

IV. THE FREIGHT TRANSPORTATION INDUSTRY

The freight transportation industry is an important part of the U.S. economy. It employs millions of people, supports economic activity, and invests in transportation infrastructure and equipment that benefits both passenger travel and freight movement.

Fixed transportation assets reflect the significant role of both public and private sectors in moving freight. Freight railroad facilities and services are almost entirely private, while private-sector

trucks operate over public highways. Air-cargo services in the private sector operate in public airways and mostly public airports, and ships in the private sector serve public waterways and both public and private port facilities. Pipelines are mostly privately owned, although significantly controlled by public regulation. In the public sector, virtually all truck routes are owned by state or local governments. Airports and harbors are typically owned by public authorities, although terminals are usually owned or managed by private operators. Air and water navigation is mostly controlled by the Federal government, and safety is regulated by all levels of government.

Total private and public fixed assets grew from just over \$26.9 trillion in 2000 to more than \$44.7 trillion in 2010 (current U.S. dollars). Transportation equipment and structures (private and public) accounted for 11 percent of the total in 2010. The components of transportation fixed assets and their 2010 values are private transportation equipment (\$1.0 trillion), private transportation structures (\$656 billion), and government transportation structures (\$3.5 trillion).¹

Table 4-1. Transportation Fixed Assets: 2000-2010
(billions of current dollars)

	2000	2005	2009	2010	Percent change, 2000 to 2010
Private Sector					
Transportation Equipment ¹	828	980	1,012	1,001	20.9
Transportation Structures ²	450	557	637	656	45.9
Public Sector					
Highways	1,435	2,056	2,836	2,939	104.8
Transportation Structures ²	261	413	564	592	126.9
Federal	6	10	14	14	117.2
State and Local	254	403	551	578	127.1

¹Includes trucks, truck trailers, buses, automobiles, aircraft, ships, boats, and railroad equipment.

²Includes physical structures for all modes of transportation.

¹Fixed assets are for 2010 and include both passenger and freight transportation. See the Bureau of Economic Analysis at www.bea.gov/national/FA2004/index.asp, tables 2.1, 3.1s, and 7.1b.

TABLE 4-1. TRANSPORTATION FIXED ASSETS: 2000-2010

Source: U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts, Fixed Assets Tables, tables 2.1, 3.1s, and 7.1b, available at www.bea.gov/iTable/index_FA.cfm as of September 23, 2011.



The freight industry has many components, encompassing companies large and small. All told there were nearly 220,000 transportation and warehousing establishments in 2007, with more than one-half of those primarily engaged in trucking. Revenue generated by trucking accounted for about 34 percent of transportation and warehousing sector revenue while warehousing accounted for a small percentage of the total.

Table 4-2. Economic Characteristics of Transportation and Warehousing Establishments in Freight-Dominated Modes: 2002 and 2007

NAICS	Establishments		Revenue (millions of current \$)		Payroll (millions of current \$)		Paid Employees	
	2002	2007	2002	2007	2002	2007	2002	2007
Transportation and warehousing	199,618	219,706	382,152	639,916	115,989	173,183	3,650,859	4,454,383
Rail transportation	NA	NA	NA	NA	NA	NA	NA	NA
Water transportation	1,890	1,721	23,331	34,447	3,194	4,544	66,153	75,997
Truck transportation	112,642	120,390	164,219	217,833	47,750	58,266	1,435,210	1,507,923
Pipeline transportation	2,188	2,529	22,031	25,718	2,477	3,219	36,790	36,964
Support activities for transportation	33,942	42,130	57,414	86,596	16,202	24,579	465,616	608,385
Couriers and messengers	12,655	13,004	58,165	77,877	17,175	20,431	561,514	557,195
Warehousing and storage	12,671	13,938	16,548	21,921	17,183	25,526	565,533	720,451

Key: NA = not available; NAICS = North American Industry Classification System.

Notes: Total includes air transportation, transit and ground passenger transportation, and scenic and sightseeing transportation. Data are for establishments in which transportation is the primary business. Data exclude transportation provided privately, such as trucking organized "in-house" by a grocery company. Data are not collected for rail transportation or for governmental organizations even when their primary activity would be classified in industries covered by the census. For example, data are not collected for publicly operated buses and subway systems.

Table 4-3. Economic Characteristics of Freight Railroads: 2000 and 2009

	Class I		Non-Class I		Total	
	2000	2009	2000	2009	2000	2009
Number of railroads	8	7	552	556	560	563
Freight revenue (billions of current dollars)	33.1	46.1	3.2	3.3	36.3	49.4
Operating revenue (billions of current dollars)	34.1	47.8	NA	NA	NA	NA
Employees	168,360	151,906	23,448	17,985	191,808	169,891

Key: NA = not available.

Railroads include Class I (national), Class II (regional), and Class III (local) carriers. Revenue grew while employment declined in both the national railroads and the regional and local railroads between 2000 and 2009.



TABLE 4-2. ECONOMIC CHARACTERISTICS OF TRANSPORTATION AND WAREHOUSING ESTABLISHMENTS IN FREIGHT-DOMINATED MODES: 2002 AND 2007

Sources: 2002: U.S. Department of Commerce, Census Bureau, *2002 Economic Census, Transportation and Warehousing, United States* (Washington, DC: 2004), available at www.census.gov/econ/census02/data/us/US000_48.HTM as of August 22, 2011; 2007: U.S. Department of Commerce, Census Bureau, *2007 Economic Census, Transportation and Warehousing, United States* (Washington, DC: 2010), available at www.census.gov/econ/census07 as of August 22, 2011.

TABLE 4-3. ECONOMIC CHARACTERISTICS OF FREIGHT RAILROADS: 2000 AND 2009

Source: Association of American Railroads, *Railroad Facts* (Washington, DC: annual issues), p. 3.

Productivity has been relatively stable after years of improvement. Between 1987 and 2009, output-per-hour worked more than doubled in line-haul railroading but grew only 23 percent in long-distance, general-freight trucking. Line-haul railroads do not include switching and terminal operations or short-distance (or local) railroads. Long-distance, general-freight trucking establishments exclude local trucking and truck operators that require specialized equipment, such as flatbeds, tankers, or refrigerated trailers.

Employment in many transportation industries has remained steady or has grown over the past two decades with the

notable exception of railroads and pipelines, which have declined by 21 percent and 30

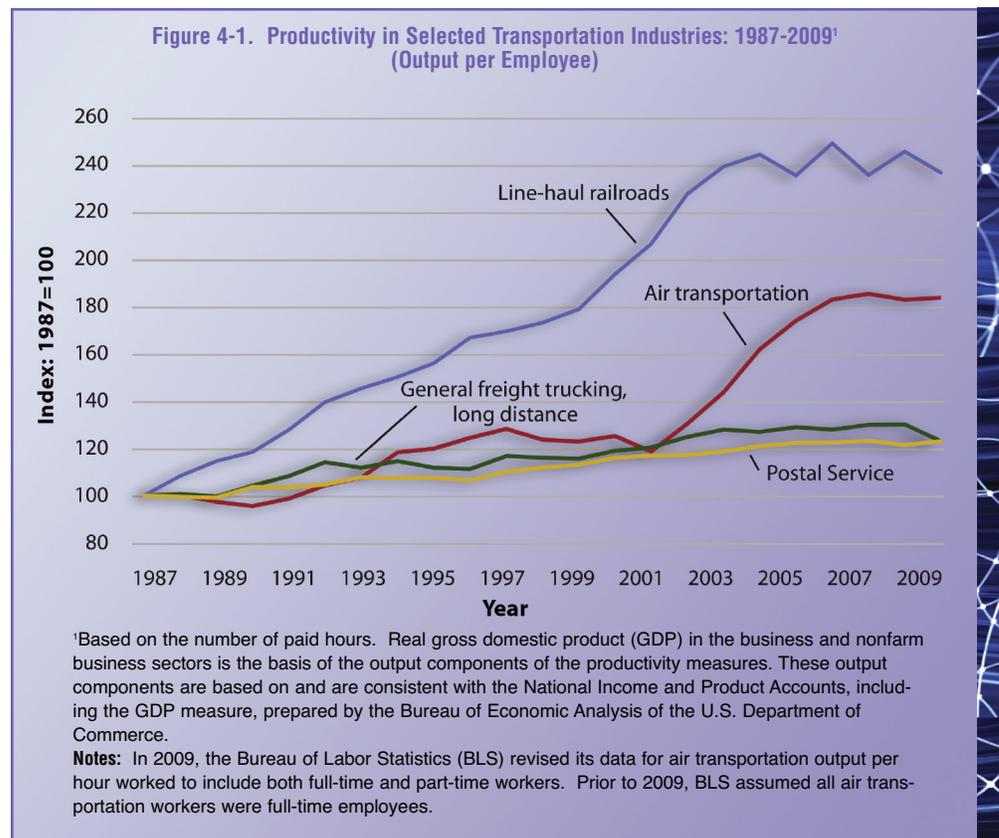


Table 4-4. Employment in For-Hire Transportation Establishments Primarily Serving Freight: 1980-2010¹

	1980	1990	2000	2009	2010
Total U.S. labor force²	90,528	109,487	131,785	(R) 130,807	129,818
Transportation and warehousing	2,961	3,476	4,410	(R) 4,236	4,184
Rail transportation	518	272	232	(R) 218	215
Water transportation	NA	57	56	(R) 63	63
Truck transportation	NA	1,122	1,406	(R) 1,268	1,244
Pipeline transportation	NA	60	46	(R) 43	42
Support activities for transportation ³	NA	364	537	549	540
Couriers and messengers	NA	375	605	(R) 546	527
Warehousing and storage	NA	407	514	(R) 637	628

Key: NA = not available; R = revised.
¹Annual averages.
²Excludes farm employment.
³Industries in the support activities for transportation subsector provide services to transportation carrier establishments or to the general public. This subsector includes a wide array of establishments, including air traffic control services, marine cargo handling, and motor vehicle towing.
Notes: These data include workers employed in transportation industries but not necessarily in a transportation occupation, such as a lawyer working for a trucking company. Moreover, these data exclude workers in transportation occupations employed by non-transportation industries, such as a truck driver employed by a retail company.

FIGURE 4-1. PRODUCTIVITY IN SELECTED TRANSPORTATION INDUSTRIES: 1987-2009

Source: U.S. Department of Labor, Bureau of Labor Statistics, Industry Productivity, available at www.bls.gov/lpc/ as of August 20, 2011.

TABLE 4-4. EMPLOYMENT IN FOR-HIRE TRANSPORTATION ESTABLISHMENTS PRIMARILY SERVING FREIGHT: 1980-2010

Source: U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics survey, available at www.bls.gov/ces/ as of August 19, 2011.



percent, respectively, between 1990 and 2010. Consequently, in 2010 rail transportation employed only 5 percent of those working in the transportation and warehousing industry compared with about 18 percent in 1980. By comparison, trucking in 2010 accounted for 30 percent of total transportation and warehousing sector employment.

Freight transportation jobs are not limited to for-hire carriers. Truck driving is by far the largest freight transportation occupation in the United States, and many drivers work for retailers and other establishments with shipper-owned trucks. There were nearly 2.62 million truck drivers in 2010; about 56 percent of these professionals drive heavy/tractor trailer trucks, 30 percent drive light/delivery service trucks, and about 14 percent are driver/sales workers. Several industry analysts believe the number of truck drivers is below demand and driver shortages will worsen in the future.

Table 4-5. Employment in Selected Freight Transportation and Freight Transportation-Related Occupations: 2000-2010

Occupation (SOC code)	2000	2008	2009	2010
Vehicle operators, pipeline operators, and primary support				
Driver/sales worker (53-3031)	373,660	372,720	363,050	371,670
Truck drivers, heavy and tractor-trailer (53-3032)	1,577,070	1,672,580	1,550,930	1,466,740
Truck drivers, light or delivery services (53-3033)	1,033,220	908,960	834,780	780,260
Locomotive engineers (53-4011)	29,390	42,760	43,560	40,750
Rail yard engineers, dinkey operators, and hostlers (53-4013)	4,020	5,480	5,360	5,600
Railroad brake, signal, and switch operators (53-4021)	16,830	24,610	24,270	22,760
Railroad conductors and yardmasters (53-4031)	40,380	39,580	41,540	42,700
Sailors and marine oilers (53-5011)	30,090	32,420	31,950	31,690
Captains, mates, and pilots of water vessels (53-5021)	21,080	30,600	30,450	29,280
Ship engineers (53-5031)	7,370	11,190	10,850	9,470
Bridge and lock tenders (53-6011)	4,790	4,490	4,290	3,250
Gas compressor and gas pumping station operators (53-7071)	6,510	4,050	4,160	4,040
Pump operators, except wellhead pumpers (53-7072)	13,730	9,280	10,310	9,440
Transportation equipment manufacturing and maintenance occupations				
Bus and truck mechanics and diesel engine specialists (49-3031)	258,800	248,620	232,810	222,770
Rail car repairers (49-3043)	10,620	20,780	20,910	19,280
Transportation Infrastructure construction and maintenance occupations				
Rail-track laying and maintenance equipment operators (47-4061)	9,940	15,020	14,880	15,520
Signal and track switch repairers (49-9097)	5,540	6,570	6,450	7,400
Dredge operators (53-7031)	3,100	1,910	1,990	1,720
Secondary support service occupations				
Dispatchers, except police, fire, and ambulance (43-5032)	167,180	193,210	185,100	180,540
Postal service mail carriers (43-5052)	354,980	354,570	339,030	324,990
Shipping, receiving, and traffic clerks (43-5071)	864,530	760,950	715,130	687,850
Transportation inspectors (53-6051)	26,520	24,940	24,250	24,280
Tank car, truck, and ship loaders (53-7121)	17,480	12,330	11,560	10,390

Key: SOC = Standard Occupational Classification.

TABLE 4-5. EMPLOYMENT IN SELECTED FREIGHT TRANSPORTATION AND FREIGHT TRANSPORTATION-RELATED OCCUPATIONS: 2000-2010

Source: U.S. Department of Labor, Bureau of Labor Statistics, *National Occupational Employment and Wages, 2010*, available at www.bls.gov/oes as of August 19, 2011.

Table 4-6: Producer Price Indices for Selected Transportation Services: 1990-2009

	1990	2000	2003	2005	2006	2007	2008	2009
Air Transportation (NAICS 481)¹	NA	147.7	162.1	171.0	180.4	183.7	203.8	188.5
Scheduled Air Transportation (NAICS 4811) ²	110.2	180.1	198.5	209.3	220.5	224.5	248.9	229.1
Scheduled Freight Air Transportation (NAICS 481112)	NA	NA	100.0	104.9	108.4	109.0	127.8	119.1
Nonscheduled Air Transportation (NAICS 4812) ³	NA	107.3	117.8	126.7	136.8	148.5	165.8	160.4
Rail Transportation (NAICS 482)³	NA	102.6	108.8	125.2	135.9	140.9	157.3	148.5
Line-Haul Railroads (NAICS 482111) ⁴	107.5	114.5	121.4	139.6	151.2	157.2	175.5	165.6
Water Transportation (NAICS 483)	NA	NA	100.0	106.4	111.1	113.5	127.0	116.1
Deep Sea Freight Transportation (NAICS 483111) ⁵	113.1	155.8	219.9	231.9	233.3	230.0	258.3	218.8
Coastal and Great Lakes Freight Transportation (NAICS 483113)	NA	NA	100.0	109.9	119.9	130.2	141.8	137.4
Inland Water Freight Transportation (NAICS 483211)	100.0	117.9	124.7	151.4	182.9	186.1	218.3	211.4
Truck Transportation (NAICS 484)	NA	NA	100.0	109.0	113.2	115.4	123.0	117.3
General Freight Trucking (NAICS 4841)	NA	NA	100.0	110.0	114.1	116.5	123.6	117.5
General Freight Trucking, Local (NAICS 48411)	NA	NA	100.0	111.5	115.3	119.6	130.2	126.0
General Freight Trucking, Long Distance (NAICS 48412)	NA	NA	100.0	109.7	113.8	115.9	122.2	115.5
Specialized Freight Trucking (NAICS 4842)	NA	NA	100.0	107.0	111.4	113.1	122.1	117.4
Used Household and Office Goods Moving (NAICS 48421)	NA	NA	100.0	106.0	107.8	108.8	112.2	112.8
Specialized Freight (except Used Goods) Trucking, Local (NAICS 48422)	NA	NA	100.0	107.1	112.3	114.2	126.7	123.9
Specialized Freight (except Used Goods) Trucking, Long Distance (NAICS 48423)	NA	NA	100.0	107.5	112.8	114.8	123.6	113.2
Pipeline Transportation (NAICS 486)	NA							
Pipeline Transportation of Crude Oil (NAICS 4861)	NA	NA	100.0	113.3	112.0	125.4	137.1	141.0
Other Pipeline Transportation (NAICS 4869) ⁶	NA	NA	100.0	105.2	108.2	115.0	121.6	128.7
Support Activities for Transportation (NAICS 488)	NA	NA	100.0	104.1	106.5	108.5	111.7	108.6
Support Activities for Water Transportation (NAICS 4883) ⁷	NA	NA	100.0	103.5	107.7	112.7	117.3	116.8
Navigational Services to Shipping (NAICS 48833)	NA	NA	100.0	105.7	113.9	120.6	133.8	122.9
Freight Transportation Arrangement (NAICS 4885) ³	NA	98.3	97.9	99.1	98.8	100.2	102.5	94.8
Postal Service (NAICS 491)	100.0	135.2	155.0	155.0	164.7	171.9	178.9	185.0
Couriers and Messengers (NAICS 492)	NA	NA	100.0	113.8	121.5	131.5	142.0	141.5

Key: NA = not available; NAICS = North American Industry Classification System.

¹Base year = 1992.

²Base year = 1989.

³Base year = 1996.

⁴Base year = 1984.

⁵Base year = 1988.

⁶Other pipeline transportation includes pipeline transportation of refined petroleum products (NAICS 48691).

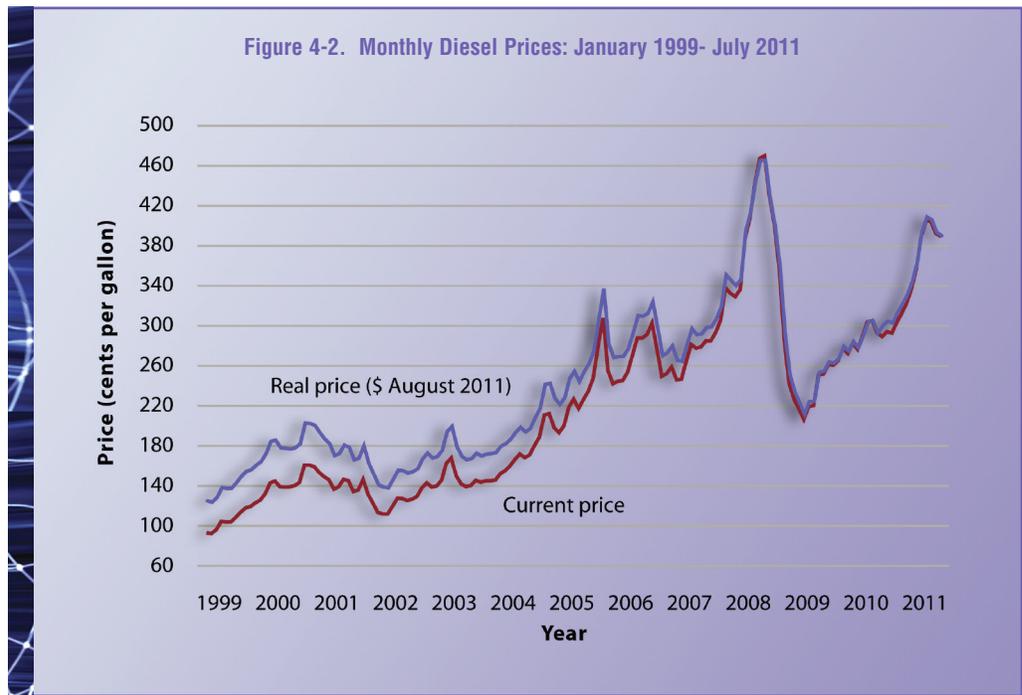
⁷Support activities for water transportation include port and harbor operations (NAICS 48831), marine cargo handling (NAICS 48832), and navigational services to shipping (NAICS 48833).

Notes: Index values start at 100.0 in 1990 unless another year is specified. This table shows annual data, which are calculated by the Bureau of Labor Statistics by averaging monthly indices. Data are reported monthly from January to December. The monthly indices, however, are available for fewer than 12 months for some years. In both cases, a simple average of the available monthly indices is reported for each year. Data are not seasonally adjusted.

From 2008 to 2009, the prices charged for transportation purchased from carriers and support activities have gone down in most industries. Rail prices decreased by about 6 percent, while air and trucking fell by 8 percent and 5 percent respectively.

TABLE 4-6: PRODUCER PRICE INDICES FOR SELECTED TRANSPORTATION SERVICES: 1990-2009

Source: U.S. Department of Labor, Bureau of Labor Statistics, Producer Price Index Industry Data, available at www.bls.gov/data/sa.htm as of August 19, 2011.



Diesel prices were about 132 percent higher in July 2011 than 10 years earlier (in inflation-adjusted terms).



FIGURE 4-2. MONTHLY DIESEL PRICES: JANUARY 1999- JULY 2011
Source: Diesel price: U.S. Department of Energy, Energy Information Agency, U.S. Petroleum Prices, available at www.eia.doe.gov as of August 19, 2011. Consumer Price Index: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index – All Urban Consumers, Monthly, available at www.bls.gov as of August 19, 2011.