

II. FREIGHT FLOWS

The U.S. transportation system in 2002 moved, on average, 53 million tons of freight worth \$36 billion each day. Trucks moved about 60 percent of freight by weight, the same proportion expected in 2035. However, over this period tons transported overall are expected to almost double with international shipments growing somewhat faster than domestic shipments. Trucks transported two-thirds of freight by value. This share is expected to decline slightly by 2035 as the value of intermodal shipments increases.

TABLE 2-1. SHIPMENTS BY MODE AND WEIGHT: 2002 AND 2035 (MILLIONS OF TONS)

	2002				2035			
	Total	Domestic	Exports ³	Imports ³	Total	Domestic	Exports ³	Imports ³
Total	(P) 19,326	17,670	(P) 524	(P) 1,133	(P) 37,178	33,668	(P) 1,105	(P) 2,404
Truck	11,539	11,336	106	97	22,814	22,231	262	320
Rail	1,879	1,769	32	78	3,525	3,292	57	176
Water	701	595	62	44	1,041	874	114	54
Air, air & truck	(P) 10	3	(P) 3	(P) 4	(P) 27	10	(P) 7	(P) 10
Intermodal¹	1,292	196	317	780	2,598	334	660	1,604
Pipeline & unknown²	3,905	3,772	4	130	7,172	6,926	5	240

Key: P = preliminary.

¹Intermodal includes U.S. Postal Service and courier shipments and all intermodal combinations, except air and truck.

²Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

³Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.

Note: Numbers may not add to total due to rounding.

TABLE 2-2. SHIPMENTS BY MODE AND VALUE: 2002 AND 2035 (BILLIONS OF DOLLARS)

	2002				2035			
	Total	Domestic	Exports ³	Imports ³	Total	Domestic	Exports ³	Imports ³
Total	(P) 13,120	11,083	(P) 735	(P) 1,302	(P) 38,399	29,592	(P) 2,623	(P) 6,184
Truck	8,856	8,447	201	208	23,767	21,655	806	1,306
Rail	382	288	26	68	702	483	63	156
Water	103	76	13	13	151	103	31	18
Air, air & truck	(P) 663	162	(P) 226	(P) 275	(P) 455	721	(P) 778	(P) 955
Intermodal¹	1,967	983	268	716	8,966	4,315	943	3,708
Pipeline and unknown²	1,149	1,127	1	22	2,357	2,315	1	41

Key: P = preliminary.

¹Intermodal includes U.S. Postal Service and courier shipments and all intermodal combinations, except air and truck.

²Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

³Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.

Note: Numbers may not add to total due to rounding.

TABLE 2-1. SHIPMENTS BY MODE AND WEIGHT: 2002 AND 2035 (MILLIONS OF TONS)

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2006.

TABLE 2-2. SHIPMENTS BY MODE AND VALUE: 2002 AND 2035 (BILLIONS OF DOLLARS)

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2006.

TABLE 2-3. TOP COMMODITIES: 2002

Tons (millions)		Value (\$ billions)	
Total	(P) 19,326	Total	(P) 13,120
Coal n.e.c. ¹	2,687	Machinery	1,866
Gravel	2,048	Electronics	948
Cereal grains	1,330	Mixed freight	944
Crude petroleum	1,284	Motorized vehicles	855
Coal	1,261	Coal n.e.c. ¹	729
Nonmetal min. prods. ²	1,138	Textiles/leather	545
Gasoline	1,090	Pharmaceuticals	519
Waste/scrap	926	Unknown	458
Fuel oils	560	Chemical prods.	444
Natural sands	557	Misc. mfg. prods.	411

Key: P = preliminary.

¹ Natural gas, selected coal products, and products of petroleum refining, excluding gasoline, aviation fuel, and fuel oil.

² Nonmetallic mineral products.

Bulk products comprise nearly two-thirds of the tonnage but only one-fifth of the value of goods moved in 2002. Motor vehicles, machinery,

pharmaceuticals, and other manufactured goods comprise over two-thirds of commodity movements by value but only 15 percent of the tonnage.

TABLE 2-4. DOMESTIC MODE OF INTERNATIONAL SHIPMENTS BY WEIGHT AND VALUE: 2002 AND 2035

	Tons (millions)		Value (\$ billions)	
	2002	2035	2002	2035
Total	(P) 1,657	(P) 3,510	(P) 2,037	(P) 8,807
Truck¹	797	2,116	1,198	6,193
Rail	200	397	114	275
Water	106	168	26	49
Air, air & truck²	(P) 8	(P) 19	(P) 506	(P) 1,772
Intermodal³	22	50	52	281
Pipeline & unknown⁴	524	760	141	238

Key: P = preliminary.

¹Excludes truck moves to and from airports.

²Includes truck moves to and from airports.

³Intermodal includes U.S. Postal Service and courier shipments and all intermodal combinations, except air and truck.

⁴Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

Note: Numbers may not add to total due to rounding.

International trade is growing rapidly and is placing pressure on the domestic transportation network and the different modes. International shipments by truck include the inland portion of intermodal shipments through ports and truck movements across land borders with Canada and Mexico.

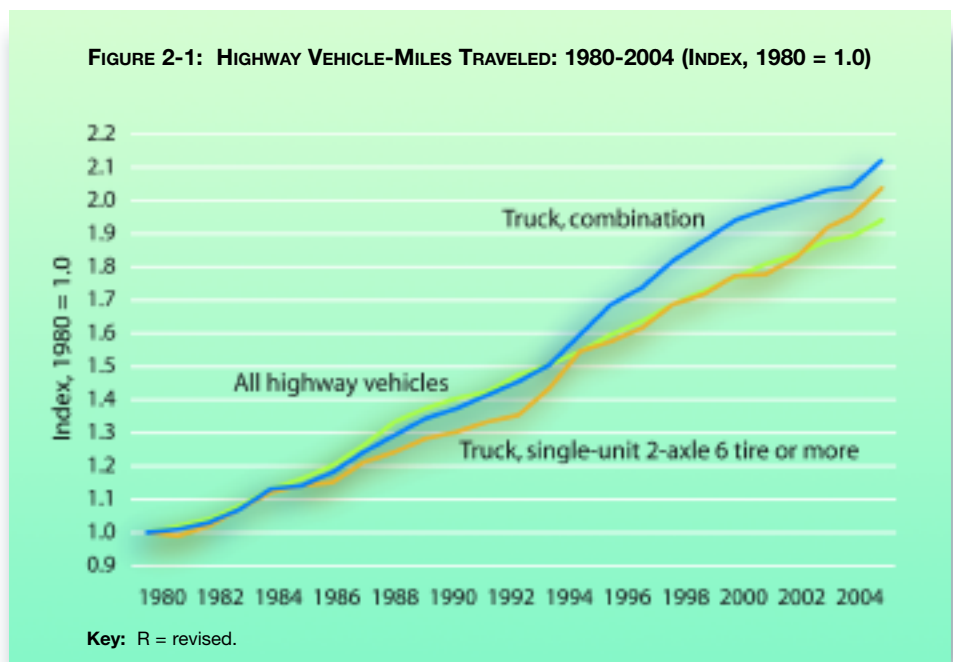
TABLE 2-3. TOP COMMODITIES: 2002

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2006.

TABLE 2-4. DOMESTIC MODE OF INTERNATIONAL SHIPMENTS BY WEIGHT AND VALUE: 2002 AND 2035

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2006.

As the demand for goods and services grows, so does the amount of truck traffic on the nation's highways. Commercial truck travel has doubled over the past two decades or so, about the same as highway travel as a whole. Consequently, truck vehicle-miles traveled (vmt) as a share of all vmt has remained relatively stable. Over this period, travel by combination trucks grew slightly faster than by single-unit trucks.



Despite doubling over the past two decades, truck traffic remains a relatively small share of highway traffic as a whole. In 2004, commercial trucks accounted for about 8 percent of highway vmt. Truck vmt is comprised of 64 percent combination truck and 36 percent single-unit truck.

Truck traffic is concentrated on major routes connecting population centers, ports, border crossings, and other major hubs of activity. Most of these routes will experience increases in truck traffic over the next twenty years, that, in combination with increases in passenger travel, will add to existing congestion.

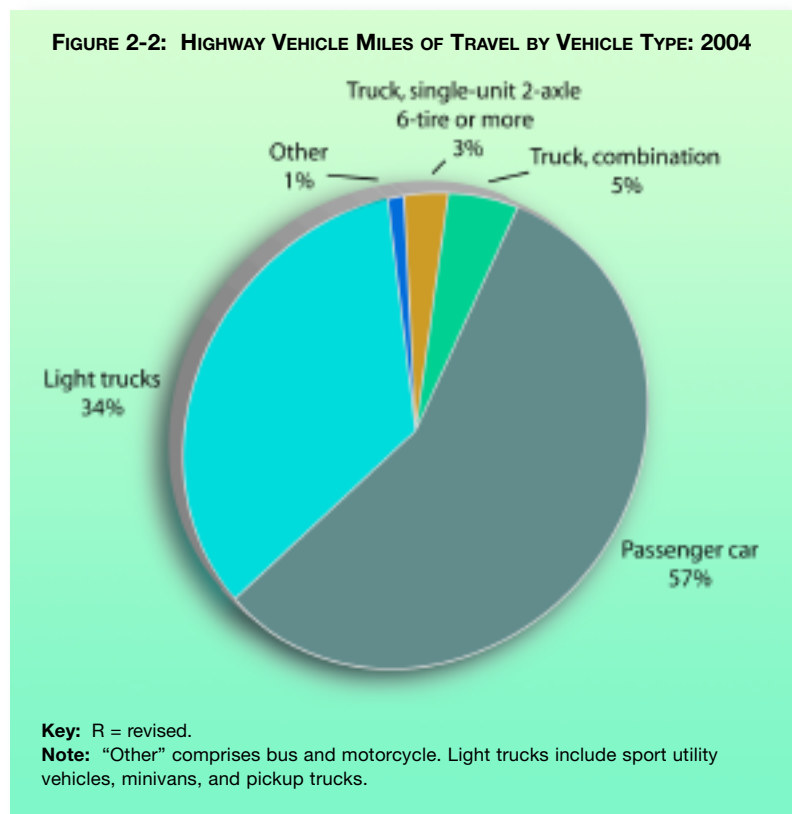


FIGURE 2-1: HIGHWAY VEHICLE-MILES TRAVELED: 1980-2004

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, (Washington, DC: Annual issues), table VM-1, available at www.fhwa.dot.gov/policy/ohpi/hss/index.htm as of Jan. 20, 2006

FIGURE 2-2: HIGHWAY VEHICLE MILES OF TRAVEL BY VEHICLE TYPE: 2004

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, (Washington, DC: Annual issues), table VM-1, available at www.fhwa.dot.gov/policy/ohpi/hss/index.htm as of Jan. 23, 2006.

FIGURE 2-3. ESTIMATED AVERAGE DAILY TRUCK TRAFFIC: 1998

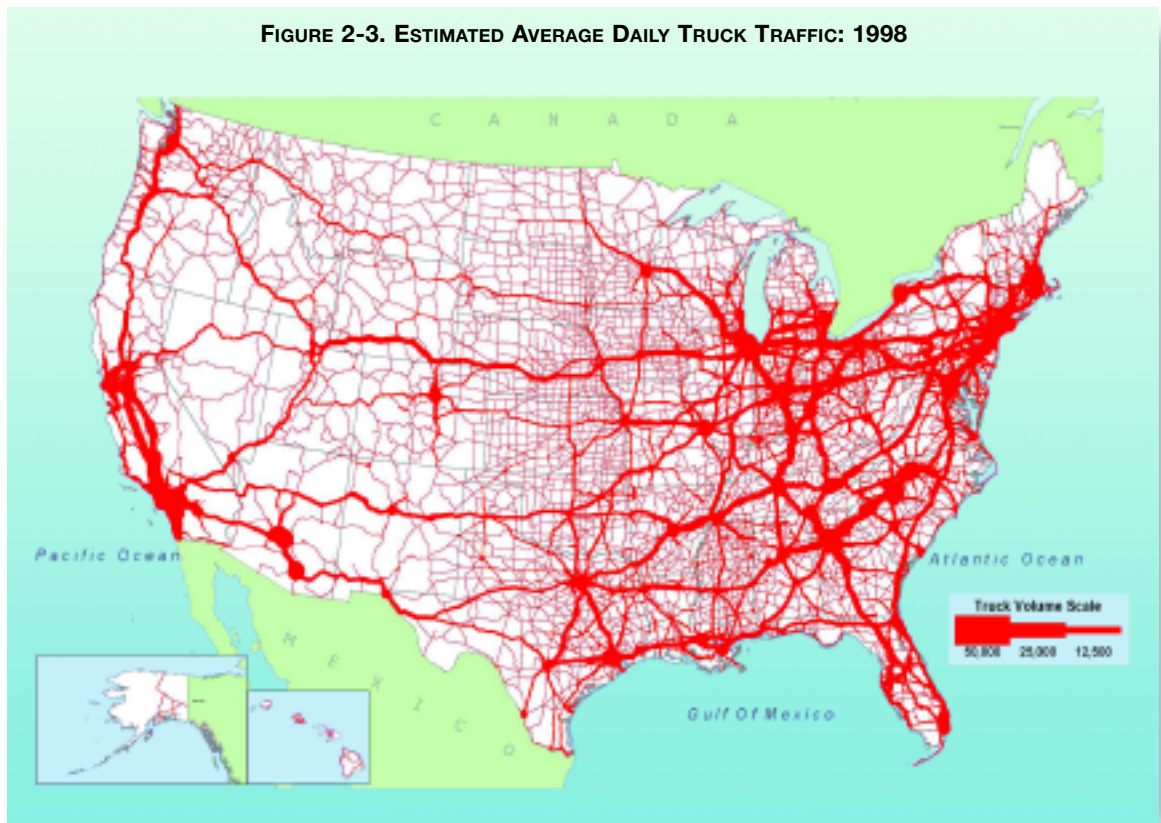


FIGURE 2-4. ESTIMATED AVERAGE DAILY TRUCK TRAFFIC: 2020

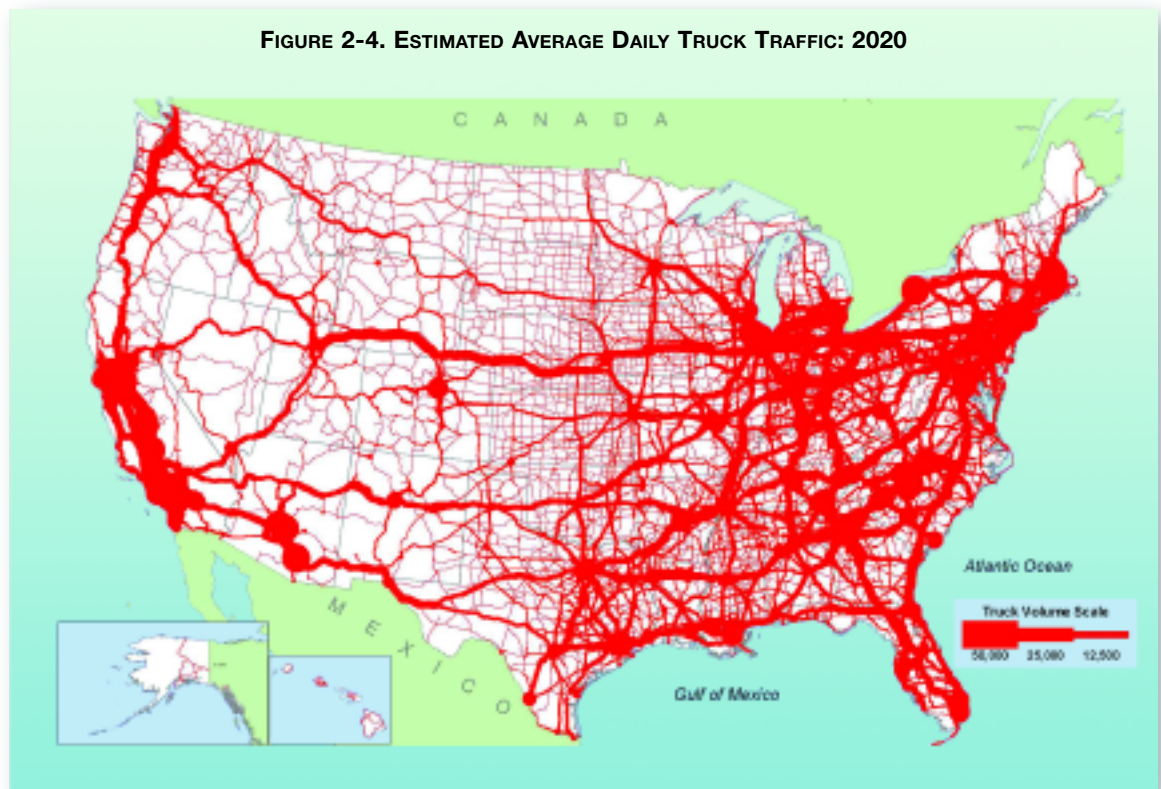


FIGURE 2-3. ESTIMATED AVERAGE DAILY TRUCK TRAFFIC: 1998

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2002.

FIGURE 2-4. ESTIMATED AVERAGE DAILY TRUCK TRAFFIC: 2020

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2002.

Some of the most severe congestion problems are found near ports, airports, and border crossings stemming from the rapid growth of international trade. Over the past two decades U.S. foreign trade in goods by value has quadrupled.

Foreign trade has had a major impact on all the borders and coasts of the United States. Since 1950, the value of merchandise trade has grown in fifteen-fold in inflation adjusted terms. In 2005, ports and airports on the Atlantic Coast remain the most important, but growth in all other regions since 1950, particularly the Pacific Coast and Mexican border, has been much faster.

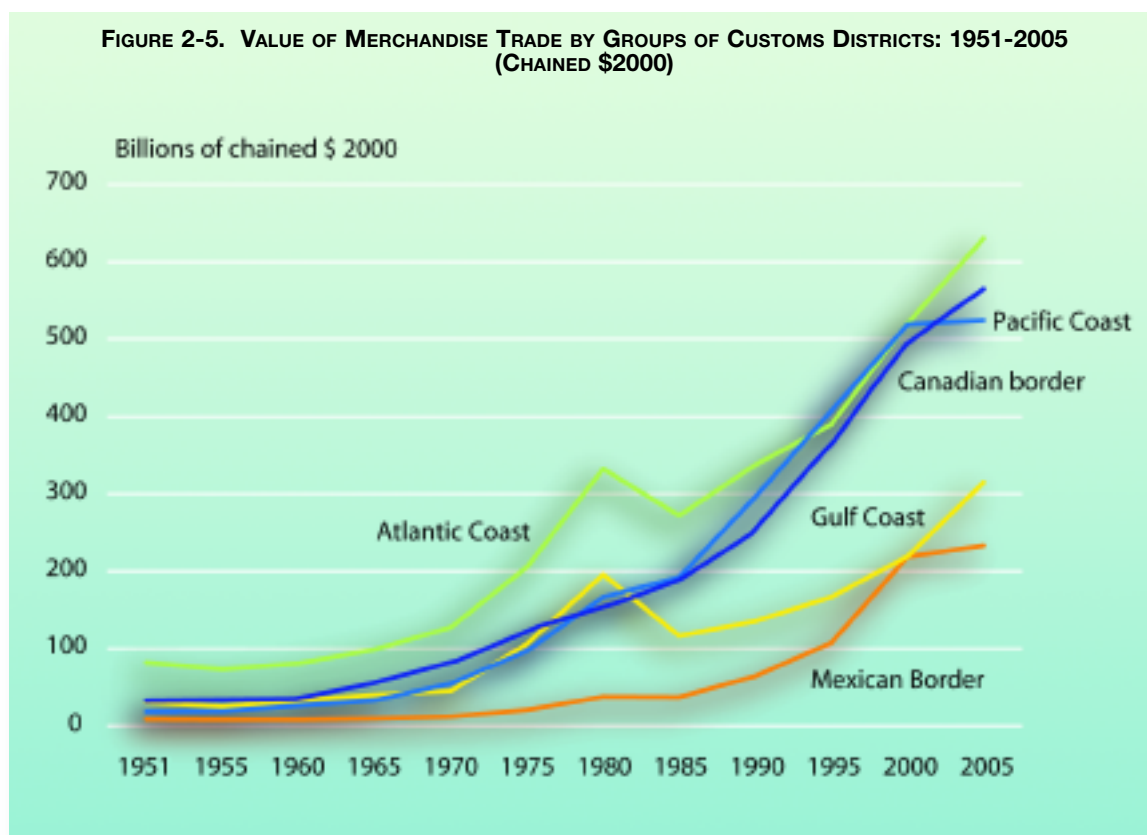
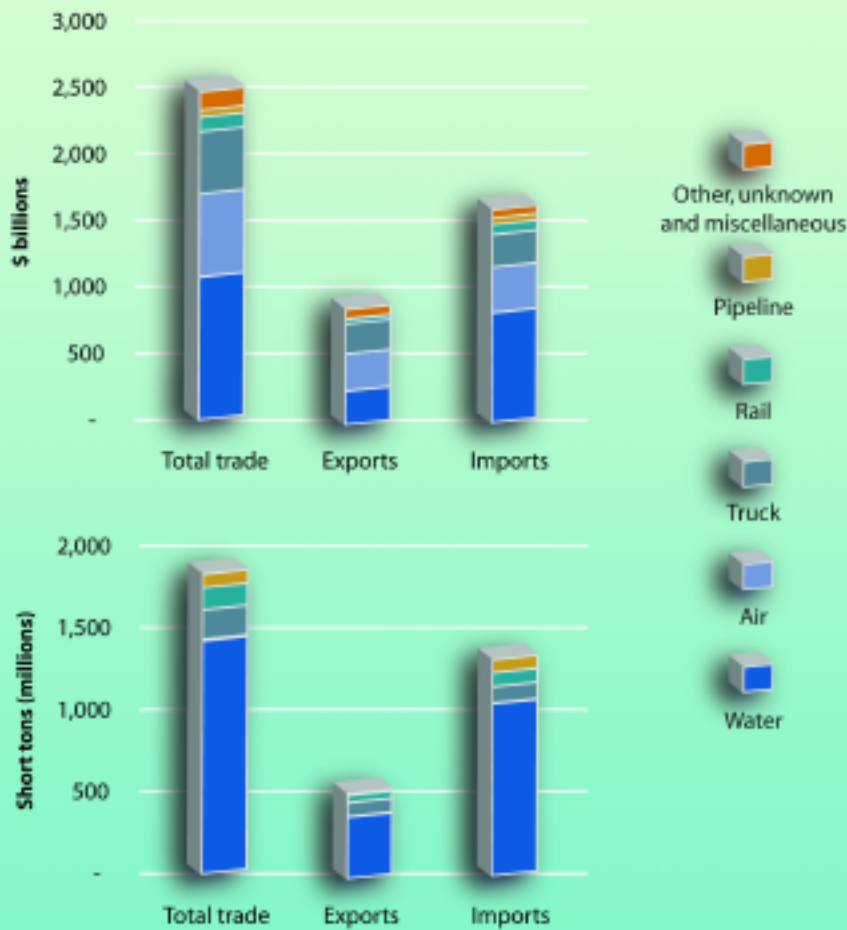


FIGURE 2-5. VALUE OF MERCHANDISE TRADE BY GROUPS OF CUSTOMS DISTRICTS: 1951-2005
Sources: 1950-1970: U.S. Census Bureau, *Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition* (Washington, DC: 1975); 1975: U.S. Census Bureau, *Statistical Abstract of the United States: 1977* (Washington, DC: 1977); 1980-1985: U.S. Census Bureau, *Statistical Abstract of the United States: 1987* (Washington, DC: 1986); 1990-2000: U.S. Census Bureau, *Statistical Abstract of the United States: 2006* (Washington, DC: 2005); 2005: U.S. Census Bureau, Foreign Trade Division, FT920 - U.S. Merchandise Trade: Selected Highlights (Washington, DC: December 2005), available at <http://www.census.gov/foreign-trade/Press-Release/2005pr/12/ft920/> as of September 8, 2006; **Implicit GDP Deflator:** U.S. Department of Commerce, Bureau of Economic Analysis, Current-Dollar and "Real" Gross Domestic Product, available at www.bea.gov as of September 8, 2006.



FIGURE 2-6. U.S. INTERNATIONAL MERCHANDISE TRADE BY MODE OF TRANSPORTATION: 2005



Note: 1 short ton = 2,000 pounds.

Nearly 80 percent of freight tons in U.S. foreign trade are transported by ship. Although the vast majority of freight tonnage in U.S. foreign trade moves by water, air and truck transportation are nearly as important when freight value is considered. By value, the water share drops to 44 percent, with 25 percent moving by air and 19 percent moving by truck.

The top 25 foreign trade gateways measured by value of shipments are comprised of 9 airports, 11 water ports, and 5 border crossings. At these 25 gateways, imports com-

prise 65 percent of the total. Ports with very large shares of imports relative to exports are mostly water ports (such as the ports of Los Angeles, CA, Long Beach, CA, and Tacoma, WA). Anchorage International Airport also has a very high proportion of imports relative to exports.

Measured in tons, the Port of South Louisiana handles the most freight of any water port in the United States. Water ports dominated by domestic trade include St. Louis, MO-IL; Pittsburgh, PA; Huntington, WV-KY-OH; and Valdez, AK. Water ports dominated

Source: Compiled by U.S. Department of Transportation (USDOT), Research and Innovative Technology Administration (RITA), Bureau of Transportation Statistics (BTS), August 2006. **Water and air data**—U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, U.S. Exports of Merchandise and U.S. Imports of Merchandise, December 2005. **Total, truck, rail, pipeline, other and unknown data**—USDOT, RITA, BTS, Transborder Freight Data 2005; and special calculation, August 2006.

FIGURE 2-7. TOP 25 U.S. FOREIGN TRADE FREIGHT GATEWAYS BY VALUE: 2005 (\$ BILLIONS)



Note: Data for all air gateways include a low level (generally less than 2%-3% of the total value) of small user-fee airports located in the same region. Air gateways not identified by airport name include major airport(s) in the geographic area in addition to small regional airports.

Figure 2-8. Top 25 Water Ports by Weight: 2004 (Million Short Tons)



FIGURE 2-7. TOP 25 U.S. FOREIGN TRADE FREIGHT GATEWAYS BY VALUE: 2005

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics* (Washington, DC: 2005), available at <http://www.bts.gov> as of October 16, 2006.

FIGURE 2-8. TOP 25 WATER PORTS BY WEIGHT: 2004

Source: U.S. Army Corps of Engineers, *2004 Waterborne Commerce of the United States, Part 5, National Summaries* (New Orleans, LA: 2006), table 5-2.

**TABLE 2-5. TOP 25 TRADING PARTNERS OF THE UNITED STATES (MERCHANDISE TRADE)
(\$ BILLIONS)**

Partner	2005					
	Rank	1998	2000	2002	2004	2005
Canada	1	329.0	405.6	371.4	445.0	499.3
Mexico	2	173.7	247.6	232.3	266.6	290.2
China	3	85.4	116.3	147.2	231.4	285.3
Japan	4	179.9	211.8	172.9	184.0	193.5
Germany	5	76.5	88.0	89.1	108.6	119.0
United Kingdom	6	73.9	85.0	74.1	82.4	89.7
South Korea	7	40.5	68.2	58.2	72.5	71.4
Taiwan	8	51.3	64.9	50.6	56.3	56.9
France	9	41.8	50.0	47.4	53.1	56.2
Malaysia	10	28.0	36.6	34.4	39.1	44.2
Italy	11	30.0	36.0	34.4	38.8	42.5
Netherlands	12	26.6	31.7	28.2	36.9	41.4
Venezuela	13	15.8	24.2	19.6	29.7	40.4
Brazil	14	25.3	29.2	28.2	35.0	39.8
Ireland	15	14.0	24.1	29.1	35.6	38.0
Singapore	16	34.0	37.0	31.0	34.9	35.8
Saudi Arabia	17	16.9	20.4	17.9	26.2	34.1
Belgium	18	22.3	23.9	23.2	29.3	31.6
Thailand	19	18.7	23.0	19.7	23.9	27.1
India	20	11.8	14.3	15.9	21.7	26.8
Israel	21	15.6	20.7	19.5	23.7	26.6
Nigeria	22	5.0	11.3	7.0	17.8	25.8
Hong Kong	23	23.5	26.1	21.9	25.1	25.2
Switzerland	24	15.9	20.1	17.2	20.9	23.7
Australia	25	17.3	18.9	19.6	21.8	23.1
Top 25 total¹		1,386.3	1,746.7	1,621.2	1,960.5	2,187.5
U.S. total trade		1,594.4	1,997.3	1,856.8	2,287.6	2,575.3
Top 25 as % of total		87	87	87	86	85

¹Represents top 25 trading partners in the reference year not necessarily the partners shown here.

By a wide margin, Canada is this country's top trading partner followed by Mexico and China. China's share of trade with the United States more than doubled between 1998 and 2005, from 5 percent of total merchandise trade to 11 percent.

Trade with Canada and Mexico has grown rapidly over the past decade. Trucks carry almost two-thirds of the value of goods traded with these countries. The value of goods carried by truck increased by about 50 percent between 1997 and 2005. By weight, the water and truck modes carry the largest share of goods traded.

Trade with Canada by land modes is much higher than trade with Mexico. Both have been growing rapidly over the past few years. Imports and exports to Mexico measured by value grew by 61 percent and 49 percent respectively between 1998 and 2005.

Imports and exports to Canada grew by 64 percent and 40 percent respectively.

TABLE 2-5. TOP 25 TRADING PARTNERS OF THE UNITED STATES (MERCHANDISE TRADE)

Source: U.S. Department of Commerce, International Trade Administration, TradeStats Express, available at <http://www.ita.doc.gov/> as of April 4, 2006.

TABLE 2-6. U.S. MERCHANDISE TRADE WITH CANADA AND MEXICO BY TRANSPORTATION MODE

Mode	1998		2000		2004		2005 ¹	
	Value (\$ billions)	Weight (millions of short tons)	Value (\$ billions)	Weight (millions of short tons)	Value (\$ billions)	Weight (millions short tons)	Value (\$ billions)	Weight (millions short tons)
Truck	350	NA	429	NA	453	NA	491	191
Rail	68	NA	94	NA	108	NA	116	141
Air	30	<1	45	1	32	<1	33	<1
Water	21	183	33	194	46	244	58	256
Pipeline	11	NA	24	NA	39	NA	52	86
Other	23	NA	29	NA	34	NA	39	5
Total	503	NA	653	526	712	NA	790	679

Key: NA = not available.

¹2005 data are from the U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, North American Freight Transportation (Washington, DC: 2003), tables A-1 and A-2, available at www.bts.gov as of August 12, 2006.

Notes: Individual modal totals may not sum to exact totals due to rounding. 1 short ton = 2,000 pounds. For value, "Other" is the difference between the total and the sum of the individual modes.

TABLE 2-7. U.S. LAND EXPORTS TO AND IMPORTS FROM CANADA AND MEXICO BY MODE (\$ MILLIONS)

	1998	2000	2004	2005
Exports to Canada, total	137,745.4	154,847.4	171,878.1	192,907.5
Truck	114,806.1	129,825.3	135,897.5	151,221.7
Rail	12,279.6	12,946.5	16,596.6	19,321.9
Pipeline	93.4	161.6	1,584.2	2,393.9
Other ¹	10,559.5	11,913.4	17,776.7	19,933.1
Mail	6.8	0.6	23.1	36.9
Exports to Mexico, total	70,173.8	97,158.9	97,303.7	104,276.5
Truck	60,432.1	82,389.2	79,349.2	83,341.2
Rail	6,188.8	10,495.8	13,632.9	15,747.7
Pipeline	73.4	301.8	87.2	543.3
Other ¹	3,470.0	3,972.0	4,216.4	4,622.7
Mail	0.1	(R) 0.0	18.1	21.6
Imports from Canada, total	162,105.7	210,270.5	236,734.9	265,402.1
Truck	108,856.7	127,816.3	132,762.1	143,695.6
Rail	37,374.1	49,699.2	57,947.2	60,606.3
Pipeline	11,120.1	23,117.1	36,828.3	48,766.5
Other ¹	4,575.1	9,571.0	8,994.4	12,184.4
Mail	1.7	4.1	0.2	0.1
FTZ ²	177.9	62.8	202.6	149.3
Imports from Mexico, total	84,102.9	113,436.5	127,646.3	135,400.5
Truck	65,883.7	88,668.7	104,943.8	112,267.6
Rail	12,029.7	21,056.1	20,183.4	20,782.2
Pipeline	2.4	11.5	0.3	0.0
Other ¹	917.8	1,573.9	1,838.7	1,990.2
Mail	0.2	0.6	0.0	0.0
FTZ ²	2,886.7	2,125.7	679.8	360.4

Key: – = value too small to report.

¹"Other" includes "flyaway aircraft" or aircraft moving under their own power (i.e., aircraft moving from the manufacturer to a customer and not carrying any freight), powerhouse (electricity), vessels moving under their own power, pedestrians carrying freight, and unknown and miscellaneous.

²Foreign Trade Zones (FTZs) were added as a mode of transport for land import shipments beginning in April 1995. Although FTZs are treated as a mode of transportation in the Transborder Surface Freight Data, the actual mode for a specific shipment into or out of an FTZ is unknown because U.S. Customs does not collect this information.

Note: Numbers may not add to totals due to rounding.

TABLE 2-6. U.S. MERCHANDISE TRADE WITH CANADA AND MEXICO

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Transborder Freight Data, August 2006.

Table 2-7. U.S. Land Exports to and Imports from Canada and Mexico by Mode

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, Transborder Surface Freight Data, available at www.bts.gov/transborder as of March 23, 2006.

TABLE 2-8. INCOMING TRUCK CONTAINER CROSSINGS BY STATE, U.S.-CANADIAN BORDER

State	1998	2000	2004	2005
Alaska	11,139	9,710	9,771	8,345
Idaho	44,683	53,102	48,266	51,157
Maine	(R) 391,027	394,067	(R) 509,976	492,542
Michigan	(R) 2,254,902	2,471,416	2,661,624	2,674,597
Minnesota	107,667	131,004	102,963	90,050
Montana	168,805	198,745	165,167	152,433
New York	NA	1,910,176	1,978,035	1,994,093
North Dakota	NA	340,301	351,968	355,885
Vermont	NA	226,109	281,538	288,486
Washington	(R) 715,759	497,405	(R) 666,080	667,856
Total U.S. - Canada border	NA	6,232,035	(R) 6,775,388	6,775,444

Key: NA = Not available; R = revised.

Note: Full or empty truck containers entering the United States. The data include containers moving as in-bond shipments.

Most trucks enter the United States through only four states: Texas, Michigan, New York, and California. Three border crossings — Detroit, MI; Buffalo-Niagara, NY; and Port Huron, MI — account for most trucks entering the United States from Canada.

TABLE 2-9. INCOMING TRUCK CONTAINER CROSSINGS BY STATE, U.S.-MEXICAN BORDER

State	1998	2000	2004	2005
Arizona	318,185	322,160	319,872	344,617
California	860,684	947,311	1,135,850	1,128,457
New Mexico	31,699	35,507	32,348	38,868
Texas	2,502,358	2,895,703	3,024,830	3,165,620
Total U.S. - Mexico border	3,712,926	4,200,681	4,512,900	4,677,562

Note: Full or empty truck containers entering the United States. The data include containers moving as in-bond shipments.

Three border crossings — Laredo, TX; Otay Mesa/San Ysidro, CA; and El Paso, TX — account for nearly two-thirds of trucks coming into the United States from Mexico.

TABLE 2-8. INCOMING TRUCK CONTAINER CROSSINGS BY STATE, U.S.-CANADIAN BORDER

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, special tabulation 2006, based on data from U.S. Customs Service, Mission Support Services, Office of Field Operations, Operations Management Database.

TABLE 2-9. INCOMING TRUCK CONTAINER CROSSINGS BY STATE, U.S.-MEXICAN BORDER

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, special tabulation 2006, based on data from U.S. Customs Service, Mission Support Services, Office of Field Operations, Operations Management Database.

Most freight trains enter the United States through five states: Michigan, Texas, Minnesota, New York, and North Dakota. Three border crossings — Port Huron, MI; Detroit, MI; and International Falls, MN — account for half of all containers coming in to the United States from Canada by rail.

TABLE 2-10. INCOMING RAIL CONTAINER CROSSINGS BY STATE, U.S.-CANADIAN BORDER

State	1998	2000	2004	2005
Alaska	N	N	N	N
Idaho	37,579	50,240	78,133	88,821
Maine	46,882	60,358	44,299	44,909
Michigan	587,317	679,747	751,600	730,100
Minnesota	215,899	250,943	333,657	322,784
Montana	23,729	25,255	39,996	29,399
New York	140,422	257,155	276,112	295,236
North Dakota	NA	154,698	225,284	233,323
Vermont	43,551	51,069	56,764	53,851
Washington	82,828	65,372	145,064	142,134
Total U.S. - Canada border	1,178,207	1,594,837	1,950,909	1,940,557

Key: N = not applicable; NA = not available; R = revised.

Note: Full or empty rail containers entering the United States. The data include containers moving as in-bond shipments.

On the Mexican border, Laredo, TX by itself accounts for 44 percent of all containers coming into the United States by rail.

TABLE 2-11. INCOMING RAIL CONTAINER CROSSINGS BY STATE, U.S.-MEXICAN BORDER

State	1998	2000	2004	2005
Arizona	35,812	50,602	46,899	46,831
California	7,755	9,115	15,091	18,313
New Mexico	N	N	N	N
Texas	344,339	512,108	613,315	663,415
Total U.S. - Mexico border	387,906	571,825	675,305	728,559

Key: N = not applicable.

Note: Full or empty rail containers entering the United States. The data include containers moving as in-bond shipments.

TABLE 2-10. INCOMING RAIL CONTAINER CROSSINGS BY STATE, U.S.-CANADIAN BORDER

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, special tabulation 2006, based on data from U.S. Customs Service, Mission Support Services, Office of Field Operations, Operations Management Database.

TABLE 2-11. INCOMING RAIL CONTAINER CROSSINGS BY STATE, U.S.-MEXICAN BORDER

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, special tabulation 2006, based on data from U.S. Customs Service, Mission Support Services, Office of Field Operations, Operations Management Database.

The Federal Aviation Administration (FAA) reports that Anchorage International and Memphis International are two of the most important U.S. airports that handle all-cargo aircraft. All-cargo aircraft are dedicated to the exclusive transportation of cargo. They do not include aircraft carrying passengers as well as cargo. Of the top 25 airports that handle all-cargo operations, Memphis is also one of the fastest growing, up 41 percent since 2000, along with Houston (45 percent) and Honolulu (40 percent).

TABLE 2-12. TOP 25 AIRPORTS BY LANDED WEIGHT OF ALL-CARGO OPERATIONS¹

Airport	2004 Rank	Landed weight (thousands of short tons)				
		2000	2001	2002	2003	2004
Anchorage, AK (Ted Stevens Anchorage International) ²	1	8,084	7,777	8,994	9,007	9,844
Memphis, TN (Memphis International)	2	6,318	6,865	8,826	8,760	8,885
Louisville, KY (Louisville International-Standiford Field)	3	3,987	4,026	4,202	4,172	4,388
Miami, FL (Miami International)	4	2,929	3,055	3,174	3,239	3,423
Los Angeles, CA (Los Angeles International)	5	2,892	2,929	3,038	3,120	3,062
New York, NY (John F. Kennedy International)	6	2,793	2,543	2,912	2,937	2,898
Chicago, IL (O'Hare International)	7	2,062	2,012	2,217	2,351	2,359
Indianapolis, IN (Indianapolis International)	8	2,884	3,154	2,338	2,277	2,314
Newark, NJ (Newark Liberty International)	9	1,961	1,795	1,758	1,835	1,765
Oakland, CA (Metropolitan Oakland International)	10	1,811	1,639	1,746	1,695	1,703
Fort Worth, TX (Dallas/Fort Worth International)	11	1,691	1,546	1,481	1,481	1,431
Philadelphia, PA (Philadelphia International)	12	1,454	1,452	1,466	1,365	1,371
Ontario, CA (Ontario International)	13	1,220	1,291	1,444	1,338	1,326
Atlanta, GA (William B. Hartsfield International)	14	1,090	1,043	1,166	1,194	1,162
Covington/Cincinnati, OH (Cincinnati/Northern Kentucky International)	15	912	980	1,043	1,098	1,141
Honolulu, HI (Honolulu International)	16	692	789	970	1,017	970
Phoenix, AZ (Sky Harbor International)	17	920	838	867	779	801
Dayton, OH (James M. Cox Dayton International)	18	2,233	1,444	897	784	787
Denver, CO (Denver International)	19	900	803	783	747	763
San Francisco, CA (San Francisco International)	20	1,267	1,012	1,035	1,200	740
Portland, OR (Portland International)	21	882	807	816	749	718
Houston, TX (George Bush Intercontinental)	22	480	463	482	666	697
Minneapolis, MN (Minneapolis-St Paul International/Wold Chamberlain)	23	622	586	621	687	678
Rockford, IL (Greater Rockford)	24	654	681	630	625	677
Salt Lake City, UT (Salt Lake City International)	25	751	606	583	599	621
Top 25 airports³		52,381	50,701	53,942	53,947	54,526
United States, all airports⁴		74,743	71,441	73,433	73,072	74,297
Top 25 as % of U.S. total		70.1%	71.0%	73.5%	73.8%	73.4%

¹All-Cargo operations are operations dedicated to the exclusive transportation of cargo. This does not include aircraft carrying passengers that may also be carrying cargo. Aircraft landed weight is the certificated maximum gross landed weight of the aircraft as specified by the aircraft manufacturers.

²Anchorage includes a large proportion of all-cargo operations in-transit.

³Represents top 25 airports in the reference year not necessarily the airports shown here.

⁴Limited to airports with an aggregate landed weight in excess of 100 million pounds (50,000 short tons) annually.

Note: 1 short ton = 2,000 pounds.

TABLE 2-12. TOP 25 AIRPORTS BY LANDED WEIGHT OF ALL-CARGO OPERATIONS

Source: U.S. Department of Transportation, Federal Aviation Administration, Air Carrier Activity Information System

(ACAIS) database, All-Cargo Data, available at http://www.faa.gov/airports_airtraffic/airports/planning_capacity/passenger_allcargo_stats/passenger/index as of March 22, 2006.

Trucks move more than one-half of all hazardous materials shipped from within the United States. However, truck ton-miles of hazardous shipments account for a much smaller share, about one-third of all ton-miles, because such shipments travel relatively short distances. By contrast, rail accounts for only 5 percent of shipments by weight but 22 percent by ton-miles.

Table 2-13. U.S. Hazardous Materials Shipments by Transportation Mode: 2002

Transportation mode	Value		Tons		Ton-miles		Average miles per shipment
	\$ Billion	Percent	Millions	Percent	Billions	Percent	
All modes, total	660.2	100.0	2,191.5	100.0	326.7	100.0	136
Single modes, total	644.5	97.6	2,158.5	98.5	311.9	95.5	105
Truck ¹	419.6	63.6	1,159.5	52.9	110.2	33.7	86
For-hire	189.8	28.8	449.5	20.5	65.1	19.9	285
Private ²	226.7	34.3	702.2	32.0	44.1	13.5	38
Rail	31.3	4.7	109.4	5.0	72.1	22.1	695
Water	46.9	7.1	228.2	10.4	70.6	21.6	S
Air	1.6	0.2	0.1	0.003	0.1	0.03	2,080
Pipeline ³	145.0	22.0	661.4	30.2	S	S	S
Multiple modes, total	9.6	1.5	18.7	0.9	12.5	3.8	849
Parcel, U.S. Postal Service or Courier	4.3	0.6	0.2	0.01	0.1	0.04	837
Other	5.4	0.8	18.5	0.8	12.4	3.8	1,371
Unknown and other modes, total	6.1	0.9	14.2	0.6	2.3	0.7	57

Key: S = data are not published because of high sampling variability or other reasons.

¹Truck as a single mode includes shipments that went by private truck only, for-hire truck only, or a combination of both.

²Private truck refers to a truck operated by a temporary or permanent employee of an establishment or the buyer/receiver of the shipment.

³Excludes most shipments of crude oil.

TABLE 2-14. U.S. HAZARDOUS MATERIALS SHIPMENTS BY HAZARD CLASS: 2002

Hazard class	Description	Value		Tons		Ton-miles	
		\$ Billions	Percent	Millions	Percent	Billions	Percent
Class 1	Explosives	7.9	1.2	5.0	0.2	1.6	0.5
Class 2	Gases	73.9	11.2	213.4	9.7	37.3	11.4
Class 3	Flammable liquids	490.2	74.3	1,789.0	81.6	218.6	66.9
Class 4	Flammable solids	6.6	1.0	11.3	0.5	4.4	1.3
Class 5	Oxidizers and organic peroxides	5.5	0.8	12.7	0.6	4.2	1.3
Class 6	Toxic (poison)	8.3	1.3	8.5	0.4	4.3	1.3
Class 7	Radioactive materials	5.9	0.9	0.1	0.003	0.04	0.01
Class 8	Corrosive materials	38.3	5.8	90.7	4.1	36.3	11.1
Class 9	Miscellaneous dangerous goods	23.6	3.6	61.0	2.8	20.2	6.2
Total		660.2	100.0	2,191.5	100.0	326.7	100.0

Table 2-13. U.S. Hazardous Materials Shipments by Transportation Mode: 2002

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, *2002 Economic Census, Transportation, 2002 Commodity Flow Survey, Hazardous Materials* (Washington, DC: December 2004), table 1a.

TABLE 2-14. U.S. HAZARDOUS MATERIALS SHIPMENTS BY HAZARD CLASS: 2002

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, *2002 Economic Census, Transportation, 2002 Commodity Flow Survey, Hazardous Materials* (Washington, DC: December 2004), table 2a.

Flammable liquids, especially gasoline, are the predominant hazardous material transported in the United States. In terms of ton-miles, flammable liquids account for about 67 percent of total ton-miles of hazardous materials shipments. The next largest class of hazardous materials in terms of ton-miles is gases at about 11 percent.

Despite the enormous amount of freight being moved by truck in the United States, the United States moves a much smaller share of its goods domestically by truck and a much greater share of goods by rail than countries in western Europe and Japan.

TABLE 2-15. DOMESTIC FREIGHT ACTIVITY BY TRANSPORTATION MODE FOR SELECTED COUNTRIES: 2003 (PERCENT SHARE OF TOTAL)

Mode	Canada	France	Germany	Italy	Japan	United Kingdom	United States
Water	¹ 5.0	² 6.7	13.1	³ 17.3	³ 41.3	³ 26.3	14.9
Oil pipeline	35.8	8.0	3.5	4.1	NA	3.8	14.5
Rail	37.5	16.9	17.7	9.8	4.0	7.5	39.5
Road	21.8	68.4	65.7	68.9	³ 54.6	62.4	31.1

Key: NA = not available.
¹Based on data from 2001.
²Based on data from 2000.
³Based on data from 2002.



TABLE 2-15. DOMESTIC FREIGHT ACTIVITY BY TRANSPORTATION MODE FOR SELECTED COUNTRIES: 2003

Sources: United States: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, *National Transportation Statistics 2005* (Washington, DC: 2005).

All other countries: Organisation for Economic Cooperation and Development (OECD), *OECD in Figures — 2005 Edition* (Paris: 2005).

