

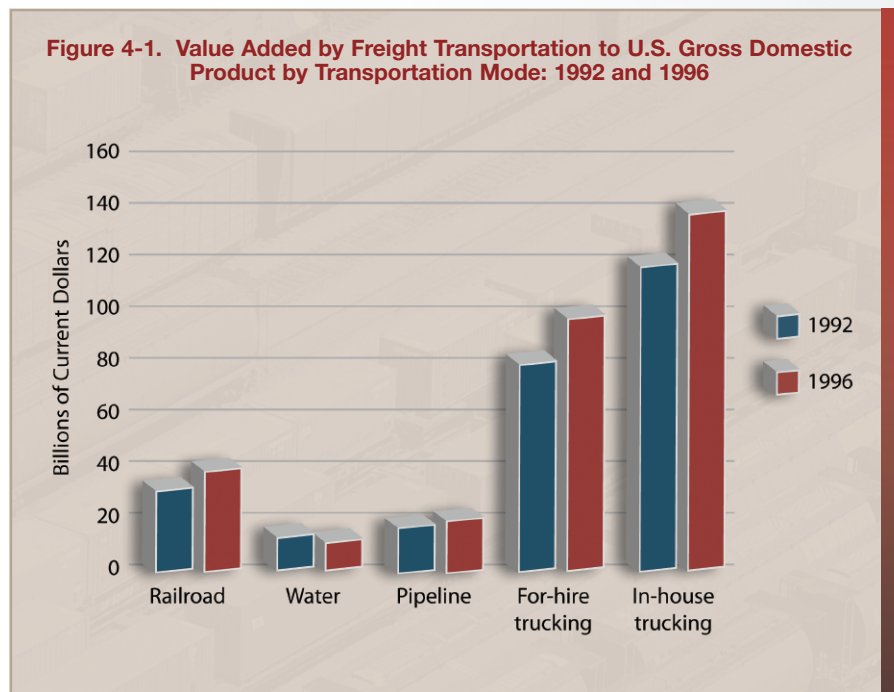
## IV. THE FREIGHT TRANSPORTATION INDUSTRY

The private sector owns a significant share of assets in the transportation industry: \$1.07 trillion in equipment plus \$681.2 billion in private structures, compared to \$502 billion in transportation structures plus \$2.47 trillion in highways owned by public agencies.<sup>1</sup> Freight railroad facilities and services are almost entirely private, while trucks in the private sector 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 in the private sector, 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 typical-

ly owned by public authorities (although terminals are usually owned or managed by private operators). Air and water navigation is mostly federal, and safety is regulated by all levels of government.

Freight transportation is a big part of the economy. The value

generated by transportation services in moving goods and people on the transportation system is about five percent of GDP. Of this five percent, three-fifths is generated by for-hire transportation services, and the rest is generated by in-house transportation (transportation provided by businesses for their own use). Most in-house transportation is in-house trucking, which contributed 40 percent more value to GDP than for-hire trucking in 1996 (the latest year for which data are available).



<sup>1</sup>Fixed assets are for 2008 and include both passenger and freight transportation. See the Bureau of Economic Analysis at [www.bea.gov/national/FA2004/index.asp](http://www.bea.gov/national/FA2004/index.asp), tables 2.1, 3.1s, and 7.1b.

**FIGURE 4-1. VALUE ADDED BY FREIGHT TRANSPORTATION TO U.S. GROSS DOMESTIC PRODUCT BY TRANSPORTATION MODE: 1992 AND 1996**

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, September 2000.

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 accounts for about 34 percent of transportation and warehousing sector revenue while warehousing accounts for a small percentage of the total.

**Table 4-1. 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
<b>Transportation and warehousing</b>	<b>199,618</b>	<b>219,706</b>	<b>382,152</b>	<b>639,916</b>	<b>115,989</b>	<b>173,183</b>	<b>3,650,859</b>	<b>4,454,383</b>
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 nor 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 4-2. Economic Characteristics of Freight Railroads: 2000 and 2008**

	Class I		Non-Class I		Total	
	2000	2008	2000	2008	2000	2008
Number of railroads	8	7	552	558	560	565
Freight revenue (billions of current dollars)	33.1	59.4	3.2	4.0	36.3	63.4
Operating revenue (billions of current dollars)	34.1	61.2	NA	NA	NA	NA
Employees	168,360	164,439	23,448	19,304	191,808	183,743

**Key:** NA = not available.

Revenue grew while employment declined in both the national (Class I) railroads and the regional and local railroads between 2000 and 2008.

**TABLE 4-1. ECONOMIC CHARACTERISTICS OF TRANSPORTATION AND WAREHOUSING ESTABLISHMENTS IN FREIGHT-DOMINATED MODES: 2002 AND 2007**

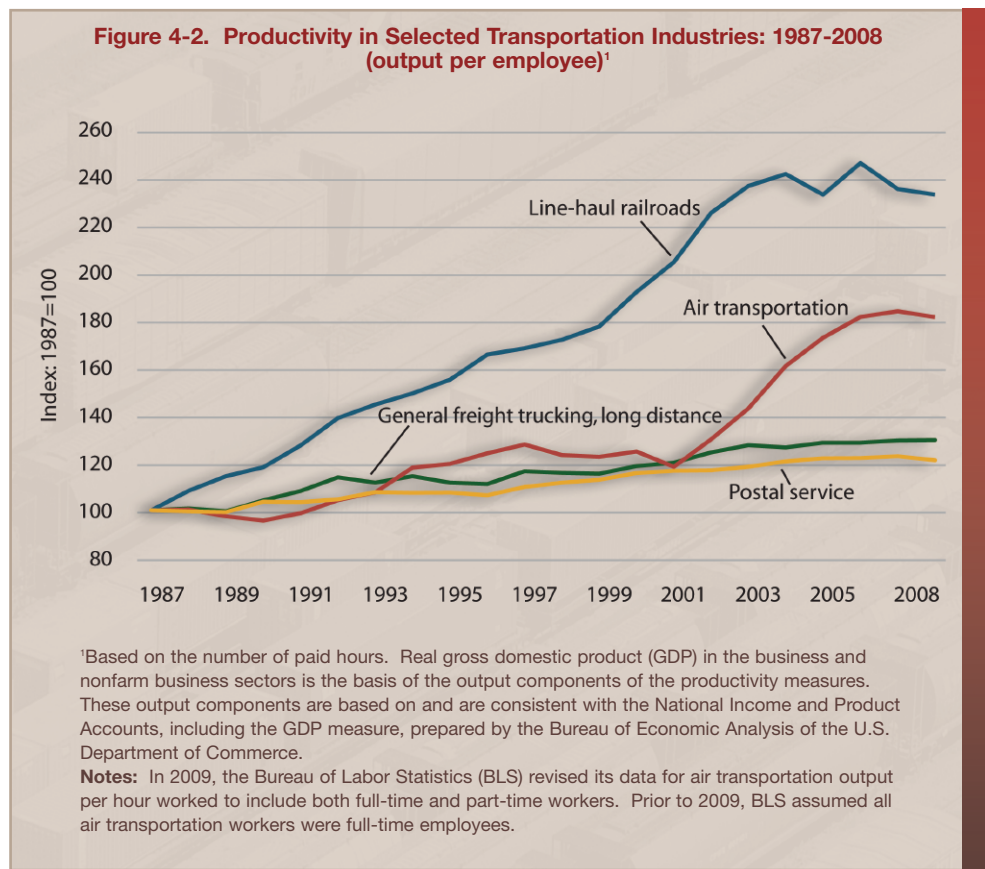
**Sources:** **2002:** U.S. Department of Commerce, Census Bureau, *2007 Economic Census, Transportation and Warehousing, United States* (Washington, DC: 2004), available at [www.census.gov/econ/census02/data/us/US000\\_48.HTM](http://www.census.gov/econ/census02/data/us/US000_48.HTM) as of June 25, 2010; **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](http://www.census.gov/econ/census07) as of August 10, 2010.

**TABLE 4-2. ECONOMIC CHARACTERISTICS OF FREIGHT RAILROADS: 2000 AND 2008**

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



Productivity has improved in all modes, particularly railroads. Between 1987 and 2008, output-per-hour worked more than doubled in line-haul railroading but grew only 30 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.



**FIGURE 4-2. PRODUCTIVITY IN SELECTED TRANSPORTATION INDUSTRIES: 1987-2008**  
**Source:** U.S. Department of Labor, Bureau of Labor Statistics, Industry Productivity, available at [www.bls.gov/lpc/](http://www.bls.gov/lpc/) as of August 9, 2010.



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 58 percent and 30 percent, respectively, between 1980 and 2009.

Consequently, in 2008 rail transportation employed only 5 percent of those working in the transportation and warehousing industry compared with about 18 percent in 1980.

By comparison, employment in trucking in 2009 accounted for 30 percent of total transportation and warehousing sector employment.

**Table 4-3. Employment in For-Hire Transportation Establishments Primarily Serving Freight: 1980-2009<sup>1</sup> (thousands)**

	1980	1990	2000	2008	2009
<b>Total U.S. labor force<sup>2</sup></b>	<b>90,528</b>	<b>109,487</b>	<b>131,785</b>	<b>(R) 136,790</b>	<b>130,920</b>
<b>Transportation and warehousing</b>	<b>2,961</b>	<b>3,476</b>	<b>4,410</b>	<b>(R) 4,508</b>	<b>4,235</b>
Rail transportation	518	272	232	(R) 231	219
Water transportation	NA	57	56	(R) 67	64
Truck transportation	NA	1,122	1,406	(R) 1,389	1,266
Pipeline transportation	NA	60	46	42	42
Support activities for transportation <sup>3</sup>	NA	364	537	(R) 592	549
Couriers and messengers	NA	375	605	(R) 573	547
Warehousing and storage	NA	407	514	(R) 672	642

**Key:** NA = not available; R = revised.

<sup>1</sup>Annual averages.

<sup>2</sup>Excludes farm employment.

<sup>3</sup>Industries in the support activities for transportation subsector provide services that support transportation. These services may be provided 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.

TABLE 4-3. EMPLOYMENT IN FOR-HIRE TRANSPORTATION ESTABLISHMENTS PRIMARILY SERVING FREIGHT: 1980-2009

Source: U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics survey, available at [www.bls.gov/ces](http://www.bls.gov/ces) as of August 10, 2010.

**Table 4-4. Employment in Selected Freight Transportation and Freight Transportation-Related Occupations: 2000-2009**

Occupation (SOC code)	2000	2007	2008	2009
<b>Vehicle operators, pipeline operators, and primary support</b>				
Driver/sales worker (53-3031)	373,660	382,360	372,720	363,050
Truck drivers, heavy and tractor-trailer (53-3032)	1,577,070	1,693,590	1,672,580	1,550,930
Truck drivers, light or delivery services (53-3033)	1,033,220	922,900	908,960	834,780
Locomotive engineers (53-4011)	29,390	41,760	42,760	43,560
Rail yard engineers, dinkey operators, and hostlers (53-4013)	4,020	4,950	5,480	5,360
Railroad brake, signal, and switch operators (53-4021)	16,830	23,120	24,610	24,270
Railroad conductors and yardmasters (53-4031)	40,380	37,540	39,580	41,540
Sailors and marine oilers (53-5011)	30,090	32,520	32,420	31,950
Captains, mates, and pilots of water vessels (53-5021)	21,080	30,540	30,600	30,450
Ship engineers (53-5031)	7,370	13,710	11,190	10,850
Bridge and lock tenders (53-6011)	4,790	4,750	4,490	4,290
Gas compressor and gas pumping station operators (53-7071)	6,510	4,230	4,050	4,160
Pump operators, except wellhead pumpers (53-7072)	13,730	10,400	9,280	10,310
<b>Transportation equipment manufacturing and maintenance occupations</b>				
Bus and truck mechanics and diesel engine specialists (49-3031)	258,800	250,370	248,620	232,810
Rail car repairers (49-3043)	10,620	23,190	20,780	20,910
<b>Transportation Infrastructure construction and maintenance occupations</b>				
Rail-track laying and maintenance equipment operators (47-4061)	9,940	14,050	15,020	14,880
Signal and track switch repairers (49-9097)	5,540	6,090	6,570	6,450
Dredge operators (53-7031)	3,100	1,910	1,910	1,990
<b>Secondary support service occupations</b>				
Dispatchers, except police, fire, and ambulance (43-5032)	167,180	190,190	193,210	185,100
Postal service mail carriers (43-5052)	354,980	348,070	354,570	339,030
Shipping, receiving, and traffic clerks (43-5071)	864,530	755,790	760,950	715,130
Transportation inspectors (53-6051)	26,520	24,130	24,940	24,250
Tank car, truck, and ship loaders (53-7121)	17,480	14,870	12,330	11,560

**Key:** SOC = Standard Occupational Classification.

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 2.75 million truck drivers in 2009; about 57 percent of these professionals drive heavy/tractor trailer trucks, 30 percent drive light/delivery service trucks, and about 13 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 4-4. EMPLOYMENT IN SELECTED FREIGHT TRANSPORTATION AND FREIGHT TRANSPORTATION-RELATED OCCUPATIONS: 2000-2009**

**Source:** U.S. Department of Labor, Bureau of Labor Statistics, *National Occupational Employment and Wages, 2009* (Washington, DC: May 2009), available at [www.bls.gov/oes](http://www.bls.gov/oes) as of August 10, 2010.

**Table 4-5: Producer Price Indices for Selected Transportation Services: 1990-2008**

	1990	2000	2003	2004	2005	2006	2007	2008
<b>Air Transportation (NAICS 481)<sup>1</sup></b>	<b>NA</b>	<b>147.7</b>	<b>162.1</b>	<b>162.3</b>	<b>171.0</b>	<b>180.4</b>	<b>183.7</b>	<b>203.8</b>
Scheduled Air Transportation (NAICS 4811) <sup>2</sup>	110.2	180.1	198.5	198.6	209.3	220.5	224.5	248.9
Scheduled Freight Air Transportation (NAICS 481112)	NA	NA	100.0	100.2	104.9	108.4	109.0	127.8
Nonscheduled Air Transportation (NAICS 4812) <sup>3</sup>	NA	107.3	117.8	119.9	126.7	136.8	148.5	165.8
<b>Rail Transportation (NAICS 482)<sup>3</sup></b>	<b>NA</b>	<b>102.6</b>	<b>108.8</b>	<b>113.4</b>	<b>125.2</b>	<b>135.9</b>	<b>140.9</b>	<b>157.3</b>
Line-Haul Railroads (NAICS 482111) <sup>4</sup>	107.5	114.5	121.4	126.5	139.6	151.2	157.2	175.5
<b>Water Transportation (NAICS 483)</b>	<b>NA</b>	<b>NA</b>	<b>100.0</b>	<b>101.3</b>	<b>106.4</b>	<b>111.1</b>	<b>113.5</b>	<b>127.0</b>
Deep Sea Freight Transportation (NAICS 483111) <sup>5</sup>	113.1	155.8	219.9	225.9	231.9	233.3	230.0	258.3
Coastal and Great Lakes Freight Transportation (NAICS 483113)	NA	NA	100.0	101.7	109.9	119.9	130.2	141.8
Inland Water Freight Transportation (NAICS 483211)	100.0	117.9	124.7	131.0	151.4	182.9	186.1	218.3
<b>Truck Transportation (NAICS 484)</b>	<b>NA</b>	<b>NA</b>	<b>100.0</b>	<b>103.1</b>	<b>109.0</b>	<b>113.2</b>	<b>115.4</b>	<b>123.0</b>
General Freight Trucking (NAICS 4841)	NA	NA	100.0	103.5	110.0	114.1	116.5	123.6
General Freight Trucking, Local (NAICS 48411)	NA	NA	100.0	105.2	111.5	115.3	119.6	130.2
General Freight Trucking, Long Distance (NAICS 48412)	NA	NA	100.0	103.2	109.7	113.8	115.9	122.2
Specialized Freight Trucking (NAICS 4842)	NA	NA	100.0	102.3	107.0	111.4	113.1	122.1
Used Household and Office Goods Moving (NAICS 48421)	NA	NA	100.0	102.6	106.0	107.8	108.8	112.2
Specialized Freight (except Used Goods) Trucking, Local (NAICS 48422)	NA	NA	100.0	102.7	107.1	112.3	114.2	126.7
Specialized Freight (except Used Goods) Trucking, Long Distance (NAICS 48423)	NA	NA	100.0	101.7	107.5	112.8	114.8	123.6
<b>Pipeline Transportation (NAICS 486)</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
Pipeline Transportation of Crude Oil (NAICS 4861)	NA	NA	100.0	103.9	113.3	112.0	125.4	137.1
Other Pipeline Transportation (NAICS 4869) <sup>6</sup>	NA	NA	100.0	101.4	105.2	108.2	115.0	121.6
<b>Support Activities for Transportation (NAICS 488)</b>	<b>NA</b>	<b>NA</b>	<b>100.0</b>	<b>101.1</b>	<b>104.1</b>	<b>106.5</b>	<b>108.5</b>	<b>111.7</b>
Support Activities for Water Transportation (NAICS 4883) <sup>7</sup>	NA	NA	100.0	101.0	103.5	107.7	112.7	117.3
Navigational Services to Shipping (NAICS 48833)	NA	NA	100.0	101.5	105.7	113.9	120.6	133.8
Freight Transportation Arrangement (NAICS 4885) <sup>3</sup>	NA	98.3	97.9	98.9	99.1	98.8	100.2	102.5
<b>Postal Service (NAICS 491)</b>	<b>100.0</b>	<b>135.2</b>	<b>155.0</b>	<b>155.0</b>	<b>155.0</b>	<b>164.7</b>	<b>171.9</b>	<b>178.9</b>
<b>Couriers and Messengers (NAICS 492)</b>	<b>NA</b>	<b>NA</b>	<b>100.0</b>	<b>106.1</b>	<b>113.8</b>	<b>121.5</b>	<b>131.5</b>	<b>142.0</b>

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

<sup>1</sup>Base year = 1992.

<sup>2</sup>Base year = 1989.

<sup>3</sup>Base year = 1996.

<sup>4</sup>Base year = 1984.

<sup>5</sup>Base year = 1988.

<sup>6</sup>Other pipeline transportation includes pipeline transportation of refined petroleum products (NAICS 48691).

<sup>7</sup>Support activities for water transportation includes 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.

The prices charged for transportation purchased from carriers and support activities has gone up in most industries. Rail prices increased by about 12 percent from 2007 to 2008, while air and trucking increased by 11 percent and 7 percent respectively.

**TABLE 4-5: PRODUCER PRICE INDICES FOR SELECTED TRANSPORTATION SERVICES: 1990-2008**

**Source:** U.S. Department of Labor, Bureau of Labor Statistics, Producer Price Index Industry Data, available at [www.bls.gov/data/sa.htm](http://www.bls.gov/data/sa.htm) as of August 9, 2010.