

APPENDIX Q
UNITED STATES AND CANADA TRADE
STATISTICS

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This appendix provides information on trade statistics for surface modes of transportation between the United States and Canada. The flow of goods, services, and people across the border contributes significantly to economic activity in border communities. Canada is the largest trading partner of the United States. In 2009, the total value of merchandise trade with Canada was approximately \$429.6 billion—\$204.7 billion in exports and \$224.9 billion in imports. Shipments by surface modes of transportation, excluding pipelines, account for approximately 79 percent of total merchandise trade with Canada. The top exports to Canada by surface modes of transportation are automobiles and automotive parts and accessories, and other machinery, appliances, and equipment (Table Q-1). The top imports from Canada are automobiles and automotive parts and accessories, other machinery and appliances, and processed paper and pulp products (Table Q-2). On average, approximately \$930 million in merchandise crosses the northern border by surface modes of transportation every day.

The automobile manufacturing industry has been significantly integrated along the northern border due to the Automotive Products Trade Agreement and later the North American Free Trade Agreement. Automobiles and auto parts account for the largest component of trade between the United States and Canada. While vehicles and parts cross the border in both directions, parts are primarily exported to Canada for assembly, and vehicles are primarily exported back the United States. Canada's motor vehicle assembly plants are among the most competitive in North America. Ontario, Canada is the largest North American automobile manufacturer, ahead of Michigan and all of Mexico (GOO, 2010).

Tables Q-1 and Q-2 summarize top U.S. exports to and imports from Canada, respectively. Tables Q-3 and Q-4 describe the top economic sectors within 100 miles north and south of the border (the "study area"). These tables provide insight into the relative dependence of the regional economies on the trade commodities described in Tables Q-1 and Q-2.

In the U.S. study area (i.e., the area within 100 miles of the border with Canada), the economic sectors with the largest annual payrolls are manufacturing (\$72.5 billion); health care and social assistance (\$69.8 billion); professional, scientific, technical services (\$37.7 billion); and retail trade (\$34.4 billion), as shown in Table Q-3. These sectors account for approximately half of all payrolls and private, non-farm jobs in the study area. Other sectors that are economically dependent on border activity account for lesser, but significant contributions to overall payrolls: wholesale trade (\$26.4 billion), accommodation and food services (\$14.6 billion), transportation and warehousing (\$13.2 billion), and arts, entertainment, and recreation (\$5.0 billion).

Table Q-3 also describes changes in payroll and employment by economic sector between 2000 and 2008. Private, non-farm jobs in the study area have declined approximately 3.3 percent since 2000. Manufacturing, the largest economic sector in the study area, has experienced a major contraction since 2000, shedding over 548,000 jobs and \$34.4 billion in payrolls. Construction, management of companies and enterprises, retail trade, and wholesale trade also experienced job losses and lower payroll growth than for the United States as a whole. Meanwhile, service sectors in the study area, such as health care and social assistance,

professional, scientific, and technical services, and accommodation and food services have increased payrolls over the last decade. The increasing importance of service sector jobs is consistent with job growth trends in the United States as a whole.

The U.S.-Canada border also plays a vital role in the Canadian economy. The manufacturing sector provides the greatest annual payrolls (\$87.2 billion) and the most jobs within the study area in Canada (Table Q-4). The next greatest economic sectors by annual payroll are health care and social assistance (\$56.2 billion); professional, scientific, technical services (\$54.9 billion); and construction (\$45.8 billion). These four sectors account for approximately 40 percent of total annual payrolls and 35 percent of employment in the study area.

The Canadian manufacturing sector experienced a significant decline in employment, losing 166,000 jobs between 2000 and 2006. Nonetheless, with the exception of manufacturing and agriculture, the number of jobs in the study area increased in all the other sectors between 2000 and 2006. Annual payrolls also increased in every sector by more than 50 percent on average; however, this may reflect appreciation of the Canadian dollar over the U.S. dollar more than a real increase in income.

Table Q-1. Top U.S. Exports to Canada by Surface Modes of Transportation*

Rank	Commodity Description	Total Value of Exports (\$ Millions)	Percent of Exports (%)
1	Vehicles, other than railway or tramway rolling stock, and parts and accessories thereof	31,037	17.1
2	Nuclear reactors, boilers, machinery and mechanical appliances, parts thereof	29,477	16.2
3	Electrical machinery and equipment and parts thereof, sound recorders and reproducers	16,490	9.1
4	Plastics and articles thereof	9,014	5.0
5	Special classification provisions	5,545	3.0
6	Paper and paperboard, articles of paper pulp, of paper or of paperboard	4,842	2.7
7	Optical, photographic, cinematographic, measuring, checking, precision, medical instruments	4,812	2.6
8	Articles of iron or steel	4,640	2.5
9	Mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes	4,036	2.2
10	Iron and steel	3,976	2.2
11	Pharmaceutical products	3,652	2.0
12	Furniture, bedding, mattress supports, cushions and similar stuffed furnishings, lighting fittings	3,616	2.0
13	Rubber and articles thereof	3,412	1.9
14	Miscellaneous chemical products	2,913	1.6
15	Edible fruit and nuts, peel of citrus fruit or melons	2,656	1.5
16	Organic chemicals	2,575	1.4
17	Printed books, newspapers, pictures and other products of the printing industry, manuscripts	2,530	1.4
18	Toys, games and sports equipment, parts and accessories thereof	2,468	1.4
19	Aircraft, spacecraft, and parts thereof	2,269	1.2
20	Aluminum and articles thereof	2,181	1.2
	Total exports (surface modes of transportation)	182,021	
	Total exports (all modes of transportation)	204,727	

* Statistics include total merchandise trade by surface modes of transportation, excluding pipelines. Surface modes of transportation include shipments made by rail, truck, mail, foreign trade zones, other and unknown modes of transportation.

Source: USDOT, 2009a; USDOT, 2009b.

Table Q-2. Top U.S. Imports from Canada by Surface Modes of Transportation*

Rank	Commodity Description	Total Value of Exports (\$ Millions)	Percent of Exports (%)
1	Vehicles, other than railway or tramway rolling stock, and parts and accessories thereof	31,512	20.3
2	Nuclear reactors, boilers, machinery and mechanical appliances, parts thereof	14,210	9.1
3	Paper and paperboard, articles of paper pulp, of paper or of paperboard	7,496	4.8
4	Plastics and articles thereof	7,486	4.8
5	Special classification provisions	6,276	4.0
6	Electrical machinery and equipment and parts thereof, sound recorders and reproducers	6,086	3.9
7	Mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes	5,887	3.8
8	Aluminum and articles thereof	5,277	3.4
9	Wood and articles of wood, wood charcoal	4,444	2.9
10	Pharmaceutical products	4,407	2.8
11	Aircraft, spacecraft, and parts thereof	4,350	2.8
12	Temporary legislation, temporary modifications established pursuant to trade legislation	3,855	2.5
13	Articles of iron or steel	3,060	2.0
14	Furniture, bedding, mattress supports, cushions and similar stuffed furnishings, lighting fittings	2,926	1.9
15	Iron and steel	2,919	1.9
16	Fertilizers	2,802	1.8
17	Natural or cultured pearls, precious or semiprecious stones, precious metals, articles thereof	2,592	1.7
18	Rubber and articles thereof	2,357	1.5
19	Organic chemicals	2,031	1.3
20	Preparations of cereals, flour, starch or milk, bakers' wares	1,940	1.2
	Total imports (surface modes of transportation)	155,458	
	Total imports (all modes of transportation)	224,910	

* Statistics include total merchandise trade by surface modes of transportation, excluding pipelines. Surface modes of transportation include shipments made by rail, truck, mail, foreign trade zones, other and unknown modes of transportation.

Source: USDOT, 2009a; USDOT, 2009b.

Table Q-3. Employment and Annual Payrolls by Economic Sector in the United States, Ranked by Annual Payroll*

Rank	Sector		Number of Paid Employees	Annual Payroll (\$ Millions)	Contribution to Employment (%)	Contribution to Income (%)	Change in Employment (2000 to 2008) (%)	Change in Annual Payroll (2000 to 2008) (%)
1	Manufacturing	Study area	1,475,612	72,494.6	13.6	16.7	-27.1	-32.2
		Total U.S.	13,096,159	628,012.9	10.8	12.1	-20.5	-21.1
2	Health care and social assistance	Study area	1,777,383	69,836.4	16.3	16.1	17.0	26.2
		Total U.S.	17,217,256	713,207.9	14.2	13.8	22.0	33.7
3	Professional, scientific, and technical services	Study area	614,625	37,658.9	5.6	8.7	12.5	23.1
		Total U.S.	8,032,847	544,010.3	6.6	10.5	17.8	21.5
4	Retail trade	Study area	1,489,397	34,402.5	13.7	7.9	-3.4	-6.8
		Total U.S.	15,614,757	372,674.8	12.9	7.2	5.2	-0.4
5	Finance and insurance	Study area	498,755	29,241.3	4.6	6.7	3.8	14.0
		Total U.S.	6,511,616	527,087.4	5.4	10.2	9.2	22.9
6	Construction	Study area	530,039	27,019.9	4.9	6.2	-8.3	-3.4
		Total U.S.	7,043,631	336,136.5	5.8	6.5	7.2	13.3
7	Wholesale trade	Study area	501,288	26,401.4	4.6	6.1	-7.3	-5.6
		Total U.S.	6,165,204	356,298.3	5.1	6.9	0.9	6.7
8	Management of companies and enterprises	Study area	245,125	22,248.3	2.3	5.1	-18.9	-21.0
		Total U.S.	2,887,407	275,772.3	2.4	5.3	0.5	5.5
9	Information	Study area	292,342	21,262.2	2.7	4.9	-1.9	-24.7
		Total U.S.	3,434,234	235,783.2	2.8	4.6	-3.1	-8.9
10	Administrative, waste management, and remediation services	Study area	672,344	21,148.7	6.2	4.9	-6.0	6.6
		Total U.S.	10,224,557	316,811.5	8.5	6.1	11.9	21.8
11	Accommodation and food	Study area	1,050,606	14,648.0	9.7	3.4	10.9	11.9

	services	Total U.S.	11,926,329	184,908.6	9.9	3.6	20.7	19.1
12	Transportation and warehousing	Study area	333,416	13,197.9	3.1	3.0	9.8	4.2
		Total U.S.	4,438,903	177,780.0	3.7	3.4	17.1	14.5
13	Other services (except public administration)	Study area	480,917	11,419.0	4.4	2.6	-6.4	-6.6
		Total U.S.	5,452,603	144,443.9	4.5	2.8	3.0	6.3
14	Real estate and rental and leasing	Study area	167,710	5,801.5	1.5	1.3	3.6	11.5
		Total U.S.	2,196,314	89,645.7	1.8	1.7	13.1	22.4
15	Educational services	Study area	215,814	5,714.8	2.0	1.3	-3.8	-5.1
		Total U.S.	3,141,297	102,699.7	2.6	2.0	24.0	34.1
16	Arts, entertainment, and recreation	Study area	177,215	5,000.9	1.6	1.2	10.7	11.0
		Total U.S.	2,069,346	62,914.9	1.7	1.2	18.8	17.8
17	Utilities	Study area	16,478	1,403.2	0.2	0.3	-47.8	-40.6
		Total U.S.	639,403	55,449.7	0.5	1.1	-2.4	10.3
18	Mining, quarrying, and oil and gas extraction	Study area	18,171	1,236.0	0.2	0.3	27.8	70.8
		Total U.S.	629,271	47,971.4	0.5	0.9	38.0	75.6
19	Hunting, fishing, forestry, and support activities for agriculture	Study area	17,546	787.5	0.2	0.2	-21.4	-4.3
		Total U.S.	167,039	5,656.6	0.1	0.1	-9.0	-2.3
20	Industries not classified	Study area	762	20.3	0.0	0.0	-91.5	-93.1
		Total U.S.	15,378	288.4	0.0	0.0	-89.3	-94.1
N/A	Agricultural production	Study area	295,846	2,018.6				
		Total U.S.	2,636,509	22,560.8				

* The study area includes counties that overlap the area within 100 south of the northern border. Data obtained from County Business Patterns exclude self-employed persons, employees of private households, railroad employees, agricultural production workers, and most government employees. Employment data for agricultural production obtained from the U.S. Department of Agriculture are not directly comparable—the sample years and populations are different—and therefore are not included in the contribution totals. Percentages do not add up to 100 because data at the county level are sometimes withheld by the Census to avoid disclosing data for individual companies (in which case data are included in the higher level totals) or because the estimate did not meet publication standards.

Source: Source: USCB, 2000; USCB, 2008; USDA, 2007.

Table Q-4. Employment and Annual Payrolls by Economic Sector in Canada, Ranked by Annual Payroll*

Rank	Sector		Number of Paid Employees	Annual Payroll (\$ Millions)	Contribution to Employment (%)	Contribution to Income (%)	Change in Employment (2000 to 2006) (%)	Change in Annual Payroll (2000 to 2006) (%)
1	Manufacturing	Study area	1,975,575	87,228.8	12.0	14.5	-7.8	33.7
		Total Canada	2,005,980	88,585.5	11.7	14.1	-7.7	34.5
2	Health care and social assistance	Study area	1,673,770	56,173.0	10.2	9.3	13.8	42.2
		Total Canada	1,716,255	57,618.2	10.0	9.2	13.6	42.5
3	Professional, scientific, and technical services	Study area	1,108,905	54,946.4	6.7	9.1	14.3	52.0
		Total Canada	1,122,445	55,681.2	6.5	8.9	14.3	52.6
4	Construction	Study area	1,043,585	45,822.4	6.3	7.6	22.0	99.2
		Total Canada	1,069,095	46,977.2	6.2	7.5	21.6	100.3
5	Educational services	Study area	1,124,395	44,478.0	6.8	7.4	12.9	57.7
		Total Canada	1,150,535	45,443.2	6.7	7.2	12.7	57.4
6	Public administration	Study area	938,935	43,586.5	5.7	7.2	8.4	54.2
		Total Canada	978,615	45,455.7	5.7	7.2	8.2	54.9
7	Retail trade	Study area	1,872,925	41,092.8	11.4	6.8	9.4	42.6
		Total Canada	1,917,170	42,083.5	11.2	6.7	9.2	43.2
8	Transportation and warehousing	Study area	802,230	32,696.0	4.9	5.4	5.9	50.8
		Total Canada	820,195	33,414.6	4.8	5.3	5.9	51.3
9	Wholesale trade	Study area	730,265	32,263.1	4.4	5.3	8.0	48.3
		Total Canada	739,305	32,672.1	4.3	5.2	7.7	48.3
10	Finance and insurance	Study area	681,700	29,804.2	4.1	4.9	8.4	31.6
		Total Canada	689,210	32,001.9	4.0	5.1	8.4	32.7

Rank	Sector		Number of Paid Employees	Annual Payroll (\$ Millions)	Contribution to Employment (%)	Contribution to Income (%)	Change in Employment (2000 to 2006) (%)	Change in Annual Payroll (2000 to 2006) (%)
11	Other services (except public administration)	Study area	802,405	24,353.2	4.9	4.0	10.0	77.0
		Total Canada	819,880	24,900.9	4.8	4.0	9.6	77.7
12	Administrative, waste management, and remediation services	Study area	708,115	20,736.1	4.3	3.4	18.9	95.7
		Total Canada	722,695	21,190.5	4.2	3.4	19.3	97.5
13	Information	Study area	410,040	19,179.9	2.5	3.2	0.1	42.8
		Total Canada	417,320	19,464.5	2.4	3.1	0.0	43.0
14	Agriculture, forestry, fishing and hunting	Study area	500,020	16,364.8	3.0	2.7	-7.7	136.9
		Total Canada	523,650	23,102.0	3.1	3.7	-7.8	138.3
15	Accommodation and food services	Study area	1,101,280	16,005.7	6.7	2.7	7.7	37.5
		Total Canada	1,126,695	16,455.7	6.6	2.6	7.7	38.7
16	Mining, quarrying, and oil and gas extraction	Study area	228,060	12,862.3	1.4	2.1	40.2	101.6
		Total Canada	238,810	15,463.2	1.4	2.5	40.5	103.1
17	Real estate and rental and leasing	Study area	298,555	9,748.7	1.8	1.6	16.9	42.6
		Total Canada	303,510	10,529.9	1.8	1.7	17.0	44.4
18	Utilities	Study area	129,640	7,461.7	0.8	1.2	12.1	71.4
		Total Canada	132,950	8,764.8	0.8	1.4	11.9	70.2
19	Arts, entertainment, and recreation	Study area	339,730	7,443.1	2.1	1.2	14.1	56.0
		Total Canada	346,315	7,542.7	2.0	1.2	14.0	56.2
20	Management of companies and enterprises	Study area	20,180	1,041.2	0.1	0.2	33.7	36.3
		Total Canada	20,530	1,052.4	0.1	0.2	34.0	35.9

* The study area includes provinces that overlap the area within 100 north of the border. Annual data are not available at the Census Division level.

Source: StatCan, 2001a; StatCan, 2001b; StatCan, 2006; StatCan, 2010.

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