Fibers and yarns, except raw cotton and raw wool							
Exports	3,496	4,444	5,610	5,059	5,201	143	2.8
Imports	2,638	3,479	3,980	3,830	3,752	-78	-2.0
Trade balance	857	965	1,630	1,229	1,449	220	17.9
TX002 Fabrics							
Exports	4,917	5,878	6,285	6,346	6,548	202	3.2
Imports	4,410	5,444	6,241	6,587	6,733	145	2.2
Trade balance	507	434	44	-241	-184	57	23.7
TX002A Broadwoven fabrics							
Exports	1,261	1,417	1,637	1,565	1,536	-29	-1.8
Imports	1,708	2,114	2,481	2,507	2,486	-21	-0.8
Trade balance	-447	-697	-844	-942	-950	-8	-0.9
TX002B Knit fabrics							
Exports	891	1,036	1,026	991	1,023	32	3.2
Imports	652	727	841	959	948	-11	-1.1
Trade balance	238	309	185	32	74	42	132.7
TX002C Specialty fabrics							
Exports	374	405	383	368	359	-9	-2.5
Imports	380	445	488	518	531	13	2.4
Trade balance	-7	-41	-105	-151	-172	-22	-14.4
TX002D Coated and other fabrics							
Exports	925	1,246	1,312	1,380	1,370	-9	-0.7
Imports	864	1,168	1,356	1,436	1,513	77	5.4
Trade balance	61	78	-44	-57	-143	-86	-152.5
TX002E Glass fiber fabrics							
Exports	219	237	251	271	282	10	3.8
Imports	120	143	170	207	205	-2	-0.9
Trade balance	99	94	81	64	76	12	19.3
TX002F Other fabrics							
Exports	1,248	1,537	1,676	1,772	1,979	207	11.7
Imports	685	847	905	961	1,049	88	9.2
Trade balance	563	691	771	811	930	119	14.6

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
TX003 Carpets and rugs							
Exports	821	959	1,025	1,057	1,070	13	1.3
Imports	1,475	1,732	1,904	2,030	2,154	124	6.1
Trade balance	-654	-773	-880	-974	-1,084	-110	-11.3
TX004 Home furnishings							
Exports	363	398	436	500	512	12	2.4
Imports	7,553	9,058	9,208	9,253	10,037	784	8.5
Trade balance	-7,190	-8,660	-8,772	-8,753	-9,525	-772	-8.8
TX004A Blankets							
Exports	23	20	23	28	28	1	2.9
Imports	616	735	740	751	860	108	14.4
Trade balance	-593	-716	-717	-724	-831	-107	-14.8
TX004B Pillowcases and sheets							
Exports	46	53	65	71	72	1	1.6
Imports	1,938	2,447	2,534	2,547	2,819	272	10.7
Trade balance	-1,893	-2,394	-2,468	-2,477	-2,747	-270	-10.9
TX004C Table/kitchen linens and towels							
Exports	44	51	47	50	49	-1	-2.0
Imports	1,852	2,151	2,196	2,257	2,333	76	3.4
Trade balance	-1,808	-2,099	-2,149	-2,207	-2,284	-77	-3.5
TX004D Curtains							
Exports	78	80	91	110	113	3	3.0
Imports	991	1,101	1,052	989	1,130	141	14.3
Trade balance	-913	-1,021	-961	-879	-1,017	-138	-15.7
TX004E Bedspreads and other furnishing articles							
Exports	54	62	66	80	86	6	7.5
Imports	1,112	1,383	1,509	1,563	1,645	82	5.2
Trade balance	-1,058	-1,321	-1,443	-1,483	-1,558	-76	-5.1
TX004F Pillows, cushions, and sleeping bags							
Exports	118	131	143	160	162	1	0.9
Imports	1,042	1,240	1,175	1,142	1,248	107	9.3
Trade balance	-924	-1,108	-1,032	-982	-1,087	-105	-10.7
TX004G Tapestries and other wall hangings							
Exports	1	1	1	1	1	(a)	17.8
Imports	2	2	3	4	2	-1	-34.0
Trade balance	-1	-2	-2	-3	-1	1	51.5

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
TX005 Apparel							
Exports	2,922	3,197	3,337	3,452	3,412	-39	-1.1
Imports	69,457	78,501	85,668	84,962	87,658	2,696	3.2
Trade balance	-66,534	-75,304	-82,331	-81,510	-84,246	-2,736	-3.4
TX005A Men's and boys' suits and sports coats							
Exports	31	27	20	25	23	-1	-5.8
Imports	949	1,014	1,201	1,304	1,359	54	4.2
Trade balance	-917	-987	-1,181	-1,280	-1,336	-56	-4.4
TX005B Men's and boys' coats and jackets							
Exports	60	73	89	95	103	7	7.6
Imports	2,299	2,636	3,183	2,970	2,839	-131	-4.4
Trade balance	-2,239	-2,563	-3,094	-2,874	-2,736	138	4.8
TX005C Men's and boys' trousers							
Exports	216	234	258	265	259	-5	-2.1
Imports	6,805	7,496	8,277	8,267	8,640	373	4.5
Trade balance	-6,589	-7,262	-8,019	-8,002	-8,380	-378	-4.7
TX005D Women's and girls' trousers							
Exports	239	276	285	297	295	-2	-0.6
Imports	8,043	8,663	8,965	9,082	9,736	653	7.2
Trade balance	-7,803	-8,387	-8,680	-8,785	-9,440	-655	-7.5
TX005E Shirts and blouses							
Exports	525	556	587	671	669	-2	-0.3
Imports	21,962	24,728	26,728	26,030	27,254	1,224	4.7
Trade balance	-21,437	-24,172	-26,141	-25,358	-26,584	-1,226	-4.8
TX005F Sweaters							
Exports	27	33	29	32	38	5	15.9
Imports	2,014	2,275	2,492	2,324	2,364	40	1.7
Trade balance	-1,987	-2,242	-2,463	-2,292	-2,327	-35	-1.5
TX005G Women's and girls' suits, skirts, and coats							
Exports	158	146	145	144	145	2	1.3
Imports	4,739	5,121	5,465	5,125	4,896	-229	-4.5
Trade balance	-4,581	-4,975	-5,320	-4,981	-4,750	231	4.6
TX005H Women's and girls' dresses							
Exports	163	188	235	237	258	20	8.6
Imports	3,098	3,679	4,339	4,619	4,530	-89	-1.9
Trade balance	-2,935	-3,490	-4,104	-4,382	-4,272	110	2.5

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
TX005I Robes, nightwear, and underwear							
Exports	97	127	116	112	125	13	11.8
Imports	4,683	5,464	5,704	5,619	5,763	144	2.6
Trade balance	-4,586	-5,337	-5,588	-5,507	-5,638	-131	-2.4
TX005J Hosiery							
Exports	291	315	284	275	258	-17	-6.3
Imports	1,509	1,831	1,947	2,031	2,163	132	6.5
Trade balance	-1,218	-1,516	-1,663	-1,755	-1,905	-149	-8.5
TX005K Body-supporting garments							
Exports	47	60	74	68	57	-11	-15.9
Imports	1,850	2,247	2,250	2,360	2,525	166	7.0
Trade balance	-1,803	-2,186	-2,176	-2,292	-2,468	-176	-7.7
TX005L Neckwear, handkerchiefs, and scarves							
Exports	20	20	26	28	30	2	7.3
Imports	758	834	968	1,013	1,130	117	11.6
Trade balance	-738	-813	-942	-985	-1,100	-115	-11.7
TX005M Gloves, including gloves for sports							
Exports	126	148	164	162	147	-14	-8.8
Imports	3,234	3,874	4,517	4,709	4,577	-132	-2.8
Trade balance	-3,108	-3,727	-4,352	-4,547	-4,430	118	2.6
TX005N Headwear							
Exports	128	140	162	192	182	-9	-4.9
Imports	1,357	1,652	1,999	1,982	1,928	-54	-2.7
Trade balance	-1,229	-1,512	-1,837	-1,791	-1,746	44	2.5
TX005O Leather apparel and accessories							
Exports	154	145	137	139	146	7	5.3
Imports	841	934	926	954	1,062	108	11.3
Trade balance	-687	-789	-789	-815	-916	-101	-12.4
TX005P Fur apparel and other fur articles							
Exports	19	15	15	19	19	(a)	2.6
Imports	136	158	186	157	157	(a)	(b)
Trade balance	-117	-143	-171	-139	-138	(a)	0.3
TX005Q Rubber, plastic, and coated-fabric apparel							
Exports	173	186	179	148	134	-14	-9.5
Imports	445	603	640	762	829	67	8.9
Trade balance	-272	-417	-462	-614	-695	-81	-13.3

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
TX005R Nonwoven apparel							
Exports	77	93	74	68	66	-1	-1.6
Imports	500	554	591	628	654	25	4.0
Trade balance	-423	-461	-517	-561	-587	-26	-4.7
TX005S Other wearing apparel							
Exports	370	415	458	476	457	-20	-4.1
Imports	4,235	4,739	5,290	5,026	5,254	227	4.5
Trade balance	-3,865	-4,324	-4,832	-4,550	-4,797	-247	-5.4
TX006 Miscellaneous textile products							
Exports	2,134	2,474	2,740	2,798	3,010	212	7.6
Imports	5,047	5,984	6,609	6,844	6,891	47	0.7
Trade balance	-2,914	-3,510	-3,870	-4,047	-3,881	166	4.1
FW001 Footwear							
Exports	620	728	832	824	789	-36	-4.3
Imports	17,666	20,710	22,559	23,745	24,612	868	3.7
Trade balance	-17,046	-19,982	-21,728	-22,920	-23,824	-903	-3.9

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on free along ship value, U.S. port of export. Calculations based on unrounded data.

[a]Less than $500,000.

[b]Less than 0.05 percent.

Table A.10 Transportation equipment: U.S. trade for industry/commodity groups and subgroups, 2009–13

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
TE001 Aircraft engines and gas turbines							
Exports	9,457	8,786	9,556	10,181	9,443	-739	-7.3
Imports	14,558	14,807	16,946	19,292	19,631	339	1.8
Trade balance	-5,102	-6,021	-7,389	-9,110	-10,188	-1,078	-11.8
TE002 Internal combustion piston engines, other than for aircraft							
Exports	11,556	16,199	18,117	18,937	18,857	-79	-0.4
Imports	11,866	17,989	22,548	24,522	23,906	-616	-2.5
Trade balance	-310	-1,790	-4,431	-5,586	-5,048	537	9.6
TE003 Forklift trucks and similar industrial vehicles							
Exports	1,576	2,163	2,848	3,046	3,066	19	0.6
Imports	1,182	1,432	2,427	3,110	3,246	135	4.4
Trade balance	394	732	421	-64	-180	-116	-181.2
TE004 Construction and mining equipment							
Exports	19,777	22,010	27,971	29,959	23,729	-6,230	-20.8
Imports	6,345	8,213	12,935	16,302	13,727	-2,576	-15.8
Trade balance	13,432	13,797	15,036	13,656	10,002	-3,654	-26.8
TE005 Ball and rollers bearings							
Exports	1,701	2,212	2,596	2,694	2,658	-37	-1.4
Imports	1,927	2,753	3,553	3,864	3,590	-274	-7.1
Trade balance	-226	-540	-957	-1,170	-932	238	20.3
TE006 Primary cells and batteries and electric							
Exports	2,162	2,712	3,184	3,054	3,522	468	15.3
Imports	2,985	3,701	4,102	4,512	4,681	169	3.8
Trade balance	-823	-989	-918	-1,458	-1,159	299	20.5
TE007 Ignition, starting, lighting, and other electrical equipment							
Exports	1,867	2,426	2,749	3,022	3,125	103	3.4
Imports	4,066	5,588	6,497	7,113	7,690	577	8.1
Trade balance	-2,199	-3,162	-3,748	-4,091	-4,565	-474	-11.6
TE008 Rail locomotive and rolling stock							
Exports	2,140	2,410	3,053	3,659	3,641	-18	-0.5
Imports	1,251	1,405	1,809	1,972	1,602	-371	-18.8
Trade balance	888	1,005	1,244	1,687	2,040	352	20.9
TE009 Motor vehicles							
Exports	35,963	48,940	59,454	65,669	69,557	3,888	5.9
Imports	94,348	132,471	144,426	171,556	180,005	8,449	4.9
Trade balance	-58,386	-83,531	-84,972	-105,887	-110,448	-4,561	-4.3

USITC code and industry/commodity group	Million $ 2009	2010	2011	2012	2013	Absolute change, 2012–13	Percent change, 2012–13
TE010 Certain motor-vehicle parts							
Exports	22,713	31,194	35,714	37,806	38,109	303	0.8
Imports	35,296	51,903	59,875	69,605	71,969	2,364	3.4
Trade balance	-12,584	-20,709	-24,161	-31,799	-33,860	-2,061	-6.5
TE011 Powersport vehicles							
Exports	2,571	2,748	2,985	3,235	3,214	-21	-0.6
Imports	2,988	2,317	3,251	3,866	3,860	-6	-0.2
Trade balance	-417	431	-266	-631	-646	-15	-2.4
TE011A Motorcycles and mopeds							
Exports	1,357	1,373	1,476	1,526	1,641	115	7.5
Imports	2,341	1,618	2,420	2,873	2,813	-60	-2.1
Trade balance	-984	-246	-944	-1,347	-1,172	175	13.0
TE012 Trailers, semi-trailers, and parts							
Exports	1,772	2,486	3,038	3,493	3,821	328	9.4
Imports	906	1,202	1,911	2,117	2,144	27	1.3
Trade balance	866	1,284	1,126	1,376	1,677	301	21.9
TE013 Aircraft, spacecraft, and related equipment							
Exports	77,700	73,949	82,028	95,210	104,881	9,671	10.2
Imports	18,339	18,931	21,546	24,107	29,080	4,973	20.6
Trade balance	59,361	55,019	60,482	71,103	75,801	4,698	6.6
TE014 Ships, tugs, pleasure boats, and similar vessels							
Exports	1,946	2,525	2,420	3,387	2,591	-796	-23.5
Imports	1,510	1,804	1,395	2,005	2,789	784	39.1
Trade balance	436	720	1,026	1,382	-198	-1,580	[a]
TE015 Motors and engines, except internal combustion, aircraft, or electric							
Exports	1,183	1,641	1,875	2,420	2,809	389	16.1
Imports	2,240	2,431	3,358	4,466	3,629	-837	-18.7
Trade balance	-1,057	-789	-1,483	-2,047	-820	1,226	59.9

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

Note: The codes shown above are used by the U.S. International Trade Commission to identify major groupings and subgroupings of imported and exported products for trade monitoring purposes. Import values are based on customs value; export values are based on f.a.s. value, U.S. port of export. Calculations based on unrounded data. In 2009, 60 export commodity classification (schedule B) codes covering all civilian aircraft, engines, equipment, and parts were consolidated into a single code by the U.S. Census Bureau. This reclassification may have accounted for some of the shifts in exports in the aircraft, spacecraft, and related equipment industry/commodity group and the engines and gas turbines industry/commodity group.

[a]Not meaningful for purposes of comparison