

Wisconsin's Exports

A Special Report on Wisconsin's Economy

April 2011

Wisconsin Department of Revenue
Division of Research and Policy

AT A GLANCE

Wisconsin's goods exports increased 18.3% to \$19.8 billion in 2010.

- Exports are expected to increase again in 2011.
- Canada remains the main importer of Wisconsin goods, followed by Mexico, China, Germany, and Japan.
- Main export goods are machinery, computers and electronics, transportation equipment, processed foods, and chemicals.

The International Trade Administration of the U.S. Department of Commerce reports Wisconsin's goods exports returned to growth in 2010, increasing 18.3% to \$19.8 billion. However, Wisconsin's exports have not fully recovered from the downturn suffered in 2009. Exports in 2010 are 3.8% below the \$20.6 billion export peak of 2008. Nationally, goods exports increased 21.0% in 2010 to \$1.28 trillion, \$10 billion (0.8%) below the 2008 peak.

More than two-thirds (68.7%) of Wisconsin's exports go to the top ten destinations. Canada remains the largest importer of Wisconsin goods, accepting 30.5% of total exports, equaling \$6.0 billion worth of goods. Mexico is the second largest destination, importing 10.2% of the total (\$2.0 billion), followed by China (\$1.3 billion), Germany (\$745.3 million), and Japan (\$731.4 million).

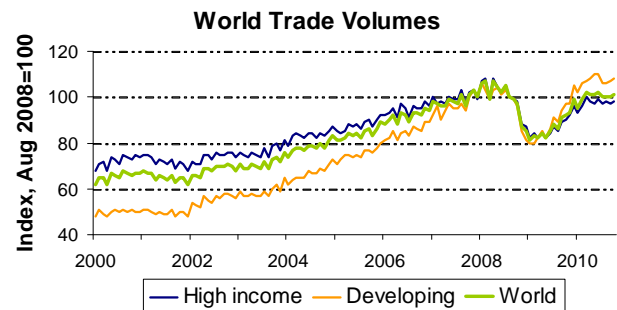
Wisconsin's exports made up 1.5% of the nation's total exports. It ranked 19th out of 53 U.S. states and territories, slipping one spot from last year. Texas and California combined exported more than one-fourth of all U.S. exports.

The economy shrank in 2009, and exports fell even more. As a result, goods exports as a percent of total economic activity fell in both the U.S. and Wisconsin. In 2008, exports were 9.0% of the U.S. economy and 8.5% of the state economy. In 2009, exports declined to 7.5% of the nation's economy and 7.0% of Wisconsin's. The nation's exports rebounded to 8.7% of GDP in 2010. While state GDP data will not be available for several more months, it is expected that the state's exports also increased as a share of output.

Trends in International Trade

International trade fell sharply in 2009 in the wake of the massive financial crisis that gripped the world in late 2008. World trade volumes, as measured by the World Bank, fell 12.7% in 2009. Trade volumes of developing countries fell farther, down 13.9%, while developed countries retreated 9.5%.

2010 has seen a rebound in world trade volume, up 17.2% through the first ten months of the year. This is charted below:



Source: World Bank

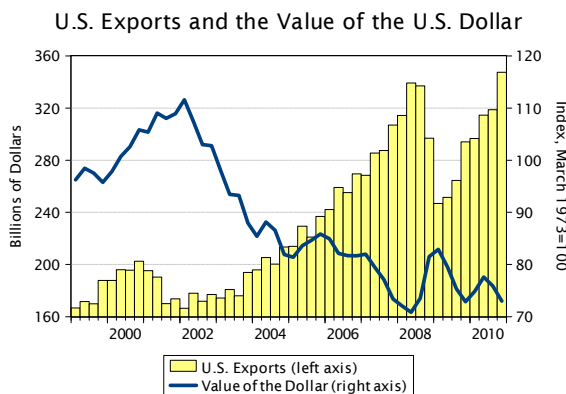
Trade volumes of developing countries fell further in 2009, but they also increased faster in 2010, rising 23.6% through the first ten months. In contrast, trade volume increased 14.6% for high-income nations during the same time period.

Inventory rebuilding and consumer spending, spurred by government stimulus, supported much of the economic recovery in late 2009 and the first half of 2010. These factors also helped drive capital goods and consumer goods exports on the world level. However, these were temporary in nature and have mostly ended. As a result, global trade has slowed dramatically, from a

21.1% annualized rate in the first half of 2010 to 1.65% in the third quarter of 2010.¹ Despite the deceleration, the recovery is becoming more broad-based, both on the world scale and at home in the U.S. According to the World Bank's analysis, Global trade should continue to expand, although at a lower rate than during the initial post-recession rebound.

This increase in global trade translates to export growth for the U.S. and Wisconsin. Export growth to advanced economies, which make up the bulk of U.S. exports, will be somewhat constrained over the next several years. However, developing nations, which take in 40% of U.S. exports, should continue to have strong economic growth. As such, American exports to these nations will remain healthy as well.²

The strength of the dollar also has implications for U.S. export growth. As the dollar weakens, American goods become relatively less expensive, driving demand for American goods. The inverse relationship between U.S. exports and the value of the dollar is plotted below. The dollar index, measured by the blue line, is the trade-weighted value of the dollar relative to the nation's main trading partners.



The dollar rose in 2000 and 2001, and exports during that time were flat or falling. The dollar began to fall in 2002 and continued moving lower until a brief uptick in late 2008. The rise in 2008 and the subsequent falloff in exports was a result of the financial crisis. As the dollar fell, exports rose, rising an average of 10.9% from 2003 to 2008. The dollar's average decline during the period was 5.7%.

¹ World Bank: "Global Economic Prospects 2011: Developments in Trade" January 2011. <http://go.worldbank.org/NYUVAFVKV1>

² Wells Fargo, "Can America Double Its Exports in Five Years?" February 14, 2011. https://www.wellsfargo.com/downloads/pdf/com/research/special-reports/Double_Exports_02142011.pdf

The dollar is expected to remain weak. IHS Global Insight expects the dollar will decline 3.6% in 2011 but rise slightly in 2012, up 2.0%.

Overall, IHS Global Insight expects national goods exports to increase 17.5% in 2011 and 10.6% in 2012. Further evidence of strong export growth is seen in the export index from the ISM Manufacturing survey. This measure increased to a level of 62.5 in February, signaling strong growth in the months ahead. In addition, GDP growth for the nation's major trading partners is expected to increase 2.3% in 2011 and 2.4% in 2012, supporting demand for exports.

Wisconsin's Export Markets

Wisconsin's Top Five Export Markets in 2010:

- \$6.0 billion: Canada (30.5% of the total)
- \$2.0 billion: Mexico (10.2%)
- \$1.3 billion: China (6.7%)
- \$745.3 million: Germany (3.8%)
- \$731.4 million: Japan (3.7%)

Canada

Canada is Wisconsin's number one export market. In 2010, 30.5% of total Wisconsin exports went to Canada, totaling \$6.0 billion worth of products. Exports to Canada from Wisconsin increased 24.9% over 2009 levels, and are 46.0% above 2000 levels.

Nationally, exports to Canada are 19.4% of all exports, totaling \$248.2 billion. Wisconsin exports 2.4% of U.S. shipments to Canada, ranking 12th in the nation. Michigan and Texas are the largest state exporters to Canada.

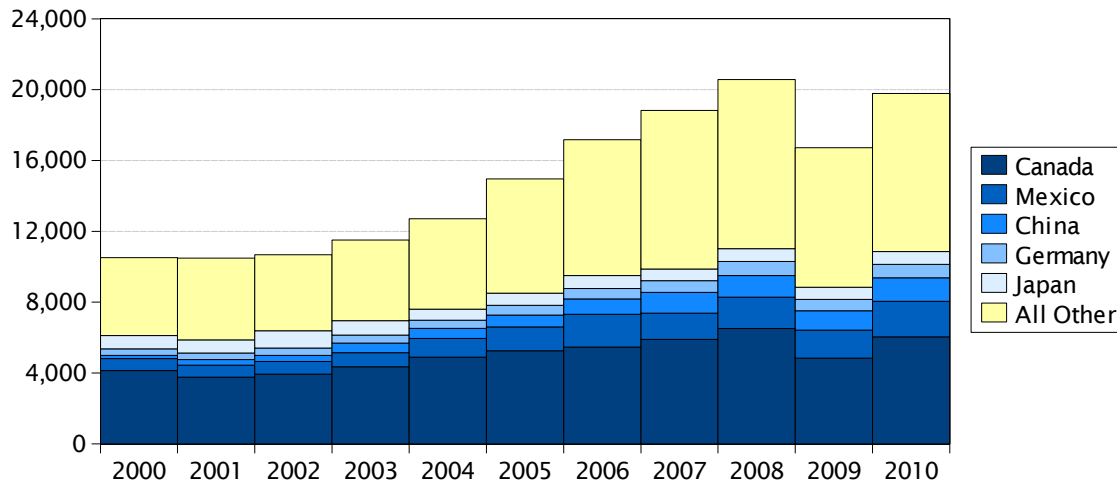
Largest exports to Canada from Wisconsin in 2010:

- \$1.4 billion: machinery (22.8% of the total)
- \$785.8 million: transportation equipment (13.0%), mainly motor vehicle parts
- \$610.9 million: processed foods (10.1%)
- \$509.1 million: paper (8.4%)
- \$318.7 million: chemicals (5.3%)

Mexico

Exports to Mexico totaled \$2.0 billion in 2010, equaling 10.2% of total Wisconsin exports. Exports to Mexico increased 26.8% from 2009, and have increased 198.3% since 2000.

Wisconsin Export Destinations \$ Millions



Nationally, 12.8% of exports are destined for Mexico, totaling \$163.3 billion worth of products. Wisconsin makes up 1.2% of all U.S. exports to Mexico, ranking 13th nationally. The largest state exporters to Mexico are Texas and California.

Largest exports to Mexico from Wisconsin in 2010:

- \$324.5 million: transportation equipment (16.1% of all exports), mostly motor vehicle parts
- \$317.3 million: machinery (15.8%), mostly HVAC/commercial refrigeration and general purpose machinery
- \$219.9 million: electrical equipment (10.9%)
- \$204.4 million: computers and electronics (10.2%)
- \$139.6 million: fabricated metals (6.9%)

China

Exports to China from Wisconsin reached a new high in 2010 at \$1.3 billion worth of product, a 26.8% increase over 2009 levels. Exports to China have increased 651.5% since 2000, fastest of the five largest destinations and much greater than the 88.3% increase in total exports from Wisconsin. Despite this fast growth, exports to China are only 6.7% of total Wisconsin exports. Nationally, exports to China are 7.2% of the total. Wisconsin is the origination of 1.5% of U.S. exports to China, ranking it 19th in the U.S. California, Washington, and Texas are the largest sources of U.S. exports to China.

Largest exports to China from Wisconsin in 2010:

- \$423.7 million: machinery (31.8% of total), mostly general purpose machinery and agricultural/construction machinery
- \$342.3 million: computers and electronics (25.7%)
- \$113.8 million: waste & scrap (8.5%)
- \$69.6 million: fabricated metal (5.2%)
- \$58.6 million: chemicals (4.4%)

Germany

Wisconsin exports to Germany totaled \$745.3 million in 2010, 3.8% of total exports and a 16.3% increase over 2009 levels. Since 2000, exports to Germany have increased 97.2%.

Nationally, exports to Germany are 3.8% of the total, and Germany ranks sixth in exports destination for the U.S. Wisconsin's exports to Germany make up 1.5% of U.S. exports to the country, ranking Wisconsin 25th. California and Puerto Rico are the largest sources of U.S. exports to Germany.

Largest exports to Germany from Wisconsin in 2010:

- \$198.6 million: computer and electronics (26.6% of the total)
- \$166.9 million: machinery (22.4%)
- \$141.4 million: chemicals (19.0%)
- \$71.4 million: transportation equipment (9.6%)
- \$31.7 million: miscellaneous manufactures (4.1%)

Japan

Goods shipped from Wisconsin to Japan increased 6.7% in 2010 to \$731.3 million, 3.7% of all Wisconsin exports. Since 2000, exports to Japan have actually declined 2.3%, the only of the top five destinations to see a decline in Wisconsin shipments. Japan was the third-largest destination for Wisconsin's products in 2000, ahead of China and Germany.

Exports from the U.S. to Japan are 4.7% of national exports, and Japan is the fourth-largest destination of U.S. products. Exports originating in Wisconsin make up 1.2% of all U.S. exports to Japan. California and Washington are the largest state exporters to Japan.

Largest exports to Japan from Wisconsin in 2010:

- \$307.9 million: computers and electronics (42.1% of the total)
- \$115.8 million: machinery (15.8%)
- \$74.0 million: processed foods (10.1%)
- \$51.8 million: chemicals (7.1%)
- \$38.8 million: transportation equipment (5.3%)

Wisconsin's Export Products

Wisconsin's Top Five Export Products in 2010:

- \$5.4 billion: machinery (27.1% of the total)
- \$3.4 billion: computers and electronics (17.1%)
- \$1.8 billion: transportation equipment (9.0%)
- \$1.3 billion: processed food (6.6%)
- \$1.2 billion: chemicals (5.9%)

Machinery

Wisconsin exports more machinery than any other type of product. In 2010, machinery exports were 27.1% of total exports, valued at \$5.4 billion worth of goods. Machinery exports increased 9.7% in 2010 but are 14.1% below their 2008 peak.

While machinery is Wisconsin's largest export, it is only the fourth largest for the U.S., at 10.8% of total U.S. exports. Wisconsin exports 3.9% of total U.S. exports of machinery. The largest state exporters of machinery are Texas and California.

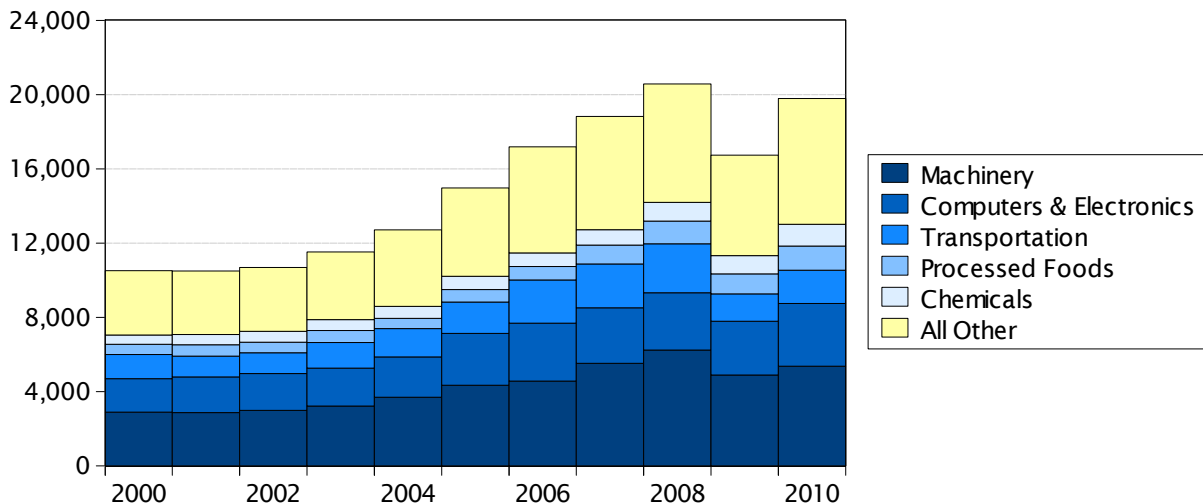
Largest importers of Wisconsin machinery:

- \$1.4 billion: Canada (25.7% of the total)
- \$423.7 million China (7.9%)
- \$331.1 million: Chile (6.2%)
- \$317.3 million: Mexico (5.9%)
- \$294.5 million: Australia (5.5%)

Main machinery exports:

- \$2.0 billion: agriculture and construction machinery (38.1% of total)
- \$1.2 billion: general purpose machinery (23.2%)
- \$835.0 million: engines, turbines, and power transmission equipment (15.6%)

Wisconsin Exports by Industry
\$ Millions



Computers and Electronics

The second most commonly exported good from Wisconsin is computers and electronics. This category of products was 17.1% of total Wisconsin exports, valued at \$3.4 billion in 2010. Exports of computers and electronics increased 17.2% over their 2009 levels and surpassed their 2008 peak.

Computers and electronics are also the second largest export good from the U.S. at 14.9% of the total. In 2010, 1.8% of computers and electronics exports from the U.S. originated in Wisconsin. The largest state exporters of computers and electronics are California and Texas.

Largest importers of Wisconsin computers and electronics:

- \$342.3 million: China (10.1% of the total). Their main import was semiconductors and other electronic components
- \$307.9 million: Japan (9.1%)
- \$305.2 million: Canada (9.0%)
- \$236.2 million: France (7.0%)

- \$204.4 million: Mexico (6.0%)

Main computer and electronic equipment exports:

- \$1.7 billion: navigational, measuring, medical, or control instruments (49.8%)
- \$656.7 million: computer equipment (19.4%)
- \$526.2 million: semiconductors (15.5%)

Transportation Equipment

Transportation equipment is Wisconsin's third largest export good. In 2010, 9.0% of exports were transportation equipment, equaling \$1.8 billion worth of goods. While this category of goods increased 17.2% over its 2009 level, it is still 32.2% below its peak reached in 2008.

Nationally, transportation equipment is the largest category of exports, at 14.9% of the total. Wisconsin exports of transportation equipment are 0.9% of the national total. Washington and Michigan are the largest state exporters of transportation equipment.

Agriculture and Livestock Exports

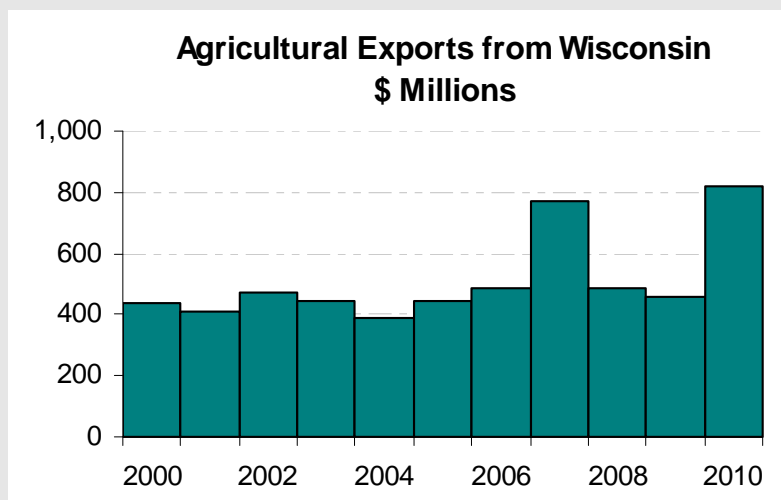
Foreign destinations are an important market for Wisconsin's farmers. Agricultural exports, not including processed foods, totaled \$816.3 million in 2010. This was an increase of 76.9% over 2009 levels. According to a recent report from the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), export revenues accounted for 30% of Wisconsin farm cash receipts in 2008.³ Other highlights from the DATCP report:

Top categories of agricultural and livestock products exported from Wisconsin:

- \$654.4 million: oilseeds and grains (80.1% of total)
- \$89.6 million: other animals (not fish) (11.3%)
- \$18.8 million: forestry products (2.3%)

Wisconsin is the leading exporter of:

- Flax seed
- Ginseng roots
- Canned sweet corn
- Mustard flour
- Mixes and dough



³ 2010 Export Statistics, Wisconsin Department of Agriculture, Trade, and Consumer Protection, http://datcp.wi.gov/Business/Exports/Export_Statistics/index.aspx

Largest importers of Wisconsin transportation equipment:

- \$785.8 million: Canada (44.0% of the total)
- \$324.5 million: Mexico (18.2%)
- \$714.5 million: Germany (4.0%)
- \$61.0 million: United Kingdom (3.4%)
- \$56.0 million: Australia (3.1%)

Main transportation equipment exports from Wisconsin:

- \$998.8 million: motor vehicle parts (56.0% of total)
- \$245.6 million: aerospace products & parts (13.8%)
- \$204.1 million: motor vehicles (11.4%)

Exports of motor vehicle parts peaked in 2006. They flattened for several years before declining sharply in 2009. This category increased 43.5% in 2010 but is still 9.9% below their 2008 level.

In 2008 motor vehicles was the second largest sector of transportation goods exported from Wisconsin, at 31.0% of the total. But with the closing of the Janesville GM plant in December of 2008, exports of motor vehicles have declined 75.0% since their 2008 peak.

Processed Food

The fourth largest category of exports from Wisconsin is processed food. In 2010 this group of goods was 6.6% of total exports. At \$1.3 billion worth of products, this group increased 19.5% over 2009 levels and is up 7.1% over the previous peak reached in 2008.

Nationally, processed foods are the ninth largest exported product, at 4.1% of total. Wisconsin exports 2.5% of the U.S. total. California and Texas are the largest state exports of processed food, together exporting 22.5% of the national total.

Largest importers of Wisconsin processed foods:

- \$610.9 million: Canada (46.9% of the total)
- \$123.9 million: Mexico (9.5%)
- \$81.8 million: South Korea (6.3%)
- \$74.0 million: Japan (5.7%)
- \$46.9 million: China (3.6%)

Main processed foods exported from Wisconsin:

- \$298.9 million: meat products and meat packaging products (22.9% of the total)
- \$298.7 million: dairy products (22.9%)
- \$208.8 million: foods, not elsewhere classified (16.0%)

Chemicals

The fifth most commonly exported good from Wisconsin is chemicals. This category of products was 5.9% of total Wisconsin exports, valued at \$1.2 billion in 2010. Exports of chemicals increased 19.7% over their 2009 levels and surpassed their 2008 peak.

Chemicals are the third largest export good from the U.S. at 14.0% of the total. In 2010, 0.7% of chemical exports from the U.S. originated in Wisconsin. Texas and Puerto Rico are the largest exporters of U.S. chemicals.

Largest importers of Wisconsin chemical exports:

- \$318.7 million: Canada (27.2% of the total)
- \$153.5 million: France (13.1%)
- \$141.4 million: Germany (12.1%)
- \$94.4 million: Mexico (8.1%)
- \$58.6 million: China (5.0%)

Main chemical products exported from Wisconsin:

- \$354.4 million: pharmaceuticals and medicines (30.3% of the total)
- \$282.7 million: basic chemicals (24.1%)
- \$186.4 million: soaps, cleaning compounds and toilet preparations (15.9%)

This report was prepared by **Emily Camfield** of the
Wisconsin Department of Revenue - Division of Research & Policy
 based on data from the U.S. Department of Commerce.

Questions: doreconomists@revenue.wi.gov

Wisconsin Department of Revenue
 2135 Rimrock Road • Madison, WI 53713
www.revenue.wi.gov

Wisconsin Exports: Destination Detail

(Thousands of Dollars)

	2006	2007	2008	2009	2010
World	17,173,628	18,825,489	20,569,622	16,724,997	19,782,771
% change	14.8%	9.6%	9.3%	-18.7%	18.3%
Canada	5,459,259	5,896,125	6,515,852	4,835,991	6,038,497
% change	3.8%	8.0%	10.5%	-25.8%	24.9%
Mexico	1,850,791	1,481,389	1,761,455	1,585,512	2,009,763
% change	38.3%	-20.0%	18.9%	-10.0%	26.8%
China	870,111	1,178,915	1,230,797	1,097,619	1,333,112
% change	29.2%	35.5%	4.4%	-10.8%	21.5%
Germany	582,051	659,769	790,345	640,963	745,314
% change	5.8%	13.4%	19.8%	-18.9%	16.3%
Japan	738,752	655,118	724,430	685,255	731,353
% change	6.2%	-11.3%	10.6%	-5.4%	6.7%
United Kingdom	686,410	722,753	683,094	531,476	615,539
% change	6.6%	5.3%	-5.5%	-22.2%	15.8%
Australia	466,637	563,672	583,465	510,024	582,633
% change	9.8%	20.8%	3.5%	-12.6%	14.2%
France	467,820	441,907	517,870	476,913	558,477
% change	12.8%	-5.5%	17.2%	-7.9%	17.1%
Brazil	248,437	326,535	420,055	391,373	558,275
% change	0.5%	31.4%	28.6%	-6.8%	42.6%
Chile	120,791	188,252	307,663	361,361	422,453
% change	-0.1%	55.9%	63.4%	17.5%	16.9%
All Other	5,682,569	6,711,054	7,034,596	5,608,510	6,187,356
% change	23.7%	18.1%	4.8%	-20.3%	10.3%

Source: Origin of Movement (OM) Series from the Foreign Trade Division of the U.S. Census Bureau

Wisconsin Exports: Product Detail

(Thousands of Dollars)

	2006	2007	2008	2009	2010
World	17,173,628	18,825,489	20,569,622	16,724,997	19,782,771
% change	14.8%	9.6%	9.3%	-18.7%	18.3%
Machinery, Except Electrical	4,554,903	5,517,770	6,236,655	4,881,767	5,355,530
% change	5.2%	21.1%	13.0%	-21.7%	9.7%
Computer and Electronic Products	3,129,219	2,983,022	3,090,185	2,894,569	3,391,276
% change	12.1%	-4.7%	3.6%	-6.3%	17.2%
Transportation Equipment	2,329,025	2,369,899	2,631,702	1,474,638	1,784,176
% change	37.3%	1.8%	11.0%	-44.0%	21.0%
Food Manufacturing	717,424	1,021,106	1,216,559	1,090,769	1,303,420
% change	7.1%	42.3%	19.1%	-10.3%	19.5%
Chemicals	738,301	827,260	1,010,674	978,315	1,170,799
% change	4.2%	12.0%	22.2%	-3.2%	19.7%
Electrical Equipment	887,017	1,029,648	1,115,400	977,606	1,093,103
% change	24.3%	16.1%	8.3%	-12.4%	11.8%
Paper	777,852	809,248	754,507	629,875	836,190
% change	0.4%	4.0%	-6.8%	-16.5%	32.8%
Agricultural Products	361,044	591,467	342,381	350,798	699,417
% change	1.6%	63.8%	-42.1%	2.5%	99.4%
Fabricated Metal	532,474	559,622	614,862	585,374	651,047
% change	11.3%	5.1%	9.9%	-4.8%	11.2%
Plastics & Rubber	459,027	474,046	525,590	478,793	608,932
% change	18.1%	3.3%	10.9%	-8.9%	27.2%
All Other	2,687,342	2,642,401	3,031,105	2,382,493	2,888,881
% change	30.9%	-1.7%	14.7%	-21.4%	21.3%

Source: Origin of Movement (OM) Series from the Foreign Trade Division of the U.S. Census Bureau