

# Transportation Indicators

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## **Indicators**

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# Introduction

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This report is intended to provide timely, easily accessible information for the transportation community. It was developed by the Bureau of Transportation Statistics (BTS) of the U.S. Department of Transportation (DOT), and is updated each month on the BTS website ([www.bts.gov](http://www.bts.gov)).

Each indicator is placed under a heading corresponding to one of the five strategic goals of DOT — safety, mobility, economic growth, environment, and national security. Some indicators are related to more than one strategic goal.

The indicators fall under two broad categories: those that provide context about the economy and society in which transportation functions, and those that convey information about an aspect of transportation. To the extent possible, these latter indicators are transportation-wide in scope; however, some apply to only part of the transportation system. Reference tables at the beginning of the document provide key statistics about U.S. social and economic characteristics, and about the extent of the transportation system.

For indicators that are highly seasonal, the current value of that indicator is compared to the value for the same time period in the previous year (e.g., April 2001 compared to April 2000). Otherwise, the tables show a comparison of the current value to a comparable preceding period of time (e.g., the data for the month of April 2001 compared to those of March 2001).

BTS would like feedback about this report. Please send comments to:

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# Highlights – May 2002

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☞ Preliminary estimates for 2001 suggest a 4 percent decline from 2000 in the number of people injured in motor vehicle crashes, from 3,190,000 in 2000 to 3,055,000 in 2001. 41,730 died in motor vehicle crashes in 2001, a decline of 0.2 percent from 2000.	3,11
☞ In February 2002, domestic revenue passenger miles for U.S. air carriers were 9 percent lower than in February 2001. Revenue ton-miles were also down 9 percent. The decline in revenue passenger miles and available ton-miles was less than the 12 percent and 14 percent (respectively) decline in January 2002 compared to a year earlier.	19,20
☞ There were 11 percent fewer revenue enplanements on domestic airlines in February 2002 than a year earlier— 42.4 million compared to 47.6 million. This was an improvement over the 13 percent decline in enplanements in January 2002 compared to a year earlier.	23
☞ Rail intermodal traffic in the week 19, ending May 11, 2002 was 11 percent higher in the United States and 12 percent higher in Canada than in the comparable week last year.	29
☞ April 2002 consumer prices for gasoline were 10 percent above March 2002 prices, the third highest increase in the last 12 years. The April 2002 figure was still 9 percent lower than the record level in April 2001.	46
☞ Consumer prices for new cars and trucks have decreased 3 percent since 1997, while consumer prices for all other components of private transportation have increased.	46
☞ Since 1993, producer prices for air transportation have risen 55 percent, while producer prices for rail transportation have increased only 7 percent.	48
☞ April 2002 producer prices for highway and street construction were 4 percent below April 2001, the second largest decline in the 10 years of data tracked by this report.	54
☞ Since 1992, average real hourly earnings of Class I Railroad workers have fallen by over 20 percent, while train-miles/employee-hour rose by 50 percent.	65,70
☞ Comparing the fourth quarter of 2001 with that of 2000, large air carrier operating revenues were down 26 percent while expenses declined only 12 percent. More specifically, passenger revenues were down 30 percent and freight revenues down 8 percent.	72



# Highlights – May 2002

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✎ Business investment in transportation equipment was 7 percent lower in the first quarter of 2002 than the first quarter of 2001.	81
✎ Retail gasoline cost was 37 cents per gallon more in Los Angeles than in Atlanta in April 2002.	89
✎ U.S. travel exports increased 21 percent in the first quarter of 2002 over the last quarter of 2001, while U.S. travel imports grew 20 percent. These first quarter figures were 11 and 17 percent lower, respectively, than the first quarter of 2001.	97,98
✎ Transportation energy consumption was 4 percent lower in January 2002 than the same month the previous year.	103
✎ The U.S. imported 12 percent less petroleum, on a net basis, in March 2002 than in March 2001.	109
<b>New Indicators:</b>	
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✎ Special Section– A Time Series Analysis of U.S. Inland Waterways Trade	116
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The validity of these statements has not been statistically tested. BTS is testing a statistical monitoring process in order to apply statistical quality control techniques to the indicators data.



## Summary of Social and Economic Characteristics of the United States: 1980-2000

	1980	1985	1990	1995	1996	1997	1998	1999	2000
<b>Total U.S. resident population (thousands)<sup>a</sup></b>	<b>227,225</b>	<b>237,924</b>	<b>248,791</b>	<b>262,803</b>	<b>265,229</b>	<b>267,784</b>	<b>270,248</b>	<b>272,691</b>	<b>276,059</b>
<b>Age (thousands)<sup>a</sup></b>									
Under 18	63,754	62,623	63,949	68,555	69,109	69,603	69,903	70,199	70,484
18-24 years	30,022	28,902	26,961	25,112	24,843	24,980	25,476	26,011	26,748
25-34	37,082	41,696	43,174	40,730	40,246	39,559	38,743	37,936	37,189
35-44	25,634	31,691	37,444	42,555	43,365	44,014	44,498	44,813	44,813
45-54	22,800	22,460	25,062	31,100	32,358	33,625	34,575	35,804	37,685
55-64	21,703	22,135	21,116	21,132	21,353	21,813	22,666	23,389	24,209
65 and over	25,550	28,415	31,083	33,619	33,957	34,185	34,385	34,540	39,301
<b>Sex (thousands)<sup>b</sup></b>									
Male	110,053	116,160	121,284	128,294	129,504	130,783	132,030	133,277	134,979
Female	116,493	122,576	127,507	134,510	135,724	137,001	138,212	139,414	141,080
<b>Metropolitan areas (population in millions)</b>									
Large (over 1 million)	119	U	139	147	149	151	153	156	U
Medium (250,000-999,999)	41	U	41	44	44	43	43	43	U
Small (less than 250,000)	17	U	18	19	19	20	20	20	U
<b>Rural v. urban areas (population in thousands)</b>									
Rural	59,495	U	61,656	U	U	U	U	U	U
Urban	167,051	U	187,053	U	U	U	U	U	U
<b>Regions (population in millions)<sup>c</sup></b>									
Northeast	49.1	49.9	50.8	51.4	51.6	51.6	51.7	51.8	U
South	75.4	81.4	85.5	91.8	93.1	94.2	95.3	96.5	U
Midwest	58.9	58.8	59.7	61.8	62.1	62.5	63.0	63.2	U
West	43.2	47.8	52.8	57.7	58.5	59.4	60.3	61.2	U
<b>Immigrants admitted</b>	530,639	570,009	1,536,483	720,461	915,900	798,378	660,447	U	U
<b>Total area (square miles)</b>	3,618,770	U	3,717,796	U	U	U	U	U	U

-Table continued on next page-



## Summary of Social and Economic Characteristics of the United States: 1980-2000 (continued)

	1980	1985	1990	1995	1996	1997	1998	1999	2000
<b>Gross Domestic Product (GDP)</b> (chained \$ 1996 billions) <sup>d</sup>	4,901	5,717	6,708	7,544	7,813	8,160	8,516	8,876	9,319
<b>Total civilian labor force (thousands)</b> <sup>e</sup>	106,940	115,461	125,840	132,304	133,943	136,297	137,673	139,368	141,489
Participation rate of men	77.4%	76.3%	76.4%	75.0%	74.9%	75.0%	74.9%	74.7%	74.6%
Participation rate of women	51.5%	54.5%	57.5%	58.9%	59.3%	59.8%	59.8%	60.0%	60.2%
<b>Unemployment rate</b>	7.1%	7.2%	5.6%	5.6%	5.4%	4.9%	4.5%	4.2%	4.0%
Men	6.9%	7.0%	5.7%	5.6%	5.4%	4.9%	4.4%	4.1%	4.0%
Women	7.4%	7.4%	5.5%	5.6%	5.4%	5.0%	4.6%	4.3%	4.0%
<b>Number of households (thousands)</b>	80,776	86,789	93,347	98,990	99,627	101,018	102,528	U	U
<b>Average size of households</b>	2.76	2.69	2.63	2.65	2.65	2.64	2.62	U	U
<b>Median household income</b> (chained \$ 1996)	33,722	34,439	35,945	35,082	35,492	36,175	37,430	U	U
<b>Families below poverty level (thousands)</b>	6,217	7,223	7,098	7,532	7,708	7,324	7,186	U	U
<b>Average household expenditures</b> (chained \$ 1996)	U	34,253	34,070	33,217	33,797	34,038	34,205	U	U

KEY: U = Unavailable

<sup>a</sup> Estimates as of July 1 except 1980 and 1990, which are as of April 1, and 2000, which is as of November 1.

<sup>b</sup> 1995 through 2000 data are estimates.

<sup>c</sup> As of July 1 for all years except 1980 and 1990.

<sup>d</sup> For definition of chained dollars, see page 49.

<sup>e</sup> For 2000, as of December.

**SOURCES: 1980-1998 data:** Multiple sources as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics 1999, Table A, p. xix.

**2000 Data: Population:** U.S. Department of Commerce, Bureau of the Census, available at: <http://www.census.gov>.

**Immigration:** U.S. Department of Justice, Immigration and Naturalization Services, *Annual Report: Legal Immigration* FY 1998, available at:

<http://www.ins.usdoj.gov/graphics/aboutins/statistics/index.htm>.

**GDP, Average household expenditure, Median household income:**

U.S. Department of Commerce, Bureau of Economic Analysis.

**Employment (1980-2000):** U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/cps/home.htm>.

**Average Size of Households, Families below poverty level:** U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1999.



## Transportation System Extent

Mode	Components (2000 data unless otherwise noted)
<b>Highway</b>	<p><b>Public Roads</b>            46,675 miles of Interstate highway; 114,505 miles of other National Highway System roads            3,951,098 miles of other roads</p>
<b>Air</b>	<p><b>Public-use airports</b>            5,317 airports</p> <p><b>Airports serving large certificated carriers</b>            29 large hubs<sup>a</sup> (72 airports), 479 million enplaned passengers            31 medium hubs (53 airports), 102 million enplaned passengers            54 small hubs (69 airports), 40 million enplaned passengers            585 nonhubs (610 airports), 18 million enplaned passengers</p>
<b>Rail</b>	<p><b>Miles of road operated</b>            120,986 miles by Class 1 freight railroads<sup>b</sup>            21,250 miles by regional freight railroads            28,422 miles by local freight railroads            22,741 miles by Amtrak (passenger), of which 750 miles are Amtrak owned</p>
<b>Urban transit</b>	<p><b>Directional route-miles serviced (1998)</b>            Bus: 157,823; Trolley bus: 424; Commuter rail: 5,172 Heavy rail: 1,527; Light rail: 676</p> <p><b>Stations</b>            Commuter rail: 972; Heavy rail: 987; Light rail: 555</p>
<b>Water</b>	<p>26,000 miles of navigable waterways            276 locks; Ferry routes: 48</p> <p><b>Commercial Facilities</b>            Great Lakes: 611 deep; 143 shallow            Inland: 2,367 shallow            Coastal: 4,079 deep; 2,109 shallow</p>
<b>Pipeline (1999)</b>	<p><b>Oil</b>            Crude lines: 88,000 miles of pipe; Product lines: 91,000 miles of pipe</p> <p><b>Gas</b>            Transmission: 254,000 miles of pipe; Distribution: 981,000 miles of pipe</p>

<sup>a</sup>As used here, a hub is defined as a geographic area based on the percentage of total enplaned passengers in that area. For example, a large hub is a geographical area serving 1 percent or more of all enplaned revenue passengers in U.S. certificated route carriers operating in U.S. areas. This definition should not be confused with airline usage of the term hub to describe "hub and spoke" route structures, or other definitions of hubs used by the Federal Aviation Administration focusing on traffic at individual airports.

<sup>b</sup> Includes 574 miles of road operated by U.S. Class 1 freight railroads in Canada.

**SOURCES:** U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2000* (Washington DC: 2001); USDOT, Federal Aviation Administration, *Administrator's Fact Book 2000* (Washington, DC: 2001); USDOT, Bureau of Transportation Statistics, *National Transportation Statistics 2000* (Washington DC: 2001), various tables; National Ferry Database, as of 10/10/00; and U.S. Army Corps of Engineers, Navigation Data Center, *The U.S. Waterway System - Transportation Facts*, December 2000.



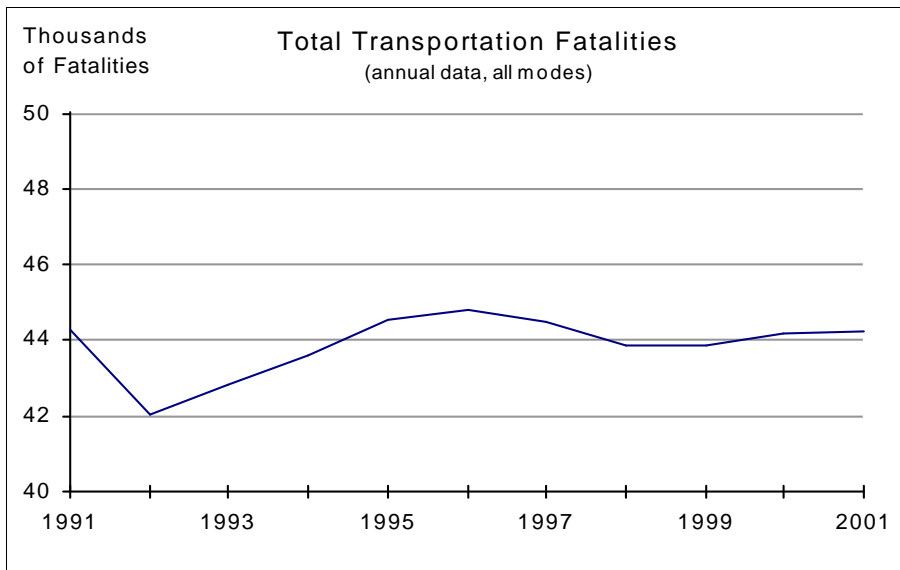
# Safety

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TRANSPORTATION FATALITIES: ALL MODES



Transportation Fatalities	2000	2001*
Total	44,164	44,208
Percent change from previous year	0.68	0.10

\* Preliminary estimates

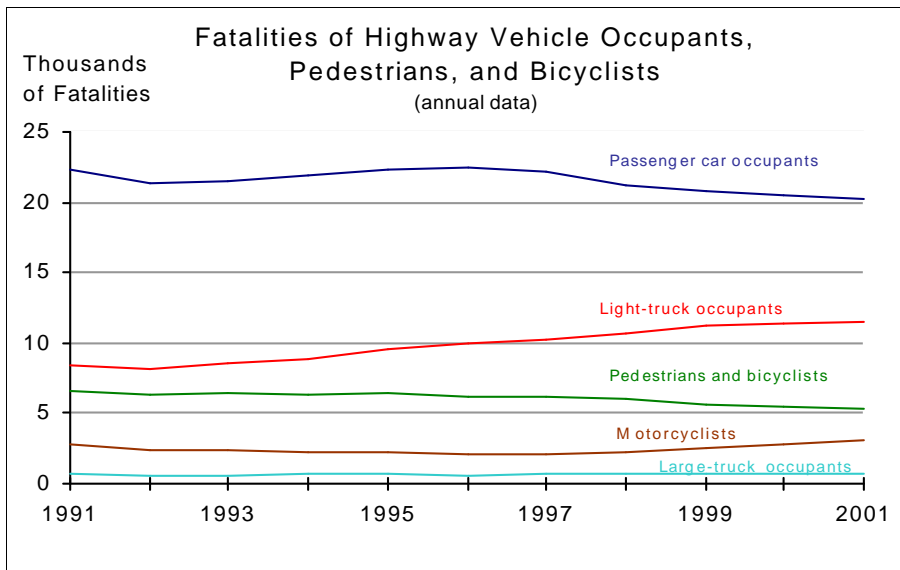
SOURCES: Data compiled from various government agencies as cited in the U.S. Department of Transportation (USDOT), Bureau of Transportation Statistics (BTS), *National Transportation Statistics 2000*. 2001 number from *U.S. DOT 2003 Performance Plan, 2001 Performance Report*, available at: <http://www.dot.gov/performance/>

Fatalities represent the most severe safety consequence for the transportation system. The overall number of transportation fatalities grew from 1992 to 1996, then trended downward in 1997 and 1998. Preliminary estimates for transportation-related fatalities in 2001 were 44,208, compared to 47,348 in 1990.

See U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, pp. 429-435, for detailed discussion of modal fatality data.



MOTOR VEHICLE-RELATED HIGHWAY FATALITIES



Highway crashes caused 94 percent of all transportation-related fatalities in 2001, and were the leading cause of death of people ages 4 through 23 (DOT Performance Plan FY 2003 and Performance Report FY 2001).

NOTES: Large trucks — trucks over 10,000 pounds gross vehicle weight rating, including single unit trucks and truck tractors.

Light trucks — trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles. The number of light trucks has increased greatly since 1990, affecting light truck occupant fatality numbers.

See U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, pp. 429-435, for detailed discussion of modal fatality data.

Fatalities by Type	2000	2001*
Highway total	41,821	41,730
<i>Percent change from previous year</i>	0.25	-0.22
Passenger car occupants	20,492	20,269
<i>Percent change from previous year</i>	-1.77	-1.09
Light-truck occupants	11,418	11,564
<i>Percent change from previous year</i>	1.56	1.28
Pedestrians	4,739	4,698
<i>Percent change from previous year</i>	-4.05	-0.87
Motorcyclists	2,862	3,067
<i>Percent change from previous year</i>	15.26	7.16
Large-truck occupants	741	696
<i>Percent change from previous year</i>	-2.37	-6.07
Bicyclists	690	701
<i>Percent change from previous year</i>	-8.49	1.59
Other highway**	879	735
<i>Percent change from previous year</i>	47.48	-16.38

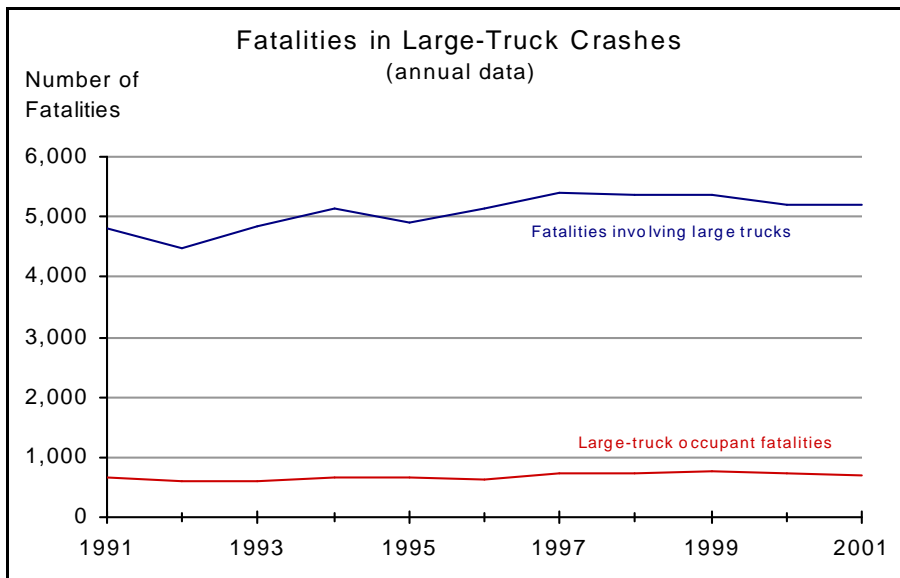
\*Preliminary estimates.

\*\* Other highway includes buses, construction equipment, farm equipment, etc. and other unknown vehicle types.

SOURCES: U.S. Department of Transportation, National Highway Traffic Safety Administration, 2000 Traffic Safety Facts, available at: <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/nhsa/tsf2000/2000ovrfacts.pdf>. 2001 numbers from NHTSA, 2001 Early Assessment, available at: <http://www.nrd-nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2002/2001EARRelease.pdf>



FATALITIES IN LARGE-TRUCK CRASHES



Large-Truck Crashes	2000	2001*
Fatalities involving large trucks	5,211	5,192
<i>Percent change from previous year</i>	-2.82	-0.36
Large-truck occupant fatalities	741	696
<i>Percent change from previous year</i>	-2.37	-6.07

\* Preliminary estimate

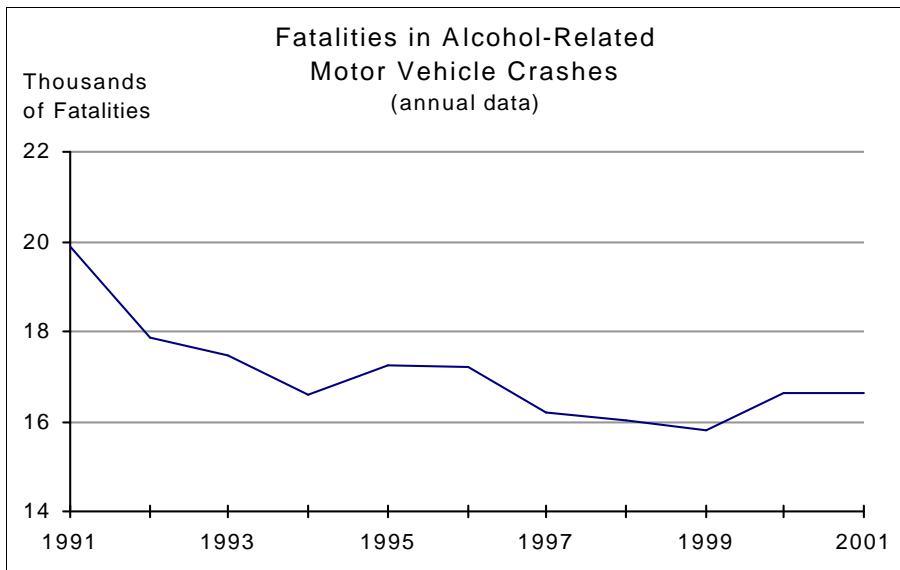
NOTE: Large trucks are over 10,000 pounds gross vehicle weight rating.

SOURCES: U.S. Department of Transportation, Federal Motor Carrier Safety Administration, Analysis Division, *Large Truck Crash Profile: The 1999 National Picture*, available at <http://www.fmcsa.dot.gov/factsfigs/mchsstats.htm>, and U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *2000 Traffic Safety Facts*. Available at: <http://www.nhtsa.dot.gov/people/nca/factsheet.html>. 2001 numbers from NHTSA, 2001 Early Assessment, available at: <http://www.nrd-nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2002/2001EARRelease.pdf>

Trucks represent 4 percent of registered highway vehicles, about 7 percent of vehicle miles of travel, and 12 percent of all people killed in motor vehicle incidents are involved in a crash with a large truck. Occupants of other vehicles or people outside the truck account for 87 percent of total fatalities involving large trucks for 2001.



ALCOHOL-RELATED HIGHWAY FATALITIES



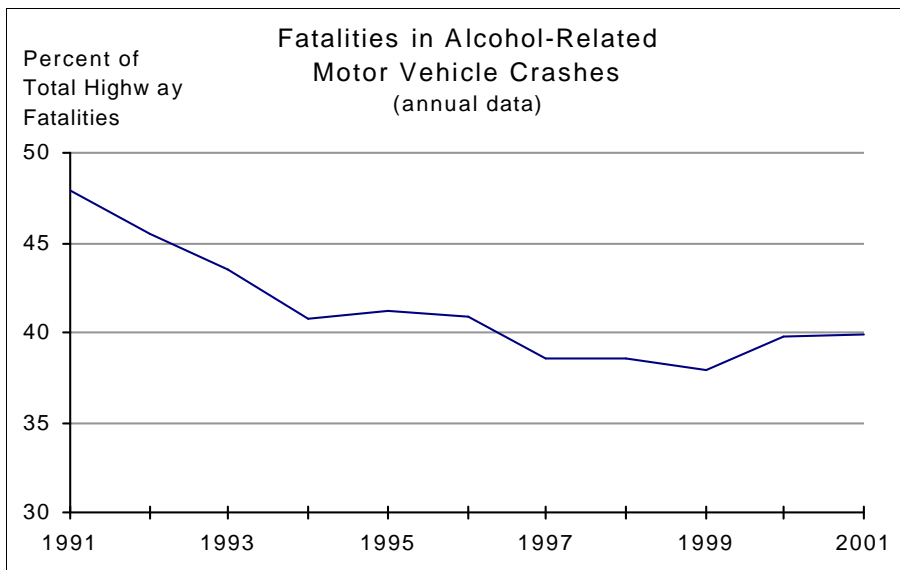
Alcohol-Related Highway Fatalities	2000	2001*
Total	16,653	16,652
Percent change from previous year	5.49	-0.01

\* Preliminary estimate

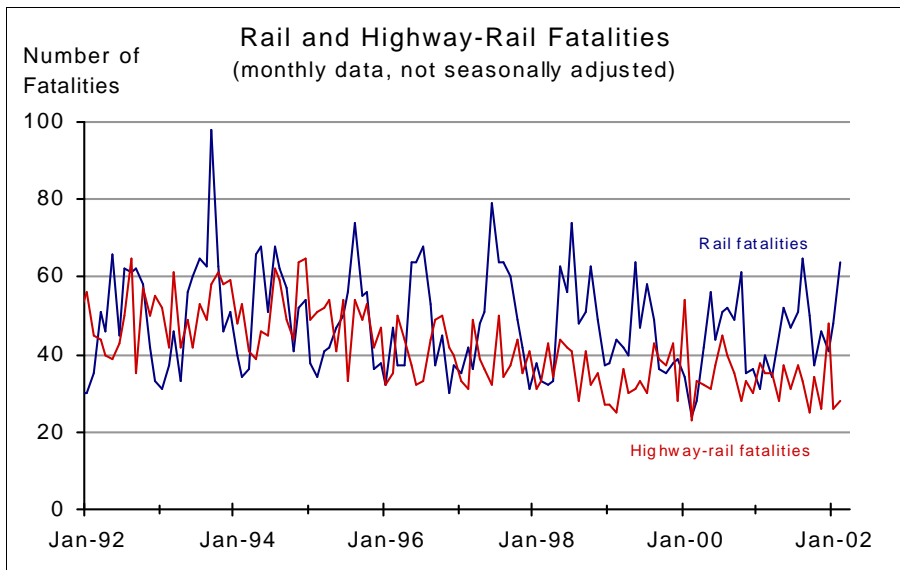
SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *Traffic Safety Facts 1998*, DOT HS 808 983 (Washington, DC: October 1999), table 13, and personal communication, Sept. 11, 2000. 2000 data: National Highway Traffic Safety Administration, National Center for Statistics and Analysis, *2000 Traffic Safety Facts*. Available at: <http://www.nhtsa.dot.gov/people/ncsa/factsheet.html>. 2001 numbers from NHTSA, 2001 Early Assessment, available at: <http://www.nrd-nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2002/2001EARRelease.pdf>

Alcohol is the single largest cause of fatal crashes. Alcohol-related fatalities accounted for nearly 40 percent of all highway fatalities in 2001.

Fatalities include those arising from motor vehicle related crashes in which the driver and/or a fatally injured pedestrian or other nonmotorist had a measured or estimated blood alcohol content of 0.01 grams per deciliter or greater.



**RAILROAD AND HIGHWAY-RAIL CROSSING FATALITIES**



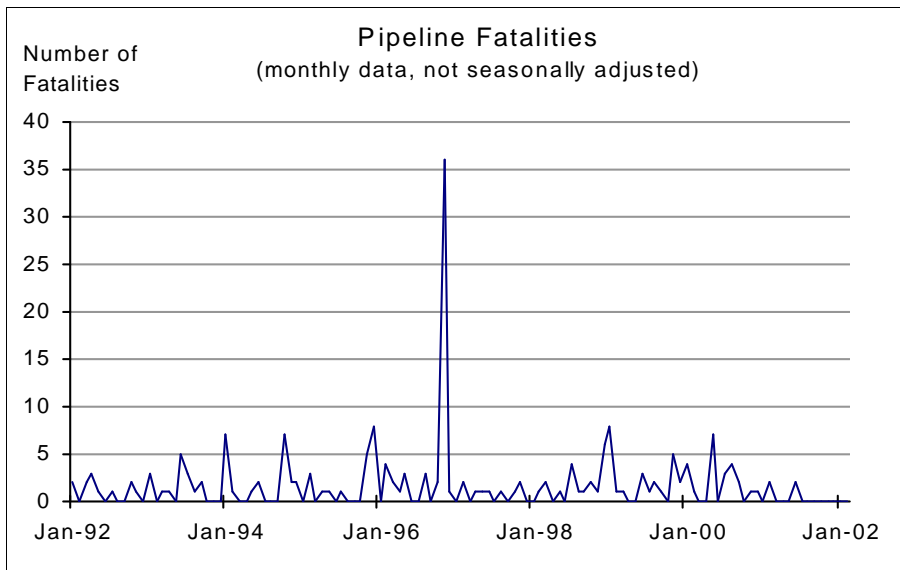
Railroad	Feb-01	Feb-02
Rail Fatalities	40	64
<i>Percent change from same month previous year</i>	66.67	60.00
Highway-Rail Fatalities	35	28
<i>Percent change from same month previous year</i>	52.17	-20.00

SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety, available at: <http://safetydata.fra.dot.gov/officeofsafety>

In most years, the overwhelming majority of people killed in train accidents are outside the train. Many are occupants of highway vehicles, pedestrians, or bystanders at highway-rail grade crossings. Railroad workers and others on railroad property (including trespassers) account for most other rail-related fatalities.



**HAZARDOUS LIQUID AND NATURAL GAS PIPELINE FATALITIES**



Note: Spike in graph represents leak and explosion of gas in a residential and shopping district in San Juan, Puerto Rico, 11/21/96.

Pipeline failures are low-probability events that can result in fatalities, injuries, and property damage. Over time, gas pipeline fatalities tend to outnumber those involving hazardous liquid (e.g., petroleum) pipelines. Outside force damage (e.g., damage to a pipeline during excavation for construction) is the leading cause of pipeline failures, followed by corrosion (DOT Performance Plan FY 2001).

Pipeline Fatalities	Feb-01	Feb-02
Total	2	0
Percent change from same month previous	100.00	0

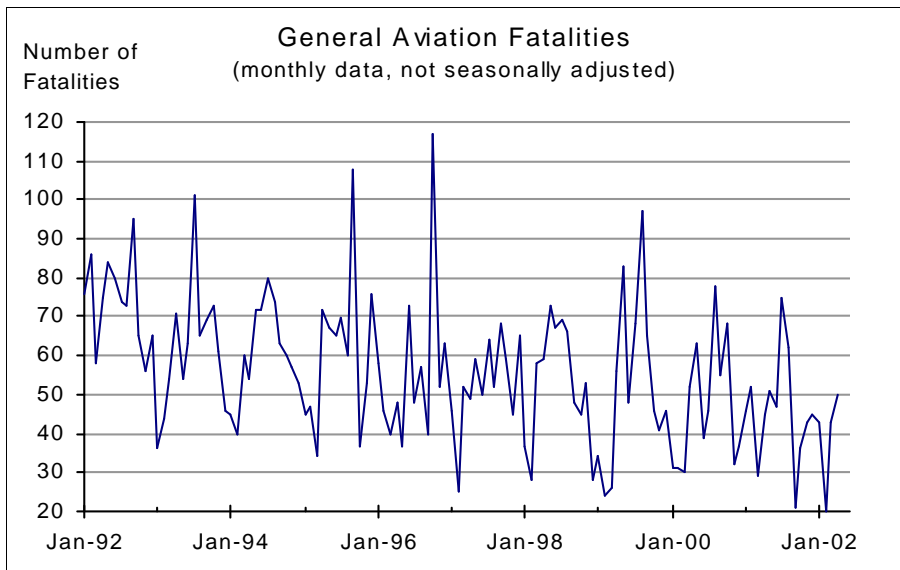
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

All 2001 data are preliminary, and subject to change as incidents are reported.

SOURCE: U.S. Department of Transportation, Office of Pipeline Safety, Research and Special Programs Administration, Online Library Accident and Incident Data as of May 15, 2002, available at <http://ops.dot.gov/IA98.htm>



GENERAL AVIATION FATALITIES



General aviation fatalities comprise the majority of aviation fatalities in most years.

General Aviation	Apr-01	Apr-02
Fatalities	45	50
<i>Percent change from same month previous year</i>	<i>-13.46</i>	<i>11.11</i>

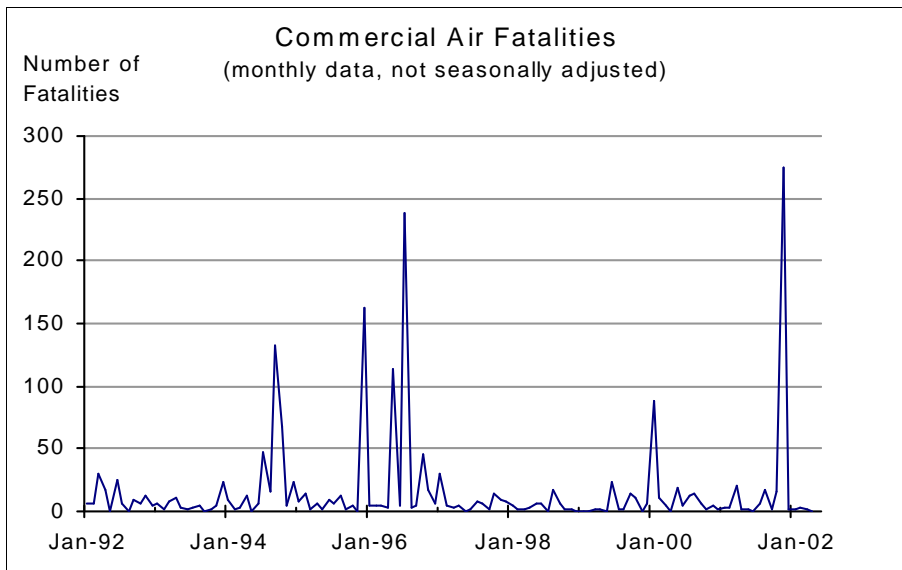
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

General Aviation – Movements of aircraft and helicopters belonging to individuals, companies not primarily in the aviation business, and flying clubs. Services provided by general aviation aircraft include firefighting, law enforcement, news coverage, and corporate in-house transportation.

SOURCE: National Transportation Safety Board, Office of Aviation Safety, available at: [http://www.nts.gov/aviation/curr\\_mo.txt](http://www.nts.gov/aviation/curr_mo.txt)



COMMERCIAL AVIATION FATALITIES



Commercial air fatalities include those arising from accidents of planes providing passenger and/or cargo services to the public, including large air carriers, commuter air, and air taxi. Commercial air includes scheduled and nonscheduled service by air carriers operating under 14 Code of Federal Regulations (CFR) 121 and 14 CFR 135.

Commercial Air	Apr-01	Apr-02
Fatalities	1	0
<i>Percent change from same month previous year</i>	<i>0</i>	<i>0</i>

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Fatalities from the four hijacked airplanes deliberately crashed in terrorist acts on September 11, 2001 are not included by the source in the September 2001 data. The number of people who perished on the four planes was 266. The total number of people on the ground who perished or are missing and presumed dead has not been conclusively determined.

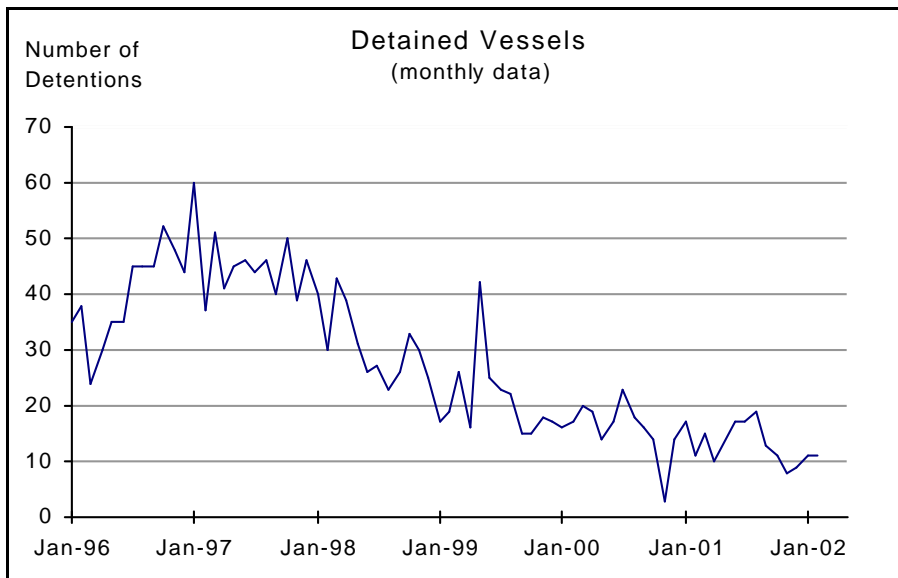
The November 2001 fatalities are due to the November 12 crash of an American Airline plane in Belle Harbor, New York, and resulted in 275 fatalities (including 5 people on ground).

SOURCE: National Transportation Safety Board, Office of Aviation Safety, available at: [http://www.ntsb.gov/aviation/curr\\_mo.txt](http://www.ntsb.gov/aviation/curr_mo.txt)





VESSEL DETENTIONS



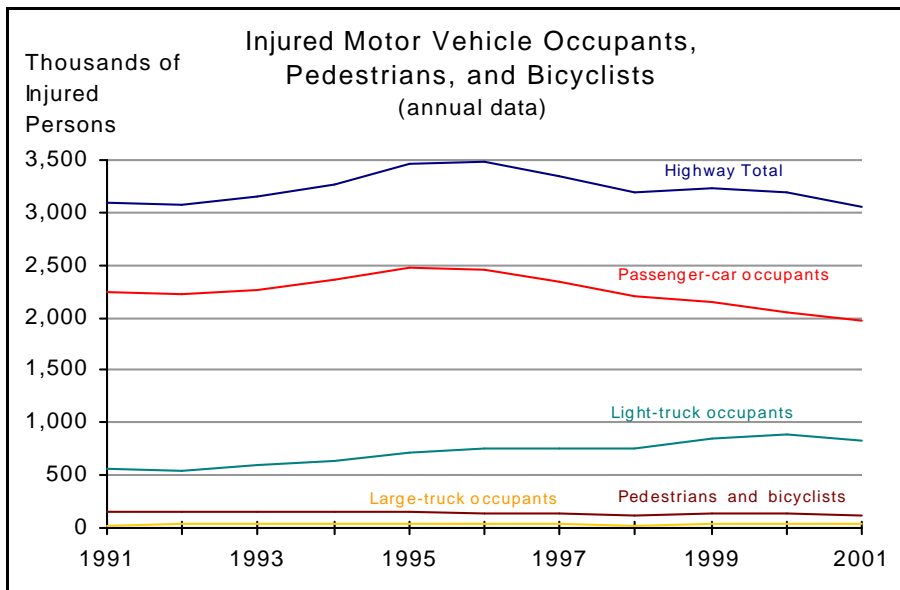
Vessel Detentions	Feb-01	Feb-02
Total	11	11
Percent change from same month previous year	-35.29	0.00

SOURCE: U.S. Department of Transportation, U.S. Coast Guard, available at: [http://www.uscg.mil/hq/g-m/pscweb/list\\_of\\_detained\\_vessels.htm](http://www.uscg.mil/hq/g-m/pscweb/list_of_detained_vessels.htm)

The U.S. Coast Guards identifies vessels not in compliance with International Conventions through examinations and boardings. If a vessel is not compliant in any way, appropriate action is taken to eliminate any threat that vessels may pose to the United States.



**INJURED MOTOR VEHICLE OCCUPANTS, PEDESTRIANS, AND BICYCLISTS**



The vast majority of transportation injuries involve motor vehicles. The number of light trucks has increased greatly since 1990, affecting light-truck occupant injury numbers.

Injured Persons by Mode	2000	2001*
Highway total	3,190,000	3,055,000
<i>Percent change from previous year</i>	-0.53	-4.23
Passenger car occupants	2,052,000	1,965,000
<i>Percent change from previous year</i>	-3.27	-4.24
Light-truck occupants	887,000	840,000
<i>Percent change from previous year</i>	5.43	-5.30
Pedestrians and bicyclists	129,000	123,000
<i>Percent change from previous year</i>	-5.15	-4.65
Motorcyclists	58,000	59,000
<i>Percent change from previous year</i>	16.00	1.72
Large-truck occupants	31,000	32,000
<i>Percent change from previous year</i>	-9.09	3.23
Bus occupants**	22,000	18,000
<i>Percent change from previous year</i>	37.50	-18.18

\*Preliminary estimates  
 \*\* 2000 and 1999 numbers

NOTES: National estimates of highway injuries are sampled and subject to sampling errors. Highway table includes categories not displayed in graph.

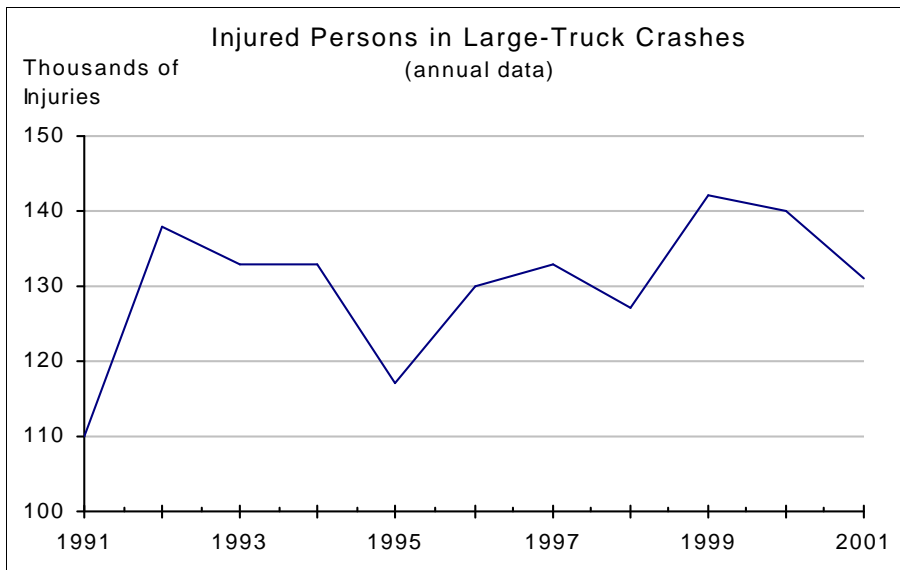
Light trucks — trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles.

See U.S. Department of Transportation, Bureau of Transportation Statistics, pp. 429-435, *National Transportation Statistics 2000* for detailed discussion of modal injury data.

SOURCE: Data compiled from various government agencies, as cited in U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 2000*, table 2-2, available at: [http://www.bts.gov/btsprod/nts/Ch2\\_web/2-2.htm](http://www.bts.gov/btsprod/nts/Ch2_web/2-2.htm), and U.S. Department of Transportation, National Highway Traffic Safety Administration, *2000 Traffic Safety Facts*, available at <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/ncsa/tsf2000/2000ovrfacts.pdf>. 2001 numbers from NHTSA, 2001 Early Assessment, available at: <http://www.nrd-nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2002/2001EARelease.pdf>



INJURED PERSONS IN LARGE-TRUCK CRASHES



Large-Truck Crashes	2000	2001*
Injured persons involving large trucks	140,000	131,000
Percent change from previous year	-1.41	-6.43

\* Preliminary estimate

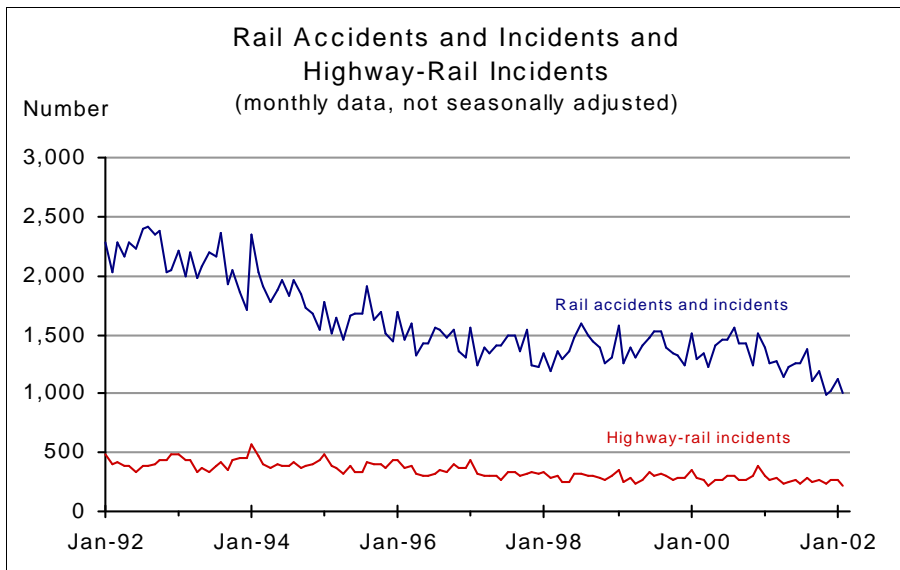
NOTE: Large trucks are trucks over 10,000 pounds gross vehicle weight rating.

SOURCES: U.S. Department of Transportation, Federal Motor Carrier Safety Administration, Analysis Division, *Large Truck Crash Profile: The 1999 National Picture*, available at <http://www.fmcsa.dot.gov/factsfigs/mchsstats.htm>, and U.S. Department of Transportation, National Highway Traffic Safety Administration, *2000 Traffic Safety Facts*, available at <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/nca/tsf2000/2000ovrfacts.pdf>. 2001 numbers from NHTSA, 2001 Early Assessment, available at: <http://www.nrd-nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2002/2001EARelease.pdf>

For 2001, preliminary estimates indicate that 76 percent of the total injuries involving large-truck crashes were occupants of other vehicles or outside the large truck.



**RAIL ACCIDENTS AND INCIDENTS**



Railroad	Feb-01	Feb-02
Rail accidents and incidents	1,263	1,001
<i>Percent change from same month previous year</i>	-2.17	-20.74
Highway-Rail Incidents	265	224
<i>Percent change from same month previous year</i>	-6.03	-15.47

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

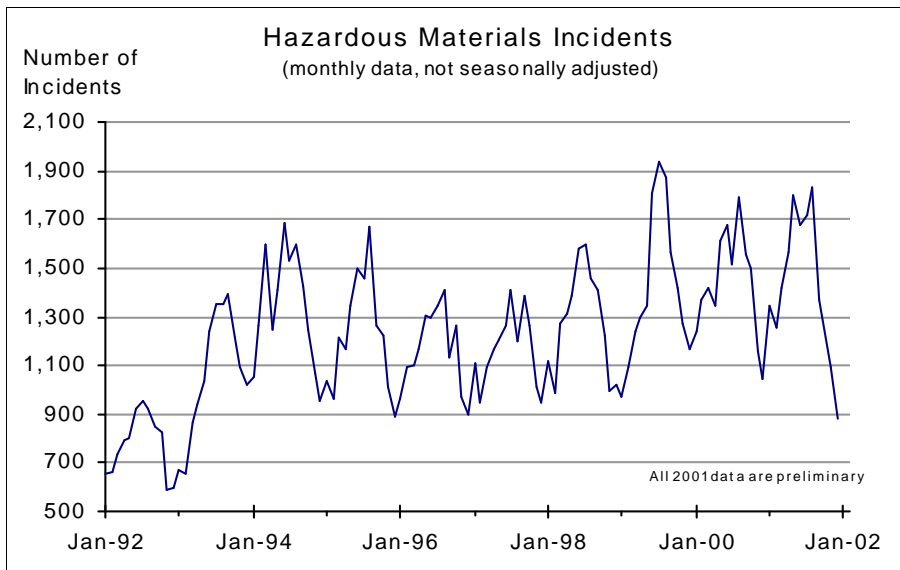
Accidents and incidents differ by the extent, in dollars, of the property damage resulting from the event.

SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety, available at: <http://safetydata.fra.dot.gov/officeofsafety>

Rail accidents and incidents include any collision between railroad on-track equipment and other vehicles or pedestrians at grade crossings; any event involving operation of railroad on-track equipment that results in damages to railroad property; and any event arising from railroad operations that results in death or injury, or, in the case of railroad employees, an occupational illness.



**HAZARDOUS MATERIALS INCIDENTS**



Hazmat Incidents	Dec-00	Dec-01*
Total	1,043	882
<i>Percent change from same month previous year</i>	-10.32	-15.44

Hazmat Serious Incidents	Dec-00	Dec-01*
Total	37	23
<i>Percent change from same month previous year</i>	-7.50	-37.84

\*Preliminary estimates

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

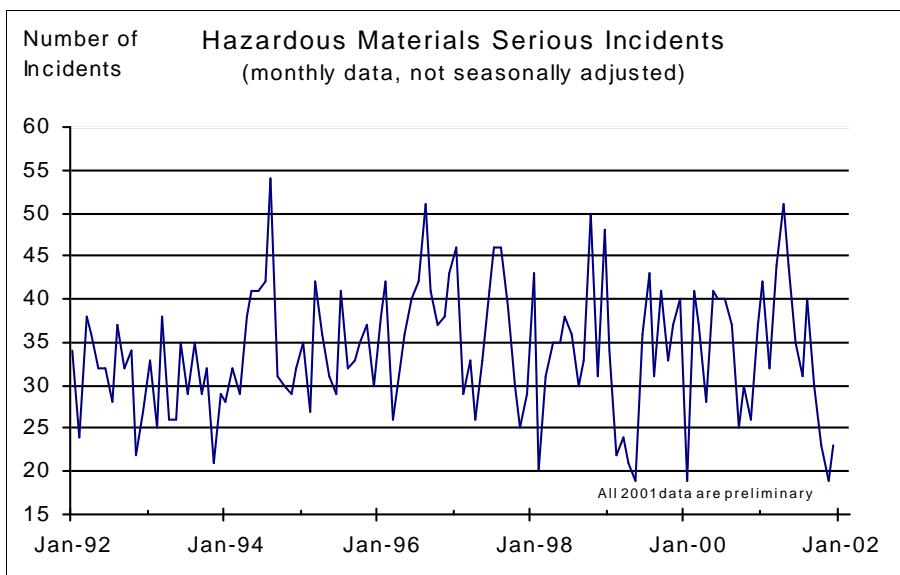
Incident reporting requirements were extended to intrastate motor carriers on Oct. 1, 1998. Beginning in April 1993, there was sharp improvement in reporting of incidents by small package carriers.

A reported incident is a report of any unintentional release of hazardous material while in transportation (including loading, unloading, and temporary storage). It excludes pipeline and bulk shipments by water, which are reported separately.

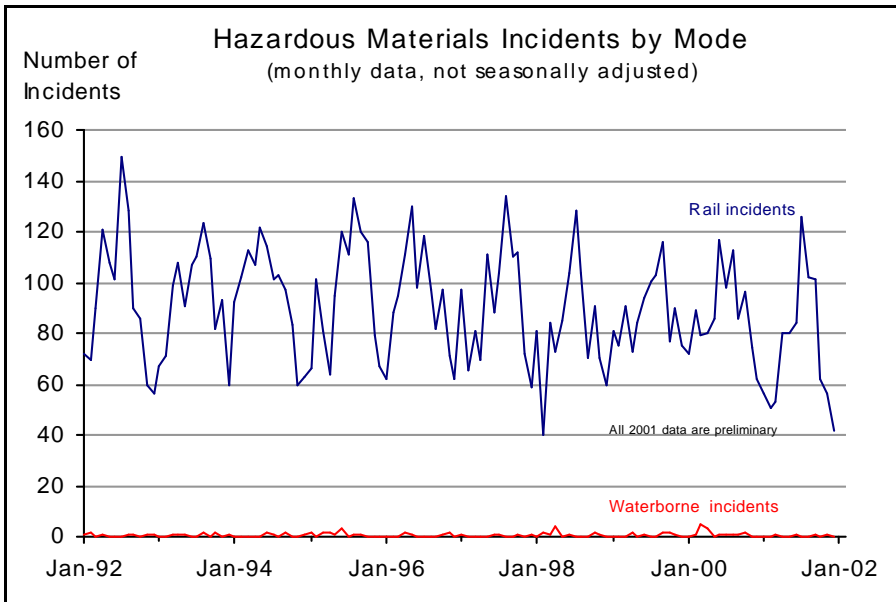
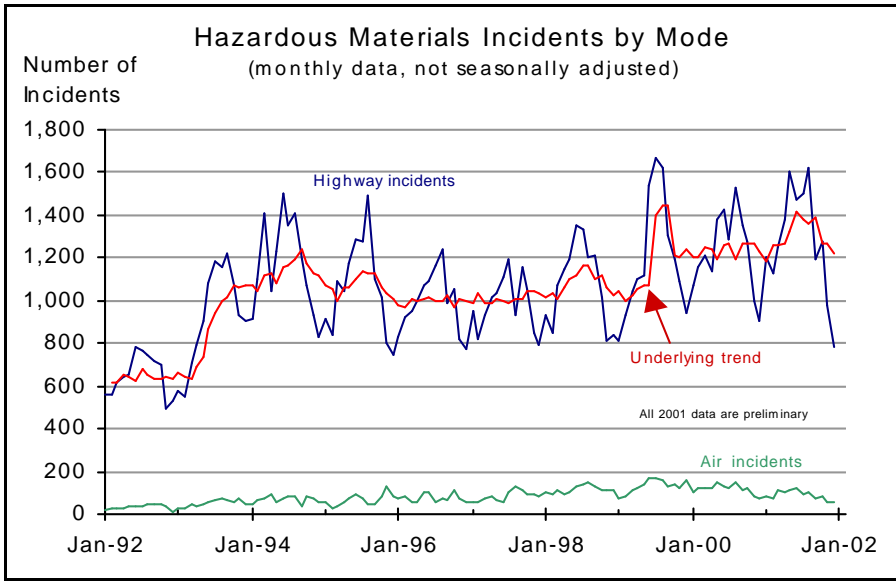
Research and Special Programs Administration (RSPA) defines serious incidents as incidents that involve a fatality or major injury due to a hazardous material, closure of a major transportation artery or facility or evacuation of six or more persons due to the presence of a hazardous material, or a vehicle accident or derailment resulting in the release of a hazardous material.

SOURCE: U. S. Department of Transportation, Research and Special Programs Administration (RSPA), Office of Hazardous Materials, Planning and Analysis, Hazardous Materials Information System data obtained through personal communication.

Flammable liquids (e.g., gasoline) comprise the most tonnage and ton-miles of hazardous material shipments. Gasoline usage peaks in the summer and accounts for the seasonality in hazardous materials incidents.



MODAL BREAKDOWN OF HAZARDOUS MATERIALS INCIDENTS



Hazardous Materials Incidents by Mode	Dec-00	Dec-01*
Highway	902	785
Percent change from same month previous year	-4.14	-12.97
Air	79	55
Percent change from same month previous year	-50.31	-30.38
Rail	62	42
Percent change from same month previous year	-17.33	-32.26
Waterborne (not including bulk shipments)	0	0
Percent change from same month previous year	0	0

\*Preliminary estimates

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Incident reporting requirements were extended to intrastate motor carriers on October 1, 1998, which may partly explain the subsequent increased volume of reports. Beginning in April 1993, there was sharp improvement in reporting of incidents by small package carriers.

A reported incident is a report of any unintentional release of hazardous material while in transportation (including loading, unloading, and temporary storage). It excludes pipeline and bulk shipments by water, which are reported separately.

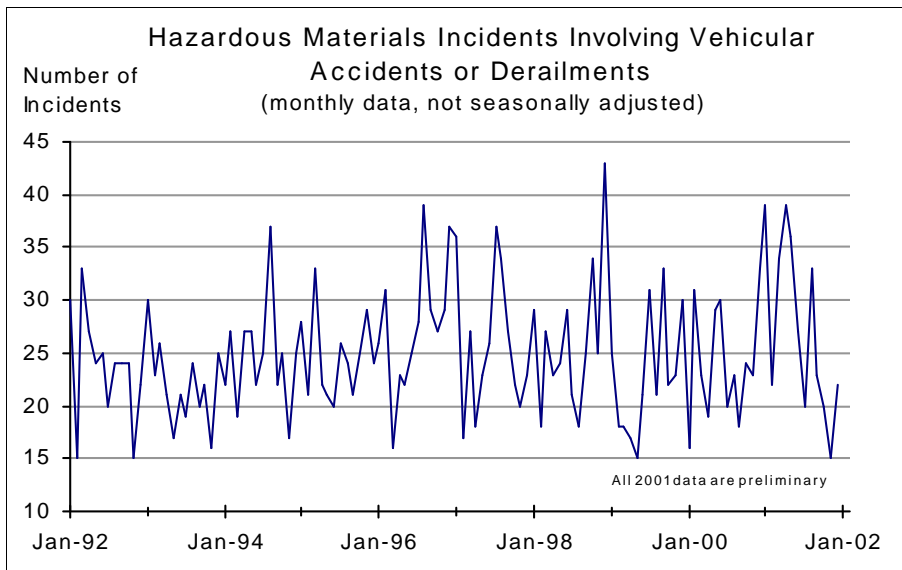
A trendline has been provided for highway incidents. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor (STAMP)*, London: Timberlake Consultants Ltd., 2000

SOURCE: U. S. Department of Transportation, Research and Special Program Administration, Office of Hazardous Materials, Planning and Analysis, Hazardous Materials Information System data obtained through personal communication.

Most reported releases of hazardous materials occur on the highways. Statistical analysis reveals an unexpected increase, starting around May 2001, in the underlying trend in the number of highway hazardous materials incidents. This increase can not be explained by variability in the seasonal behavior. It may be due to DOT outreach efforts to improve reporting. BTS will be monitoring the incident data over the next few months to determine if the increase is temporary or not.



**HAZARDOUS MATERIALS INCIDENTS INVOLVING CRASHES OR TRAIN DERAILMENTS**



Motor vehicle accidents or train derailments account for only a small portion of total number of hazardous materials incidents. However, their consequences are often the most severe.

Hazmat Incidents	Dec-00	Dec-01*
Total incidents involving vehicular accidents	33	22
Percent change from same month previous year	10.00	-33.33

\*Preliminary estimate

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Reporting requirements were extended to intrastate motor carriers on Oct. 1, 1998, which may have affected data reported after this date.

Accident/derailment is a crash involving a motor vehicle or a derailment of a train.

SOURCE: U. S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials, Planning and Analysis, Hazardous Materials Information System data obtained through personal communication.



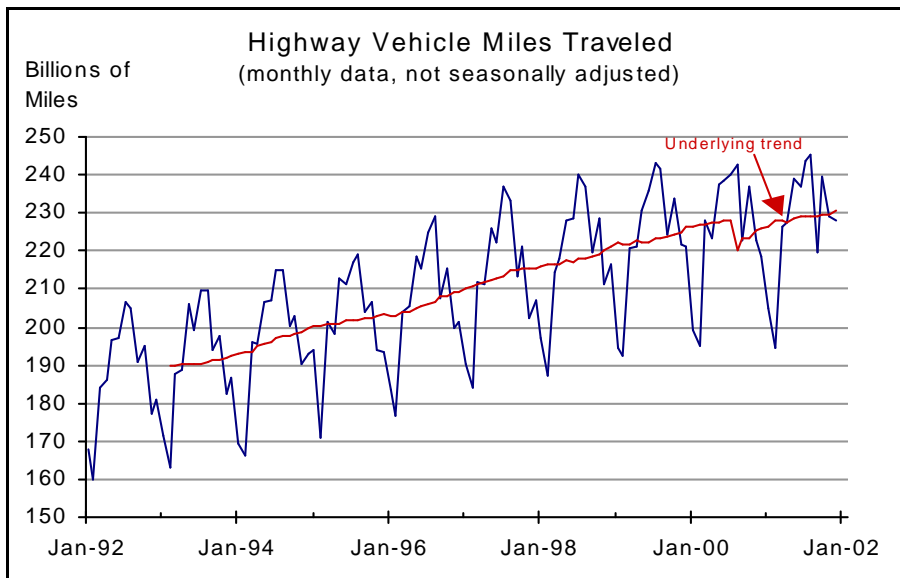
# Mobility

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U.S. HIGHWAY VEHICLE MILES TRAVELED



Vehicle Miles Traveled	Dec-00	Dec-01
Millions of highway miles	218,672	227,837
Percent change from same month previous year	-1.26	4.19

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A trendline has been provided for vehicle miles traveled. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor (STAMP)*, London: Timberlake Consultants Ltd. , 2000

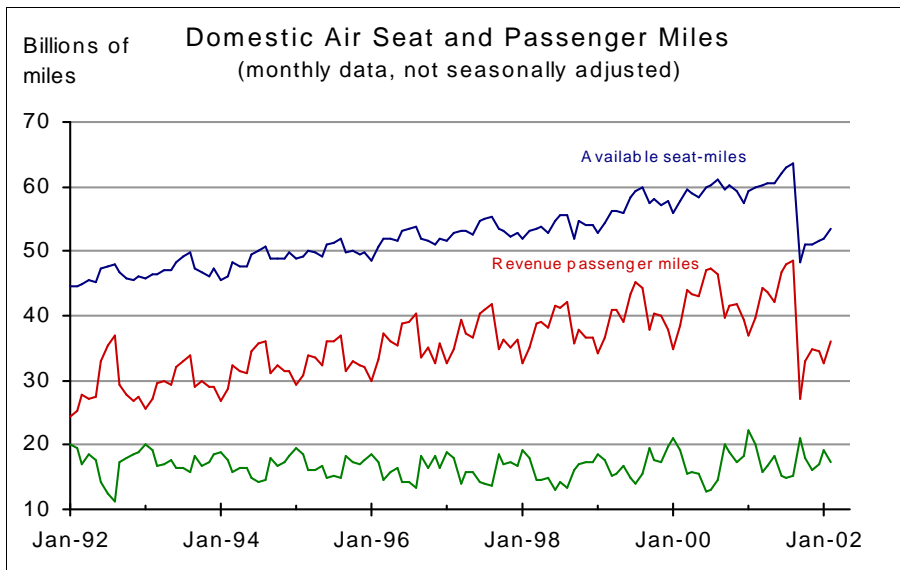
SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, available at <http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.htm>.

Vehicle miles of travel (VMT) are key data for highway planning and management, and a common measure of roadway use. Along with other data, VMT are often used in estimating congestion, air quality, and potential gas-tax revenues, and can provide a general measure of the level of the nation's economic activity.

Previous statistical analysis revealed an unexpected drop in the VMT data between August 2000 and October 2000. This drop proved to be significant, but temporary. So this temporary behavior is no longer represented in the underlying trend.



AVAILABILITY AND USE OF DOMESTIC FLIGHTS: AIR PASSENGERS



Revenue passenger-miles are a measure of the volume of air passenger transportation. Unused seat-miles (the difference between available seat-miles and revenue passenger miles) are used as a measure of airline capacity utilization. Another measure is the intensity of use of the equipment.

NOTE: A revenue passenger-mile is equal to one paying passenger carried one mile. Available seat-miles for an individual flight are the number of seats multiplied by the distance traveled. The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

Domestic Passenger Aviation	Feb-01	Feb-02
Available seat-miles (billions)	59.78	53.35
Percent change from same month previous year	3.76	-10.75
Revenue passenger miles (billions)	39.61	36.00
Percent change from same month previous year	2.97	-9.10
Unused seat-miles (billions)	20.17	17.35
Percent change from same month previous year	5.34	-13.99

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

These indicators are components of the passenger and overall aircraft load factors displayed in "Aircraft Utilization—Passengers and Freight."

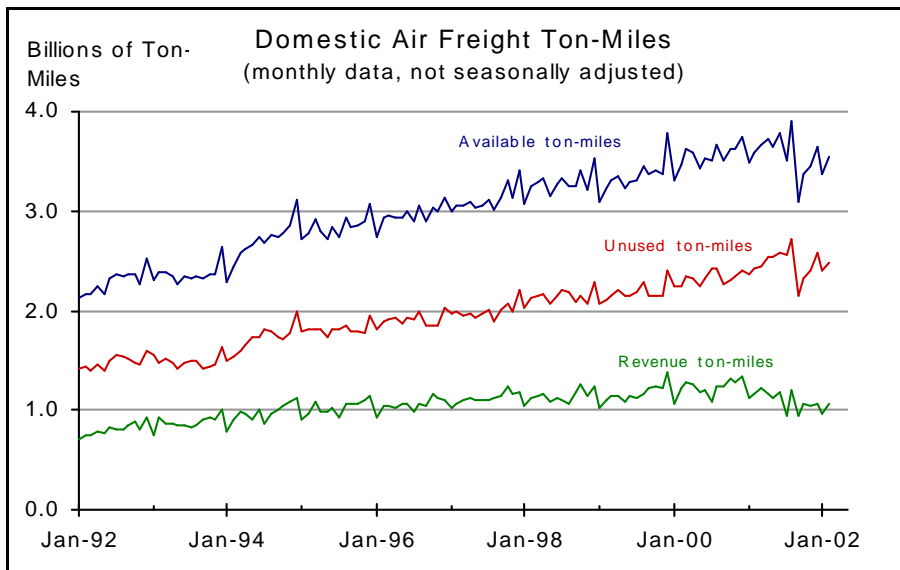
The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on Sept. 11, 2001, on aviation, including several days in which commercial air operations were suspended.

Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



AVAILABILITY AND USE OF DOMESTIC FLIGHTS: AIR FREIGHT



Though still much smaller than air passenger transportation, air freight is an increasingly important revenue source for the air transportation industry. It includes both freight handled by dedicated air cargo handlers and air cargo shipped on combined passenger and air freight carriers (passenger luggage is not considered cargo for this purpose).

Unused ton-miles are the difference between available ton-miles and revenue ton-miles utilized. Changes in the level of spare capacity might be an indicator of the timely availability of air freight services. For example, a shipper with a sudden need for service will be more likely to obtain an appropriate flight when spare capacity is higher. Space limitations also affect the availability of air freight services.

Domestic Freight Aviation	Feb-01	Feb-02
Available ton-miles (billions)	3.59	3.55
Percent change from same month previous year	3.42	-1.12
Unused ton-miles (billions)	2.43	2.49
Percent change from same month previous year	7.71	2.41
Revenue ton-miles (billions)	1.16	1.06
Percent change from same month previous year	-4.54	-8.50

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

A revenue ton-mile is equal to one ton carried one mile and measures utilization of air-freight services. The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

For those planes that carry both freight and passengers, available freight ton-miles are calculated by subtracting available seat-miles times 0.1 from total available ton-miles. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month). These indicators are components of freight and overall aircraft load factors displayed in "Aircraft Capacity Utilization—Passengers and Freight."

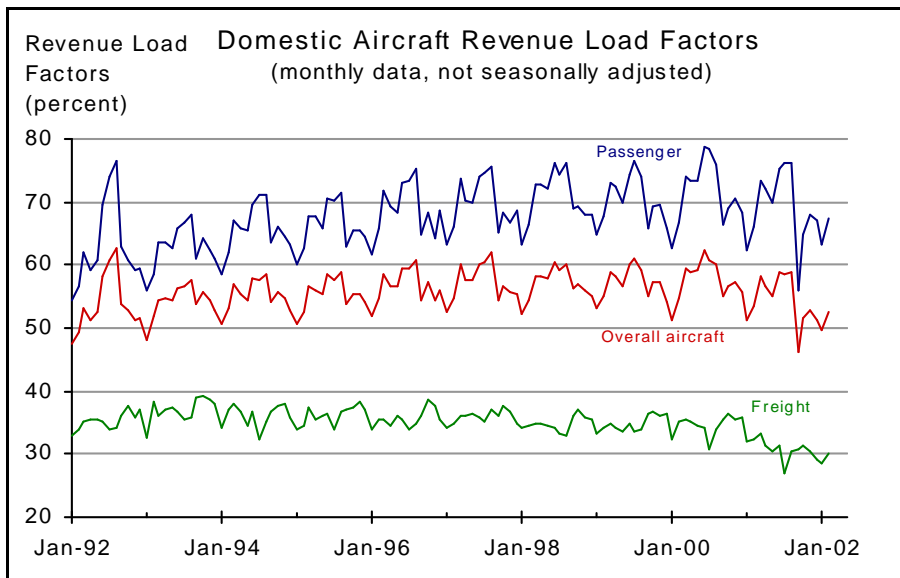
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SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



**U.S. CARRIERS AIRCRAFT CAPACITY UTILIZATION – DOMESTIC PASSENGERS AND FREIGHT**



Aircraft load factors are used to measure aircraft in-flight capacity utilization.

Domestic Revenue Load Factors (percent)	Feb-01	Feb-02
Passenger revenue load factor	66.26	67.48
<i>Change from same month previous year</i>	<i>-0.51</i>	<i>1.22</i>
Overall aircraft revenue load factor	53.54	52.49
<i>Change from same month previous year</i>	<i>-1.30</i>	<i>-1.05</i>
Freight revenue load factor	32.37	29.96
<i>Change from same month previous year</i>	<i>-2.70</i>	<i>-2.42</i>

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Load factor relates to the potential capacity of a system relative to its actual performance. In order to combine passenger and freight to calculate overall aircraft load factors, a common metric is needed: ton-miles. Thus, it is assumed that a passenger plus baggage weighs 200 pounds. The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

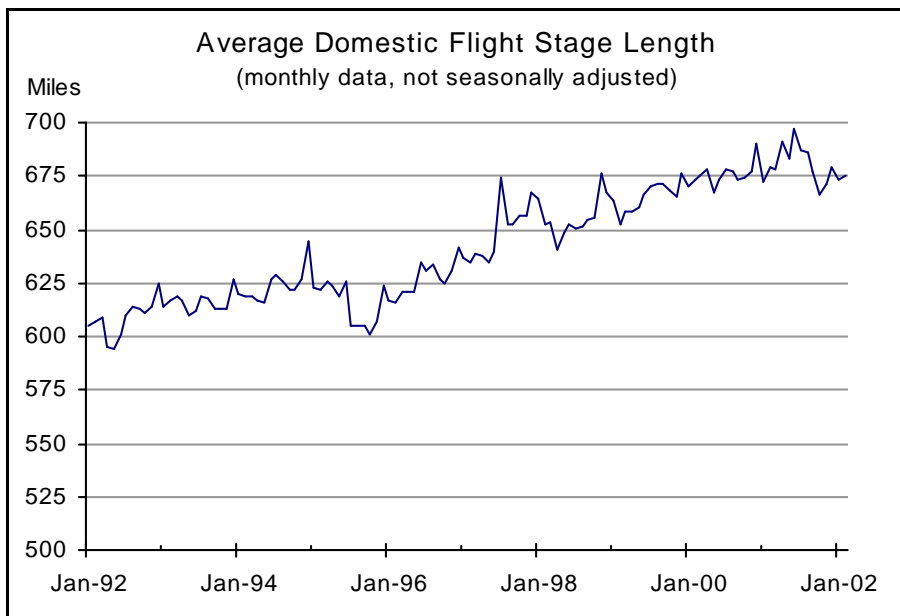
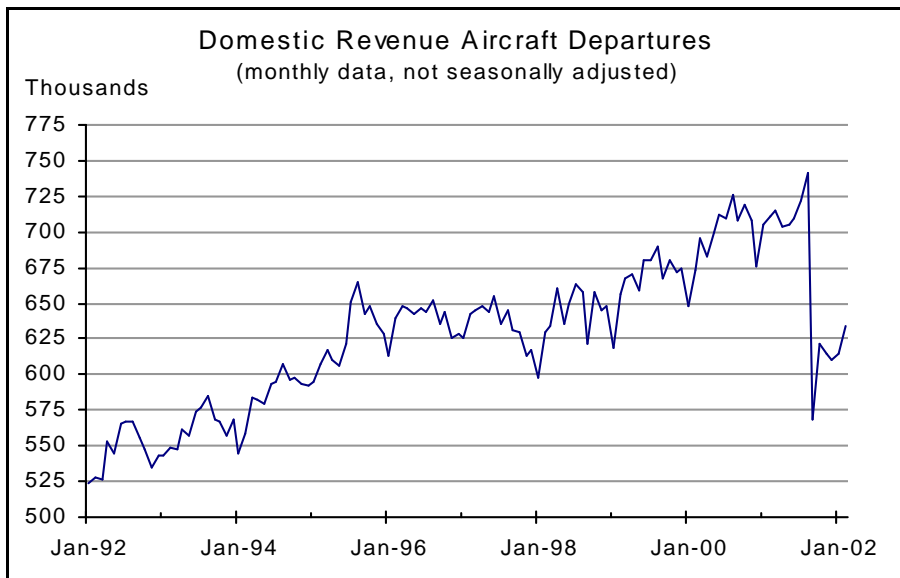
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Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



FLIGHT AVAILABILITY AND DISTANCE: DOMESTIC



Domestic Flight Availability	Feb-01	Feb-02
Revenue aircraft departures (thousands)	711	633
Percent change from same month previous year	5.57	-10.86
Flight stage length (miles)	679	675
Percent change from same month previous year	0.81	-0.56

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on Sept. 11, 2001, on aviation, including several days in which commercial air operations were suspended.

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SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.

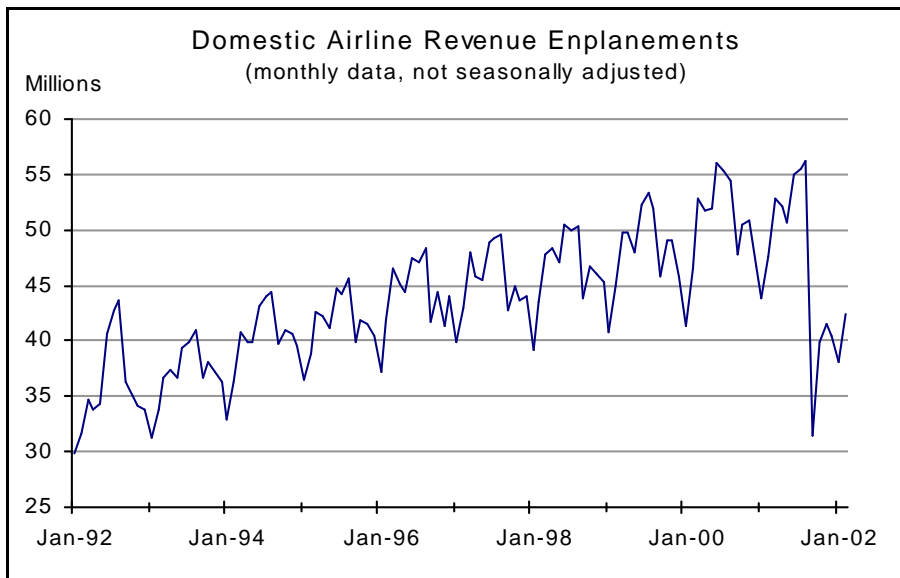
Frequency of aircraft departures, the number of connections required for a single trip, and the match between available flights and travelers' desired origin and destination points are all important determinants of scheduling convenience. Because data on connections are currently not available in a suitable format, flight stage length is used here to supplement the information on departures.

Flight stage length is the distance between take-off airport and landing airport. If the mix of origin and destination points are held constant, then an increase in flight stage length implies fewer connections are required for a trip and, therefore, higher quality of air passenger services.

The key relation is that departures and flight stage length will tend to move in opposite directions when changes are due to changes in the number of connections. For example, a trip from city A to city B with a connection in city C will have two departures, but generally a shorter average flight stage length, than the direct flight from A to B with a single departure.



ENPLANEMENTS ON DOMESTIC FLIGHTS



Revenue enplanements, the number of passengers boarding aircraft, indicate the demand for gate and luggage services. Enplanements differ from the number of trips because passengers may board more than one flight between their origination point and ultimate destination.

Domestic Passenger Aviation	Feb-01	Feb-02
Revenue aircraft enplanements (millions)	47.56	42.42
Percent change from same month previous year	2.34	-10.81

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data do not include international flights by U.S. domestic carriers or domestic flights by foreign carriers.

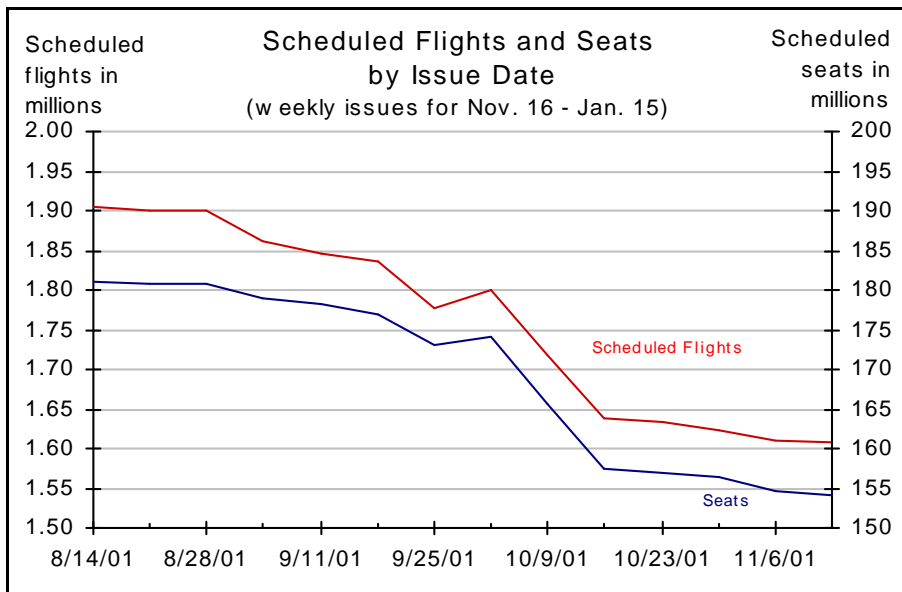
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Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



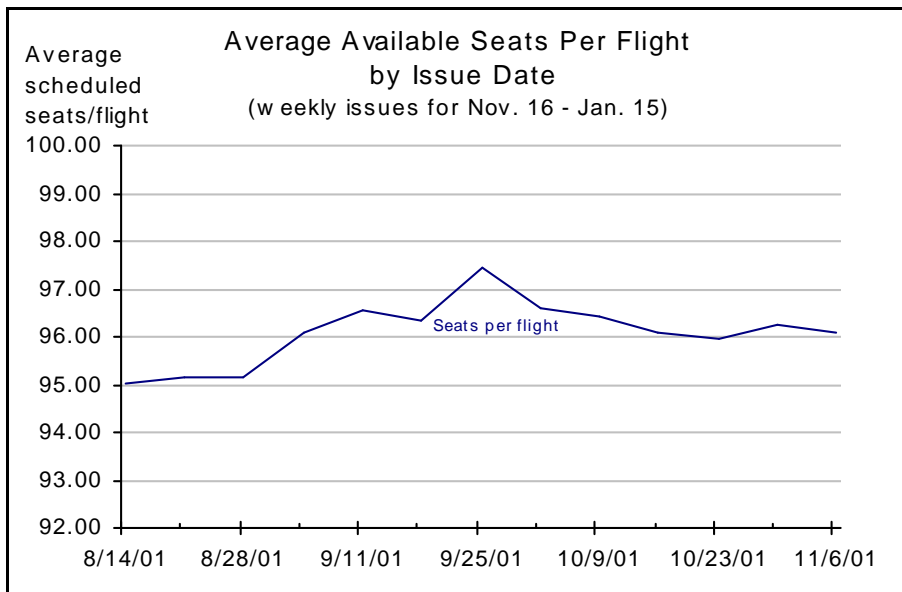
SCHEDULED FLIGHT AVAILABILITY



Scheduled Flights and Seats	16-Oct-01	13-Nov-01
Scheduled flights (millions)	1.64	1.61
Percent change from four weeks ago	-10.79	-1.88
Scheduled seats (millions)	157.33	154.17
Percent change from four weeks ago	-11.03	-2.01
Scheduled average plane size (seats/plane)	96.09	95.96
Percent change from four weeks ago	-0.28	-0.14

NOTE: The data refers to flights within the U.S. operated by domestic air carriers.

SOURCE: Various issues obtained through subscription, the Official Airline Guide, Reed Elsevier, Inc.

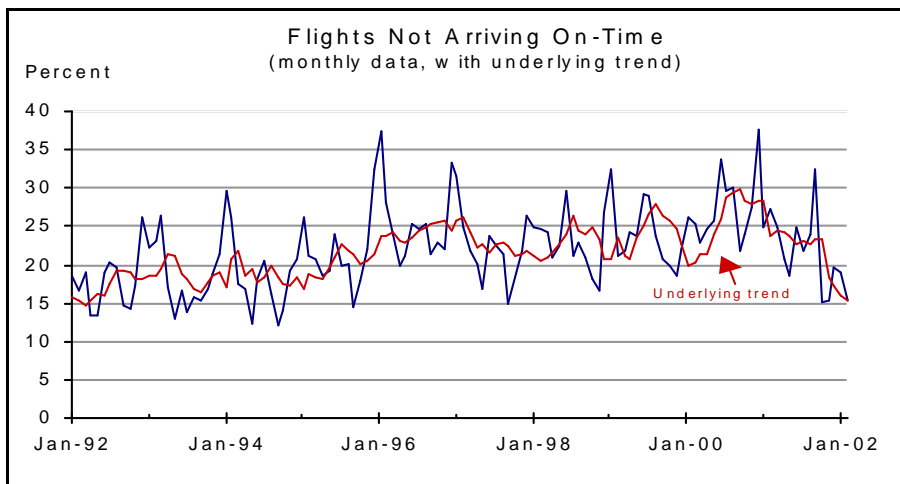
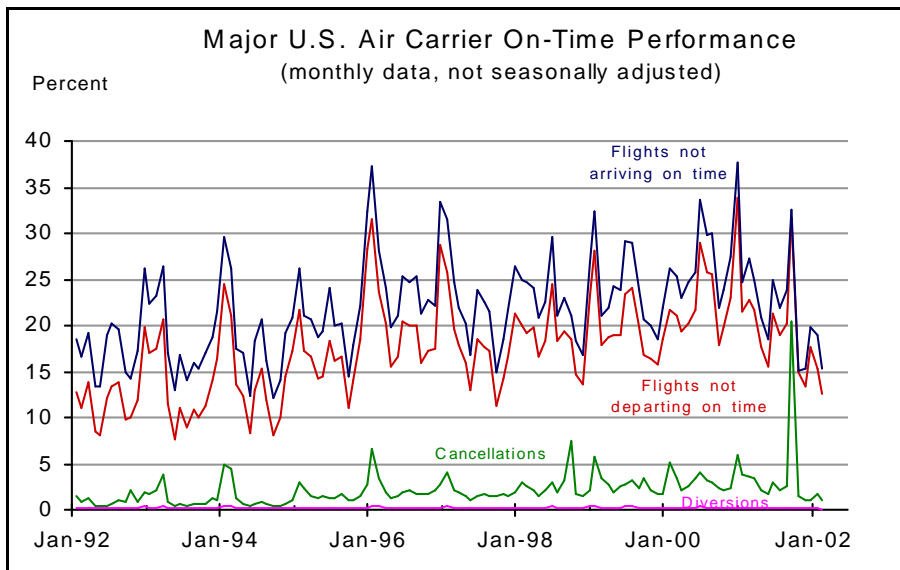


Published flight schedules represent airlines willingness to offer tickets for flights in the future given information available at the publication date. Published flights can result in two types of losses for the airline: dollar losses when an operated flight fails to generate sufficient revenue to cover operating costs and reputation losses when a published flight is subsequently cancelled. Failure to offer a flight for which there is sufficient demand also represents a loss to the airline in the form of a foregone profit opportunity.

Airline schedules for a particular future period will change as the publication date approaches the future period. Surprises that affect expected future profits, such as the Sept. 11, 2001 terrorist attack, will change airlines' willingness to offer flights. Conversely, airlines will be more likely to publish flights at dates closer to scheduled departure because surprises are less likely over a shorter time horizon. In addition to offering new flights or canceling offered flights, airlines can also respond by making changes to the size of the plane flown. Schedule changes will also tend to lag the arrival of new information due to the time it takes to analyze and implement the new information.



MAJOR U.S. AIR CARRIER ON-TIME PERFORMANCE



The number of flights not departing or arriving on time, cancellations, and diversions are measures of service quality. These indicators are strongly seasonal and are affected by weather and heavy demand in winter and summer months, respectively.

On-Time Performance	Feb-01	Feb-02
Number of scheduled flights	472,928	399,535
Percent change from same month previous year	6.40	-15.52
Percent of flights not arriving on time	27.34	15.31
Change from same month previous year	2.10	-12.03
Percent of flights not departing on time	22.87	12.53
Change from same month previous year	1.76	-10.34
Percent of cancelled flights*	3.66	1.08
Change from same month previous year	0.24	-2.58
Percent of diverted flights**	0.30	0.10
Change from same month previous year	0.06	-0.20

\* Also counted in flights not arriving or departing on time.

\*\* Also counted in flights not arriving on time.

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality. Data for American Eagle was included starting in January 2000. Percent changes from January 1999 to January 2000 were calculated based on data excluding American Eagle. Aloha Airlines, which reported on-time statistics for October 2000 through November 2001, has been excluded to retain comparability.

The data cover the 10 largest U.S. air carriers. A scheduled operation consists of any nonstop segment of a flight. The term "late" is defined as 15 minutes after the scheduled departure or arrival time. A cancelled flight is one that was not operated but was listed in a carrier's computer reservation system within seven calendar days of the scheduled departure. A diverted flight is one that left from the scheduled departure airport but flew to a destination point other than the scheduled destination point.

A trendline has been provided for flights not arriving on-time. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor (STAMP)*, London: Timberlake Consultants Ltd., 2000

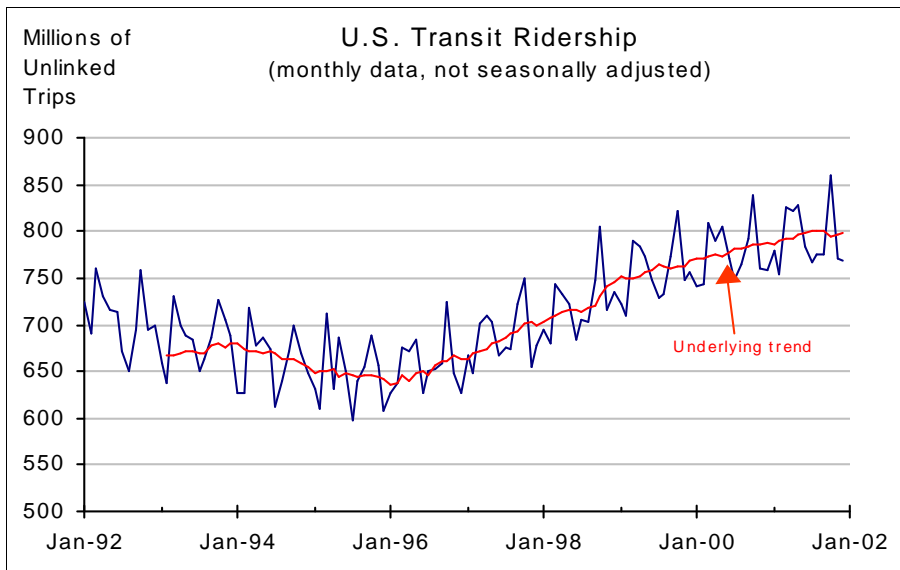
The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on September 11, 2001, on aviation, including several days in which commercial air operations were suspended.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Airline Service Quality Performance data.





PUBLIC TRANSIT



Public transportation includes transit bus, transit rail, commuter rail, trolleys, and several demand-responsive services.

Transit Ridership	Dec-00	Dec-01
Unlinked trips (in thousands)	758,321	769,325
Percent change from same month previous year	0.37	1.45

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data for the last three years are preliminary.

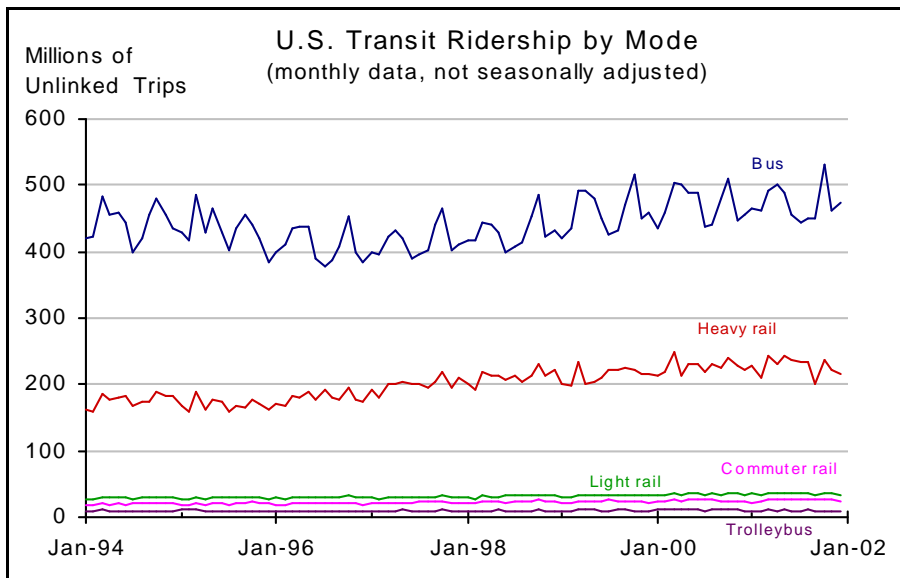
According to the American Public Transportation Association (APTA), an unlinked transit trip is a trip on one transit vehicle. A person riding one vehicle from origin to destination takes one unlinked trip; a person who transfers to a second vehicle takes two unlinked trips; a person who transfers to a third vehicle takes three unlinked trips. APTA estimates that the number of people riding transit on an average weekday is 45 percent of the number of unlinked transit passenger trips.

A trendline has been provided for U.S. transit ridership. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor (STAMP)*, London: Timberlake Consultants Ltd., 2000

SOURCE: American Public Transportation Association, *APTA Quarterly Transit Ridership Report*, available at: <http://www.apta.com/stats/ridership/index.htm>.



**PUBLIC TRANSPORTATION BY MODE**



Ridership of heavy rail has been climbing faster than any other mode of public transportation. Bus ridership is almost 60 percent of total transit ridership.

Transit Ridership by Mode	Dec-00	Dec-01
Bus (thousands)	455,814	472,759
<i>Percent change from same month previous year</i>	-0.63	3.72
Heavy rail (thousands)	220,641	214,592
<i>Percent change from same month previous year</i>	2.00	-2.74
Commuter rail (thousands)	33,422	33,146
<i>Percent change from same month previous year</i>	0.42	-0.83
Light rail (thousands)	22,766	23,371
<i>Percent change from same month previous year</i>	2.48	2.66
Trolleybus (thousands)	9,560	8,595
<i>Percent change from same month previous year</i>	2.58	-10.09

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Numbers are estimates.

According to the American Public Transportation Association (APTA), an unlinked transit trip is a trip on one transit vehicle. A person riding one vehicle from origin to destination takes one unlinked trip; a person who transfers to a second vehicle takes two unlinked trips; a person who transfers to a third vehicle takes three unlinked trips. APTA estimates that the number of people riding transit on an average weekday is 45 percent of the number of unlinked transit passenger trips.

**Commuter Rail** – Railroad local and regional passenger train operations between a central city, its suburbs, and/or another central city. It may either be locomotive-hauled or self-propelled, and is characterized by multitrip tickets, specific station-to-station fares, railroad employment practices, and usually only one or two stations in the central business district. Also known as “suburban rail.”

**Light Rail** – An electric railway with a “light volume” traffic capacity compared to “heavy rail.” Light rail may include multicar trains or single cars. Also known as “Streetcar,” “Trolley car,” and “Tramway.”

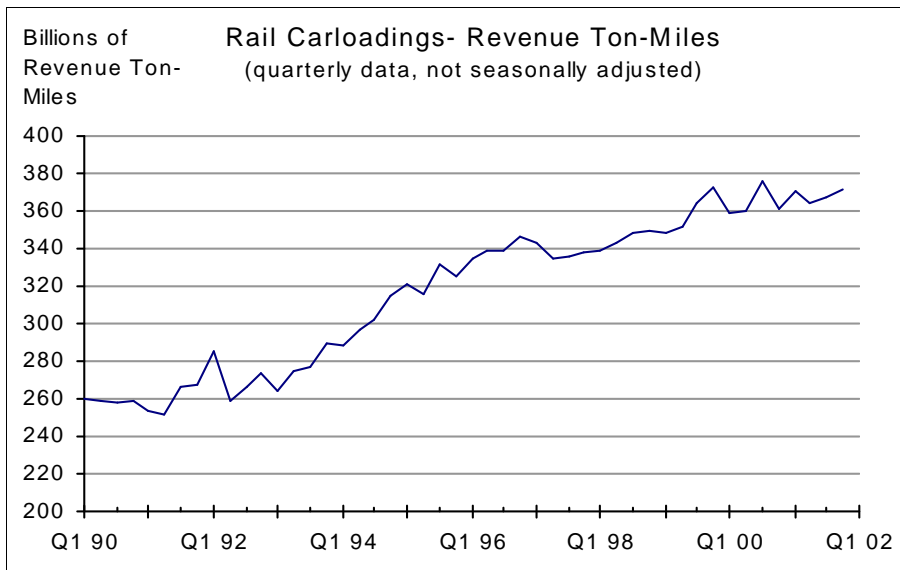
**Heavy Rail** – An electric railway with the capacity of “heavy volume” of traffic and characterized by exclusive rights-of-way, multicar trains, high speed and rapid acceleration, sophisticated signaling, and high platform loading.

**Trolleybus** – Rubber-tired passenger vehicles operating singly on city streets. Trolleybuses are propelled by electricity drawn from an overhead electric line via trolleys.

SOURCE: American Public Transportation Association, *APTA Quarterly Transit Ridership Report*, available at: <http://www.apta.com/stats>



RAIL FREIGHT



Rail Freight Revenue Ton Miles	Q4 00	Q4 01
Total (billions)	361	371
Percent change from same quarter previous year	-3.06	2.77

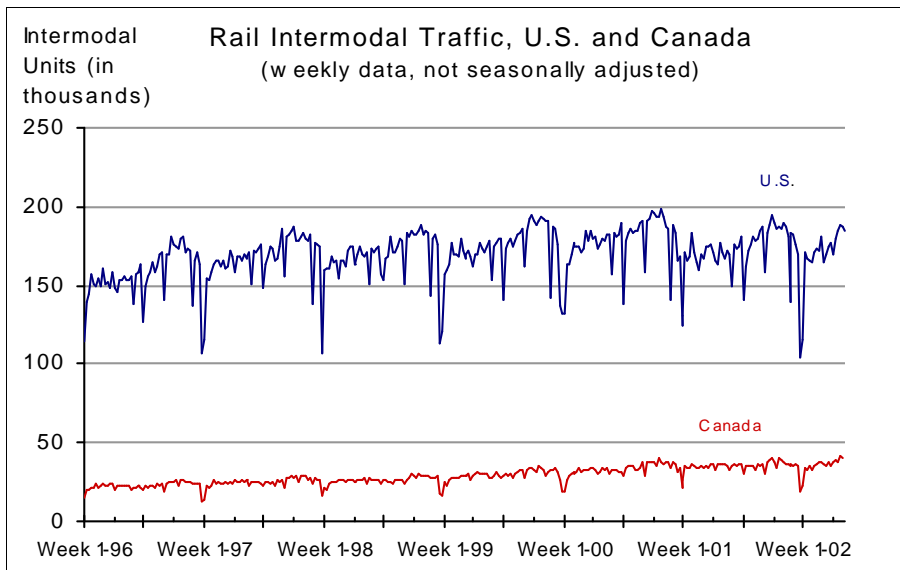
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCES: Association of American Railroads, *Railroad Revenues, Expenses, and Income. Class 1 Railroads in the United States*, R&E Series, and Surface Transportation Board, Office of Economics, Environmental Analysis and Administration at: <http://www.stb.dot.gov>.

The top commodity in U.S. rail carloadings is coal. (Association of American Railroads, Weekly Railroad Traffic).



WEEKLY RAIL INTERMODAL TRAFFIC



Rail Intermodal Traffic, U.S. and Canada	Week 19-01	Week 19-02
United States	166,840	185,257
<i>Percent change from same week previous year</i>	<i>-6.67</i>	<i>11.04</i>
Canada	35,833	39,972
<i>Percent change from same week previous year</i>	<i>9.76</i>	<i>11.55</i>

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

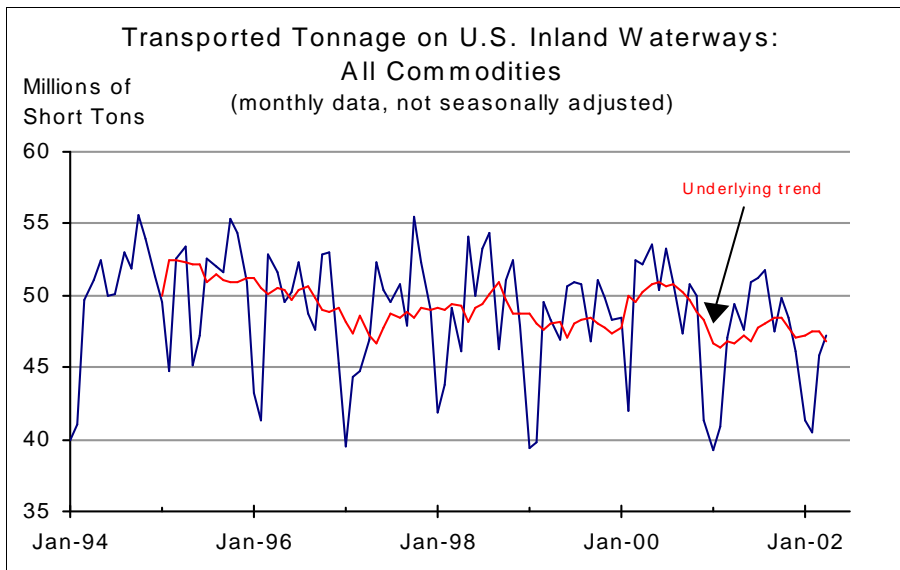
Traffic of Canadian railroads reflect their Canadian and U.S. operations, and the operations of their subsidiaries. U.S. traffic reflects the U.S. and Canadian operations of U.S. railroads.

SOURCE: Association of American Railroads, Policy and Communication Department, Weekly Railroad Traffic, Intermodal Traffic, Washington, DC.

Rail intermodal traffic consists of units of trailers and containers. Changes in rail intermodal traffic have been in the number of container units.



U.S. INLAND WATERWAYS TRADE



Inland Waterways Commercial Tonnage	Apr-01	Apr-02
All commodities (million short tons)	49.4	47.2
Percent change from same month previous year	-5.36	-4.45

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A trendline has been provided for Inland waterways commercial tonnage. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor* (STAMP), London: Timberlake Consultants Ltd., 2000

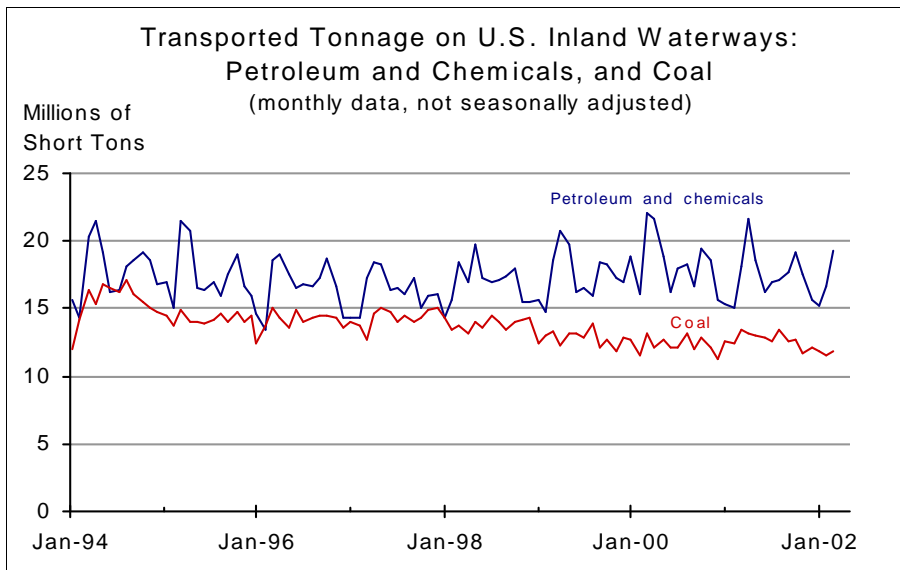
SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Monthly Indicators, available at: <http://www.iwr.usace.army.mil/ndc/wsc.htm>

Almost 60 percent of the U.S. domestic waterborne trade tonnage is moved on the inland waterways. This market consists of carriers that transport freight between U.S. ports. At least 80 percent of the tonnage in this trade is carried by barge.

NOTE: Please see *A Time Series Analysis of U.S. Inland Waterways Trade*, page 116, for a detailed analysis of the underlying trend.



**BREAKDOWN OF U.S. INLAND WATERWAYS TRADE**

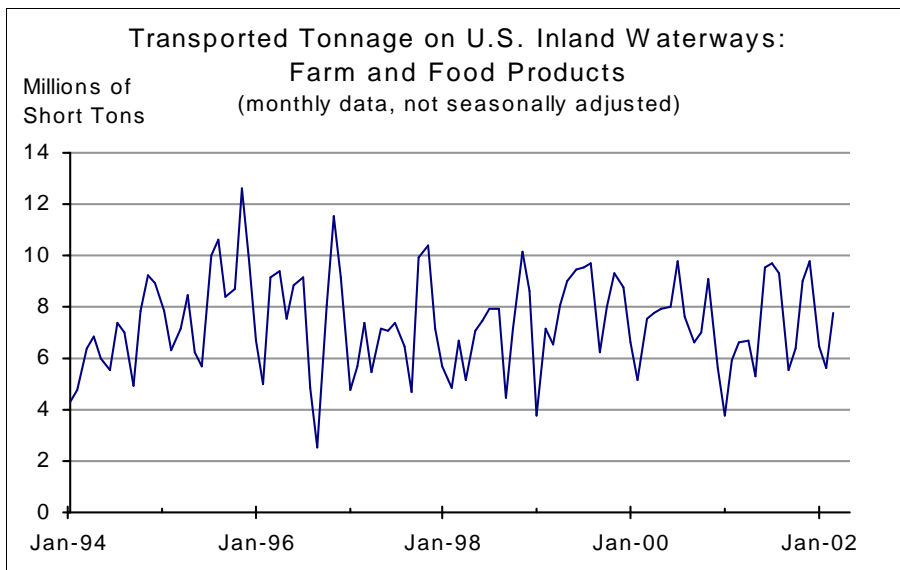


Inland Waterways Commercial Tonnage	Apr-01	Apr-02
Petroleum and chemicals (million short tons)	21.60	19.20
<i>Percent change from same month previous year</i>	<i>-0.46</i>	<i>-11.11</i>
Coal (million short tons)	13.10	11.90
<i>Percent change from same month previous year</i>	<i>8.26</i>	<i>-9.16</i>
Farm and food products (million short tons)	6.68	8.09
<i>Percent change from same month previous year</i>	<i>-13.70</i>	<i>21.11</i>

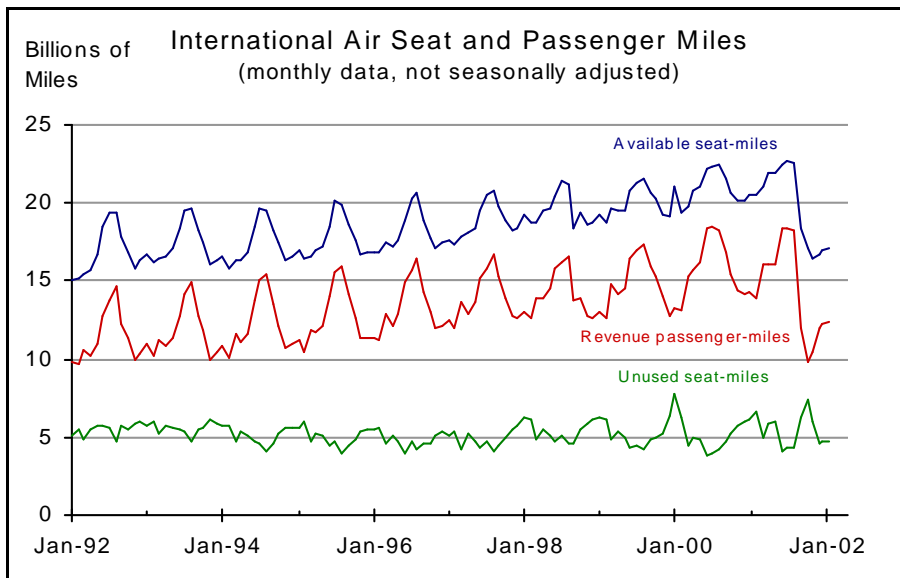
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Monthly Indicators, available at: <http://www.wrsc.usace.army.mil/ndc/monthlyindicators.htm>.

Petroleum and chemicals, coal, and farm and food products make up the vast majority of U.S. inland waterways trade tonnage. In March 2002, these commodities constituted nearly 85 percent of total inland waterway trade.



AVAILABILITY AND USE OF INTERNATIONAL FLIGHTS BY U.S. AIR CARRIERS: AIR PASSENGERS



Revenue passenger-miles are a measure of the volume of air passenger transportation. Unused seat-miles (the difference between available seat-miles and revenue passenger miles) are used as a measure of airline capacity utilization. Another measure is the intensity of use of the equipment.

NOTE: A revenue passenger-mile is equal to one paying passenger carried one mile. Available seat-miles for an individual flight are the number of seats multiplied by the distance traveled. The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

International Passenger Aviation	Feb-01	Feb-02
Available seat-miles (billions)	20.55	17.11
Percent change from same month previous year	6.30	-16.74
Revenue passenger-miles (billions)	13.95	12.33
Percent change from same month previous year	6.28	-11.63
Unused seat-miles (billions)	6.59	4.77
Percent change from same month previous year	6.36	-27.58

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

These indicators are components of the passenger and overall aircraft load factors displayed in "International Aircraft Utilization—Passengers and Freight."

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

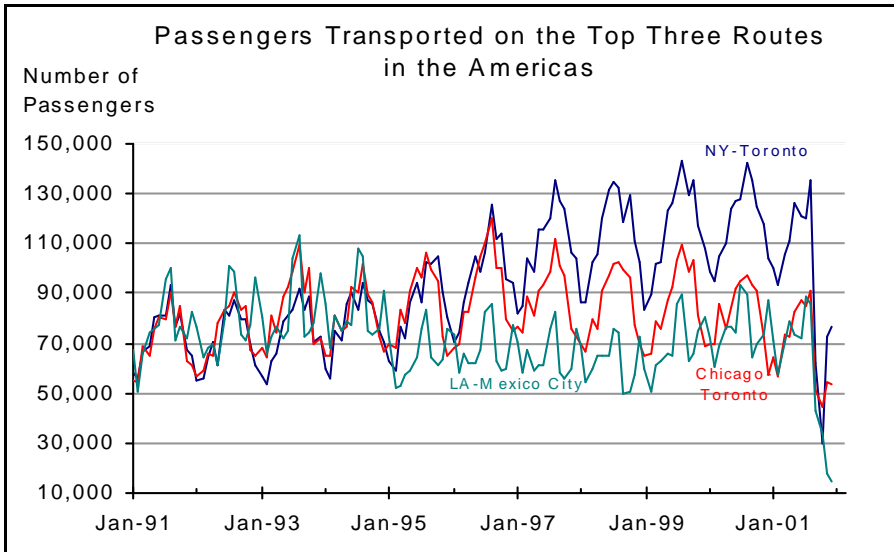
The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on Sept. 11, 2001, on aviation, including several days in which commercial air operations were suspended.

Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

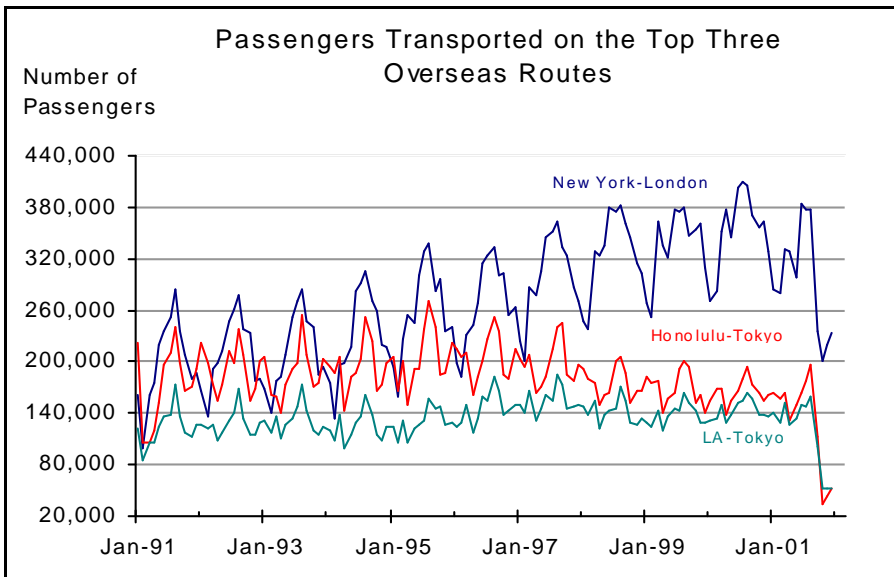
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



PASSENGERS TRANSPORTED ON THE TOP THREE INTERNATIONAL ROUTES



Passengers Transported on the Americas Routes	Dec-00	Dec-01
New York-Toronto	104,181	76,790
<i>Percent change from same month previous year</i>	-3.15	-26.29
Chicago-Toronto	57,725	53,393
<i>Percent change from same month previous year</i>	-15.91	-7.50
LA-Mexico City	87,140	14,753
<i>Percent change from same month previous year</i>	8.62	-83.07



Passengers Transported on Overseas Routes	Dec-00	Dec-01
New York-London	329,441	233,291
<i>Percent change from same month previous year</i>	6.45	-29.19
Honolulu-Tokyo	161,988	52,866
<i>Percent change from same month previous year</i>	15.53	-67.36
Los Angeles-Tokyo	135,522	51,883
<i>Percent change from same month previous year</i>	5.86	-61.72

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, U.S. Air Carrier Traffic and Capacity Data by Nonstop Segment and On-Flight Market.

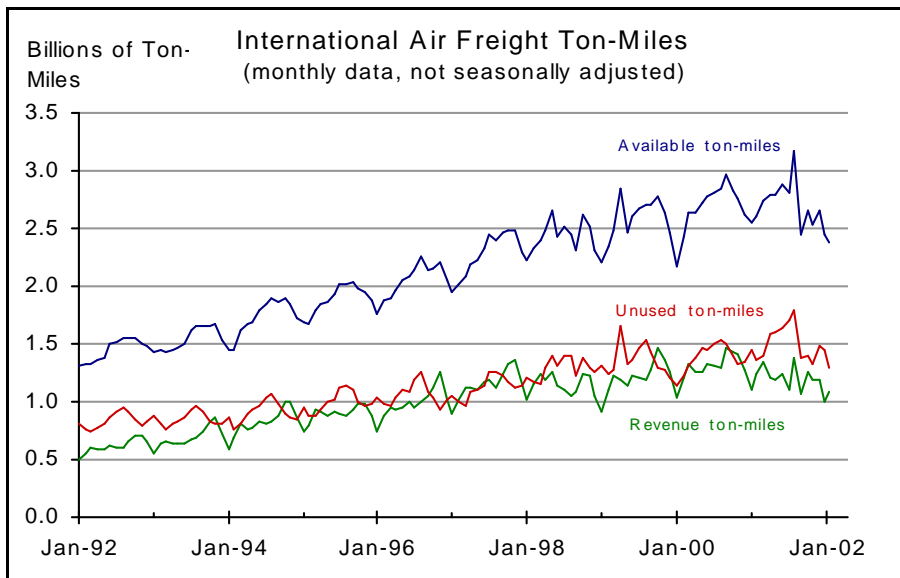
International passenger travel generates much revenue for transportation carriers, hotels, restaurants, and other travel-related businesses. Despite the terrorist attacks, international travel can be expected to place increased demands on the nation's transportation network and pose new challenges for the transportation sector. In particular, the key gateways— airports and land border crossing— that primarily service these travel flows will continue to be affected.

Enplanements on the top three international routes, both overseas and in the Americas, are highly seasonal, with more people traveling in July and August. Since September 2001, enplanements have decreased dramatically, not following the usual seasonal pattern.





AVAILABILITY AND USE OF INTERNATIONAL FLIGHTS BY U.S. AIR CARRIERS: AIR FREIGHT



Though still much smaller than air passenger transportation, air freight is an increasingly important revenue source for the air transportation industry. It includes both freight handled by dedicated air cargo handlers and air cargo shipped on combined passenger and air freight carriers (passenger luggage is not considered cargo for this purpose).

Unused ton-miles are the difference between available ton-miles and revenue ton-miles utilized. Changes in the level of spare capacity might be an indicator of the timely availability of air freight services. For example, a shipper with a sudden need for service will be more likely to obtain an appropriate flight when spare capacity is higher. Space limitations also affect the availability of air freight services.

International Freight Aviation	Feb-01	Feb-02
Available ton-miles (billions)	2.61	2.38
Percent change from same month previous year	7.11	-8.86
Unused ton-miles (billions)	1.36	1.29
Percent change from same month previous year	10.64	-5.48
Revenue ton-miles (billions)	1.25	1.09
Percent change from same month previous year	3.50	-12.55

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

A revenue ton-mile is equal to one ton carried one mile and measures utilization of air-freight services.

For those planes that carry both freight and passengers, available freight ton-miles are calculated by subtracting available seat-miles times 0.1 from total available ton-miles. The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month). These indicators are components of freight and overall aircraft load factors displayed in "Aircraft Capacity Utilization—Passengers and Freight."

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

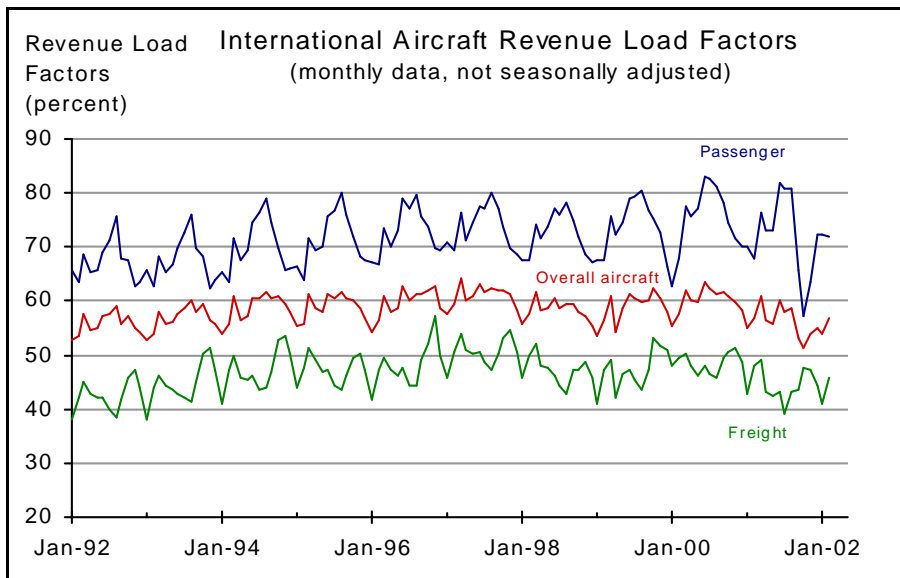
The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on Sept. 11, 2001, on aviation, including several days in which commercial air operations were suspended.

Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



**U.S. AIR CARRIERS AIRCRAFT CAPACITY UTILIZATION: INTERNATIONAL PASSENGERS AND FREIGHT**



Aircraft load factors are used to measure aircraft in-flight capacity utilization.

International Revenue Load Factors (percent)	Feb-01	Feb-02
Passenger revenue load factor	67.91	72.09
<i>Change from same month previous year</i>	<i>-0.02</i>	<i>4.17</i>
Overall aircraft revenue load factor	56.68	56.86
<i>Change from same month previous year</i>	<i>-0.97</i>	<i>0.18</i>
Freight revenue load factor	47.83	45.89
<i>Change from same month previous year</i>	<i>-1.67</i>	<i>-1.94</i>

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Load factor relates to the potential capacity of a system relative to its actual performance. In order to combine passenger and freight to calculate overall aircraft load factors, a common metric is needed: ton-miles. Thus, it is assumed that a passenger plus baggage weighs 200 pounds.

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

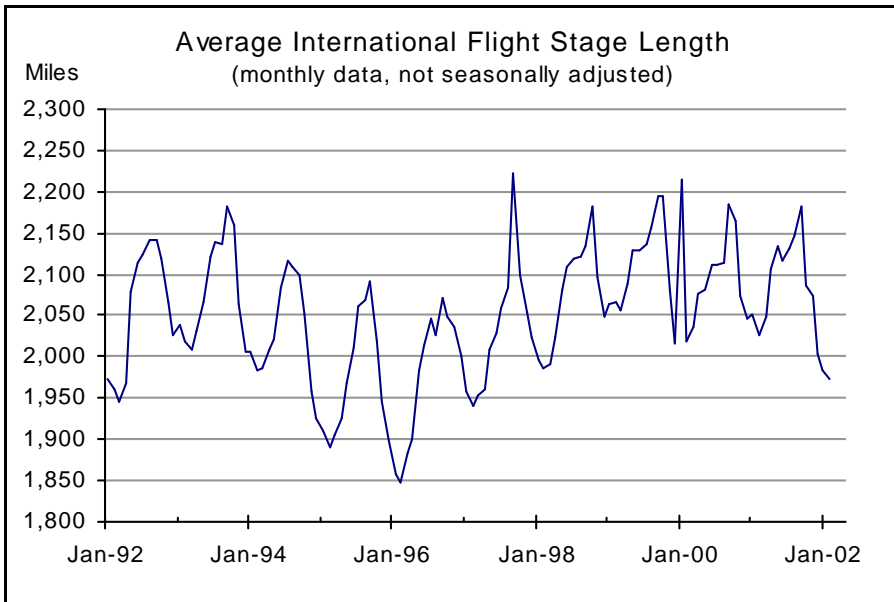
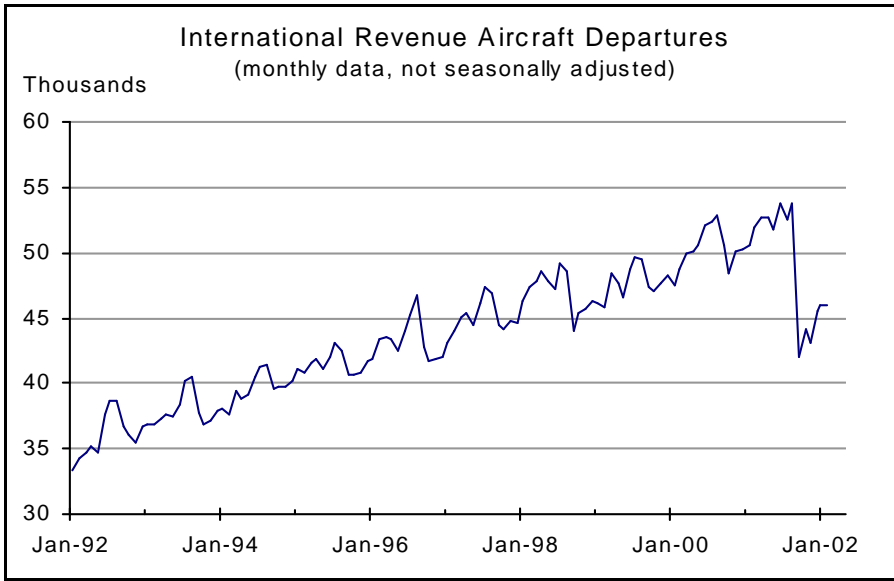
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SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



**FLIGHT AVAILABILITY AND DISTANCE: INTERNATIONAL FLIGHTS OF U.S. CARRIERS**



International Flight Availability- U.S. Air Carriers	Feb-01	Feb-02
Revenue aircraft departures (thousands)	52	46
Percent change from same month previous year	6.51	-11.48
Flight stage length (miles)	2,025	1,973
Percent change from same month previous year	0.39	-2.60

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on Sept. 11, 2001, on aviation, including several days in which commercial air operations were suspended.

Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.

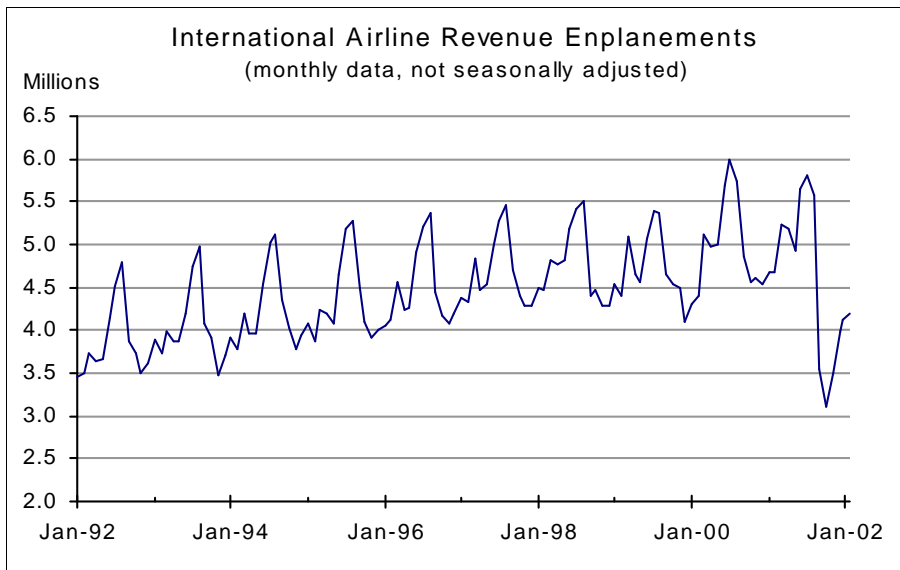
Frequency of aircraft departures, the number of connections required for a single trip, and the match between available flights and travelers' desired origin and destination points are all important determinants of scheduling convenience. Because data on connections are currently not available in a suitable format, flight stage length is used here to supplement the information on departures.

Flight stage length is the distance between take-off airport and landing airport. If the mix of origin and destination points are held constant, then an increase in flight stage length implies fewer connections are required for a trip and, therefore, higher quality of air passenger services.

The key relation is that departures and flight stage length will tend to move in opposite directions when changes are due to changes in the number of connections. For example, a trip from city A to city B with a connection in city C will have two departures, but generally a shorter average flight stage length, than the direct flight from A to B with a single departure.



ENPLANEMENTS ON INTERNATIONAL FLIGHTS OF U.S. CARRIERS



Revenue enplanements, the number of passengers boarding aircraft, indicate the demand for gate and luggage services. Enplanements differ from the number of trips because passengers may board more than one flight between their origination point and ultimate destination.

International Passenger Aviation	Feb-01	Feb-02
Revenue aircraft enplanements (millions)	4.67	4.18
Percent change from same month previous year	6.11	-10.40

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The data have been adjusted to have a standard 30-day month by multiplying the data for each month by the ratio: 30/(actual days in month).

The data include both transborder and foreign flights by U.S. carriers, but do not include any flights by foreign carriers.

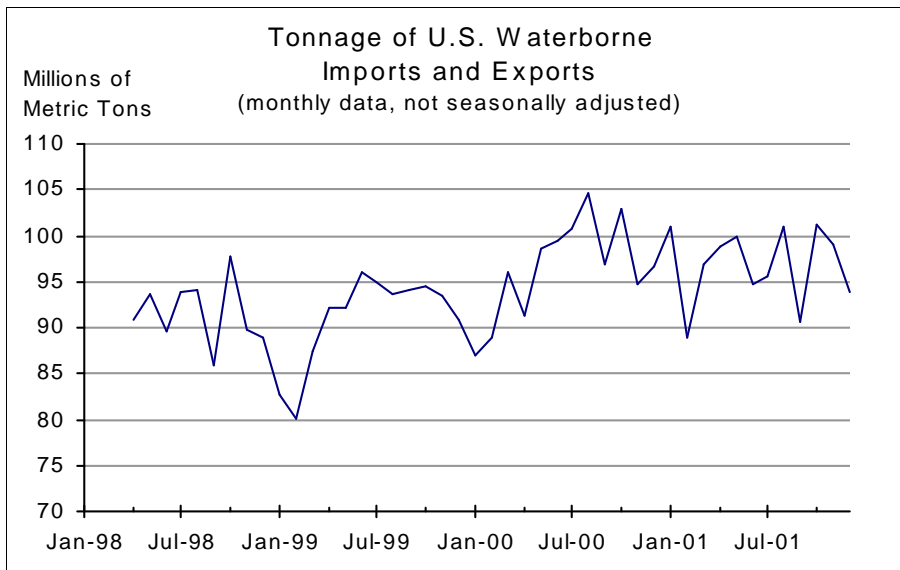
The dramatic changes in the September 2001 data reflect the impact of the terrorist attacks on Sept. 11, 2001, on aviation, including several days in which commercial air operations were suspended.

Alaskan carriers that began reporting T100 data in January 2002 are excluded from this report to retain comparability for comparisons with the previous year.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Monthly*, February 2002.



**U.S. FOREIGN WATERBORNE FREIGHT**



U.S. International Freight	Dec-00	Dec-01
Total waterborne metric tons (thousands)	96,658	93,800
Percent change from same month previous year	6.48	-2.96

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A metric ton is equal to 2,204.6 pounds.

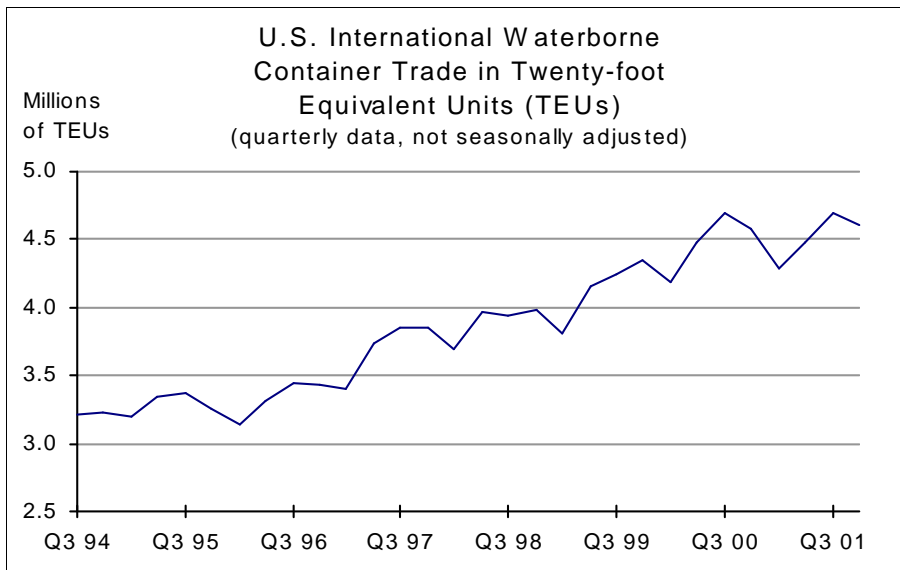
SOURCE: U.S. Department of Transportation, Maritime Administration, Office of Statistical and Economic Analysis, U.S. Foreign Waterborne Transportation Statistics data, available at: <http://www.marad.dot.gov/statistics/usfwts/index.html>.

Import and export tonnage helps identify the volume of cargo flowing through U.S. ports and the resulting vessel traffic on U.S. coastal waters. It also helps identify needs for intermodal truck and rail traffic.

Most U.S. coastal ports handle both foreign and domestic cargoes.



CONTAINER TRAFFIC VOLUME



U.S. International Container Traffic	Q4 00	Q4 01
Total waterborne TEUs (thousands)	4,579	4,606
Percent change from same quarter previous year	5.26	0.59

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: Journal of Commerce, Port Import/Export Reporting Service (PIERS) data.

International waterborne container traffic, measured in twenty-foot equivalent units (TEUs), helps identify container traffic trends affecting ports and related intermodal freight demand.

The majority of container traffic involves manufactured goods.

Container transportation is very concentrated and competitive. The top 25 U.S. ports handle more than 90 percent of U.S. container traffic.



# Economic Growth

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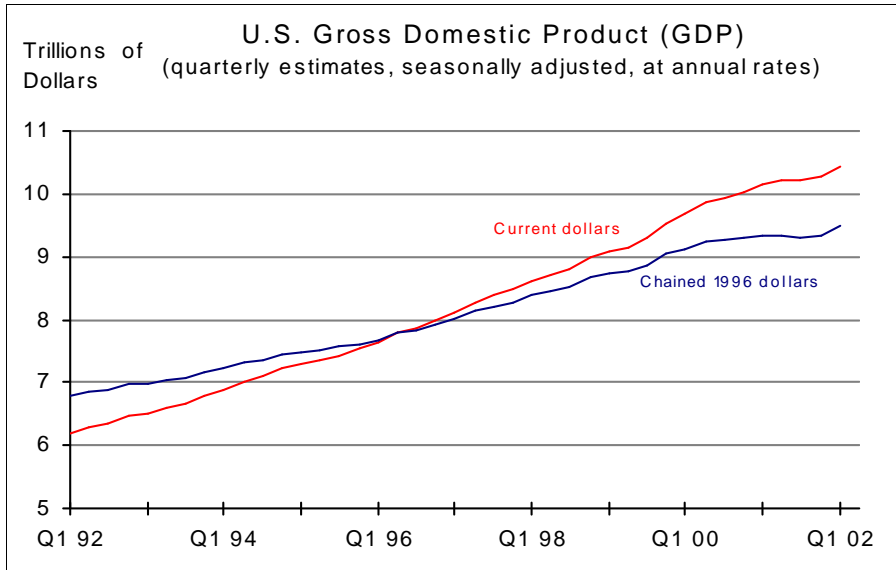
# Economic Growth

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GROWTH IN GROSS DOMESTIC PRODUCT

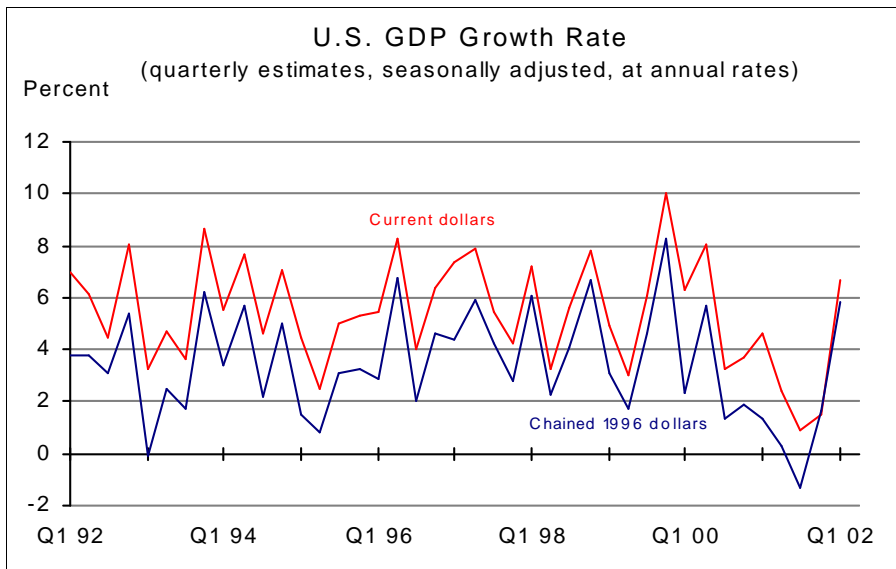


U.S. Gross Domestic Product	Q4 01	Q1 02
Billions of current dollars	10,263	10,431
Percent change from previous quarter	0.38	1.64
Billions of chained 1996 dollars	9,349	9,482
Percent change from previous quarter	0.41	1.43

NOTES: Quarterly GDP data are presented at an annual rate.

Chained 1996 dollars are calculated using chain-type indices, rather than constant dollars, to measure real GDP. The chain-type method first calculates the real changes between adjacent years. Annual rates of real changes are then chained (multiplied) together to obtain the rate of real changes between nonadjacent years. Chained dollars are preferable to constant dollars, which merely reflect overall price inflation, because chained dollars capture the effect of changes in the components of GDP.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Tables 1.1 and 1.2; Apr. 26, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S1>; based on *Survey of Current Business*.

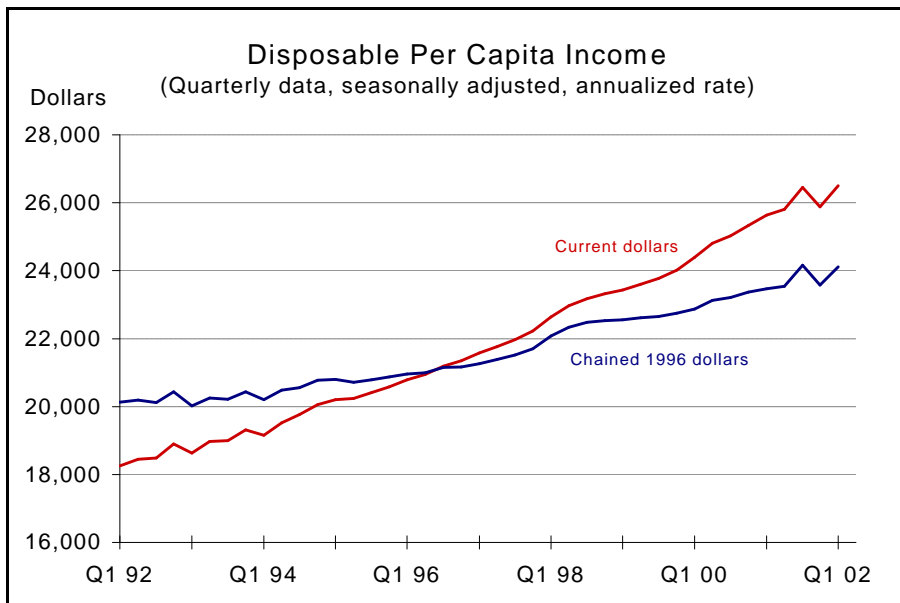


Gross Domestic Product (GDP) growth affects new demand for transportation services. The third quarter of 2001 was the first quarter since the first quarter of 1993 in which GDP did not grow in real terms. However, the downturn was not protracted as there was a slight increase the fourth quarter of 2001 and a real increase in the first quarter of 2002 that was the greatest since the fourth quarter of 1999. It should be noted that there was a very large decrease in private inventories in the fourth quarter of 2001, which lowered the final GDP figure for that quarter. Overall, private inventories decreased more than \$280 billion over the previous five quarters. (NIPA Table 1.2)

GDP is the net output of goods and services produced by labor and property located in the United States. Real GDP is expressed in chained 1996 dollars.



DISPOSABLE PERSONAL INCOME



Per capita disposable personal income increased slightly more than two percent in the first quarter of 2002. In real terms, disposable income nearly reached the level of the third quarter of 2001. Two factors contributed to the jump in the third quarter. One was the advance refund checks sent to taxpayers beginning in July as part of the Economic Growth and Tax Relief Reconciliation Act of 2001, which lowered net income tax payments. The other factor was an increase in transfer payments in July, which reflected one-time payments to taxpayers to correct for underpayments of benefits associated with an error in the indexing for social security and supplemental security income benefits.

Per Capita Disposable Personal Income	Q4 01	Q1 02
Current dollars (annual rate)	25,880	26,499
<i>Percent change from previous quarter</i>	-2.18	2.39
Chained 1996 dollars (annual rate)	23,580	24,108
<i>Percent change from previous quarter</i>	-2.39	2.24

NOTES: Disposable personal income is personal income less personal tax and nontax payments.

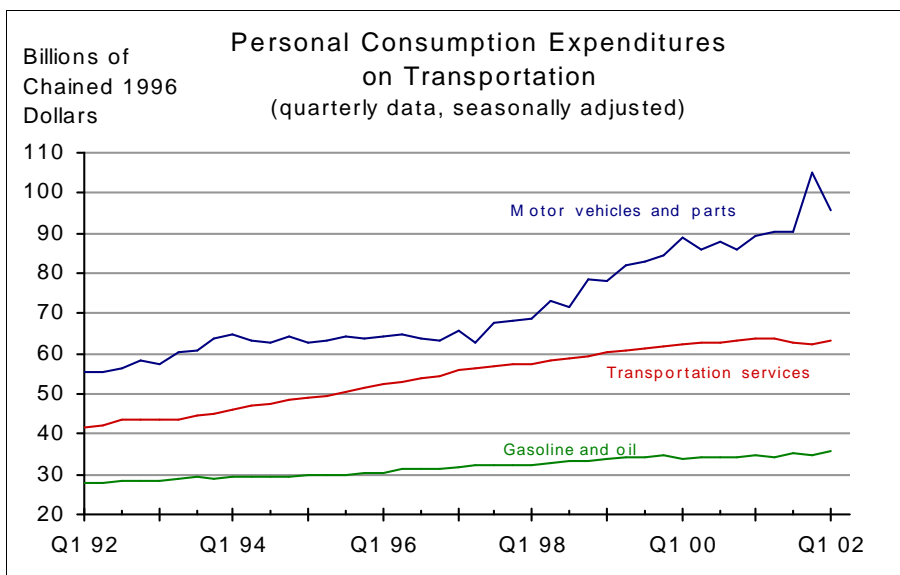
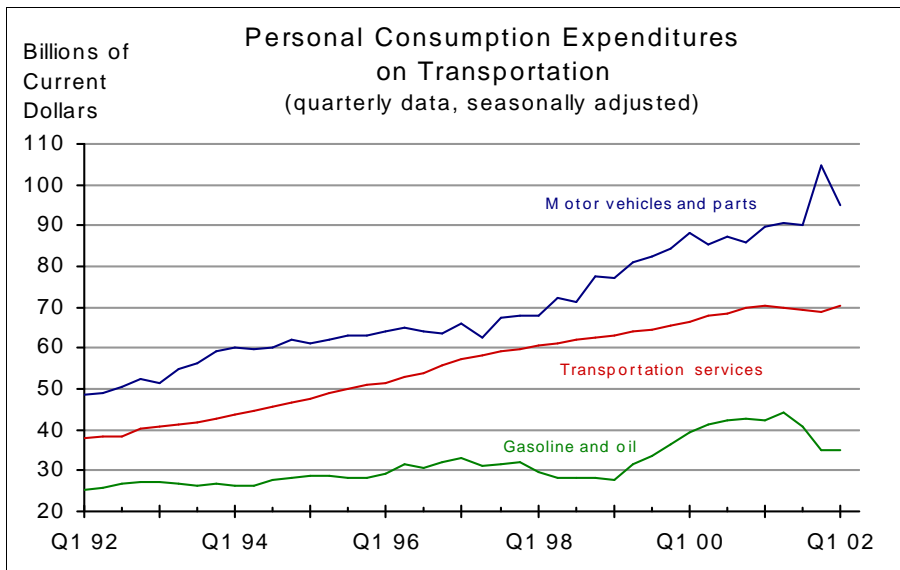
Chained 1996 dollars are calculated using chain-type indices, rather than constant dollars, to measure real changes in personal income. The chain-type method first calculates the real changes between adjacent years. Annual rates of real changes between adjacent years are then chained (multiplied) together to obtain the rate of real changes between nonadjacent years. Chained dollars are preferable to constant dollars because it avoids the bias of base year associated with constant dollars.

Historical data back through 1991 was revised in the most recent update. An explanation is available at: <http://www.bea.doc.gov/bea/dn/nipaweb/note301p.htm>.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Table 2.1; Apr. 26, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S2>; based on *Survey of Current Business*.



PERSONAL SPENDING ON TRANSPORTATION



Personal Consumption Expenditures (billions of current dollars)	Q4 01	Q1 02
Motor vehicles and parts	104.83	95.00
<i>Percent change from previous quarter</i>	16.38	-9.37
Transportation services	68.83	70.30
<i>Percent change from previous quarter</i>	-0.79	2.14
Gasoline and oil	35.08	34.83
<i>Percent change from previous quarter</i>	-14.14	-0.71

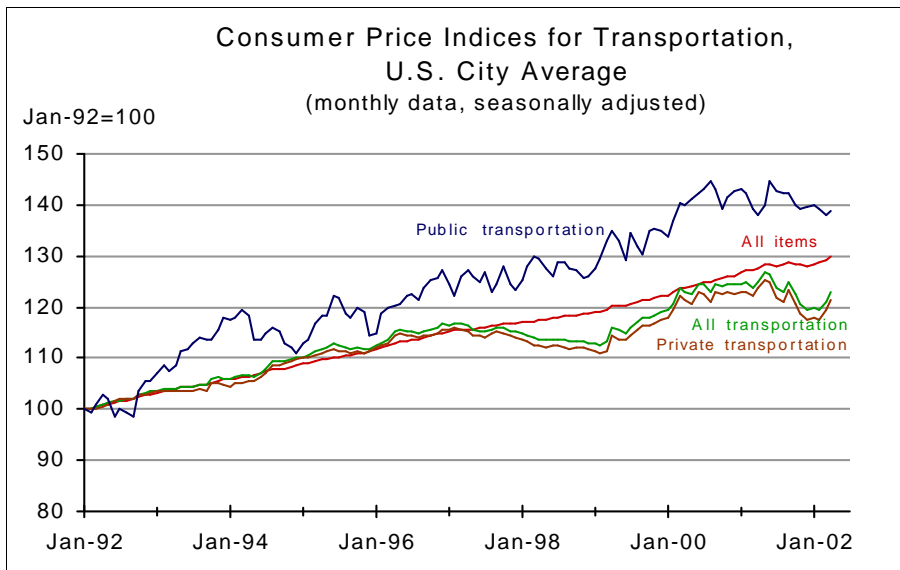
Personal Consumption Expenditures (billions of chained 1996 dollars)	Q4 01	Q1 02
Motor vehicles and parts	104.85	95.98
<i>Percent change from previous quarter</i>	16.02	-8.46
Transportation services	62.43	63.15
<i>Percent change from previous quarter</i>	-0.91	1.16
Gasoline and oil	34.90	35.53
<i>Percent change from previous quarter</i>	-0.36	1.79

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Tables 2.2 and 2.3; Apr. 26, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S2>; based on *Survey of Current Business*.

Personal expenditures on transportation are a measure of consumer demand for transportation services. Since expenditures are the product of quantity and price, these expenditures are also influenced by changes in the prices of transportation-related goods and services. To show the “real” changes in demand for transportation services over time, the expenditures are also presented in chained 1996 dollars. The traditional constant dollar measure is different from the chained dollar measure in that chained dollars gets rid of the effects of short-term price shocks, in addition to general inflation effects. Therefore, expenditures measured in chained 1996 dollars reflect changes in quantities. For items with volatile prices, such as gasoline, changes in chained dollar expenditure over time can be very different from changes in current dollar expenditures.



PRICES OF TRANSPORTATION SERVICES PAID BY AMERICAN HOUSEHOLDS



NOTES: The consumer price index for a specific item is a weighted average of the prices for the individual components of the item. The weights are determined by the expenditure shares of the individual components based on a survey of consumer expenditure during the base year(s). The base year price is then normalized to 100. For some items, the Bureau of Labor Statistics establishes weights using several years of consumer expenditure surveys in order to smooth out the effects of short-term price shocks and of the business cycle. Weights formed using several years will give a more accurate measure of typical consumer expenditure patterns.

The base period of the original index is 1982-84. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

The Consumer Price Index (CPI) tracks the price of a market basket of goods and services purchased by U.S. households over time. Both monthly and annual changes are reported in the tables for the CPI in order to facilitate comparison with other series.

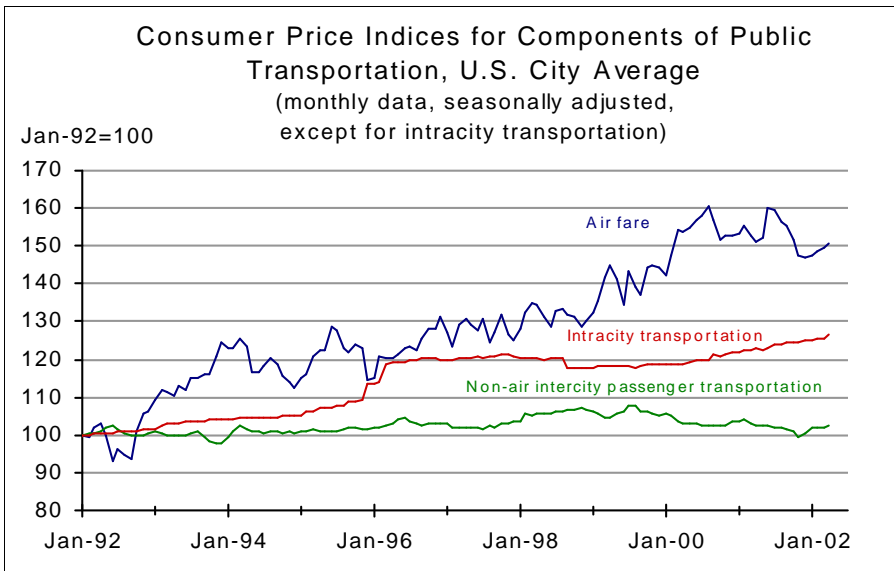
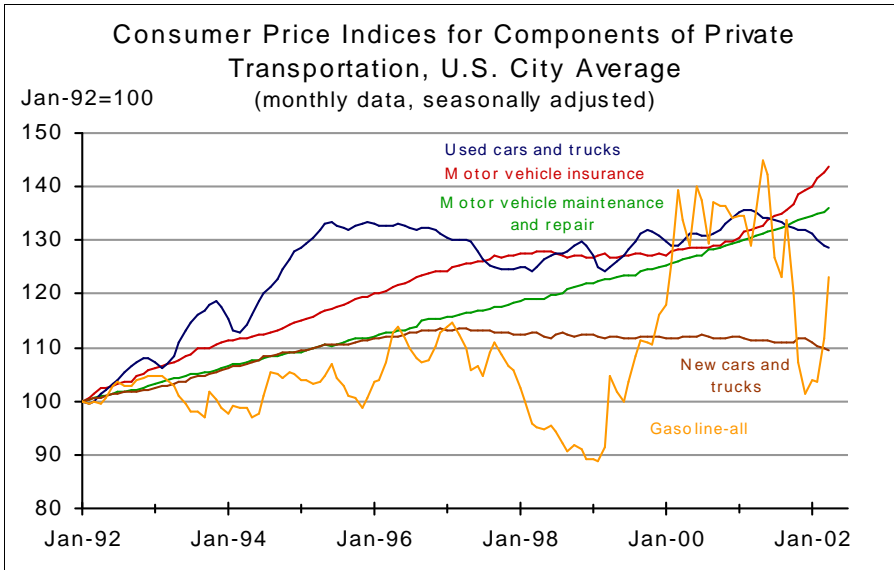
Price Index (Jan-92=100)	Mar-02	Apr-02
Public transportation	138.0	138.8
<i>Percent change from previous month</i>	-0.77	0.53
All items	129.0	129.7
<i>Percent change from previous month</i>	0.34	0.50
All transportation	120.9	123.0
<i>Percent change from previous month</i>	1.21	1.73
Private transportation	119.3	121.4
<i>Percent change from previous month</i>	1.38	1.77

Price Index (Jan-92=100)	Apr-01	Apr-02
Public transportation	137.8	138.8
<i>Percent change from same month previous year</i>	-1.63	0.68
All items	127.6	129.7
<i>Percent change from same month previous year</i>	3.09	1.64
All transportation	124.9	123.0
<i>Percent change from same month previous year</i>	1.57	-1.48
Private transportation	123.5	121.4
<i>Percent change from same month previous year</i>	1.74	-1.71

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/cpi/>.



CONSUMER PRICES FOR TRANSPORTATION



Price Index (Jan-92=100)	Mar-02	Apr-02
Motor vehicle insurance	142.6	143.6
<i>Percent change from previous month</i>	<i>0.64</i>	<i>0.70</i>
Motor vehicle maintenance and repair	135.3	135.9
<i>Percent change from previous month</i>	<i>0.27</i>	<i>0.48</i>
Used cars and trucks	129.2	128.5
<i>Percent change from previous month</i>	<i>-0.84</i>	<i>-0.52</i>
New cars and trucks	109.8	109.6
<i>Percent change from previous month</i>	<i>-0.28</i>	<i>-0.21</i>
Gasoline all types	111.9	123.2
<i>Percent change from previous month</i>	<i>7.96</i>	<i>10.14</i>
Airfare	149.5	150.9
<i>Percent change from previous month</i>	<i>0.47</i>	<i>0.94</i>
Intracity transportation (not seasonally adjusted)	125.5	126.5
<i>Percent change from previous month</i>	<i>0.05</i>	<i>0.76</i>
Non-air intercity passenger transportation	102.0	102.6
<i>Percent change from previous month</i>	<i>-0.13</i>	<i>0.52</i>

NOTES: Other intercity passenger transportation consists of Amtrak, commuter rail, buses, and other for-hire nonair modes of transportation between urban areas.

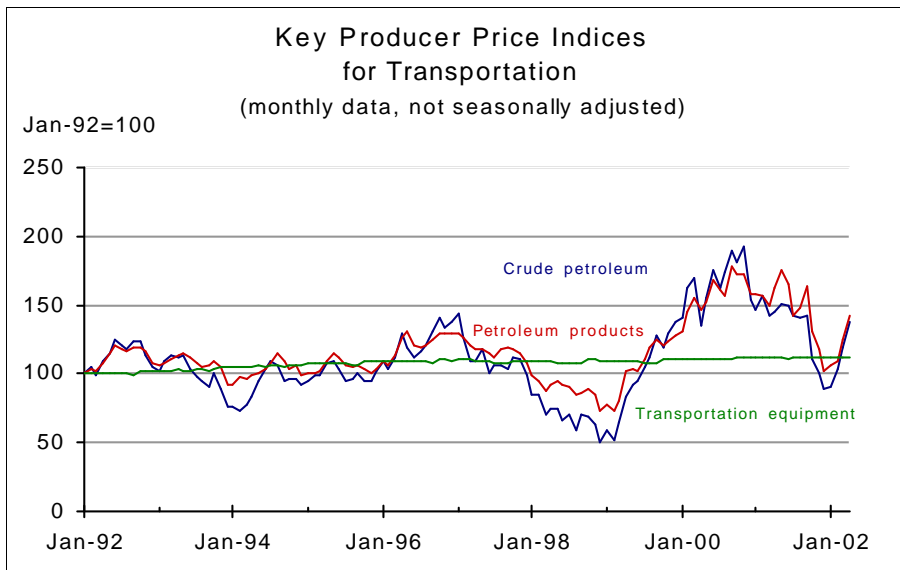
The base period of the original index is 1982-84. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/cpi/>.

The transportation component index of the CPI shows changes in transportation prices for consumers, and includes motor vehicle insurance, maintenance and repair, used and new cars and trucks, gasoline (all types), air fare, and intercity transportation.



PRODUCER PRICES OF KEY TRANSPORTATION INPUTS



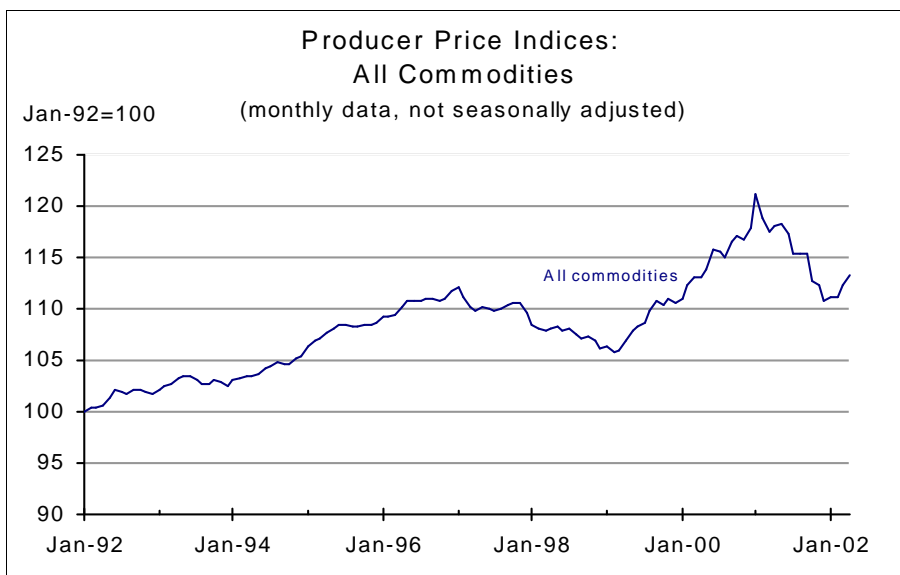
Price Index (Jan-92=100)	Apr-01	Apr-02
Petroleum products	162.9	142.3
<i>Percent change from same month previous year</i>	11.11	-12.66
Crude Petroleum	145.2	137.6
<i>Percent change from same month previous year</i>	7.04	-5.23
All commodities	118.0	113.3
<i>Percent change from same month previous year</i>	4.36	-3.96
Transportation equipment	112.1	111.8
<i>Percent change from same month previous year</i>	1.39	-0.27

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The base period of the original index is 1982. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

Data from January 2002 to April 2002 are preliminary. A more complete description of producer prices is given in Chapter 14 of the *BLS Handbook of Methods*, available at: [http://www.bls.gov/opub/hom/homch14\\_e.htm](http://www.bls.gov/opub/hom/homch14_e.htm).

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.

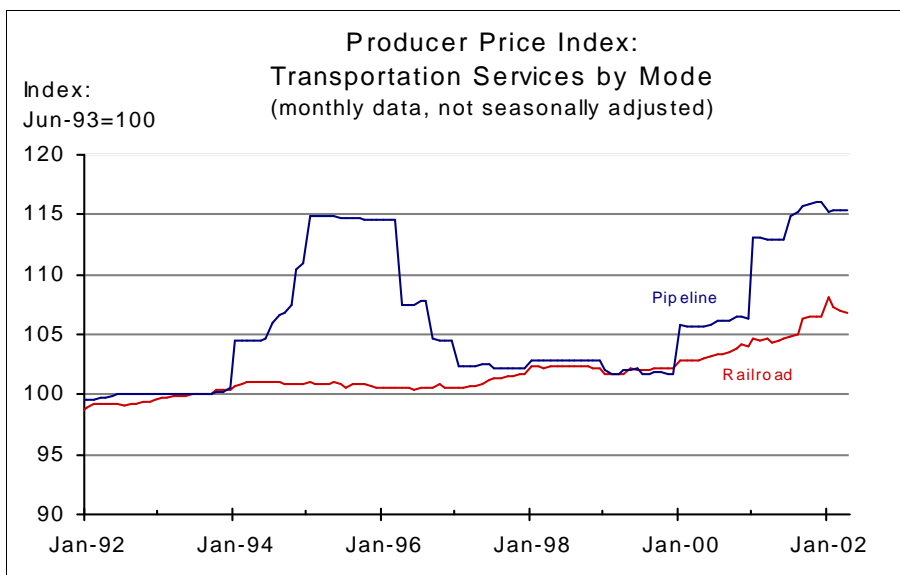
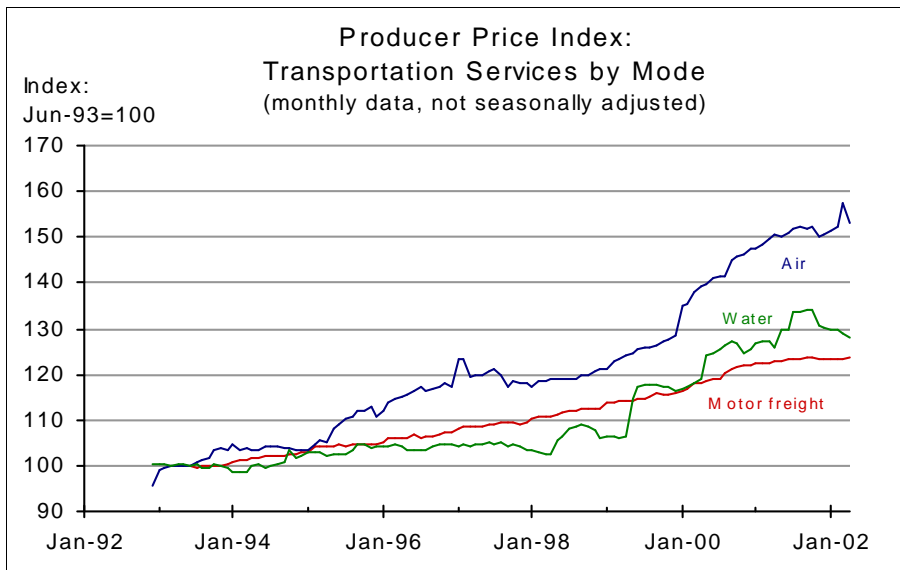


Producer prices are those charged for the output of firms in a particular industry, or by all firms, regardless of industrial classification, for a particular commodity. These prices exclude markups at later stages of processing and the retail level. Producer prices reflect prices charged to anyone purchasing directly from the firm, including consumers, when the firm also serves as a retailer.

Changes in producer prices for transportation inputs suggest the direction of future costs for providing transportation services. Motor vehicle prices are strongly seasonal, declining as the model year culminates each September.



PRODUCER PRICES OF FOR-HIRE TRANSPORTATION SERVICES



Price Index (Jun-93=100)	Apr-01	Apr-02
Air transportation	150.7	153.3
<i>Percent change from same month previous year</i>	8.32	1.71
Water transportation	125.8	128.0
<i>Percent change from same month previous year</i>	5.73	1.75
Motor freight transportation and warehousing	122.7	123.8
<i>Percent change from same month previous year</i>	3.81	0.90
Pipelines, excluding natural gas	113.0	115.3
<i>Percent change from same month previous year</i>	6.97	2.11
Railroad transportation	104.4	106.9
<i>Percent change from same month previous year</i>	1.58	2.33

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from January 2002 to April 2002 are preliminary. The original data for the indices in this table have different base periods. For comparability, the indices have been adjusted to have a common reference point (Jun-93).

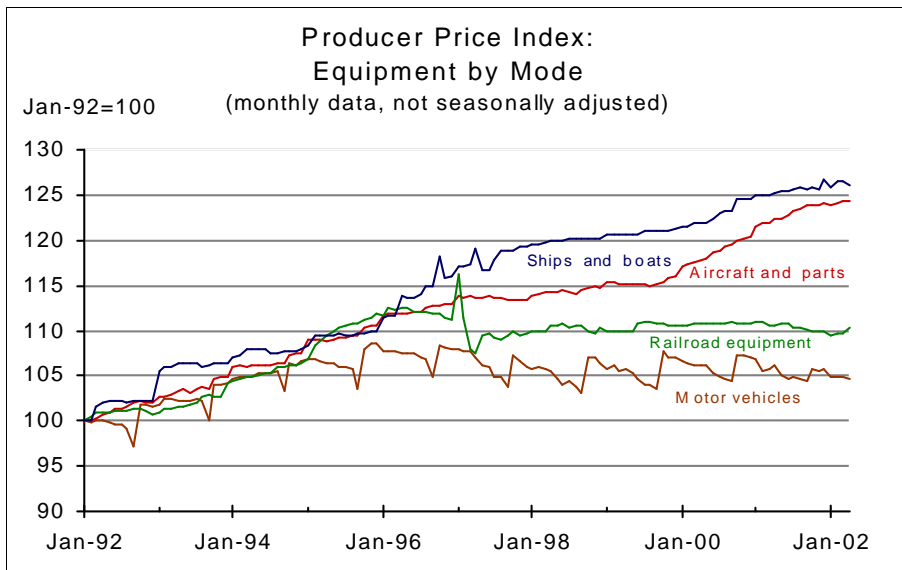
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.

Producer prices reflect prices charged to anyone, including consumers when the firm also serves as a retailer. Actual prices to users of transportation services will differ due to substitution between domestic and foreign markets, and substitution between user- and market-provided services.





**PRODUCER PRICES FOR TRANSPORTATION EQUIPMENT**



Price Index (Jan-92=100)	Apr-01	Apr-02
Aircraft and parts	122.3	124.2
<i>Percent change from same month previous year</i>	3.75	1.59
Ships and boats	125.1	126.1
<i>Percent change from same month previous year</i>	2.55	0.77
Railroad equipment	110.6	110.3
<i>Percent change from same month previous year</i>	-0.22	-0.30
Motor vehicles and motor vehicle equipment	106.2	104.7
<i>Percent change from same month previous year</i>	0.08	-1.36

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

The base period of the original index is 1982. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

Data from January 2002 to April 2002 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.

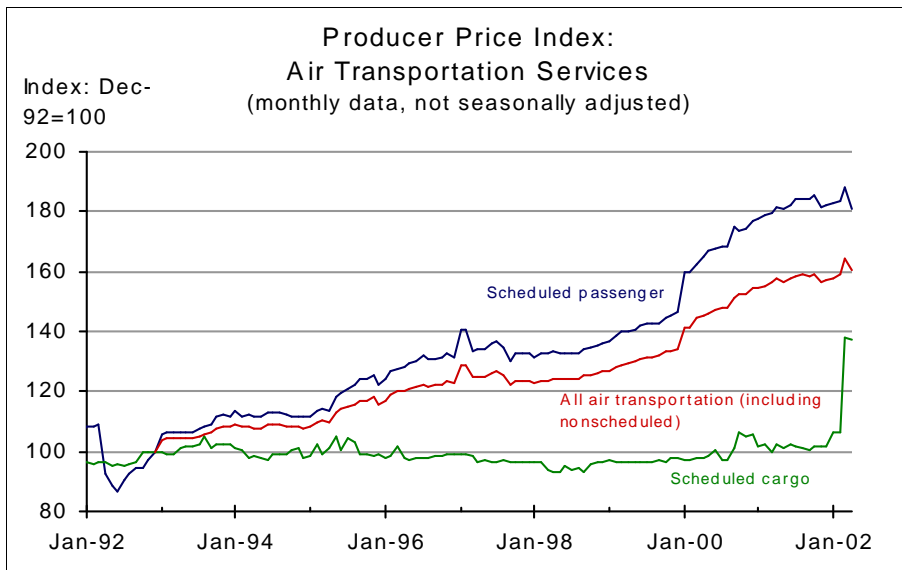
Equipment cost accounts for approximately 47 percent of the total cost of user-operated transportation services. In the past decade, producer prices for transportation equipment have undergone a gradual but consistent increase. Increases in the producer prices for aircraft and parts and for ships and boats contributed most significantly to the rise in overall producer prices for transportation equipment. The increase in producer prices for railroad equipment and motor vehicles has been much slower, remaining at nearly the same level since 1997.

Motor vehicle prices are strongly seasonal, declining as the model year culminates each September.





**PRODUCER PRICES OF AIR TRANSPORTATION SERVICES**



Price Index (Dec-92=100)	Apr-01	Apr-02
Scheduled air transportation - passenger	181.7	180.8
<i>Percent change from same month previous year</i>	10.28	-0.51
All air transportation (including nonscheduled)	157.5	160.2
<i>Percent change from same month previous year</i>	8.32	1.71
Scheduled air transportation - cargo	102.2	137.7
<i>Percent change from same month previous year</i>	4.64	34.75

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

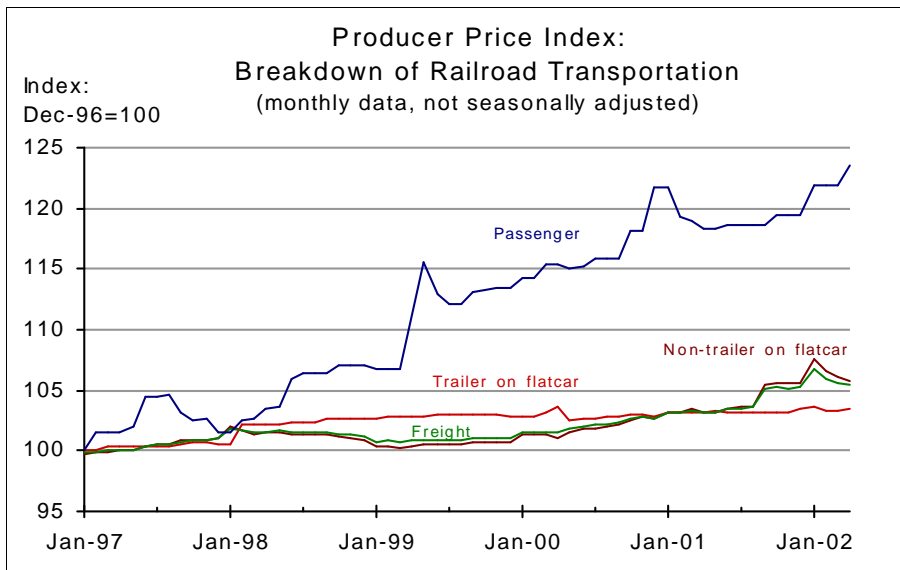
Data from January 2002 to April 2002 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.

Producer prices for scheduled air transportation services represent prices for business and personal travel, as well as shipment of high-value freight. Because producers also act as retailers, a change in prices charged by airlines is immediately passed on to consumers.



**PRODUCER PRICES OF RAILROAD TRANSPORTATION SERVICES**



NOTE: U.S Department of Labor, Bureau of Labor Statistics reports missing data for April 1999 for passenger transportation.

Producer prices for rail transportation indicate prices to producers for freight and to passengers for intercity travel. Rail transportation of trailers is an important component of intermodal freight transportation. See indicator for prices of transportation services for the aggregated producer price index for rail transportation services.

Price Index (Dec-96=100)	Apr-01	Apr-02
Passenger	118.3	123.5
<i>Percent change from the same month previous year</i>	<i>2.51</i>	<i>4.40</i>
Non-trailer on flatcar	103.1	105.8
<i>Percent change from the same month previous year</i>	<i>1.98</i>	<i>2.62</i>
Freight	103.1	105.5
<i>Percent change from the same month previous year</i>	<i>1.58</i>	<i>2.33</i>
Trailer on flatcar	103.2	103.5
<i>Percent change from the same month previous year</i>	<i>-0.39</i>	<i>0.29</i>

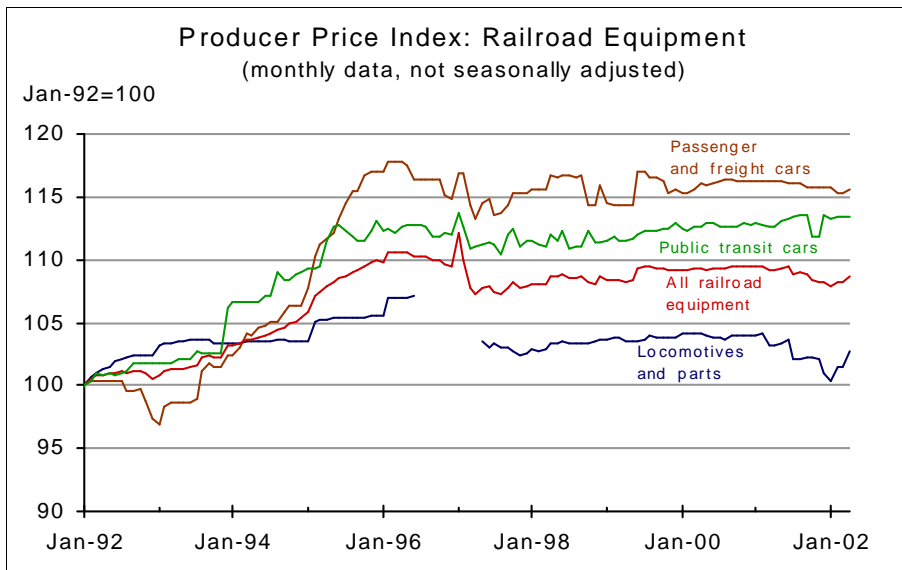
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from January 2002 to April 2002 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.



PRODUCER PRICES OF RAILROAD EQUIPMENT



Rail equipment represents a major cost to rail service providers.

Price Index (Jan-92=100)	Apr-01	Apr-02
Public transit cars, all rebuilt cars, and all car parts <i>Percent change from same month previous year</i>	112.7 0.08	113.4 0.60
Passenger and freight cars, new (excluding parts) <i>Percent change from same month previous year</i>	116.2 0.08	115.6 -0.46
Locomotives and parts <i>Percent change from same month previous year</i>	103.2 -0.85	102.7 -0.55
All railroad equipment <i>Percent change from same month previous year</i>	109.2 -0.08	108.8 -0.39

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from January 2002 to April 2002 are preliminary. The series presented on this page use an industry-based PPI, rather than the commodity-based PPI used on page 51, because the industry-based PPI was less affected by these events.

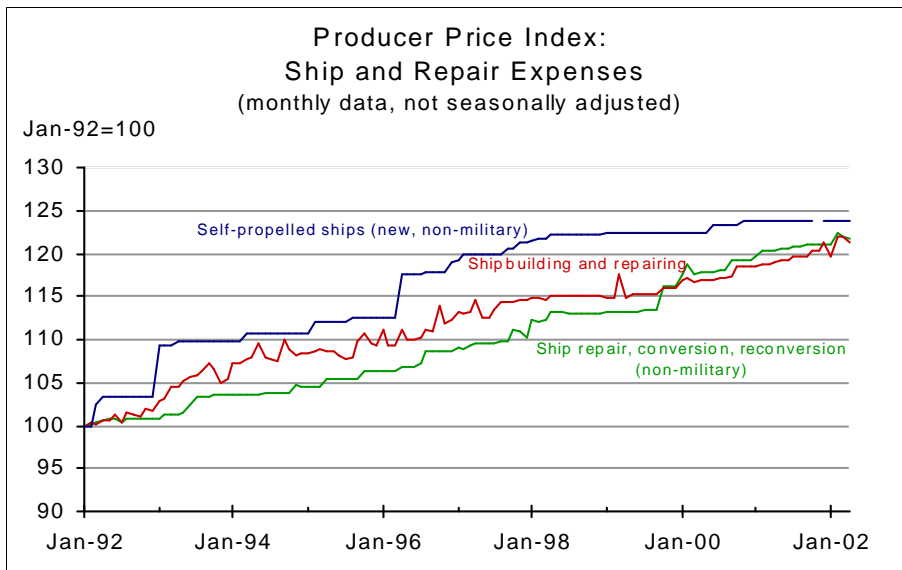
The base period of the original index is June 1984. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

Data for July, 1996 to April, 1997 for locomotives were affected by a strike at GM, and a revision of the BLS weighting scheme. Data for this period are anomalous, and are not depicted in the graph.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.



**PRODUCER PRICES OF EQUIPMENT AND REPAIR SERVICES FOR WATER TRANSPORTATION**



Shipbuilding and repair expenses are major costs in providing water transportation services.

Price Index (Jan-92=100)	Apr-01	Apr-02
Self-propelled ships (new, non-military)	123.9	123.9
<i>Percent change from same month previous year</i>	<i>1.26</i>	<i>0.00</i>
Ship building and repairing	118.9	121.2
<i>Percent change from same month previous year</i>	<i>1.83</i>	<i>1.94</i>
Ship repair, conversion, reconversion (non-military)	120.4	121.7
<i>Percent change from same month previous year</i>	<i>2.24</i>	<i>1.02</i>

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

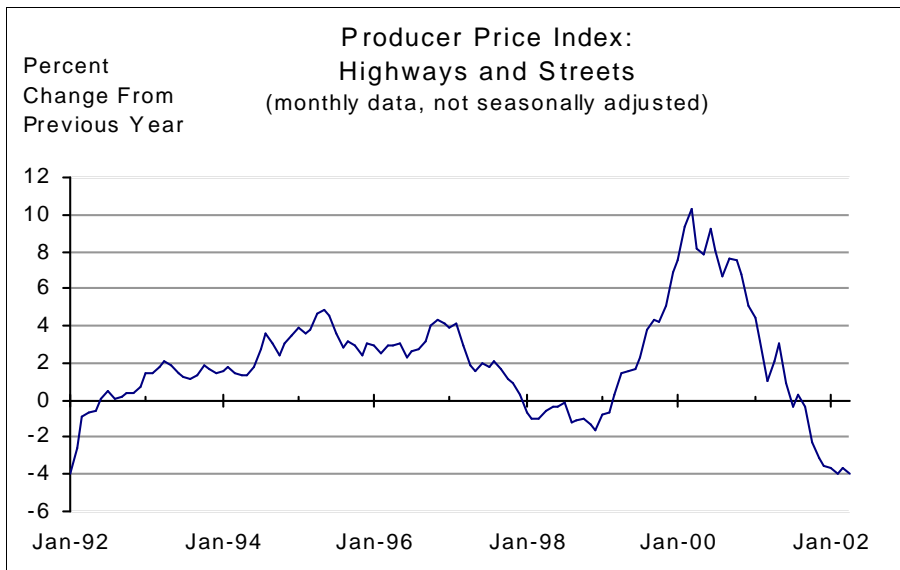
The base period of the original index is December 1985. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

Data from January 2002 to April 2002 are preliminary. Data for new, nonmilitary self-propelled ships was not available for November 2001.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.



**PRODUCER PRICES OF HIGHWAY AND STREET CONSTRUCTION**



Producer Price Index (Jan-92=100)	Apr-01	Apr-02
Highways and Streets	127.3	122.2
<i>Percent change from same month previous year</i>	2.14	-3.97

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data from January 2002 to April 2002 are preliminary. The base period of the original index is June 1986. January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

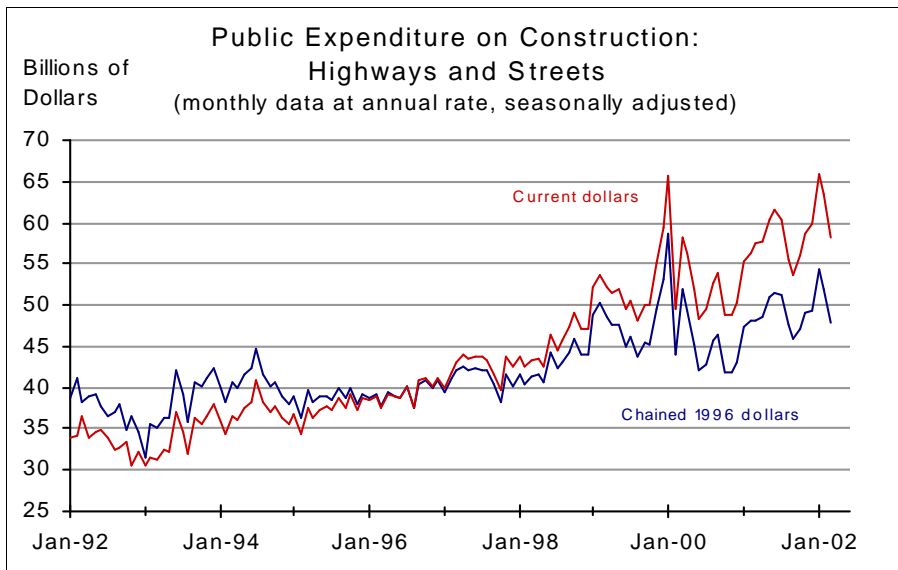
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/ppi/>.

Construction prices for highway and streets represent the price to government in providing a key component of transportation infrastructure.

Construction prices for highways and streets represent the price to government in providing a key component of transportation infrastructure.



**PUBLIC EXPENDITURES ON CONSTRUCTION OF HIGHWAYS AND STREETS**



Highways and streets are the largest component of public transportation infrastructure spending.

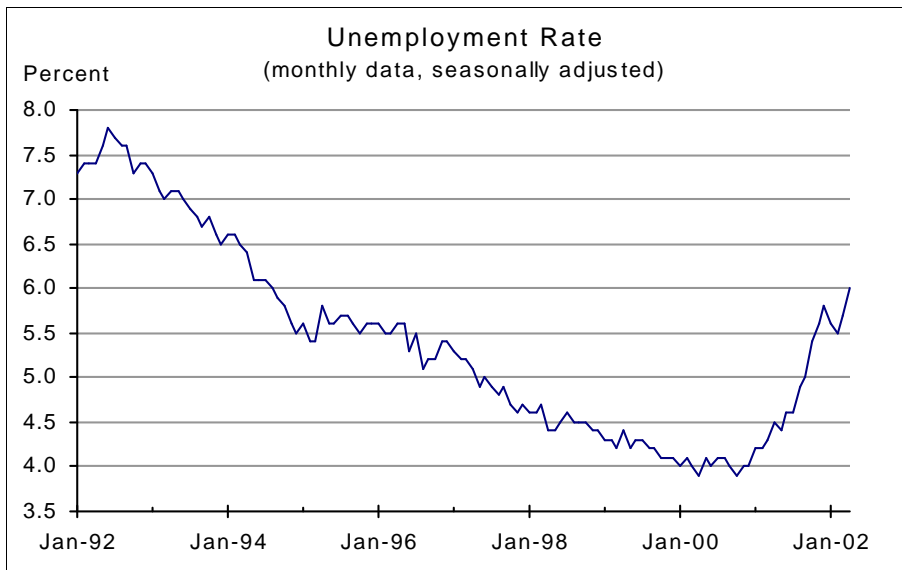
Public Expenditure on Construction	Feb-02	Mar-02
Highways and streets (billions of current dollars)	63.48	58.17
<i>Percent change from previous month</i>	-3.84	-8.35
Highways and streets (billions of chained 1996 dollars)	51.95	47.76
<i>Percent change from previous month</i>	-4.40	-8.05

NOTE: The data has changed due to new Census Bureau estimating methodologies. Questions can be directed to Mike Davis, 301-457-1605.

SOURCE: U.S. Department of Commerce, Bureau of the Census, available at: <http://www.census.gov/pub/const/C30/c30curtb.html>.



UNEMPLOYMENT RATE



Civilian Labor Force	Mar-02	Apr-02
Unemployment rate (percent)	5.7	6.0
Number of unemployed (thousands)	8,111	8,594

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Overall BLS Most Requested Series, available at: <http://stats.bls.gov/data/home.htm>.

The generally low unemployment rate in recent years suggests a tight labor market for industry in general, which includes transportation firms. It also suggests increased demand for transportation to and from work, as well as for leisure travel.



**UNEMPLOYMENT RATES FOR SELECTED METROPOLITAN AREAS AND CITIES, MARCH 2001 AND 2002  
(in percent)**

**Ranked by Metropolitan Area Unemployment, March 2002**

City	March 2001		March 2002	
	Metropolitan Area	City	Metropolitan Area	City
Portland, OR-WA CMSA	5.2	5.9	8.4	9.9
Chicago, IL-IN-WI CMSA	5.3	6.6	6.6	7.8
Seattle, WA CMSA	5.0	5.3	6.6	7.4
Cleveland, OH CMSA	4.1	8.0	6.6	12.7
Miami, FL CMSA	5.0	8.4	6.5	10.4
Dallas, TX CMSA	3.4	4.5	6.1	8.1
Fort Worth, TX		4.5		7.3
Detroit, MI CMSA	4.7	8.8	6.1	11.0
San Francisco, CA CMSA	2.8	3.6	6.0	6.6
Oakland, CA		4.8		9.7
San Jose, CA		2.6		8.6
Denver, CO CMSA	2.8	3.6	5.9	7.1
New York, NY-NJ-CT-PA CMSA	4.1	5.6	5.8	7.7
Los Angeles, CA CMSA	4.3	5.6	5.6	7.4
Long Beach, CA		4.6		6.1
Pittsburgh, PA MSA	4.6	4.0	5.6	4.9
Philadelphia, PA-NJ-DE-MD CMSA	4.2	6.1	5.5	7.2
St. Louis, MO-IL MSA	4.5	7.6	5.3	8.6
Phoenix, AZ MSA	3.0	3.2	5.2	5.7
Houston, TX CMSA	3.7	4.4	5.1	6.1
Boston, MA-NH-ME-CT CMSA	3.3	3.4	4.7	4.9
Atlanta, GA MSA	3.0	4.9	4.7	7.6
Washington, DC-MD-VA-WV CMSA	3.0	6.2	4.4	6.4
Baltimore, MD		7.2		9.2
Minneapolis, MN-WI MSA	3.0	3.2	4.3	4.6
Tampa, FL MSA	3.1	3.7	4.1	4.7
San Diego, CA MSA	2.6	2.7	3.8	3.8

NOTES: Cities with population greater than 400,000 that are part of the CMSA, but not the city listed as the main city, have unemployment listed below that of the main city.

Definitions of Metropolitan Statistical Area (MSA) and Consolidated Metropolitan Statistical Area (CMSA) are available on the Census Bureau web site at: <http://www.census.gov/population/www/estimates/aboutmetro.html>.

fifty states, the District of Columbia, the Los Angeles-Long Beach PMSA, and New York City were revised in order to reflect re-estimations according to the Current Population Survey. Data back to 1999 are affected; more information is available at: <http://www.bls.gov/lau/launews1.htm>.

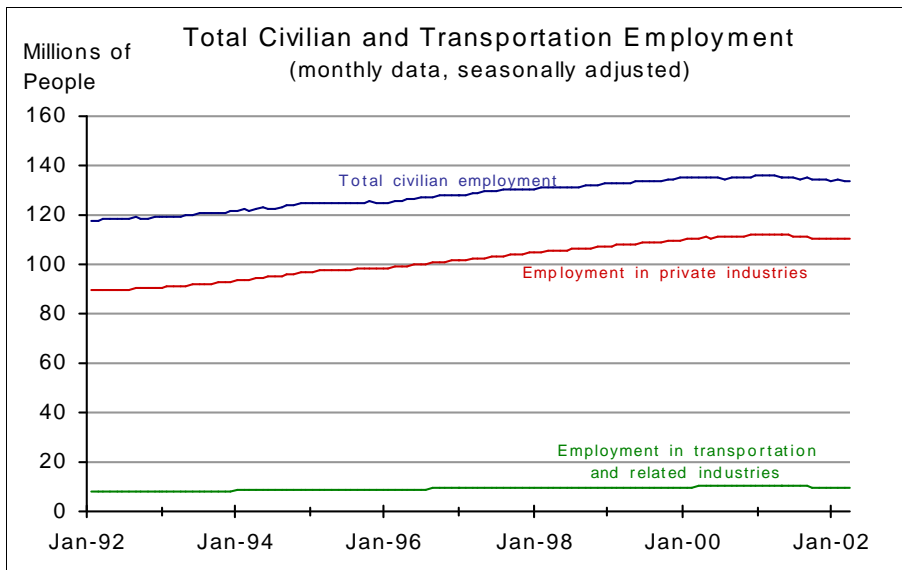
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/data/home.htm>.

In the most recent update of local unemployment statistics, the labor force estimates for all



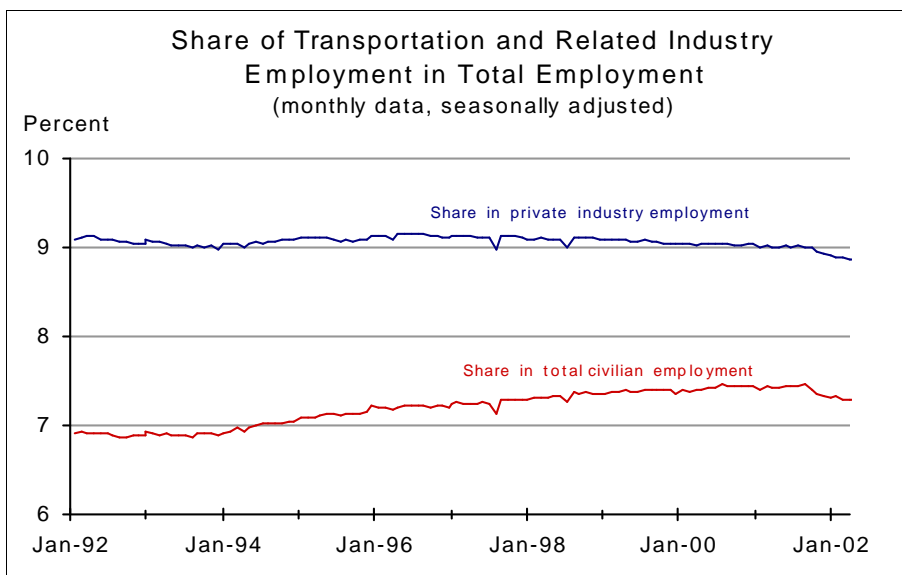


TRANSPORTATION EMPLOYMENT



Employment (thousands)	Mar-02	Apr-02
Total civilian employment	133,894	133,976
<i>Percent change from previous month</i>	-0.32	0.06
Employment in private industries	110,068	110,109
<i>Percent change from previous month</i>	-0.05	0.04
Employment in transport and related industries	9,759	9,772
<i>Percent change from previous month</i>	-0.31	0.13

Share of Transportation and Related Industry Employment (percent)	Mar-02	Apr-02
As share of private industry employment	7.29	7.29
<i>Change from previous month</i>	0.01	0.07
As share of total civilian employment	8.87	8.87
<i>Change from previous month</i>	-0.26	0.10



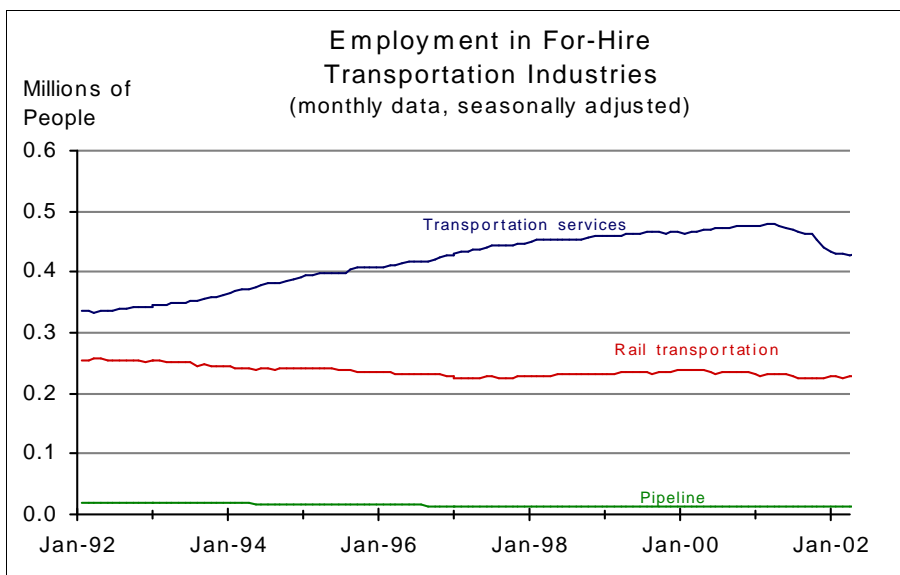
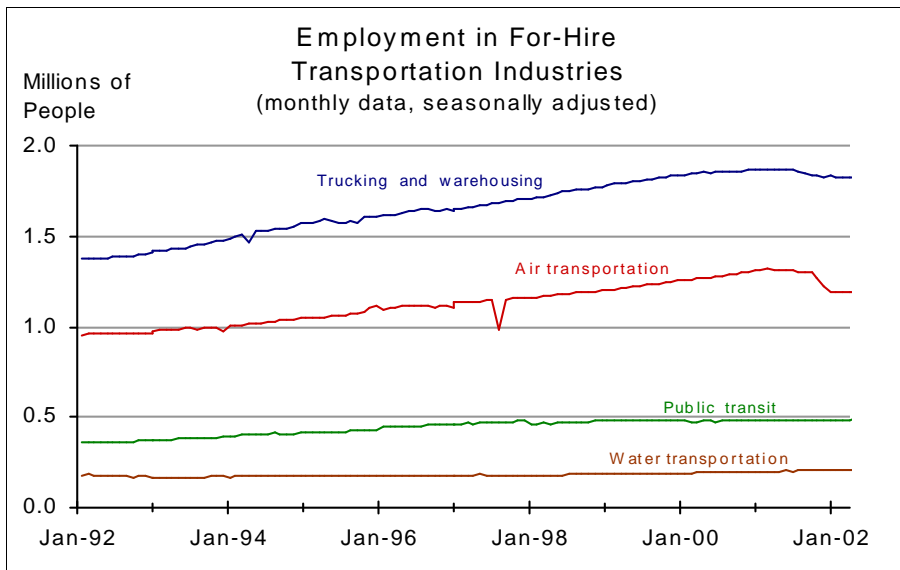
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Status of Civilian Population by Sex and Age ("A" Tables) and Employees on Nonfarm Payrolls by Industry ("B" Tables), available at: <http://www.bls.gov/cps/home.htm>.

One broad measure of transportation employment is employment in transportation-related industries, including for-hire transportation (railroad, trucking, air, water, pipeline, transit, and transportation services) and industries that support transportation directly (e.g., motor vehicle and equipment manufacturing, aircraft manufacturing, auto dealers and service stations, and auto repair and parking services).

Transportation-related industry employment does not include transportation occupations in nontransportation industries, such as truck drivers working for wholesale and retail stores. When employment in transportation occupations in nontransportation industries is included, total transportation-related employment accounts for about 13 percent of U.S. civilian jobs.



FOR-HIRE TRANSPORTATION EMPLOYMENT



Employment in For-Hire Transportation Industries (thousands)	Mar-02	Apr-02
Trucking and warehousing	1,826	1,830
<i>Percent change from previous month</i>	<i>-0.05</i>	<i>0.22</i>
Air transportation	1,187	1,192
<i>Percent change from previous month</i>	<i>-0.67</i>	<i>0.42</i>
Public transit	484	489
<i>Percent change from previous month</i>	<i>0.00</i>	<i>1.03</i>
Transportation services	428	429
<i>Percent change from previous month</i>	<i>-0.47</i>	<i>0.23</i>
Rail transportation	227	227
<i>Percent change from previous month</i>	<i>0.44</i>	<i>0.00</i>
Water transportation	203	206
<i>Percent change from previous month</i>	<i>-0.98</i>	<i>1.48</i>
Pipeline	14	14
<i>Percent change from previous month</i>	<i>0.00</i>	<i>0.00</i>

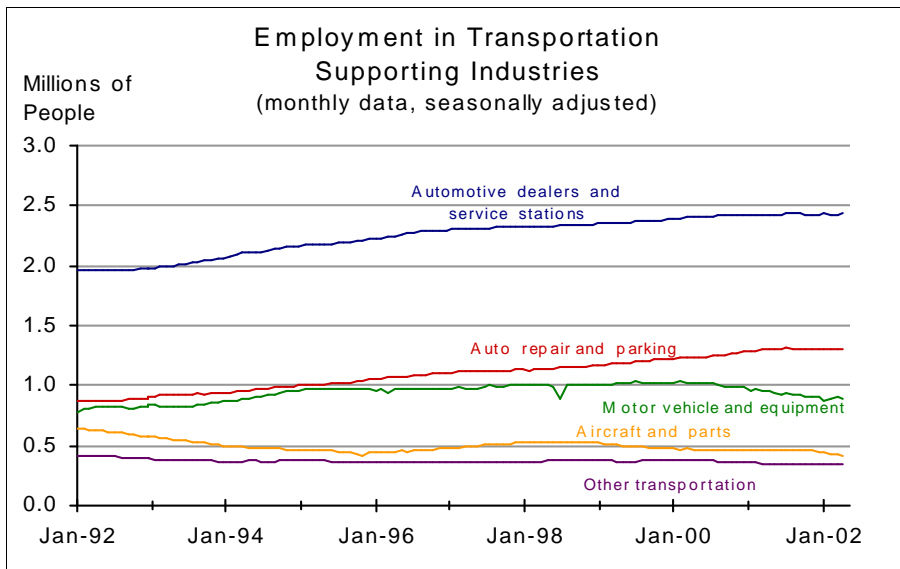
NOTE: For-hire transportation includes establishments providing passenger and freight transportation and related services on a fee basis to the general public or other business enterprises. For-hire does not include in-house transportation establishments within nontransportation enterprises, which provide transportation services for the enterprises' own use. Transportation services includes establishments furnishing services incidental to transportation, such as forwarding and packing services, and the arrangement of passenger and freight transportation.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Status of Civilian Population by Sex and Age ("A" Tables) and Employees on Nonfarm Payrolls by Industry ("B" Tables), available at: <http://www.bls.gov/cps/home.htm>.

Employment in for-hire transportation industries accounted for about 45 percent of total transportation-related industry employment in recent years. The trucking and warehousing industry and air transportation together accounted for about 70 percent of the employment in for-hire transportation in the last few years.



TRANSPORTATION SUPPORTING INDUSTRY EMPLOYMENT



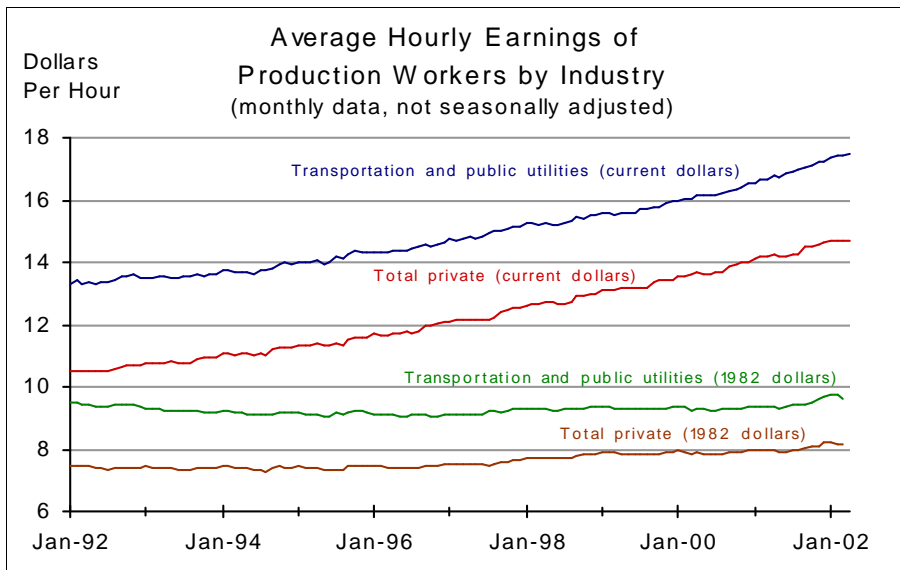
Employment in Transportation Supporting Industries (thousands)	Mar-02	Apr-02
Auto dealers and service stations	2,427	2,433
<i>Percent change from previous month</i>	<i>-0.12</i>	<i>0.25</i>
Auto repair and parking	1,302	1,301
<i>Percent change from previous month</i>	<i>-0.38</i>	<i>-0.08</i>
Motor vehicle and equipment manufacturing	899	891
<i>Percent change from previous month</i>	<i>0.22</i>	<i>-0.89</i>
Aircraft and parts manufacturing	423	419
<i>Percent change from previous month</i>	<i>-2.08</i>	<i>-0.95</i>
Other transportation equipment manufacturing	339	341
<i>Percent change from previous month</i>	<i>-0.88</i>	<i>0.59</i>

Employment in transportation supporting industries accounts for over half of total transportation-related industry employment. Automotive dealers and service stations employ the most people among transportation supporting industries. Employment of automotive dealers and service stations increased 0.25 percent in April 2002. At the same time, employment of motor vehicle and equipment manufacturing decreased 0.89 percent.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Status of Civilian Population by Sex and Age ("A" Tables) and Employees on Nonfarm Payrolls by Industry ("B" Tables), available at: <http://www.bls.gov/cps/home.htm>.



**HOURLY EARNINGS OF PRODUCTION WORKERS IN TRANSPORTATION INDUSTRIES**



Hourly earnings are the actual return to the worker for an hour worked. They are on a "gross" basis because they include not only basic hourly and incentive wage rates, but also such variable factors as premium pay for overtime and late-shift work. However, average hourly earnings are not average hourly labor costs to employers because they do not include irregular bonuses, retroactive items, payments of various welfare benefits, payroll taxes paid by employers, and earnings for those employees not covered under production worker, construction worker, or non-supervisory employee definitions.

Changes in average hourly earnings indicate the changes in the actual return to production workers. They also reflect shifts in the number of employees between relatively high-paid and low-paid work.

Average Hourly Earnings	Mar-01	Mar-02
Transportation and public utilities (current dollars)	16.65	17.40
<i>Percent change from same month previous year</i>	3.93	4.50
Total private (current dollars)	14.19	14.69
<i>Percent change from same month previous year</i>	4.42	3.52
Transportation and public utilities (1982 dollars)	9.35	9.65
<i>Percent change from same month previous year</i>	1.19	3.21
Total private (1982 dollars)	7.97	8.15
<i>Percent change from same month previous year</i>	1.53	2.26

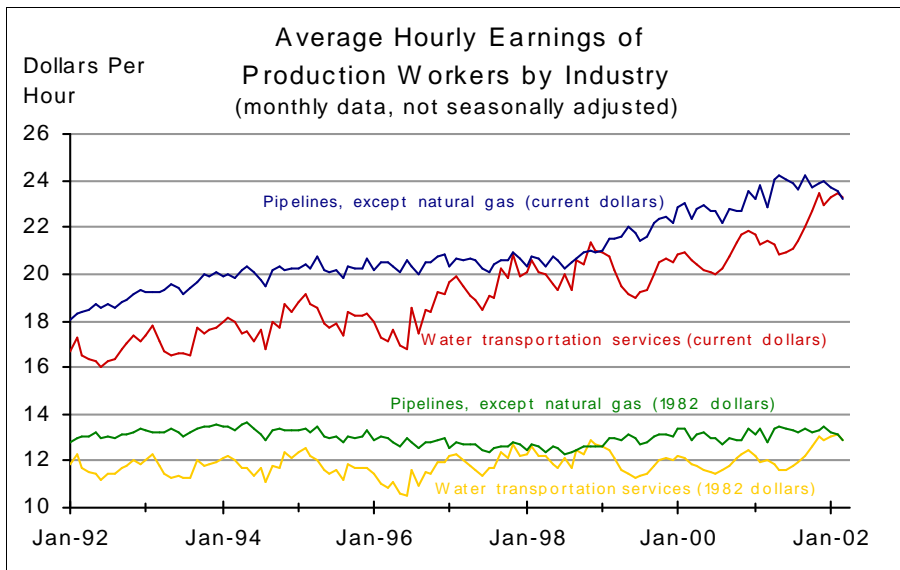
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

In the transportation industry, production workers include vehicle operators, vehicle maintenance and repair workers, transportation facility operators, and workers directly engaged in providing passenger and freight transportation services.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at <http://www.bls.gov/ncs/ect/>.



**HOURLY EARNINGS OF PIPELINE AND WATER TRANSPORTATION WORKERS**



Transportation industry hourly earnings are the actual return to production workers in transportation industries for an hour worked. Changes in average transportation industry hourly earnings may be caused by either changes in production workers' hourly wage rates or shifts in the number of workers between relatively high-paid occupations and low-paid occupations.

Average Hourly Earnings	Mar-01	Mar-02
Water transportation services (current dollars)	21.39	23.28
<i>Percent change from same month previous year</i>	<i>4.09</i>	<i>8.84</i>
Pipelines, except natural gas (current dollars)	22.85	23.21
<i>Percent change from same month previous year</i>	<i>2.24</i>	<i>1.58</i>
Water transportation services (1982 dollars)	12.01	12.91
<i>Percent change from same month previous year</i>	<i>1.34</i>	<i>7.49</i>
Pipelines, except natural gas (1982 dollars)	12.83	12.87
<i>Percent change from same month previous year</i>	<i>-0.46</i>	<i>0.32</i>

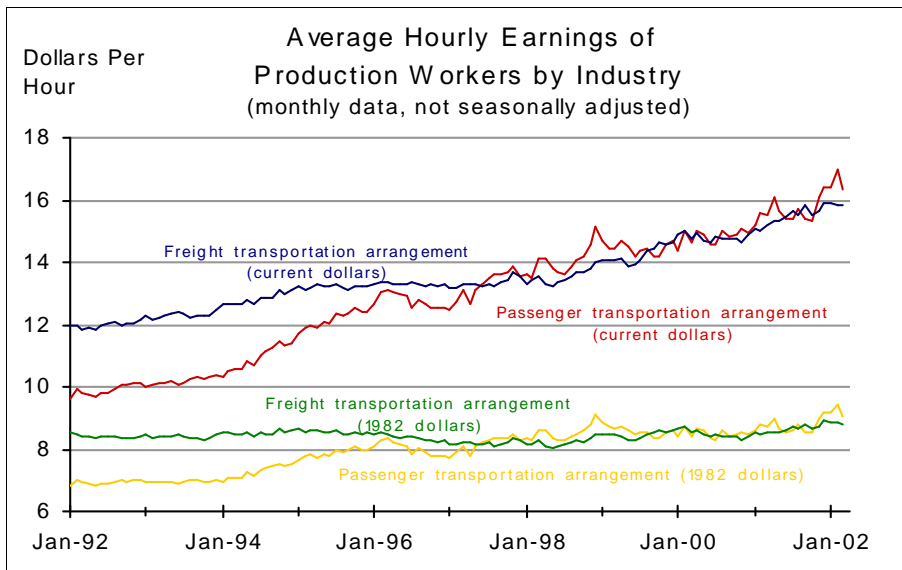
NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

In the transportation industry, production workers include vehicle operators, vehicle maintenance and repair workers, transportation facility operators, and workers directly engaged in providing passenger and freight transportation services.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at <http://www.bls.gov/ncs/ect/>.



**HOURLY EARNINGS OF WORKERS IN TRANSPORTATION ARRANGEMENT SERVICES**



Between March 2001 and March 2002, the average hourly earnings, measured in current dollars, increased in both passenger transportation arrangement and freight transportation arrangement.

Average Hourly Earnings	Mar-01	Mar-02
Passenger transportation arrangement (current dollars)	15.52	16.34
<i>Percent change from same month previous year</i>	6.08	5.28
Freight transportation arrangement (current dollars)	15.18	15.81
<i>Percent change from same month previous year</i>	2.85	4.15
Passenger transportation arrangement (1982 dollars)	8.72	9.06
<i>Percent change from same month previous year</i>	3.28	3.98
Freight transportation arrangement (1982 dollars)	8.52	8.77
<i>Percent change from same month previous year</i>	0.13	2.86

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

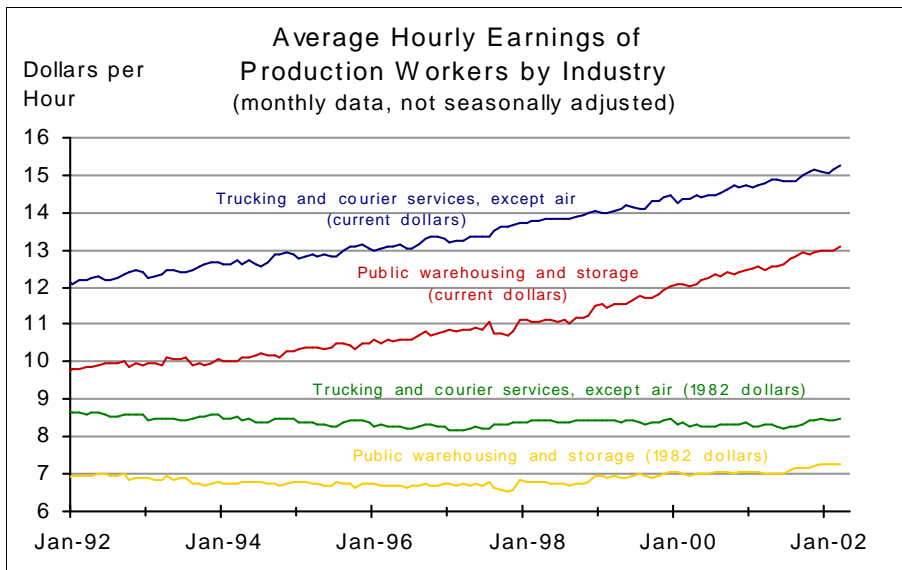
Passenger transportation arrangement includes travel agencies, tour operators, and other establishments primarily engaged in arranging passenger transportation, such as ticket offices, not operated by transportation companies, for railroads, buses, ships, and airlines.

Freight transportation arrangement includes establishments primarily engaged in furnishing information and acting as agents in arranging transportation for freight and cargo, such as shipping agents, freight consolidators, shipping document preparation and tariff consultants.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at <http://www.bls.gov/ncs/ect/>.



**HOURLY EARNINGS OF WORKERS IN TRUCKING AND PUBLIC WAREHOUSING SERVICES**



Measured in current dollars, the average hourly earnings of workers in trucking and courier services and workers in warehousing and storage services have increased in recent years. However, taking the effect of inflation into account, real hourly earnings of workers in the two industries have remained at about the same level since the early Nineties.

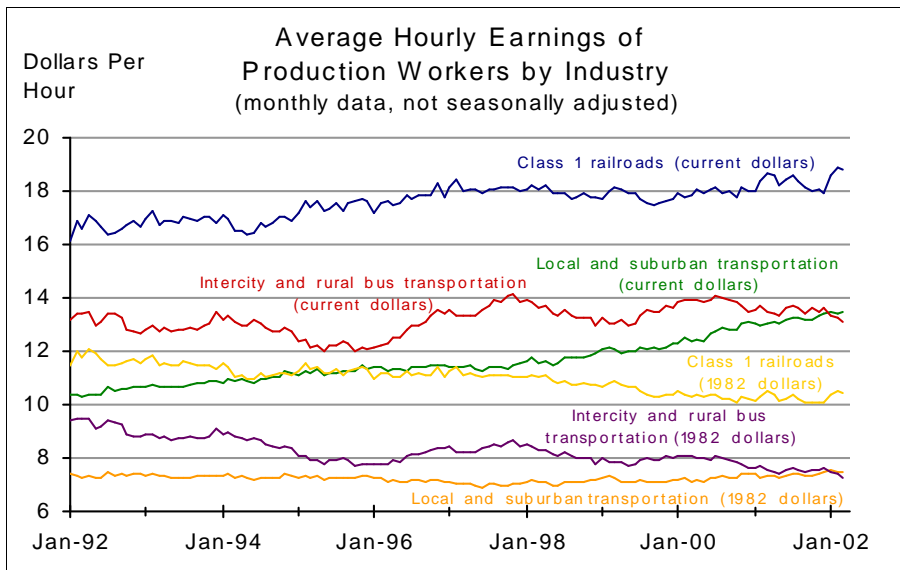
Average Hourly Earnings	Mar-01	Mar-02
Trucking and courier services, except air (current dollars)	14.79	15.28
<i>Percent change from same month previous year</i>	2.85	3.31
Public warehousing and storage (current dollars)	12.48	13.09
<i>Percent change from same month previous year</i>	3.65	4.89
Trucking and courier services, except air (1982 dollars)	8.31	8.47
<i>Percent change from same month previous year</i>	0.14	2.03
Public warehousing and storage (1982 dollars)	7.01	7.26
<i>Percent change from same month previous year</i>	0.92	3.59

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at <http://www.bls.gov/ncs/ect/>.



HOURLY EARNINGS OF RAIL, BUS, AND TRANSIT WORKERS



Transportation industry hourly earnings are the actual return to production workers in transportation industries for an hour worked. Changes in average transportation industry hourly earnings may be caused by either changes in production workers' hourly wage rates or shifts in the number of workers between relatively high-paid occupations and low-paid occupations.

Between March 2001 and March 2002, the average hourly earnings in Class I Railroads increased 0.91 percent, while average hourly earnings in local and suburban transportation services decreased 2.89 percent. In contrast, the average hourly earnings in intercity and rural bus transportation services increased 3.69 percent.

Average Hourly Earnings	Mar-01	Mar-02
Class I Railroads (current dollars)	18.67	18.84
<i>Percent change from same month previous year</i>	<i>4.77</i>	<i>0.91</i>
Local and suburban transportation (current dollars)	13.50	13.11
<i>Percent change from same month previous year</i>	<i>-3.16</i>	<i>-2.89</i>
Intercity and rural bus transportation (current dollars)	13.01	13.49
<i>Percent change from same month previous year</i>	<i>5.26</i>	<i>3.69</i>
Class I Railroads (1982 dollars)	10.48	10.45
<i>Percent change from same month previous year</i>	<i>2.01</i>	<i>-0.34</i>
Local and suburban transportation (1982 dollars)	7.58	7.27
<i>Percent change from same month previous year</i>	<i>-5.71</i>	<i>-4.09</i>
Intercity and rural bus transportation (1982 dollars)	7.31	7.48
<i>Percent change from same month previous year</i>	<i>2.48</i>	<i>2.40</i>

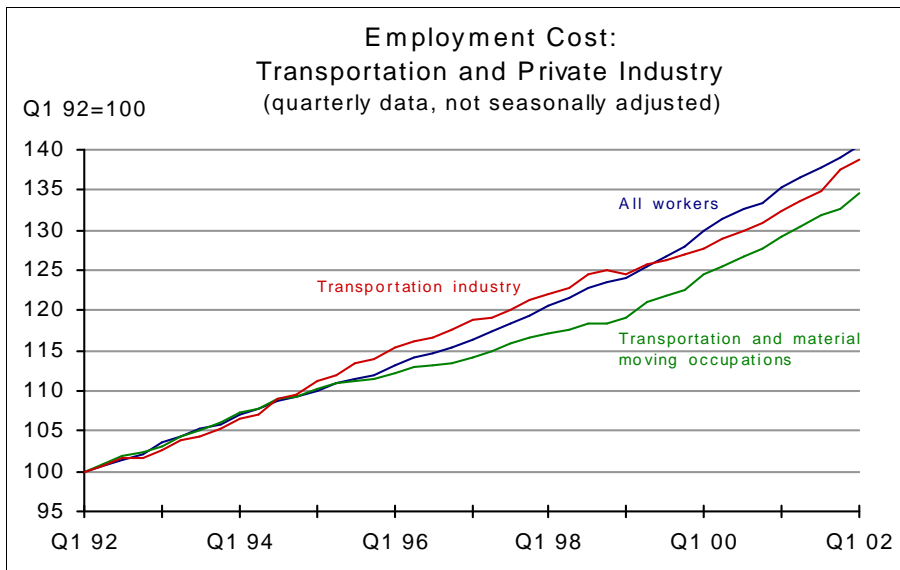
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, National Employment, Hours, and Earnings, available at <http://www.bls.gov/ncs/ect/>.





TRANSPORTATION AND PRIVATE INDUSTRY EMPLOYMENT COSTS



The Employment Cost Index (ECI) measures changes in the cost of labor to employers. Since the ECI is a fixed-employment-weighted index, it is free from the influence of employment shifts among occupations and industries.

Over the last decade, the rise of employment cost in the transportation industry was slower than in private industry as a whole and the rise of employment cost of transportation occupations was slower than the average of all workers. However, between the first quarter of 2001 and first quarter of 2002, employment cost of transportation occupations increased 4.88 percent, a slightly higher rate than the 3.86 percent for all workers. During the same period, the employment cost of transportation industry continued to increase at a rate faster than that of all workers.

Employment Cost: Total Compensation (Index)	Q1 01	Q1 02
All workers (private industry)	135.28	140.50
<i>Percent change from same quarter previous year</i>	4.22	3.86
Transportation industry (private)	129.17	134.69
<i>Percent change from same quarter previous year</i>	3.71	4.28
Transportation occupations (private)	132.30	138.76
<i>Percent change from same quarter previous year</i>	3.56	4.88

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

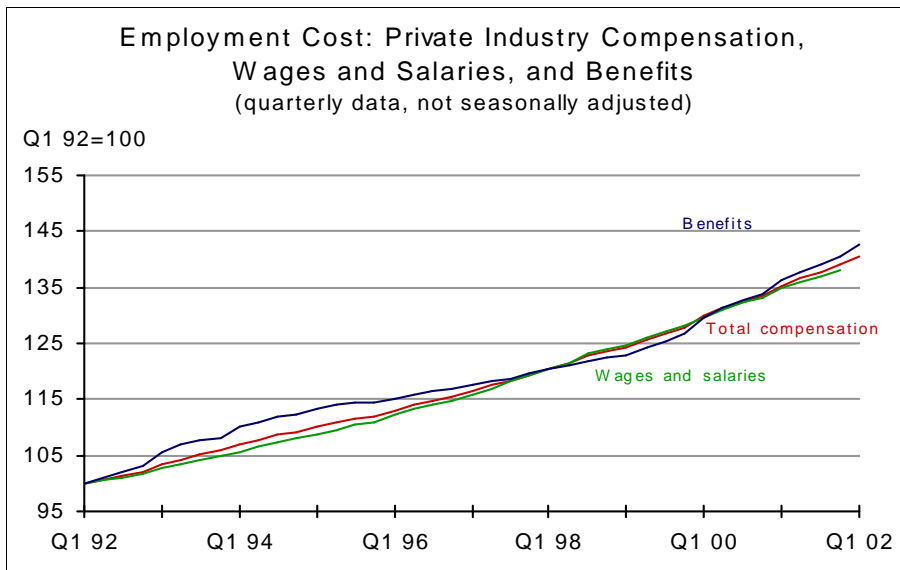
Employment cost to employers is the total compensation cost incurred by employers in obtaining labor inputs. Compensation costs include wages, salaries, and employer costs for employee benefits. Employment costs of transportation industry is the weighted average of the employment costs of all occupations working in transportation industries, including non-transportation industries. Employment costs of transportation occupations is the weighted average of the employment costs of all transportation occupations, including those working in non-transportation industries, such as truck drivers working for retail stores.

The base period of the original index is Q2 1989. The first quarter of 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of Q1 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, Public Query Data, available at <http://www.bls.gov/ncs/ect/>.



**BREAKDOWN OF EMPLOYMENT COSTS FOR PRIVATE INDUSTRY**



Employment cost can be broken down into two major components, wages and salaries, and benefits. Benefit costs increased faster than wages and salaries for most industries over the last decade. Between the first quarter of 2001 and the first quarter of 2002, the average benefit costs of all workers in private industry rose 4.83 percent, while their average wage and salary rose 3.55 percent.

All Workers (Index)	Q1 01	Q1 02
Benefits (private industries)	136.17	142.75
<i>Percent change from same quarter previous year</i>	<i>5.01</i>	<i>4.83</i>
Total compensation (private industries)	135.28	140.50
<i>Percent change from same quarter previous year</i>	<i>4.22</i>	<i>3.86</i>
Wages and salaries (private industries)	134.72	139.50
<i>Percent change from same quarter previous year</i>	<i>3.82</i>	<i>3.55</i>

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

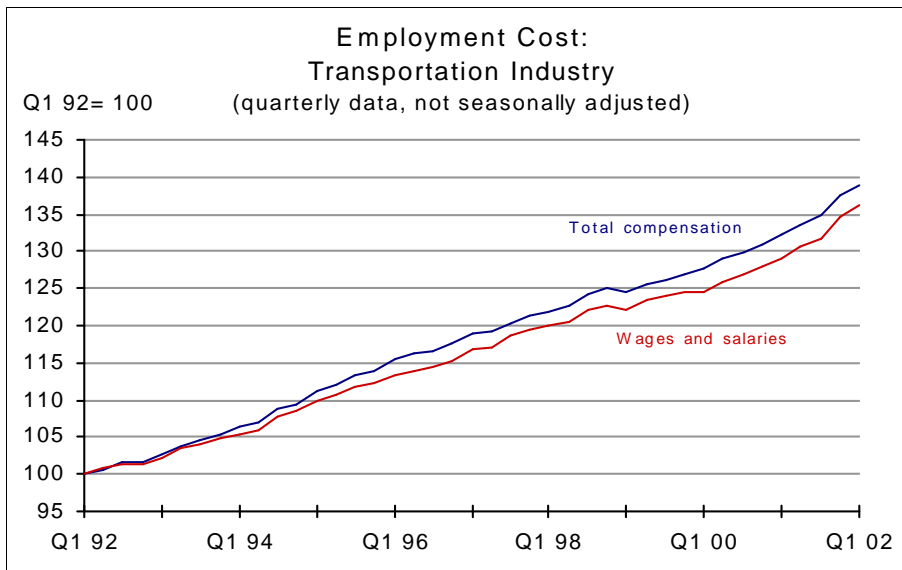
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SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, Public Query Data, available at <http://www.bls.gov/ncs/ect/>.



**BREAKDOWN OF EMPLOYMENT COSTS FOR TRANSPORTATION INDUSTRIES**



Labor cost is a significant portion of the production cost of every industry. This is particularly true for the transportation industries, which are much more labor intensive than industry as a whole. Changes in labor cost directly affect the price of transportation services, the profit margin, and competitiveness of the transportation industries.

As total compensation cost increases, the balance between wages and salaries and benefits also changes over time. These changes reflect changes in economic environment and labor management practices of employers.

Transportation Industry (Index)	Q1 01	Q1 02
Total compensation (private)	132.30	138.76
<i>Percent change from same quarter previous year</i>	3.56	4.88
Wages and salaries (private)	129.09	136.10
<i>Percent change from same quarter previous year</i>	3.63	5.44

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

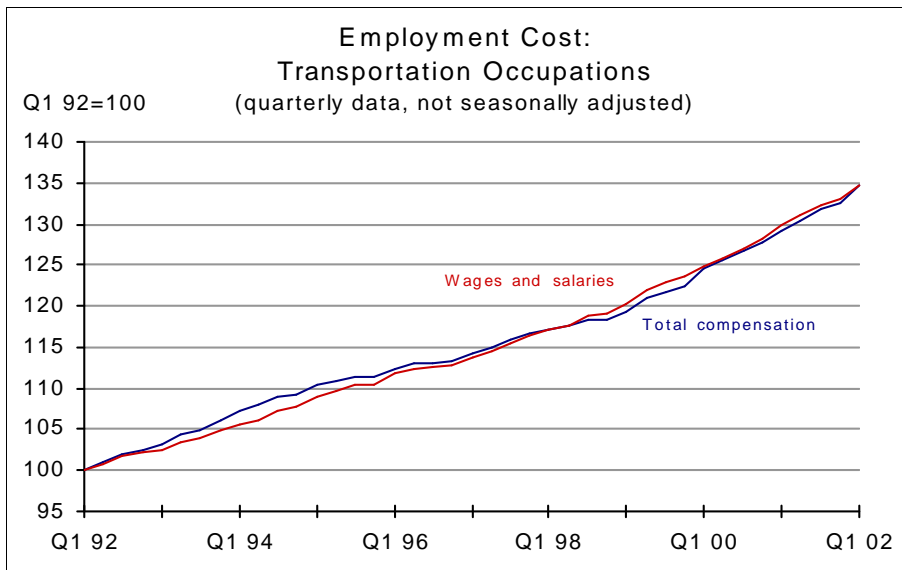
Employment costs of transportation industry is the weighted average of the employment costs of all occupations working in transportation industries, including nontransportation industries. Employment costs of transportation occupations is the weighted average of the employment costs of all transportation occupations, including those working in non-transportation industries, such as truck drivers working for retail stores.

The base period of the original index is Q2 1989. The first quarter of 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of Q1 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, available at <http://www.bls.gov/ncs/ect/>.



**BREAKDOWN OF EMPLOYMENT COSTS IN TRANSPORTATION OCCUPATIONS**



The increased share of wage and salary in total employment cost during the last year was also observed among transportation occupations. Between the first quarter of 2001 and the first quarter of 2002, total compensation of transportation occupations increased 3.80 percent, while wages and salaries of transportation occupations increased 4.28 percent, indicating benefits increased at a slightly slower rate during the same period.

Transportation Occupations (Index)	Q1 01	Q1 02
Wages and salaries (private)	129.17	134.69
<i>Percent change from same quarter previous year</i>	3.71	4.28
Total compensation (private)	129.89	134.82
<i>Percent change from same quarter previous year</i>	4.03	3.80

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

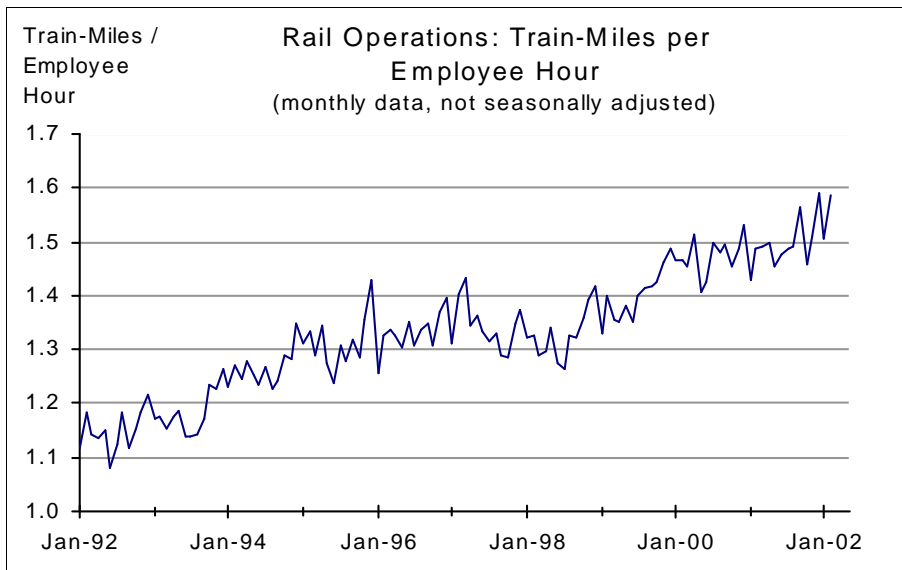
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SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Employment Cost Trends, available at <http://www.bls.gov/ncs/ect/>.



**RAILROAD LABOR PRODUCTIVITY**



Rail Operations	Feb-01	Feb-02
Train-Miles/Employee hour	1.49	1.59
<i>Percent change from same month previous year</i>	1.73	6.48

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

This indicator of rail productivity differs from that shown in the previous page. The data sources are different, and this measure is based on train-miles while that on the previous page is based on ton-miles.

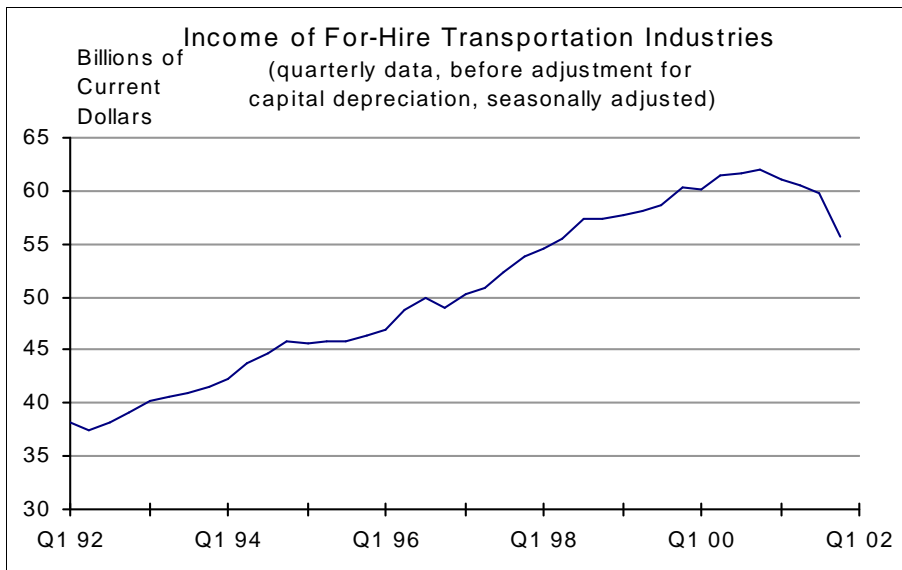
SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Safety Analysis, available at: <http://safetydata.fra.dot.gov/officeofsafety/>.

Train-miles per employee hour are used as a measure for labor productivity in rail-road transportation.

Total train miles include yard-switching miles.



TRANSPORTATION INDUSTRY PROFIT AND INCOME

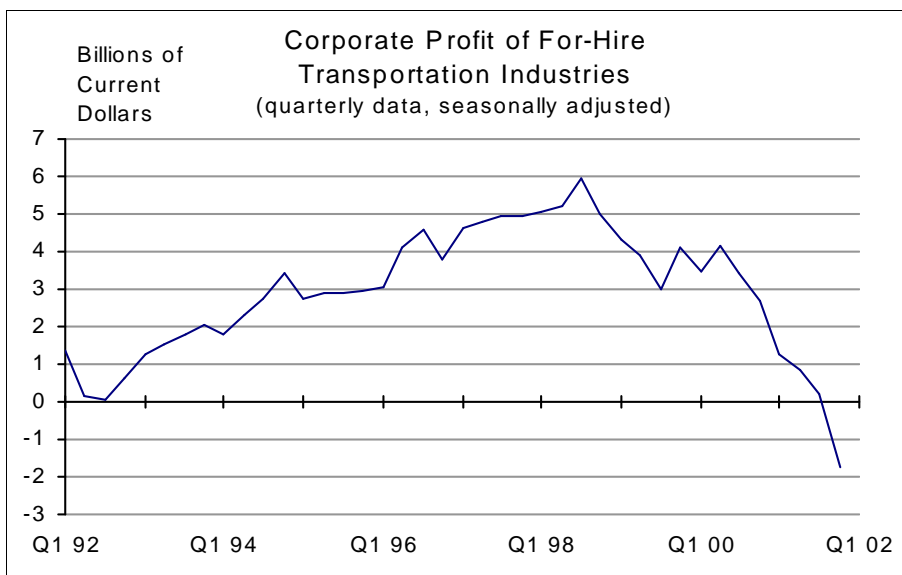


For-Hire Transportation Industries	Q3 01	Q4 01
Income (billions of dollars)	59.73	55.70
Percent change from previous quarter	-1.28	-6.74
Profit (billions of dollars)	0.23	-1.73
Percent change from previous quarter	-72.73	(--)

NOTES: For-hire transportation includes establishments providing passenger and freight transportation and related services on a fee basis to the general public or other business enterprises. For-hire does not include in-house transportation establishments within non-transportation enterprises, which provide transportation services for the enterprises' own use.

Income of a for-hire transportation industry is the difference between its revenue and the cost of its intermediate inputs (or goods and services consumed in providing transportation services). If an industry has no operations in foreign countries and its income comes entirely from its production activities (e.g., in contrast to financial activities), its income would be the same as its contribution to Gross Domestic Product.

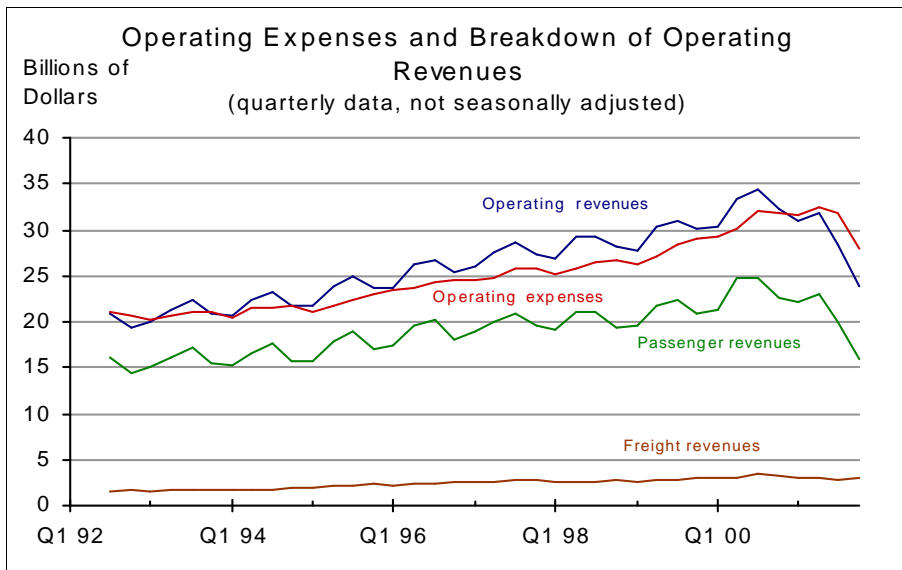
SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Tables 6.1C and 6.16C; Mar. 28, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S6>; based on *Survey of Current Business*.



Income and profit are two measures of an industry's performance. Income of transportation industries has declined 10.1 percent since the first quarter of 2001. This decline has caused transportation industries' profits to be negative (a loss) for the first time since the third quarter of 1991. In the fourth quarter of 2001, the profit of transportation industries reached its lowest ever margin in current terms.



**AIR CARRIER REAL OPERATING EXPENSES AND BREAKDOWN OF OPERATING REVENUES**



Air carriers' major source of revenue is passenger fares. Freight revenue has increased in importance for large air carriers in recent years, but is much smaller than passenger revenue. Air carrier asset returns are highly seasonal due to the seasonality of passenger revenues.

Billions dollars	Q4 00	Q4 01
Operating revenues	32.30	23.79
<i>Percent change from same quarter previous year</i>	7.13	-26.35
Operating expenses	31.89	28.04
<i>Percent change from same quarter previous year</i>	10.13	-12.06
Passenger revenues	22.69	15.98
<i>Percent change from same quarter previous year</i>	9.28	-29.56
Freight revenues	3.29	3.03
<i>Percent change from same quarter previous year</i>	6.19	-7.98

NOTES: Data for the last year are preliminary.

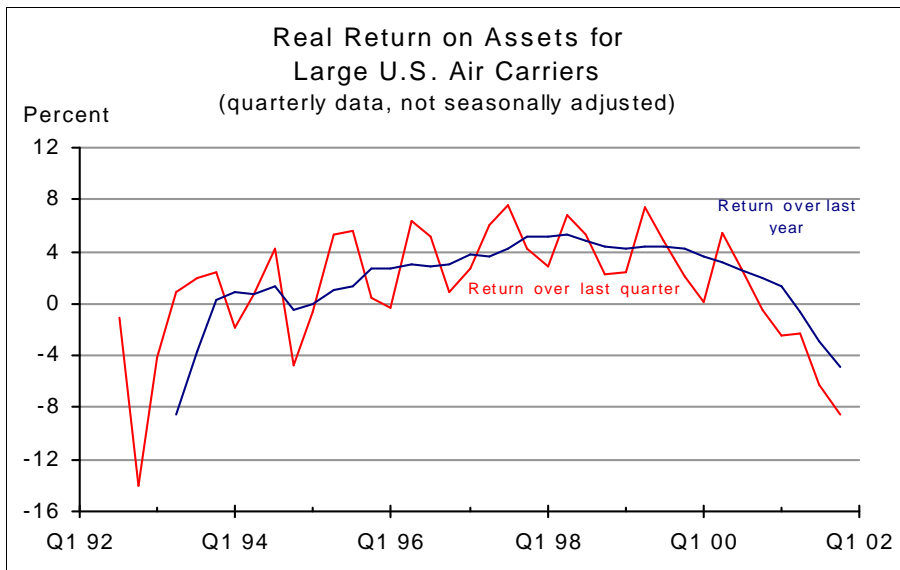
The current value is compared to the value from the same period in the previous year to account for seasonality.

The data include profits of both foreign and domestic operations for U.S. air carriers with more than 20 million dollars in annual operating revenue.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, Air Carrier Financial Statistics data; and U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/cpi/>.



**AIR CARRIER REAL RETURN ON ASSETS**



Return on Assets for Large U.S. Air Carriers	Q4 00	Q4 01
Return over last quarter	-0.42	-8.55
<i>Percent change from same quarter previous year</i>	-2.59	-8.13
Return over last year	1.96	-4.96
<i>Percent change from same quarter previous year</i>	-2.29	-6.92

NOTES: Data for the last year are preliminary.

The current value is compared to the value from the same period in the previous year to account for seasonality.

Return on assets is the ratio of net income to the average of beginning- and end-of-period assets for large air carriers. When net income and assets are deflated using the average CPI, the nominal rate of return is converted into a real rate of return.

The data include profits of both foreign and domestic operations for U.S. air carriers with more than 20 million dollars in annual operating revenue.

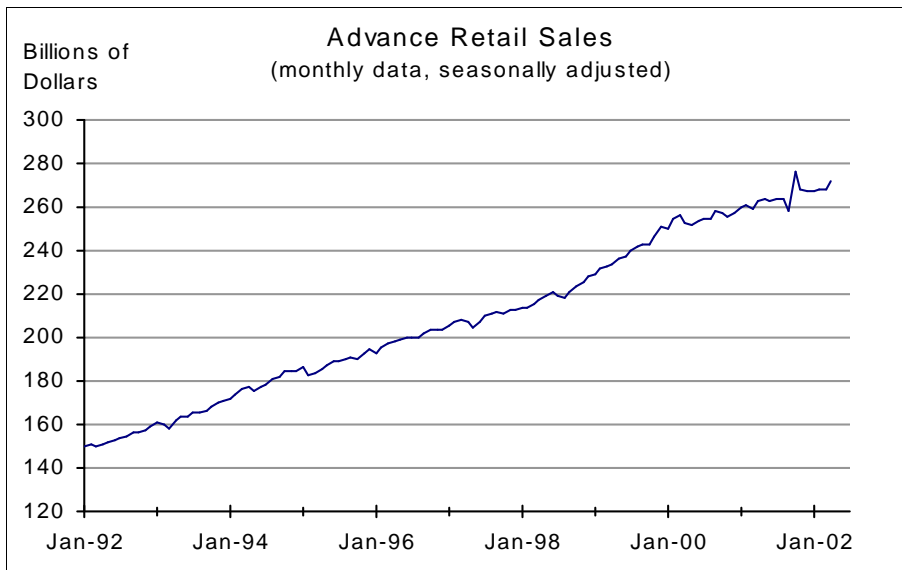
SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, Air Carrier Financial Statistics data; and U.S. Department of Labor, Bureau of Labor Statistics, available at: <http://www.bls.gov/cpi/>.

Return on assets is a measure of the profitability of investment adjusted for inflation. Improving profits depends on a combination of holding down costs while growing revenue.





RETAIL SALES AND TRANSPORTATION DEMAND



Advance Retail Sales	Mar-02	Apr-02
Advance retail sales (billions of dollars)	268,566	272,057
Percent change from previous month	0.06	1.30

NOTE: Advance retail sales are advance estimates of monthly retail trade that are produced by the Bureau of the Census. The advance estimates are based on a small subsample of the Census Bureau's full retail sales sample.

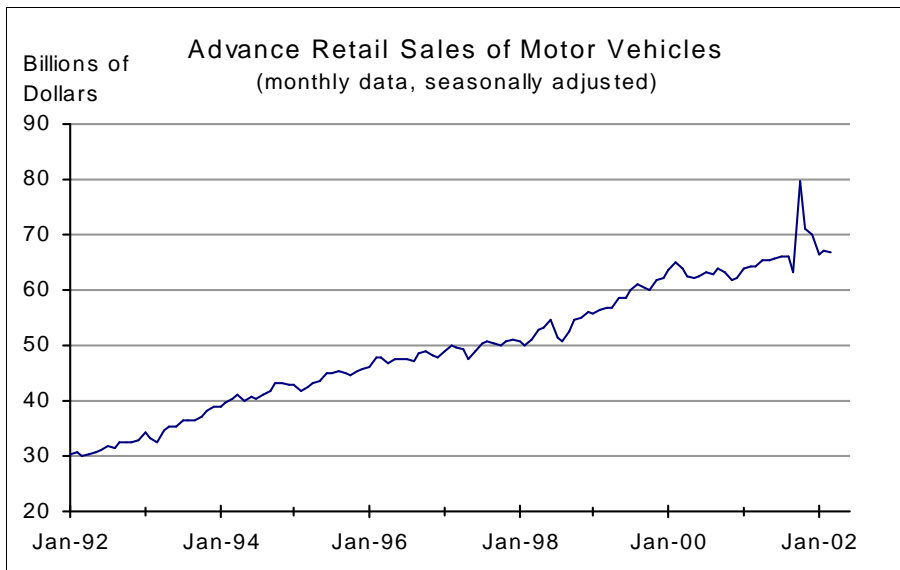
In October 2001, advance retail sales reached \$276 billion. That spike was primarily due to the jump in advance sales of automobiles and other motor vehicles.

SOURCE: U.S. Department of Commerce, Bureau of the Census, as of May 14, 2002, available at: <http://www.census.gov/svsd/www/adseries.html>.

Advance retail sales are a leading indicator of retailers' sales expectations and may suggest future demand for commercial transportation services. Retail stores may require faster and more reliable delivery of shipments as consumer demand increases and inventories are maintained at lower levels.



ADVANCE RETAIL SALES OF MOTOR VEHICLES



Advance Retail Sales of Motor Vehicles	Feb-02	Mar-02
Value of advance sales (in millions)	67,004	66,794
Percent change from previous month	0.72	-0.31

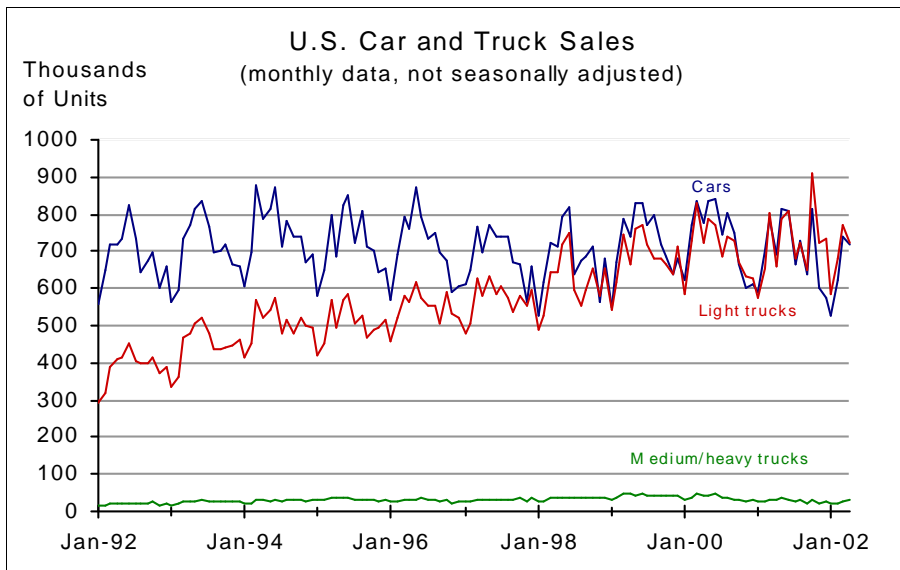
NOTE: Advance retail sales are advance estimates of monthly retail trade that are produced by the Bureau of the Census. The advance estimates are based on a small subsample of the Census Bureau's full retail sales sample.

SOURCE: U.S. Department of Commerce, Bureau of the Census, as of Apr. 12, 2002, available at: <http://www.census.gov/svsd/www/adseries.html>.

Motor vehicles are a major component of overall advance retail sales, accounting for twenty-five percent of the overall total for the month of March.



RETAIL SALES OF MOTOR VEHICLES



U.S. Car and Truck Sales	Apr-01	Apr-02
Light trucks	657,200	724,314
<i>Percent change from same month previous year</i>	-8.84	10.21
Cars	689,622	717,576
<i>Percent change from same month previous year</i>	-10.98	4.05
Medium/heavy trucks	30,222	30,007
<i>Percent change from same month previous year</i>	-30.58	-0.71

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

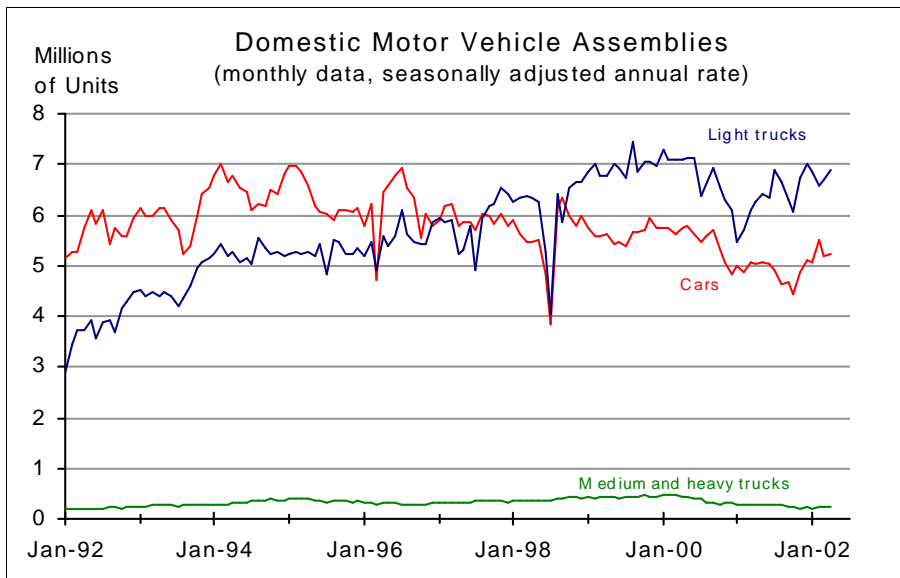
Light trucks include pickup trucks, sport utility vehicles, vans, and minivans.

SOURCE: Lisa Smith, Ward's AutoInfoBank, 3000 Town Center Drive, Southfield, Michigan 48075.

Car and truck sales can be seen as an indicator of future demands to be placed on transportation infrastructure. Trends in sales for particular types of vehicles may also have implications for safety, energy usage, air pollution, and other matters. For example, the sale of light trucks has grown to match and in certain months even exceed the level of car sales in recent years.



**DOMESTIC PRODUCTION OF MOTOR VEHICLES**



Motor Vehicle Assemblies	Mar-02	Apr-02
Light trucks (millions of units)	6.70	6.90
Percent change from previous month	2.03	2.91
Cars (millions of units)	5.19	5.21
Percent change from previous month	-5.36	0.40
Medium and heavy trucks (millions of units)	0.23	0.24
Percent change from previous month	-5.69	4.74

NOTES: The dip in assemblies in mid-1998 was caused by a strike at General Motors in June and July.

An assembly is equal to the assembly of the entire vehicle.

Seasonal factors and underlying data for car, light truck, and medium and heavy truck production are available on the Board's web site: <http://www.federalreserve.gov/releases/G17/mvsf.htm>.

Data from January to April 2002 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; May 15, 2002; available at: <http://www.federalreserve.gov/releases/g17/download.htm>.

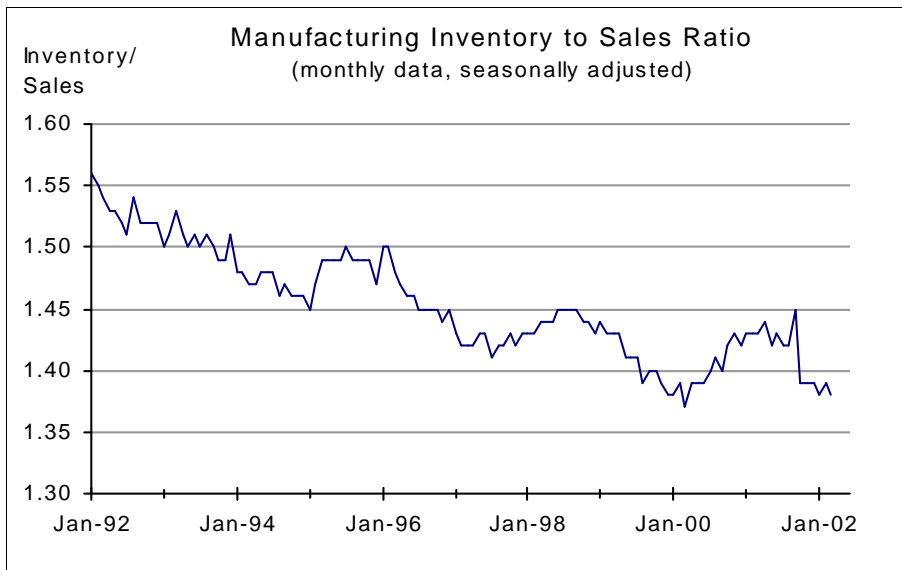
The motor vehicle industry is an important component of the manufacturing output of the United States. Over the previous four quarters (up to the Third Quarter of 2001), motor vehicle manufacturing accounted for 19.3 percent of all durable goods manufacturing in the United States. (NIPA table 1.3)

The domestic production level of motor vehicles is dependent on other factors beyond the domestic demand for motor vehicle transportation: Foreign trade is playing an increasingly important role in the domestic automotive market. The value in real terms (1996 dollars) of U.S. motor vehicle-related net imports increased from 50.7 billion dollars in 1992 to 114.0 billion dollars in 2001. (NIPA table 4.4)

The production of medium and heavy trucks can be used as a gauge of commercial expectations from the standpoint of shipping capacity. Shippers may buy more road freight handling vehicles to expand capacity to meet an expected increase in demand. Light trucks and cars are used primarily for personal transportation. The production of light trucks has grown the most since 1992. Income growth over the past decade has helped drive consumer demand for more expensive personal transportation like SUV's.



LEVEL OF MANUFACTURING INVENTORY



Manufacturing Inventory to Sales	Feb-02	Mar-02
Inventory/sales ratio	1.39	1.38
Percent change from previous month	0.72	-0.72

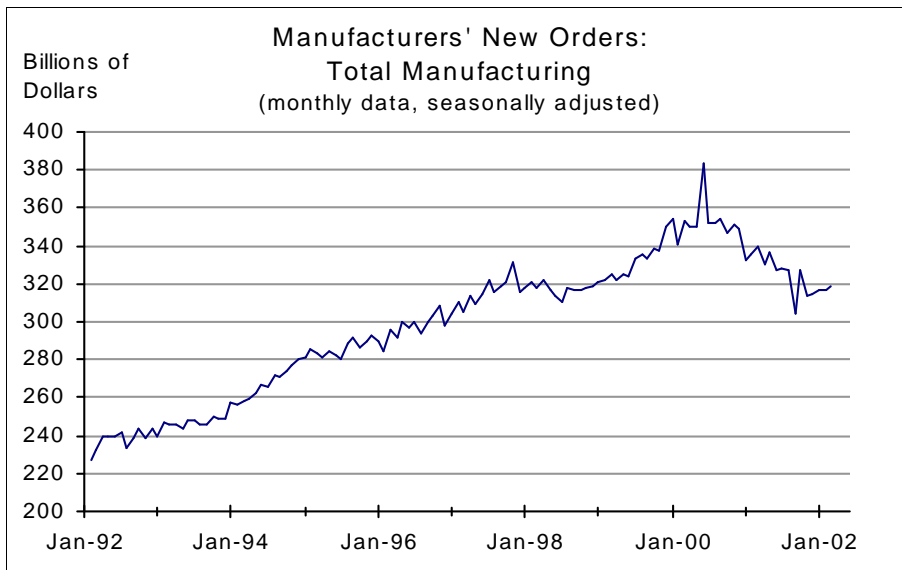
NOTE: The Census Bureau released revised historical new orders data on May 21, 2001. This report reflects those revisions.

SOURCE: U.S. Department of Commerce, Bureau of the Census, as of May 16, 2002, available at: <http://www.census.gov/mtis/www/mtis.html>.

Manufacturing inventory to sales ratio indicates the level of inventory that manufacturers currently maintain to meet a given sales volume. Over time, manufacturers have reduced inventory in relation to sales. Increased speed and reliability of transportation help manufacturers operate with smaller inventories.



NEW ORDERS—ALL MANUFACTURING

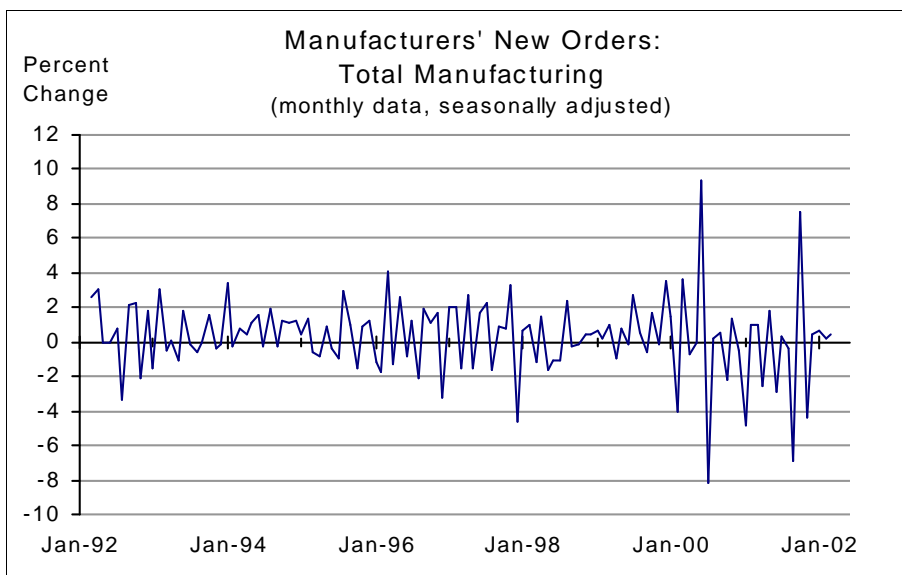


Manufacturers' New Orders	Feb-02	Mar-02
Total manufacturing (billions of dollars)	317.12	318.52
Percent change from previous month	0.17	0.44

NOTES: New orders, as reported in the monthly Manufacturers' Shipments, Inventories, and Orders (M3) survey conducted by the U.S. Census Bureau, are net of order cancellations and include orders received and filled during the month as well as orders received for future delivery. Orders are defined to include those supported by binding legal documents such as signed contracts, letters of award, or letters of intent, although in some industries this definition may not be strictly applicable. See more details at <http://www.census.gov/indicator/www/m3/m3desc.htm>.

The Census Bureau released revised historical new orders data on May 21, 2001. This report reflects those revisions. Another revision occurred with the May 2, 2002, release. The currently published numbers do not include semiconductor manufacturers because the Census Bureau does not have an adequate sample in order to produce an estimate for that sector. For more information, see <http://www.census.gov/indicator/www/m3/prel/marsemifaq.pdf>.

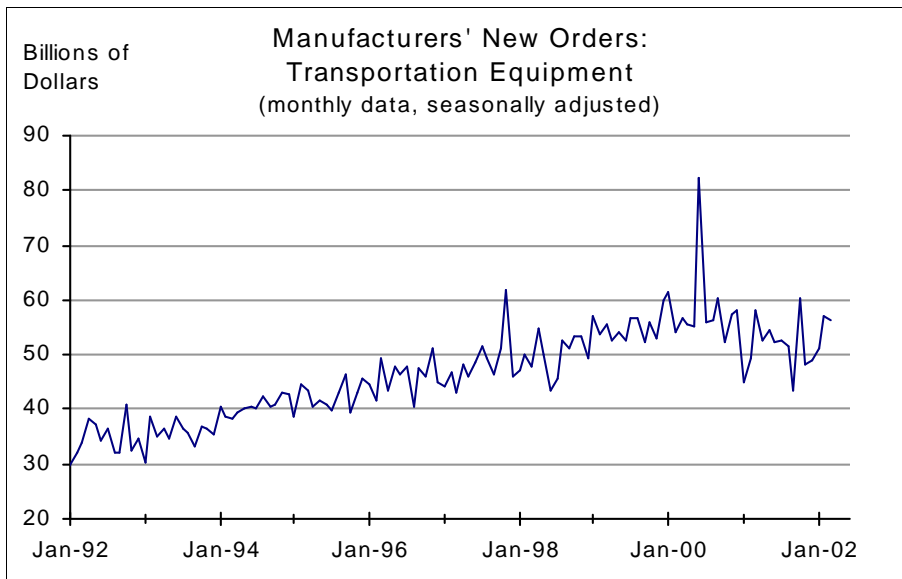
SOURCE: U.S. Department of Commerce, Bureau of the Census, available at: <http://www.census.gov/indicator/www/m3/prel/index.htm>.



Month-to-month changes in factory orders may affect demand for transportation services, including both domestic and international transportation of parts and other manufacturing inputs.



NEW ORDERS—TRANSPORTATION EQUIPMENT

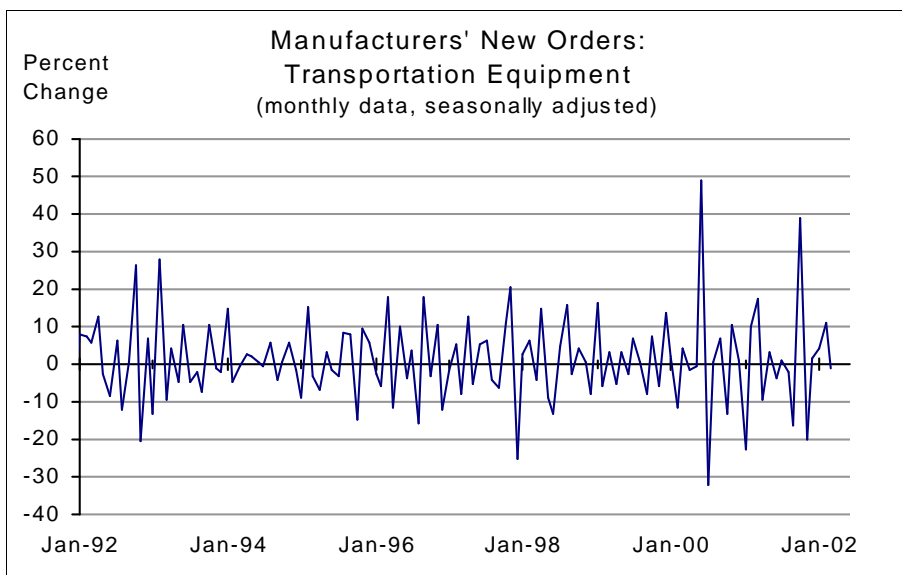


Manufacturers' New Orders	Feb-02	Mar-02
Transportation equipment (billions of dollars)	56.85	56.12
Percent change from previous month	11.28	-1.29

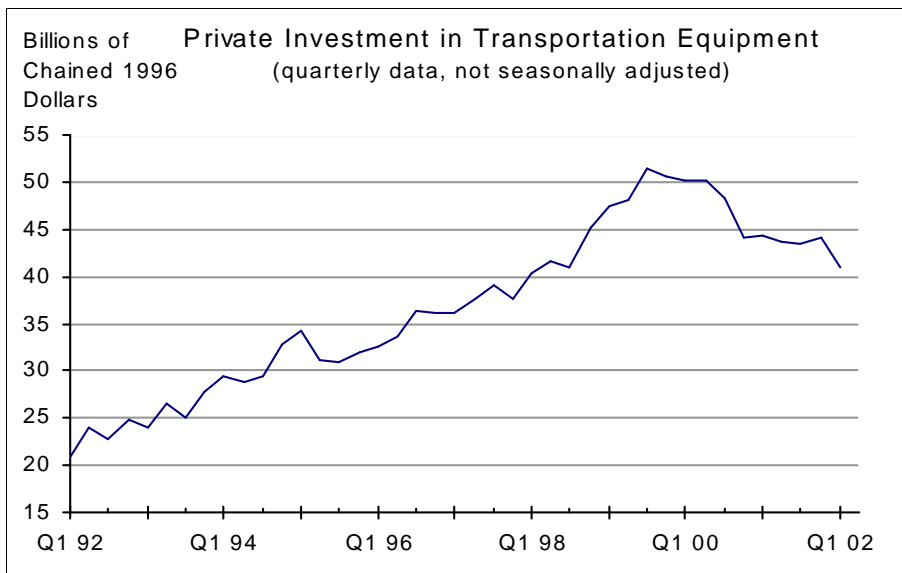
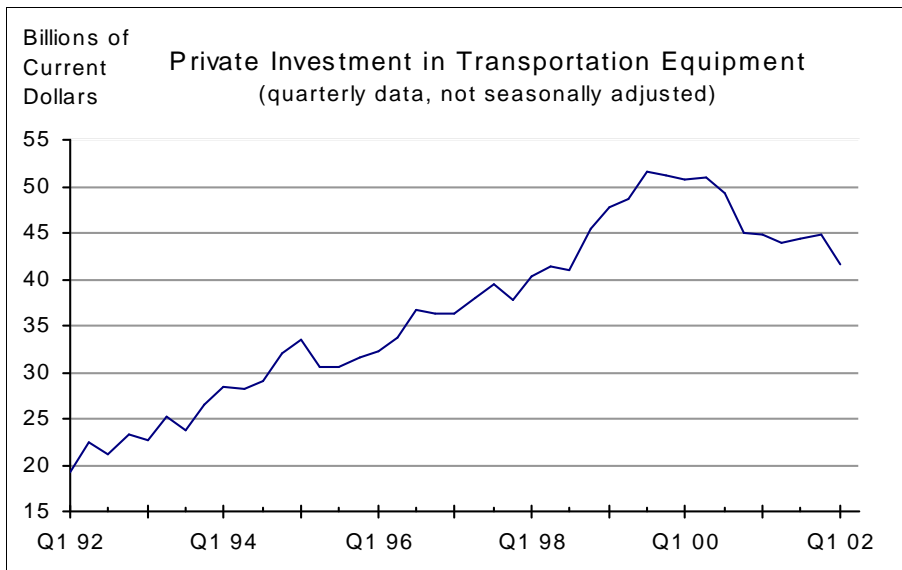
NOTE: The Census Bureau released revised historical new orders data on May 21, 2001. This report reflects those revisions.

SOURCE: U.S. Department of Commerce, Bureau of the Census, available at: <http://www.census.gov/indicator/www/m3/prel/index.htm>.

Month-to-month changes in new orders for transportation equipment indicate the level of investment in transportation and may indicate the industry outlook for transportation services. There can be a substantial time lag between ordering and delivery of equipment such as commercial airplanes and ships. New orders refer to orders placed with domestic producers of equipment.



**BUSINESS INVESTMENT IN TRANSPORTATION EQUIPMENT**



Private Investment in Transportation	Q1 01	Q1 02
Current dollars (billions)	44.75	41.65
Percent change from same quarter previous year	-11.69	-6.93
Chained 1996 dollars (billions)	44.35	41.03
Percent change from same quarter previous year	-11.57	-7.50

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Private investment in transportation equipment (PITE) and manufacturers' new orders for transportation equipment (NOTE) both measure business demand for transportation equipment. However, they differ from each other in the following aspects.

(1) Actual vs. potential: PITE is the actual expenditures spent on transportation equipment by business in the concerned time period, while NOTE is the net of orders and cancellations and include orders received and filled during the concerned time period as well as orders received for future delivery, which are subject to cancellation.

(2) Domestic vs. international: PITE is expenditures spent by domestic business on purchasing transportation equipment, while NOTE includes orders from other countries.

(3) Producer vs. purchaser: NOTE is orders to transportation equipment manufacturers and is measured in producer's price, while PITE is purchasers' expenditures on transportation equipment and is measured in purchaser's price, which includes transportation cost, trade margin, and excise tax, in addition to producer's price.

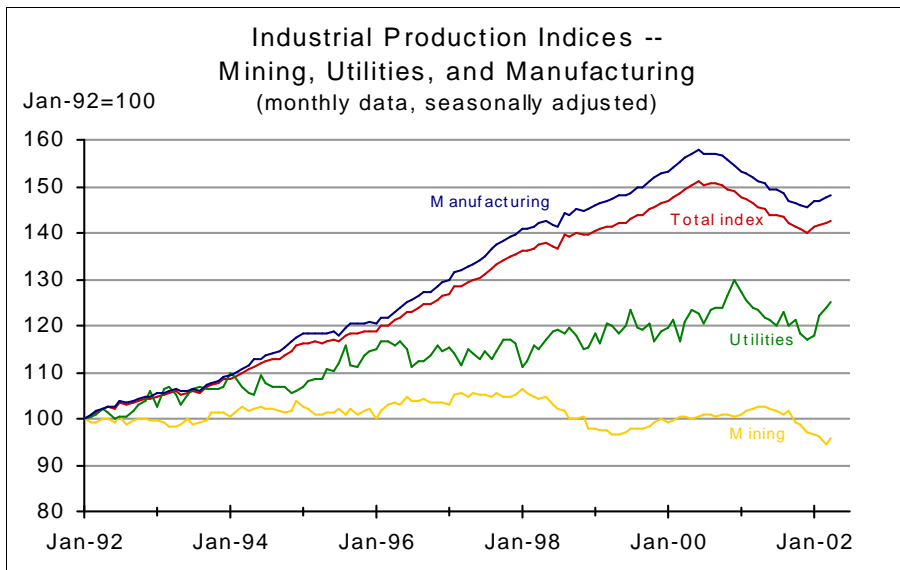
SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Tables 5.4 and 5.5; Apr. 26, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S5>; based on *Survey of Current Business*.

Private investment indicates the level of demand anticipated by industry; therefore, it can be considered a leading indicator for transportation capacity and supply. The data cover both domestically produced and imported equipment.





**INDUSTRIAL PRODUCTION INDICES — MINING, UTILITIES, AND MANUFACTURING**



Industrial production (IP) indices measure the current output of the specified manufacturing, energy, or mining industry as a ratio to the output of the base year (which is set to be equal to 100).

The total index is most heavily influenced by manufacturing, reflecting the large share of manufacturing in the economy. In 1999, the latest year which data is available, manufacturing accounted for 88.8 percent of the total value added of the three industries, with 4.8 percent for mining, and 6.4 percent for utilities. Over the last 10 years, manufacturing’s output grew twice the rate of utilities, while mining’s output stayed around its base year level.

Changes in the output levels of manufacturing, mining, and the utility industries have direct impact on the demand for transportation, because their outputs have higher weight/value ratios than those of other sectors in the economy and hence it needs more transportation service to produce a unit of output in these three industries. According to the U.S. Transportation Satellite Accounts published by the Bureau of Transportation Statistics, it requires 3.5 cents of transportation service as input to produce a \$1 worth of output in the manufacturing industry, 4.3 cents in the mining industry, and 2 cents in the utility industry.

Industrial Production Index (Jan-92=100)	Mar-02	Apr-02
Manufacturing	147.58	148.01
<i>Percent change from previous month</i>	<i>0.48</i>	<i>0.29</i>
Total index	142.17	142.71
<i>Percent change from previous month</i>	<i>0.44</i>	<i>0.38</i>
Utilities	123.89	125.03
<i>Percent change from previous month</i>	<i>1.35</i>	<i>0.92</i>
Mining	94.65	95.69
<i>Percent change from previous month</i>	<i>-1.38</i>	<i>1.09</i>

NOTE: The three Major Industry Groups are manufacturing, utilities, and mining. Currently, industries are classified using the Standard Industrial Classification (SIC) groups, but will change to the North American Industrial System (NAICS) with the 2002 revision. There is more information at the Federal Reserve Board of New York’s web site: <http://www.federalreserve.gov/Releases/G17/sdtab1.pdf>.

Data from January to April 2002 are preliminary.

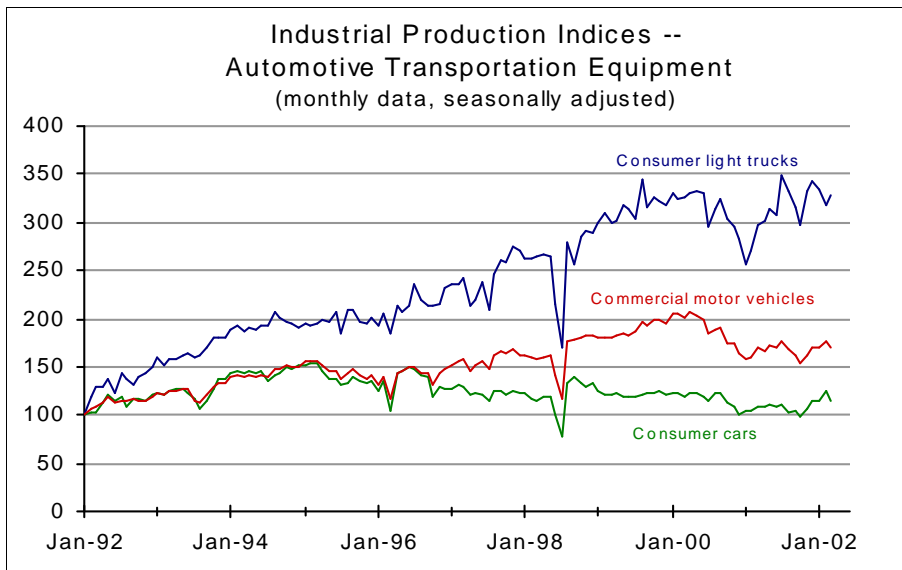
The base period of the original index is the 1992 annual index. The month of January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; May 15, 2002; available at: <http://www.federalreserve.gov/releases/g17/download.htm>.

In terms of modal distribution, more than three fifths of manufacturing industry’s transportation demand are for trucking service, while the mining industry and the utility industry rely more on railroad service.



**INDUSTRIAL PRODUCTION INDICES — AUTOMOTIVE TRANSPORTATION EQUIPMENT**



Industries will expand or contract production to meet demand or expected demand. For example, the demand for consumer light trucks has risen dramatically over the past ten years relative to demand for consumer cars. The current level of consumer light truck production is more than twice the level in 1992.

Industrial Production Index (Jan-92=100)	Mar-02	Apr-02
Consumer light trucks	327.33	344.49
<i>Percent change from previous month</i>	3.26	5.24
Commercial motor vehicles	170.90	177.79
<i>Percent change from previous month</i>	-2.57	4.03
Consumer automobiles	115.42	117.91
<i>Percent change from previous month</i>	-7.43	2.16

NOTES: These numbers represent three components of Standard Industrial Classification grouping for motor vehicles (371). The figures for selected non-automotive industries (372-6,9) are on the page entitled "Industry Production Indices for Non-Automotive Transportation Equipment."

The dip in production in mid-1998 was caused by a strike at General Motors in June and July.

These indices are based on market group categories as opposed to the industrial group categories used on page 82 and pages 84 through 86.

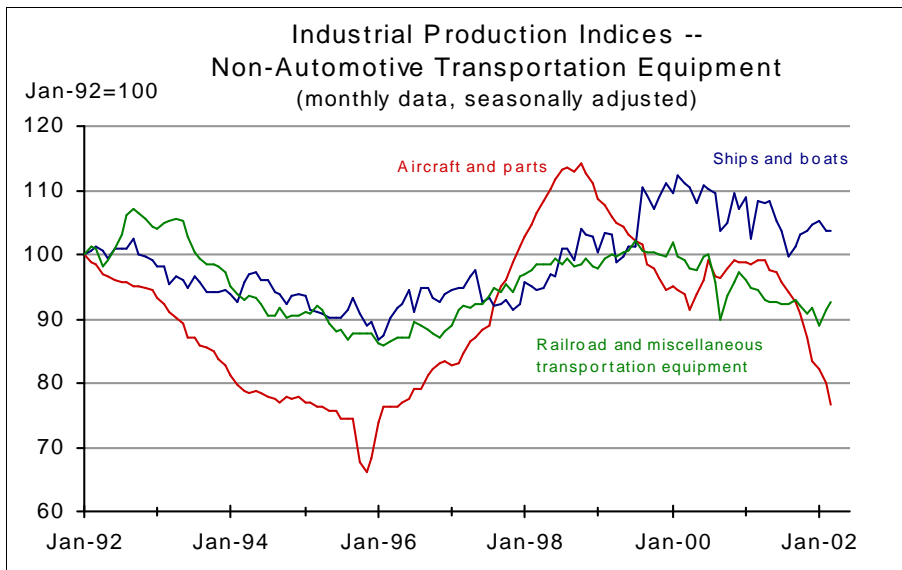
Data from January to April 2002 are preliminary.

The base period of the original index is the 1992 annual index. The month of January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; May 15, 2002; available at: <http://www.federalreserve.gov/releases/g17/download.htm>.



**INDUSTRIAL PRODUCTION INDICES — NON-AUTOMOTIVE TRANSPORTATION EQUIPMENT**



Aircraft, commercial shipping watercraft, and rail equipment usually already have a buyer before fabrication starts. Buyers of high-cost transportation equipment generally base the amount of their order on the level of expected demand for transportation services.

Industrial Production Index (Jan-92=100)	Feb-02	Mar-02
Ships and boats	103.65	103.79
<i>Percent change from previous month</i>	-1.38	0.13
Railroad and other transportation equipment	91.24	92.55
<i>Percent change from previous month</i>	2.59	1.44
Aircraft and parts	79.90	76.75
<i>Percent change from previous month</i>	-2.68	-3.95

NOTES: These numbers represent the following Standard Industrial Classification groupings: Aircraft and parts (372), Ships and boats (373), and Rail and other transportation equipment (374-6,9). Automotive industries (371) are on the page entitled "Industry Production Indices for Automotive Transportation Equipment."

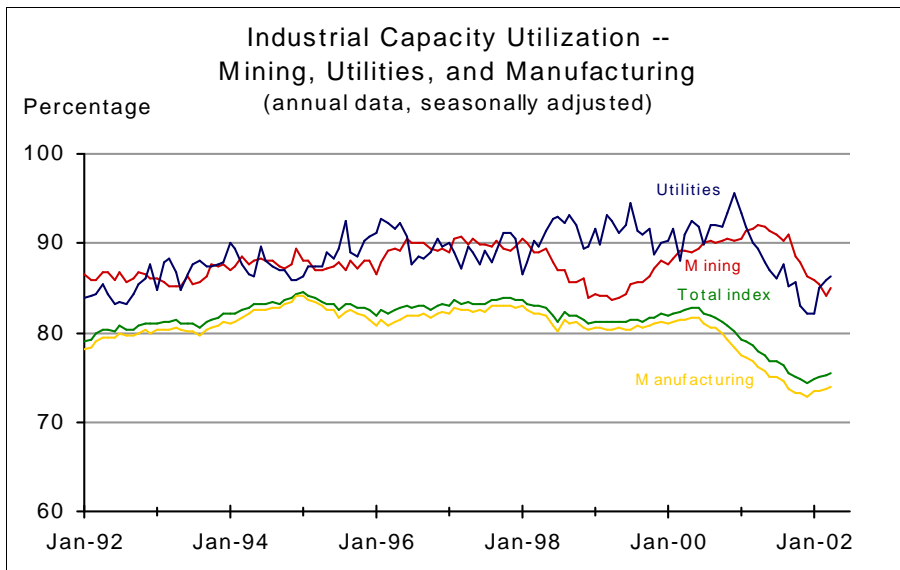
Data from December 2001 to March 2002 are preliminary.

The base period of the original index is the 1992 annual index. The month of January 1992 is set to be the new reference point (=100) by dividing the values of the original index by the value of January 1992 in the original index. It is important to point out that this process changes only the reference point, and not the base period of the index because the weight structure of the index did not change.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; May 15, 2002; available at: <http://www.federalreserve.gov/releases/g17/download.htm>.



**INDUSTRIAL CAPACITY UTILIZATION — MINING, UTILITIES, AND MANUFACTURING**



Industry capacity utilization rates measure the intensity of production given current available capital and indicate the potential for short-term expansion. Changes in industry capacity utilization rates describe the changes in the relation between supply and demand. Since capacity changes much slower, short-term changes in utilization reflect primarily changes in demand and the availability of labor. In a period of fast growth, capacity utilization would be high, while in a period of slowdown, it would be low. In the long-run, firms may adjust the amount of capital to respond capacity shortages or capacity under utilization.

Industrial Capacity Utilization	Mar-02	Apr-02
Utilities (percentage)	85.77	86.27
<i>Percent change from previous month</i>	<i>0.99</i>	<i>0.58</i>
Mining (percentage)	84.14	85.06
<i>Percent change from previous month</i>	<i>-1.40</i>	<i>1.09</i>
Total index (percentage)	75.26	75.49
<i>Percent change from previous month</i>	<i>0.36</i>	<i>0.30</i>
Manufacturing (percentage)	73.72	73.87
<i>Percent change from previous month</i>	<i>0.40</i>	<i>0.21</i>

NOTES: The three Major Industry Groups are manufacturing, utilities, and mining. There is more information at the Federal Reserve Board of New York's web site: <http://www.federalreserve.gov/Releases/G17/sdtab1.pdf>.

Mining includes components of two-digit (Standard Industrial Classification) SIC groups 10-14. Utilities includes parts of SIC group 49. Manufacturing is also available broken down between durable and nondurable. Durable manufacturing includes measurements from SIC groups 24, 25, and 32-39; non-durable manufacturing includes measurements from SIC groups 20-23 and 26-31. The North American Industrial System (NAICS) will be used starting with the 2002 revision. There is more information at the Federal Reserve Board of New York's web site: <http://www.federalreserve.gov/Releases/G17/sdtab1.pdf>.

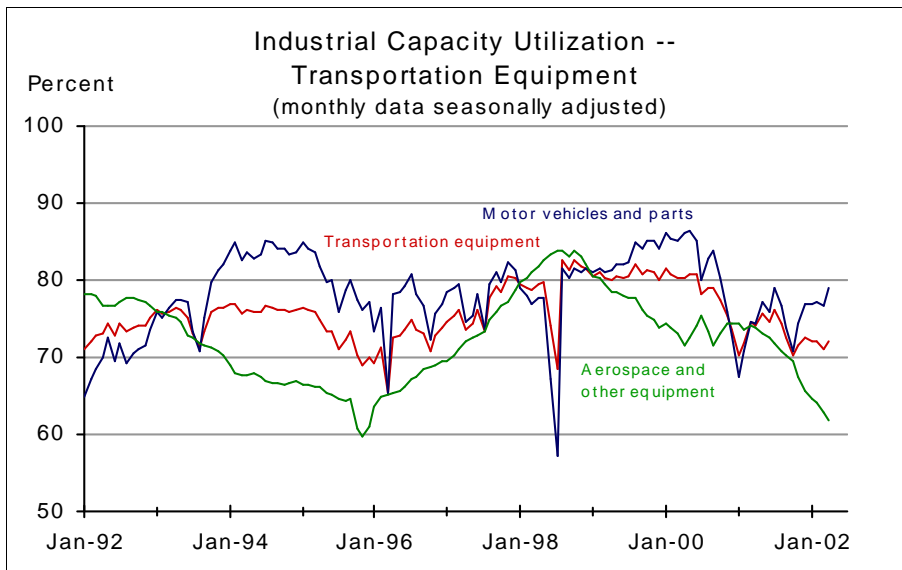
The Federal Reserve Board constructs estimates of capacity and capacity utilization for industries in manufacturing, mining, and energy. A capacity utilization rate is equal to a specified output index divided by the corresponding capacity index. The Federal Reserve Board's capacity indices are designed to quantify the concept of sustainable maximum output within a given industry. Sustainable maximum output is the highest level of output that a plant can maintain within the framework of a realistic work schedule, taking both into account normal downtime and assuming sufficient availability of inputs to operate the capital in place.

Data from January to April 2002 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; May 15, 2002; available at: <http://www.federalreserve.gov/releases/g17/download.htm>.



INDUSTRIAL CAPACITY UTILIZATION — TRANSPORTATION EQUIPMENT



Industrial capacity utilization rates measure the potential for short-term expansion and the intensity of current production given currently available capital. Short-term changes in utilization reflect changes in demand and the availability of labor. In the long-run, firms may adjust the amount of capital due to persistent changes in utilization rates.

Industrial Capacity Utilization	Mar-02	Apr-02
Motor vehicles and parts (percentage)	76.58	78.85
<i>Percent change from previous month</i>	<i>-0.87</i>	<i>2.97</i>
Transportation equipment (percentage)	71.15	72.13
<i>Percent change from previous month</i>	<i>-1.26</i>	<i>1.38</i>
Aerospace and other (percentage)	62.72	61.73
<i>Percent change from previous month</i>	<i>-1.99</i>	<i>-1.58</i>

NOTES: These data are for the industries with the following Standard Industrial Classification codes: Transportation equipment (37), Motor vehicles and parts (371), and Aerospace and other transportation equipment (372-6,9). The latter two consist of three-digit industrial classifications which are components of the two-digit industry classification.

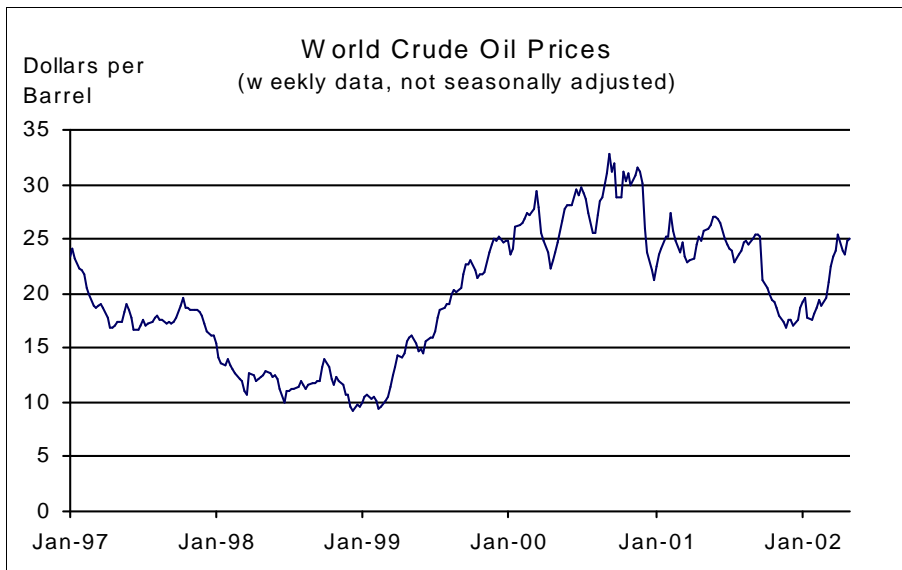
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Data from January to April 2002 are preliminary.

SOURCE: Federal Reserve, "Industrial Production and Capacity Utilization" Statistical Release; May 15, 2002; available at: <http://www.federalreserve.gov/releases/g17/download.htm>.



WORLD CRUDE OIL PRICES



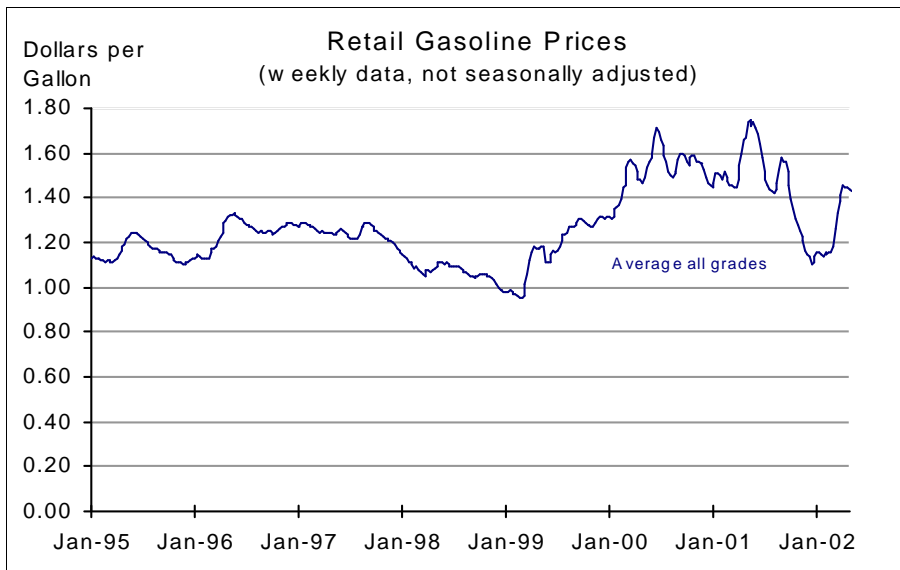
World Crude Oil	3-May-02	10-May-02
Price (dollars per barrel)	25.09	24.87
Percent change from the previous week	0.84	-0.88

SOURCE: U.S. Department of Energy, Energy Information Administration, Crude Oil Watch, as of May 2002, available at: [http://www.eia.doe.gov/oog/info/twip/twip\\_crude.html](http://www.eia.doe.gov/oog/info/twip/twip_crude.html).

The world price of crude oil is the most important factor influencing domestic motor fuel prices, since oil imports make up more than half of the U.S. oil supply. Motor fuel prices, in turn, directly affect the cost of transportation. Increases in transportation costs caused by higher world crude oil prices are pure additional costs in the sense that U.S. citizens do not generally benefit.



MOTOR FUEL PRICES

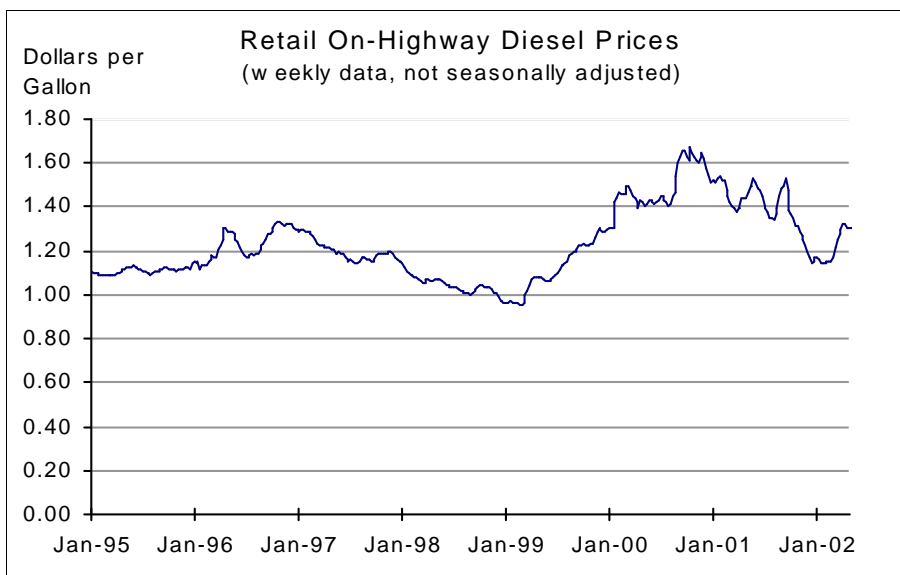


Retail Gas Prices	6-May-02	13-May-02
Average all grades (dollars/gallon)	1.427	1.431
Percent change from previous week	-0.56	0.28

SOURCE: U.S. Department of Energy, Energy Information Administration, Weekly Retail Gasoline Prices, as of May 13, 2002, available at: <http://tonto.edi.doe.gov/oog/info/gdu/gasdiesel.asp>

Retail On-Highway Diesel Prices	6-May-02	13-May-02
Retail on-highway diesel prices (dollars/gallon)	1.305	1.299
Percent change from previous week	0.23	-0.46

SOURCE: U.S. Department of Energy, Energy Information Administration, Weekly On-Highway Diesel Prices, as of May 13, 2002, available at: <http://tonto.edi.doe.gov/oog/info/gdu/gasdiesel.asp>



Motor fuel prices are an important cost component of highway transportation. Changes in motor fuel prices impact the behavior of both producers and consumers, and affect the demand for transportation in terms of level and modal mix.

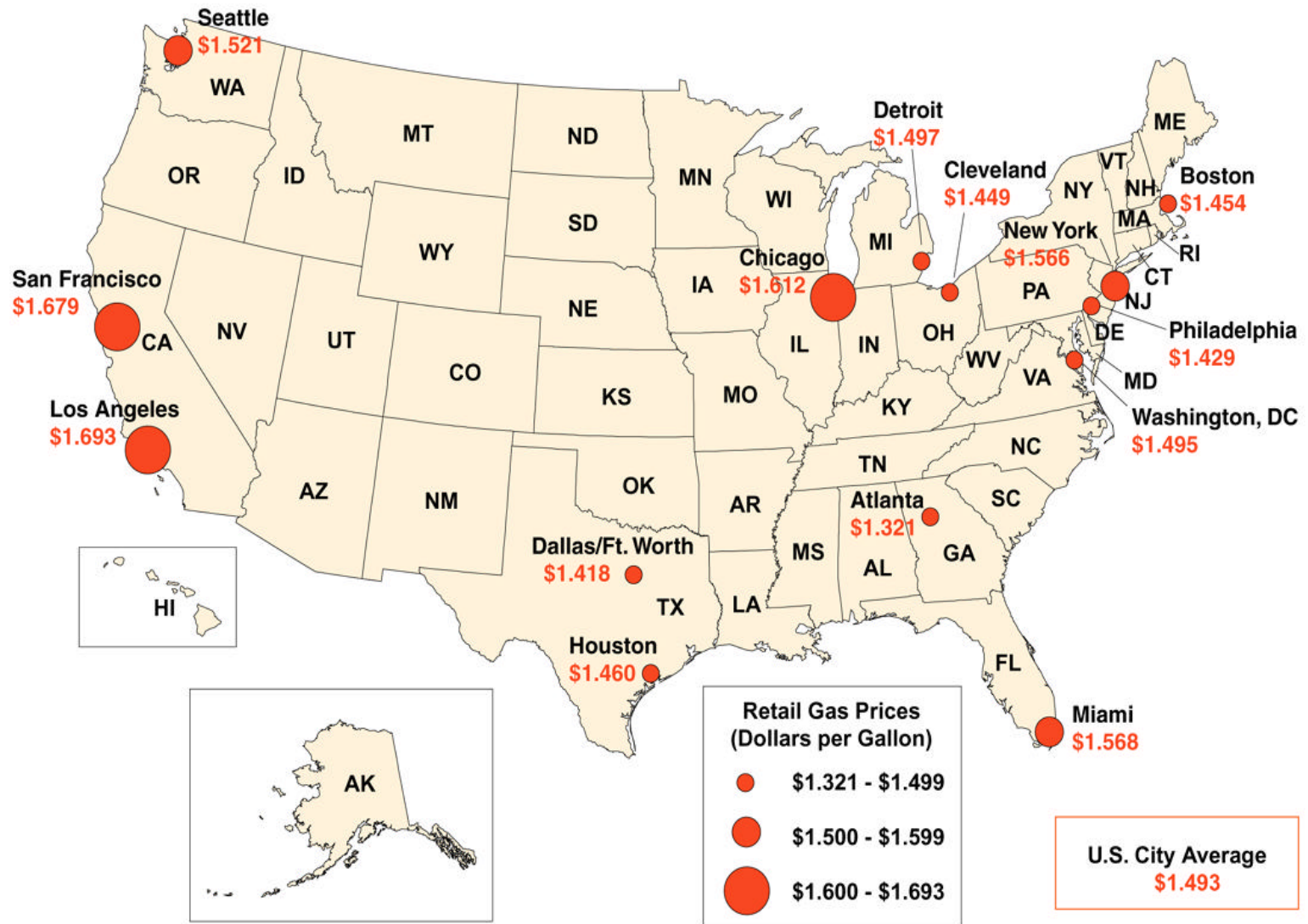
In the United States, motor gasoline prices follow world crude oil prices more closely than motor diesel prices. Changes in motor fuel prices affect the profit margin of transportation firms, particularly trucking firms.

There are regional differences in motor fuel prices, as the following maps illustrate.





### Retail Gasoline Prices of Selected Metropolitan Areas, April 2002

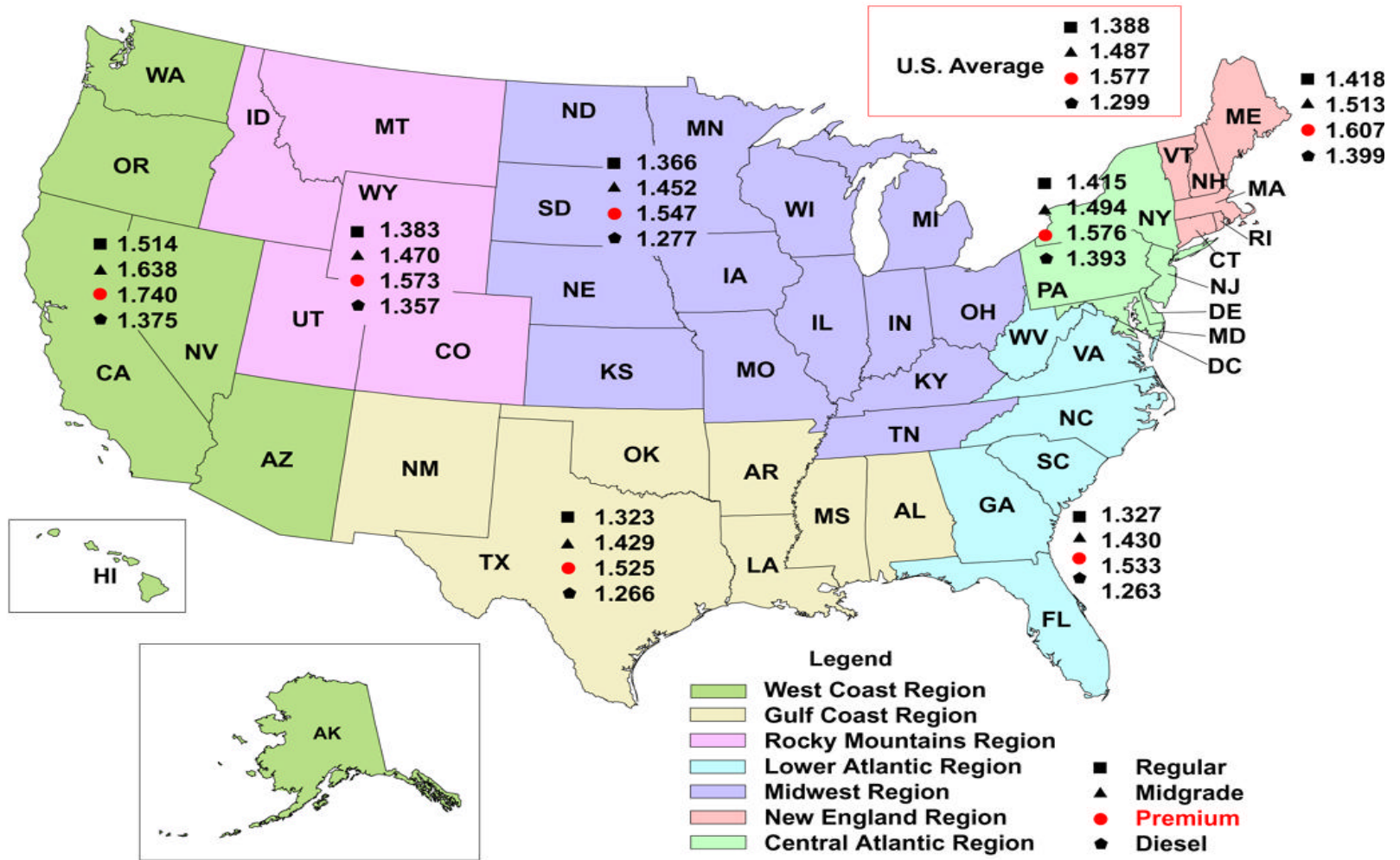


SOURCE: U.S Department of Labor, Bureau of Labor Statistics, "Price & Living Conditions: Average Price Data." <http://www.bls.gov/data/home.htm>.





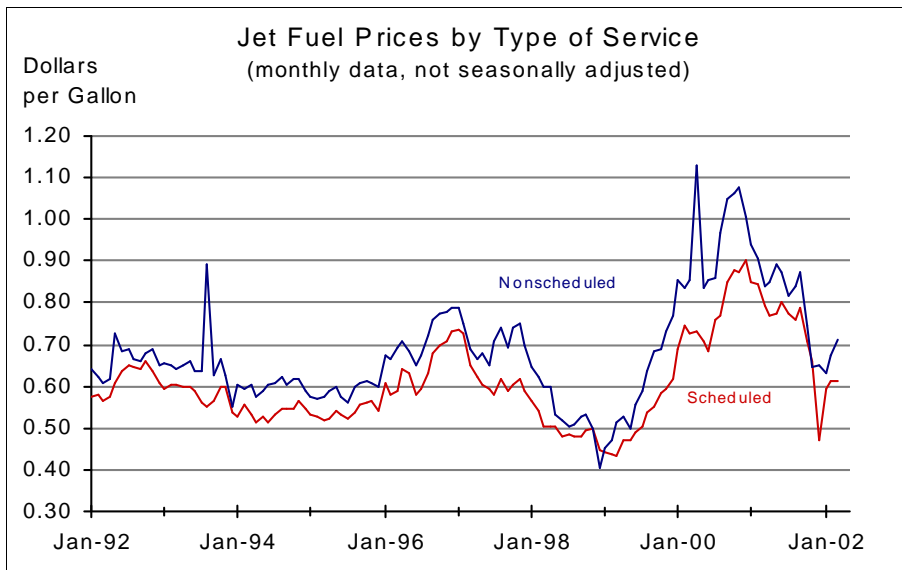
### Regional Retail Motor Fuel Prices as of May 13, 2002



SOURCE: U.S. Department of Energy, Energy Information Administration, "Retail Gasoline Prices" and "On-Highway Diesel Prices." Internet site: [http://www.eia.doe.gov/oil\\_gas/petroleum/special/gasoline\\_update/market\\_summary.html](http://www.eia.doe.gov/oil_gas/petroleum/special/gasoline_update/market_summary.html)



DOMESTIC UNIT PRICES FOR AIRLINE JET FUEL



Current Dollars per Gallon	Mar-01	Mar-02
For nonscheduled airlines	0.84	0.71
<i>Percent change from same month previous year</i>	-1.84	-15.20
For scheduled airlines	0.79	0.61
<i>Percent change from same month previous year</i>	9.26	-22.80

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

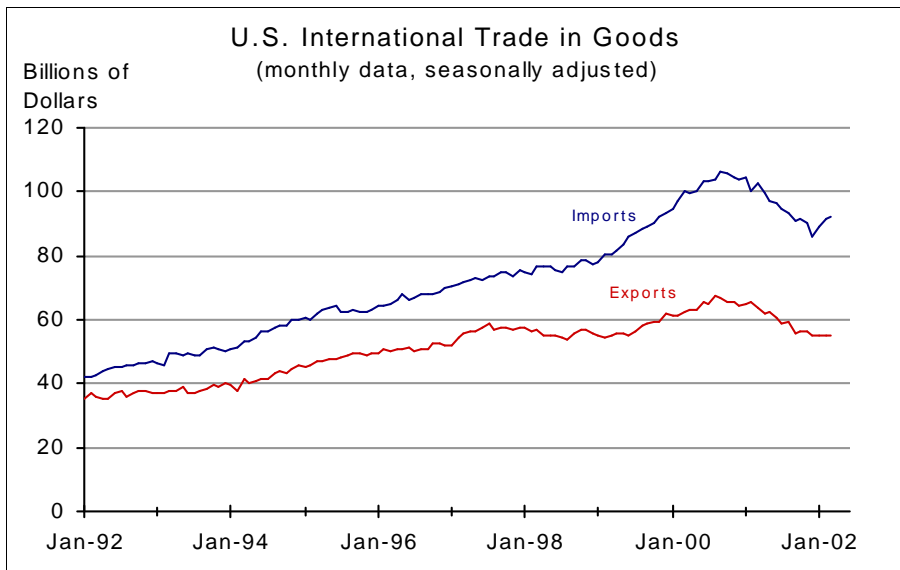
Data for December 2001 to March 2002 are preliminary due to late reports by carriers.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics.

Jet fuel prices reported to the Bureau of Transportation Statistics differ from producer prices. Reports to BTS show the cost per gallon of fuel, excluding taxes, used by domestic large certificated carriers during the month rather than the price charged by a producer on a single day. Fuel costs for scheduled airline services reflect contractual and storage advantages available to large buyers, while fuel costs for nonscheduled airline services reflect economic conditions for smaller buyers. Jet fuel prices also reflect seasonality due to both the seasonality of aviation and because jet fuel has similar refining requirements to heating oil.



VALUE OF U.S. IMPORTS AND EXPORTS



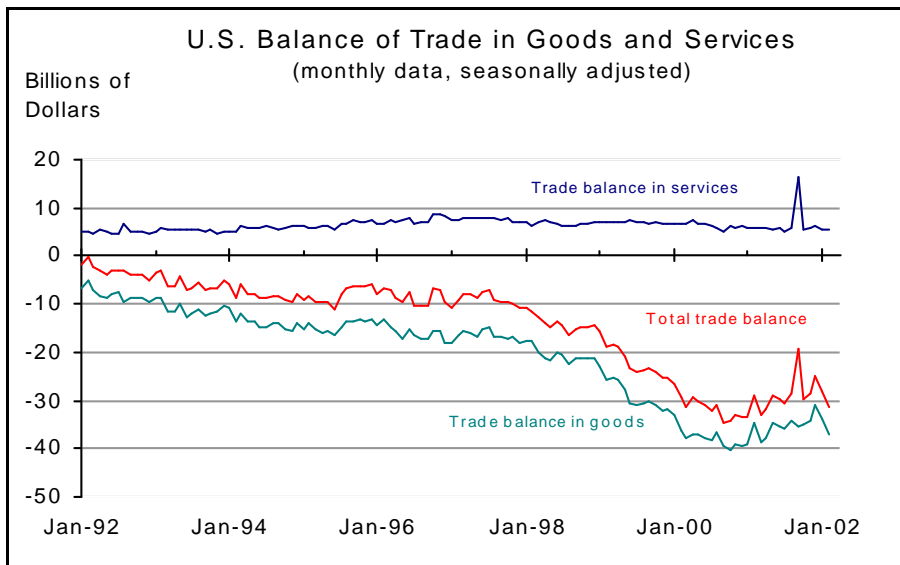
U.S. International Trade In Goods	Feb-02	Mar-02
Imports (millions of dollars)	91,828	92,154
<i>Percent change from previous month</i>	3.43	0.36
Exports (millions of dollars)	54,900	55,057
<i>Percent change from previous month</i>	-0.19	0.29

SOURCE: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division data, available at: <http://www.census.gov/foreign-trade/www/statistics.html>.

International trade represents a growing share of the U.S. economy over the past three decades. Total trade value (exports plus imports) as a ratio to GDP increased from about 10 percent in 1970 to 24 percent in 2001. Changes in the level of both imports and exports affect the level of demand for transportation services. The value of U.S. imports historically have been higher than the value of U.S. exports, but the gap has widened in recent years.



U.S. BALANCE OF TRADE IN GOODS AND SERVICES



U.S. International Trade	Jan-02	Feb-02
Trade balance in services	5.56	5.42
<i>Percent change from previous month</i>	-11.29	-2.52
Total trade deficit	-28.52	-31.51
<i>Percent change from previous month</i>	15.40	10.48
Trade deficit in goods	-34.08	-36.94
<i>Percent change from previous month</i>	9.99	8.39

SOURCE: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division, Available at: <http://www.census.gov/foreign-trade/balance/index.html>

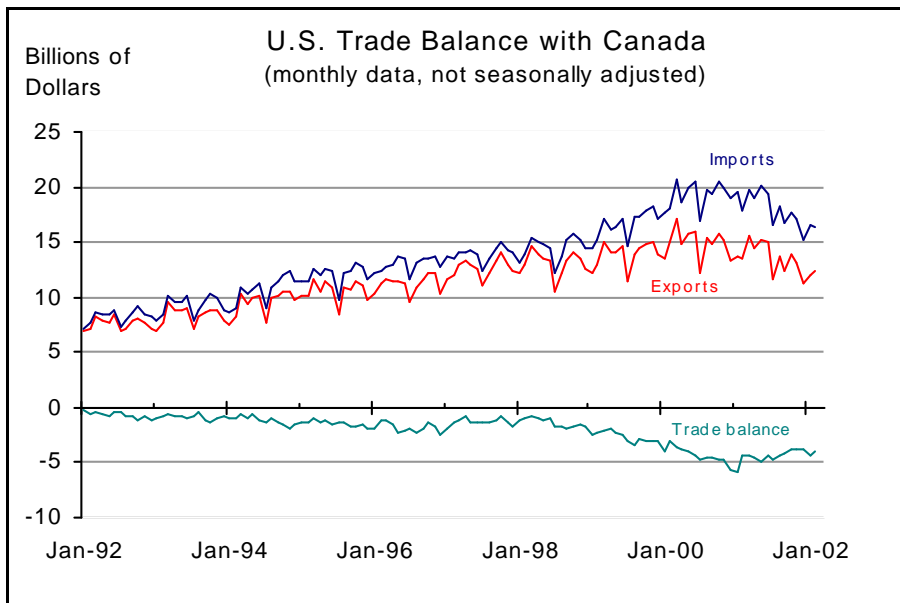
Trade generates demand for transportation and transportation makes trade possible by making local markets accessible and linking demand and supply that are separated in space. As transportation has become cheaper, faster, safer and more reliable, more goods and services— both variety and quantity— have been traded among regions and nations.

The commodity components of a country’s international trade reflects the country’s comparative advantages. The balance of trade of a country is an aggregate measure of its industries’ comparative advantages at the industry level. The positive balance of trade, exporting more than importing, shows that an industry is relatively competitive, while a negative balance of trade shows that an industry is at a relative disadvantaged position in terms of competitiveness.

The U.S. balance of trade has been negative for many years. This has mainly been because of the negative balance in trade of goods. After reaching an all-time low at the end of 2000, the U.S. balance of trade in goods has been improving. The U.S. balance of trade in services has always been positive. In September 2001, there was an unusually large spike in the balance of services, which was primarily caused by a sharp drop in imports of services. Services imports decreased \$13.5 billion from August to September, while services exports decreased only \$3.2 billion. The sharp drop in imports of services was mainly caused by hefty cuts in U.S. payments for foreign insurance services. Decreases in foreigners’ travel and passenger fares in the U.S. accounted for the large decrease in services exports.

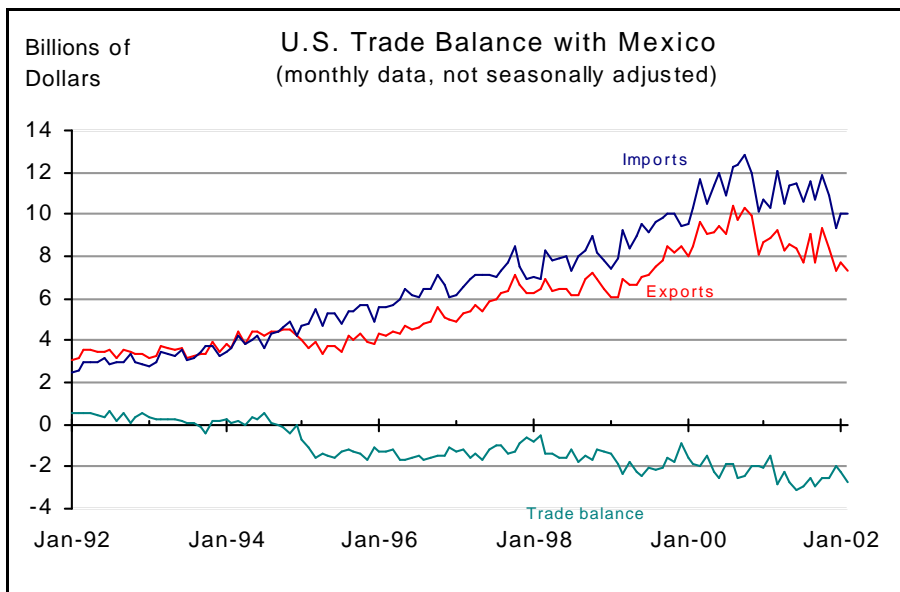


U.S. BALANCE OF TRADE WITH CANADA AND MEXICO



U.S. Trade Balance with Canada	Feb-01	Feb-02
Imports (billions of dollars)	17.88	16.31
<i>Percent change from same month previous year</i>	4.37	5.59
Exports (billions of dollars)	13.50	12.39
<i>Percent change from same month previous year</i>	-9.82	-8.22
Trade Deficit (billions of dollars)	-4.38	-3.92
<i>Percent change from same month previous year</i>	40.38	-10.5

U.S. Trade Balance with Mexico	Feb-01	Feb-02
Imports (billions of dollars)	10.32	10.02
<i>Percent change from same month previous year</i>	-0.48	-2.91
Exports (billions of dollars)	8.86	7.30
<i>Percent change from same month previous year</i>	4.73	-17.61
Trade Deficit (billions of dollars)	-1.45	-2.72
<i>Percent change from same month previous year</i>	-23.68	87.58



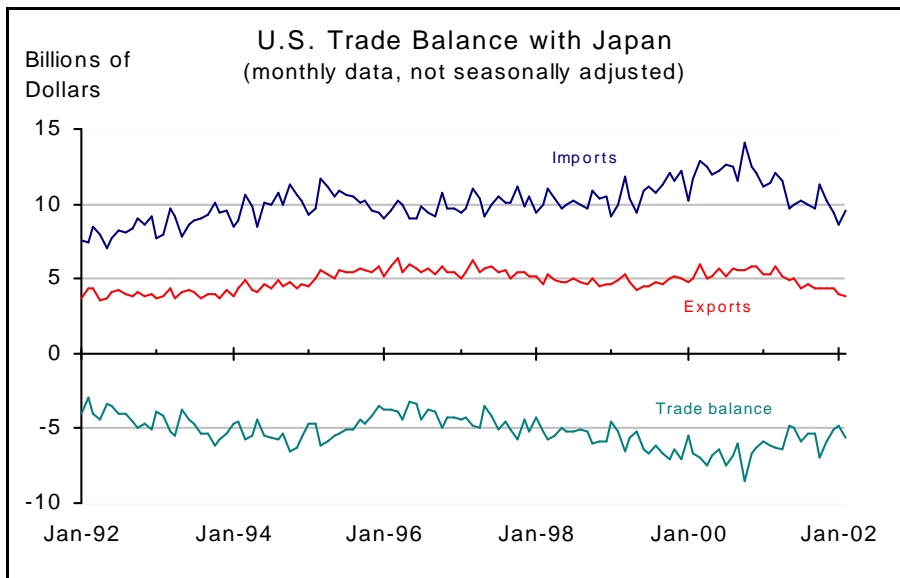
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division, Available at: <http://www.census.gov/foreign-trade/balance/index.html>

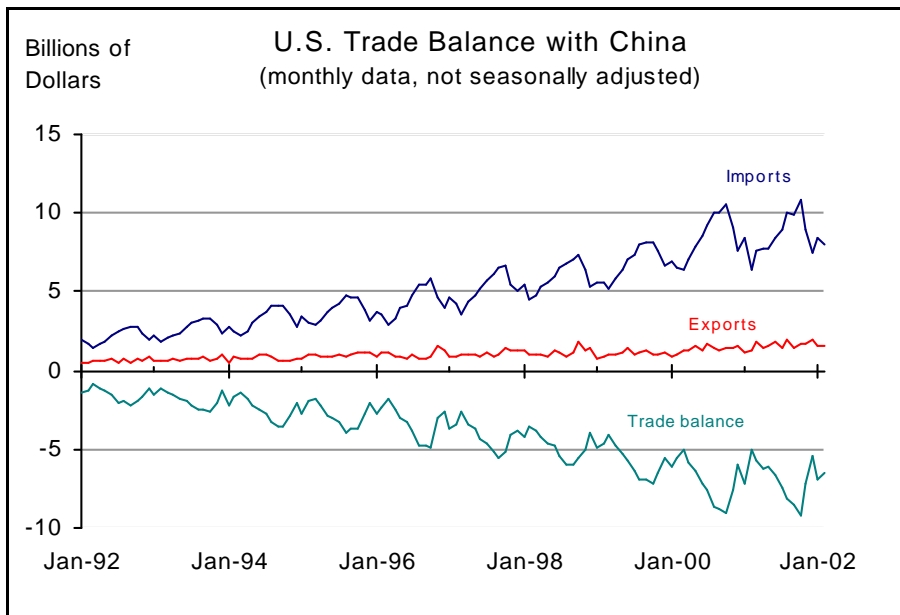
The U.S. trade balance with both Canada and Mexico is negative, with more imports from both countries than exports to them. In the last two years, while the total value of U.S. trade with the two countries increased, U.S. trade deficits with these two countries also increased.



**U.S. BALANCE OF TRADE WITH ASIA**



U.S. Trade Balance with Japan	Feb-01	Feb-02
Imports (billions of dollars)	11.40	9.54
<i>Percent change from same month previous year</i>	-2.73	-16.32
Exports (billions of dollars)	5.27	3.88
<i>Percent change from same month previous year</i>	0	-26.38
Trade Deficit (billions of dollars)	-6.13	-5.66
<i>Percent change from same month previous year</i>	-8.92	-7.67



U.S. Trade Balance with China	Feb-01	Feb-02
Imports (billions of dollars)	6.39	8.03
<i>Percent change from same month previous year</i>	-2.89	25.66
Exports (billions of dollars)	1.31	1.53
<i>Percent change from same month previous year</i>	35.05	16.79
Trade Deficit (billions of dollars)	-5.07	-6.50
<i>Percent change from same month previous year</i>	-9.63	28.21

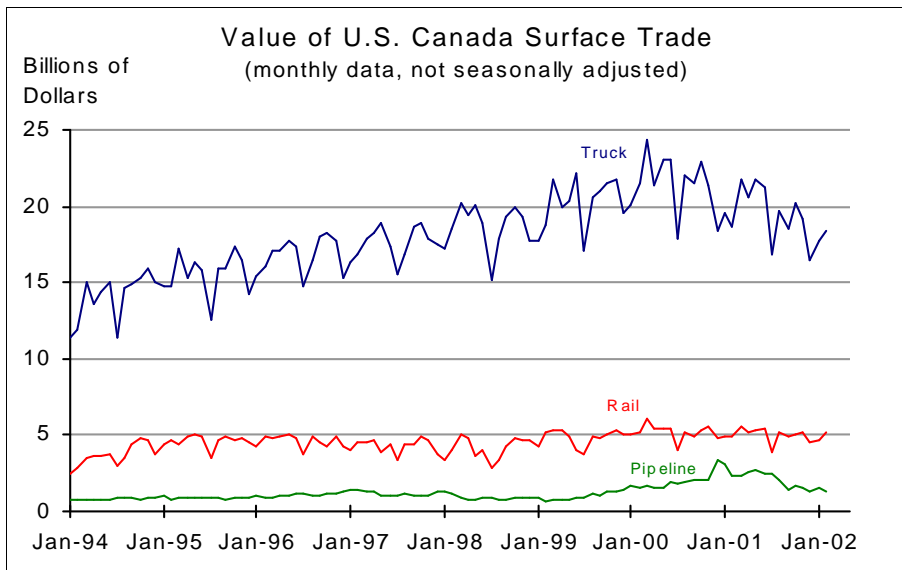
NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division, Available at: <http://www.census.gov/foreign-trade/balance/index.html>

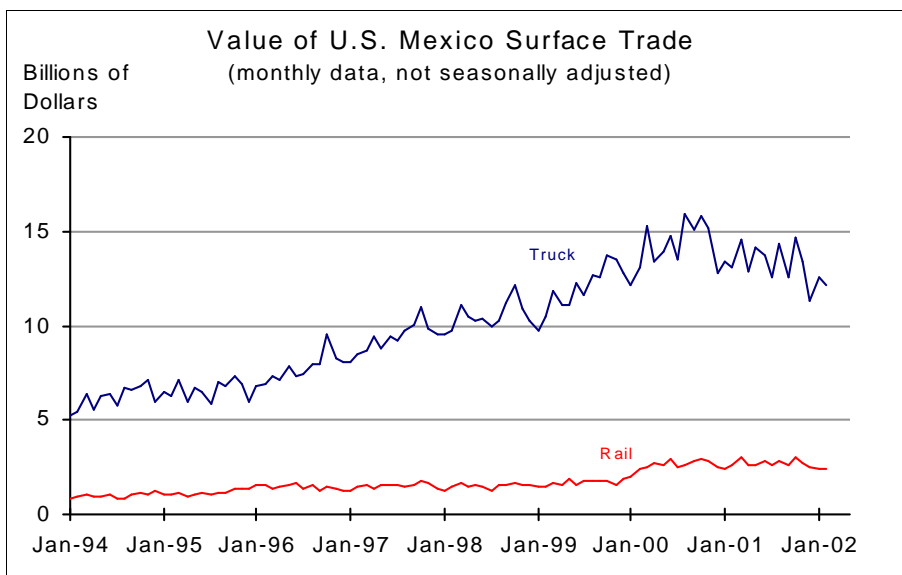
For many years, the United States has been importing more from Japan and China than it exported to these countries. While the trade volume with Japan declined in recent months, the U.S. trade volume with China continued to grow, and imports grew faster than exports. Imports from China into the United States are very seasonal compared to U.S. exports to China.



U.S. SURFACE TRADE WITH CANADA AND MEXICO



U.S. - Canada Trade	Feb-01	Feb-02
Truck (millions of dollars)	18,688	18,379
Percent change from same month previous year	-13.17	-1.65
Rail (millions of dollars)	4,932	5,170
Percent change from same month previous year	-5.10	4.82
Pipeline (millions of dollars)	2,323	1,263
Percent change from same month previous year	48.98	-45.64



U.S. - Mexico Trade	Feb-01	Feb-02
Truck (millions of dollars)	13,122	12,150
Percent change from same month previous year	0.32	-7.41
Rail (millions of dollars)	2,638	2,449
Percent change from same month previous year	8.21	-7.17
Pipeline (millions of dollars)	44	15
Percent change from same month previous year	190.92	-65.32

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

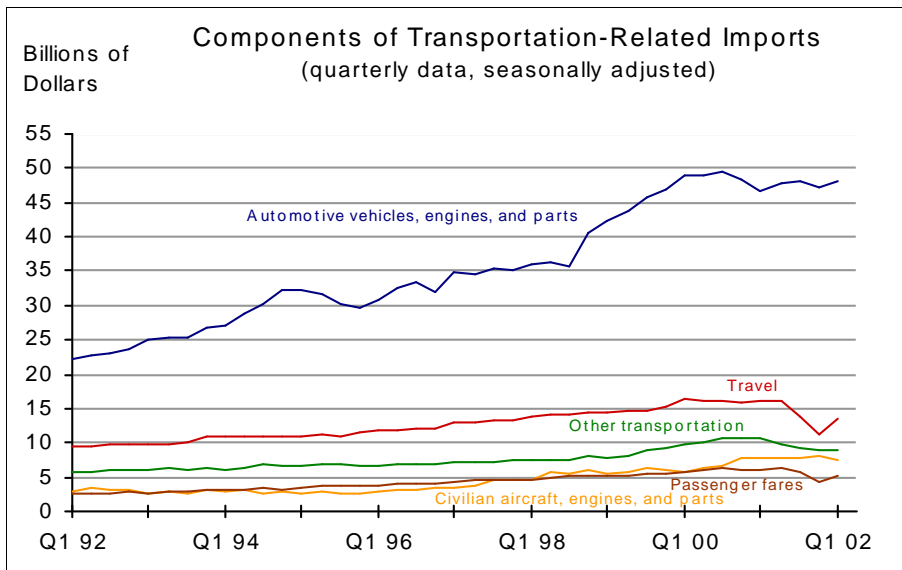
SOURCE: Data obtained from the U.S. Department of Commerce, Census Bureau by the U.S. Department of Transportation Bureau of Transportation Statistics, Transborder Surface Freight Dataset, available at: <http://www.bts.gov/ntda/tbscd/prod.html>.

Surface freight is useful in monitoring the value and modal patterns of trade with Canada and Mexico, our North American Free Trade Agreement (NAFTA) partners. Canada is our largest trading partner, while Mexico now ranks second. Surface modes include not only truck, rail, and pipeline (shown here), but also government mail and other miscellaneous modes.





VALUE OF TRANSPORTATION-RELATED IMPORTS



The largest item in U.S. transportation related imports has been automobile vehicles, engines, and parts, which accounted for 60 percent of U.S. total transportation-related imports. After a sharp increase during the period from mid-1998 to the beginning of 2000, the growth of U.S. imports of automobile vehicles decreased slightly in the last two years.

Imports (billions of dollars)	Q4 01	Q1 02
Transportation-related Total	79.60	83.15
<i>Percent change from previous quarter</i>	-5.69	4.46
Automotive and Parts	47.13	48.23
<i>Percent change from previous quarter</i>	-1.82	2.33
Travel	11.23	13.50
<i>Percent change from previous quarter</i>	-18.21	20.27
Other	8.88	8.93
<i>Percent change from previous quarter</i>	-3.01	0.56
Civilian Aircraft and Parts	8.08	7.40
<i>Percent change from previous quarter</i>	5.21	-8.36
Passenger Fares	4.30	5.10
<i>Percent change from previous quarter</i>	-26.50	18.60

NOTES: "Other transportation" imports include payments for freight transportation services and port services.

Passenger fares include international transportation fares, particularly, air fares and ocean liner fares.

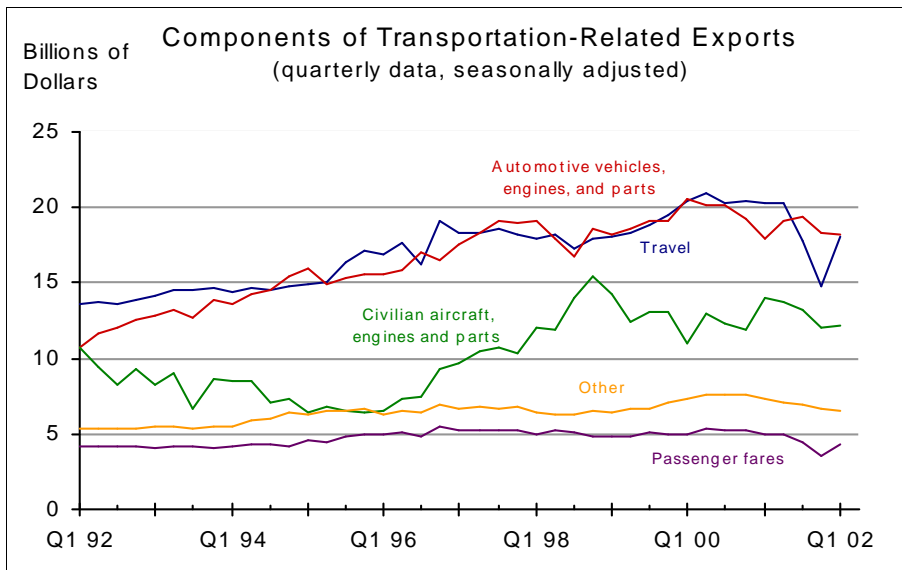
Travel includes intercity and local fares within a country, hotel and restaurant, admission fees, and souvenir expenditures.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Table 4.3; Apr. 26, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S4>; based on *Survey of Current Business*.





VALUE OF TRANSPORTATION-RELATED EXPORTS



Automobiles vehicles (including engines and parts), and travel are the leading commodities in U.S. transportation related exports. Exports of civilian aircraft, engines and parts also contributed a significant portion to the U.S. total. In the fourth quarter of 2001, all U.S. transportation-related exports decreased. Out of these decreases, the drop in exports of travel services was particularly sharp, reflecting the impact of the September 11, 2001 terrorist attacks. However, travel services exports rebounded in the first quarter of 2002, making up much of the decline that occurred during the previous quarter.

Exports (billions of dollars)	Q4 01	Q1 02
Transportation-related Total	55.30	59.38
<i>Percent change from previous quarter</i>	-10.52	7.37
Automotive and parts	18.28	18.23
<i>Percent change from previous quarter</i>	-5.56	-0.27
Travel	14.83	18.00
<i>Percent change from previous quarter</i>	-16.48	21.42
Civilian Aircraft and Parts	12.03	12.20
<i>Percent change from previous quarter</i>	-9.42	1.46
Other	6.63	6.60
<i>Percent change from previous quarter</i>	-5.02	-0.38
Passenger Fares	3.55	4.35
<i>Percent change from previous quarter</i>	-20.22	22.54

NOTES: "Other transportation" exports include payments for freight transportation services and port services.

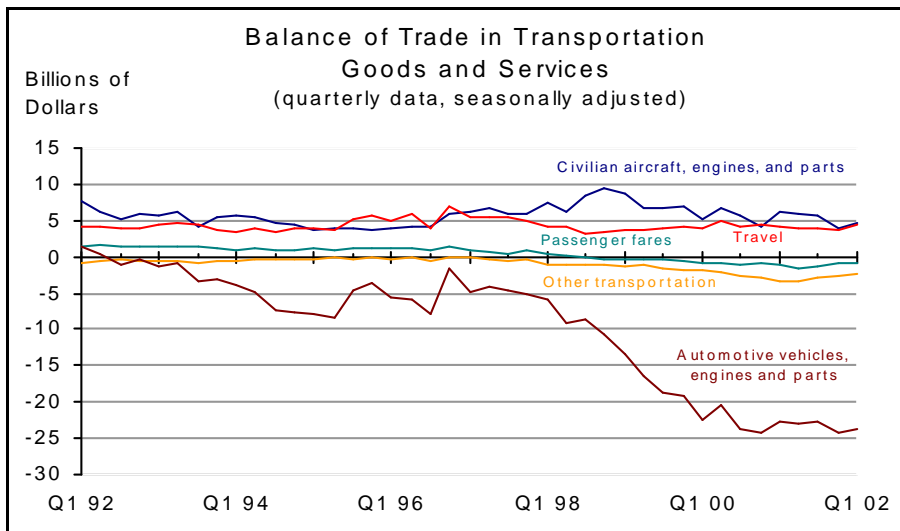
Passenger fares include international transportation fares, particularly, air fares and ocean liner fares.

Travel includes intercity and local fares within a country, hotel and restaurant, admission fees, and souvenir expenditures.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Table 4.3; Apr. 26, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S4>; based on *Survey of Current Business*.



U.S. BALANCE OF TRADE IN TRANSPORTATION GOODS AND SERVICES



U.S. international trade in transportation-related goods and services has run a deficit for many years, due to a deficit in automobile and parts trading. In contrast, civilian aircraft and parts trade has run a surplus, exports being about three times imports.

Travel is another area in which the U.S. has a trade surplus. However, this surplus has decreased in the past few months as travel into the U.S. dropped sharply after the September 11, 2001 terrorist attacks. Passenger fares were previously positive, but became negative in 1999 and recovered slightly last quarter.

Balance of Trade (billions of dollars)	Q4 01	Q1 02
Transportation-related Total	-24.30	-23.78
<i>Percent change from previous quarter</i>	7.52	2.14
Automotive and Parts	-28.85	-30.00
<i>Percent change from previous quarter</i>	0.69	3.99
Travel	3.60	4.50
<i>Percent change from previous quarter</i>	-10.67	25.00
Other	-2.53	-2.28
<i>Percent change from previous quarter</i>	-11.20	9.88
Civilian Aircraft and Parts	3.95	4.80
<i>Percent change from previous quarter</i>	-29.46	21.52
Passenger Fares	-0.75	-0.75
<i>Percent change from previous quarter</i>	-46.43	0

NOTES: "Other transportation" include payments for freight transportation services and port services.

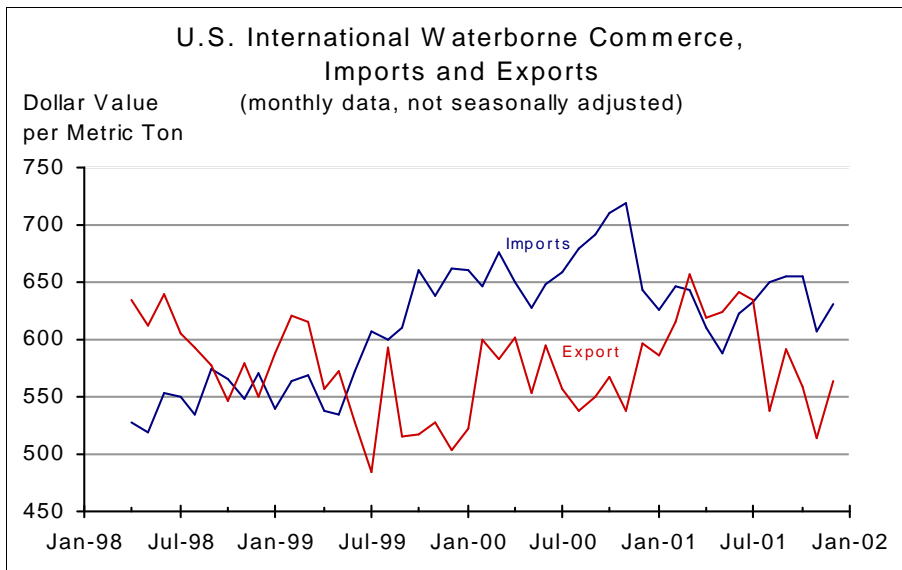
Passenger fares include international transportation fares, particularly, air fares and ocean liner fares.

Travel includes intercity and local fares within a country, hotel and restaurant, admission fees, and souvenir expenditures.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; National Income and Product Accounts data, Table 4.3; Mar. 28, 2002; available at: <http://www.bea.doc.gov/bea/dn/nipaweb/AllTables.asp?Selected=N#S4>; based on *Survey of Current Business*.



VALUE PER METRIC TON OF U.S. WATERBORNE IMPORTS AND EXPORTS



Dollar Value Per Metric Ton	Dec-00	Dec-01
Exports	596	564
<i>Percent change from same month previous year</i>	18.26	-5.39
Imports	642	631
<i>Percent change from same month previous year</i>	-2.92	-1.78

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

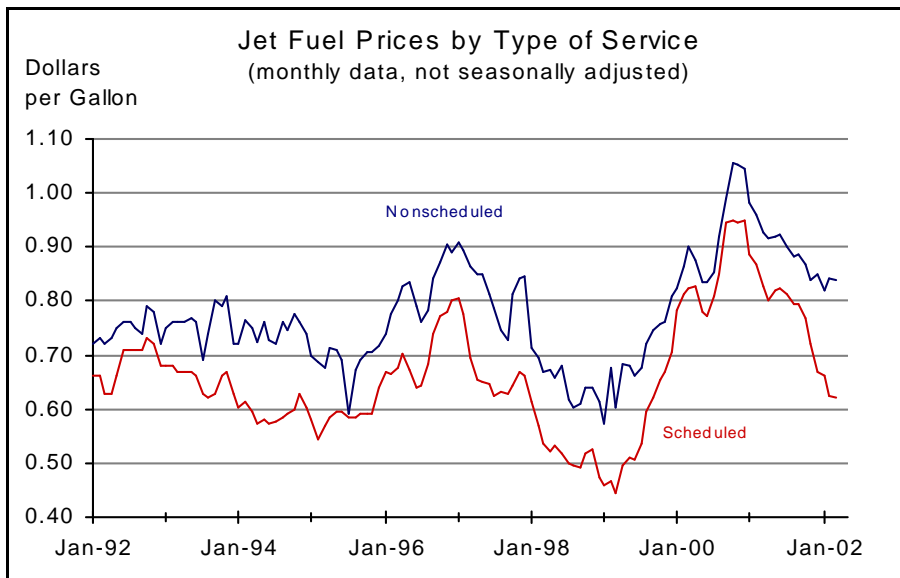
Data reported prior to the 3rd quarter of 1998 were collected and reported by the U.S. Department of Commerce and may not be completely comparable to data reported by the Maritime Administration.

SOURCE: U.S. Department of Transportation, Maritime Administration, Waterborne Databank, and U.S. Department of Commerce, Bureau of Census, Foreign Trade Division, U.S. Waterborne Exports and General Imports, various issues, available at <http://www.marad.dot.gov/statistics/usfwts/index.html>.

Approximately 40 percent by value (75 percent in terms of tonnage) of cargo carried in U.S. foreign trade is carried on the water.



INTERNATIONAL UNIT PRICES FOR AIRLINE JET FUEL



Current Dollars per Gallon	Mar-01	Mar-02
For nonscheduled airlines	0.93	0.84
<i>Percent change from same month previous year</i>	2.71	-9.48
For scheduled airlines	0.83	0.62
<i>Percent change from same month previous year</i>	0.39	-24.86

NOTES: The current value is compared to the value from the same period in the previous year to account for seasonality.

Data for December 2001 to March 2002 are preliminary due to late reports by carriers.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics.

International jet fuel prices reflect both domestic and foreign purchases consumed in international routes by U.S. carriers.

Jet fuel prices reported to the Bureau of Transportation Statistics differ from producer prices. Reports to BTS show the cost per gallon of fuel, excluding taxes, used by domestic large certificated carriers during the month rather than the price charged by a producer on a single day. Fuel costs for scheduled airline services reflect contractual and storage advantages available to large buyers, while fuel costs for nonscheduled airline services reflect economic conditions for smaller buyers. Jet fuel prices also reflect seasonality due to both the seasonality of aviation and because jet fuel has similar refining requirements to heating oil.

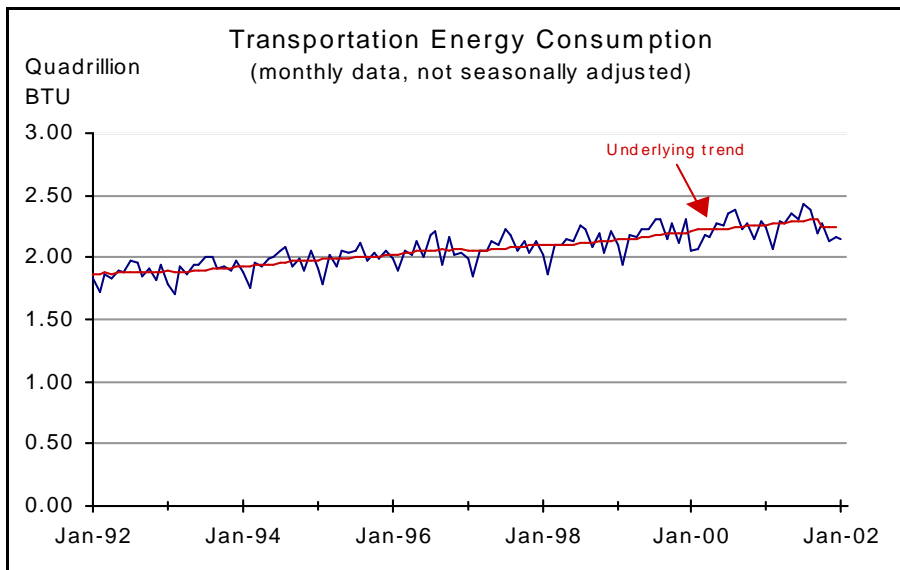


# Human and Natural Environment

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TRANSPORTATION ENERGY USE



Transportation Energy Consumption	Jan-01	Jan-02
Quadrillion BTU	2.24	2.16
Percent change from same month previous year	9.20	-3.97

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

One quadrillion is equal to one billion million.

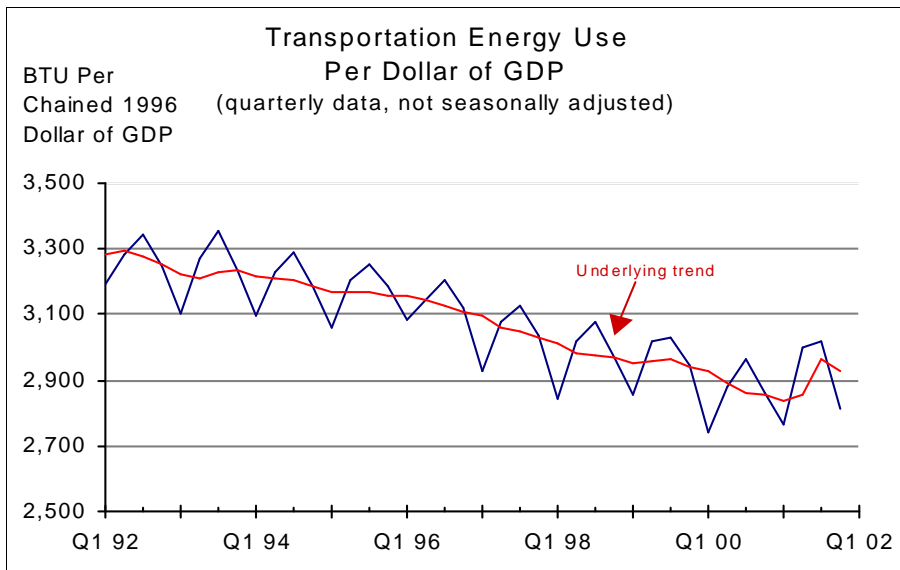
A trendline has been provided for transportation energy consumption. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor (STAMP)*, London: Timberlake Consultants Ltd. , 2000

SOURCE: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, available at: <http://www.eia.doe.gov/mer>.

Transportation accounts for about 28 percent of U.S. energy consumption. Petroleum accounts for nearly all (about 97 percent) of the transportation sector’s energy use. Petroleum is a major component of transportation costs, and its usage affects the environment. Because more than half of the U.S. petroleum supply is imported, there are also national security concerns for assuring petroleum supplies.



TRANSPORTATION ENERGY USE PER DOLLAR OF GDP



Transportation Energy Use Per \$ of GDP	Q4 00	Q4 01
Thousand BTU per Dollar of GDP	2,859	2,814
Percent change from same quarter previous year	-3.02	-1.57

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

A trendline has been provided for transportation energy consumption. The trend has been calculated through a statistical procedure called Structural Modeling, in which the time series under study is decomposed into seasonal, trend and irregular components. For further information on this statistical procedure, see: S.J. Koopman, et al., *Structural Time Series Analyser, Modeller and Predictor (STAMP)*, London: Timberlake Consultants Ltd., 2000

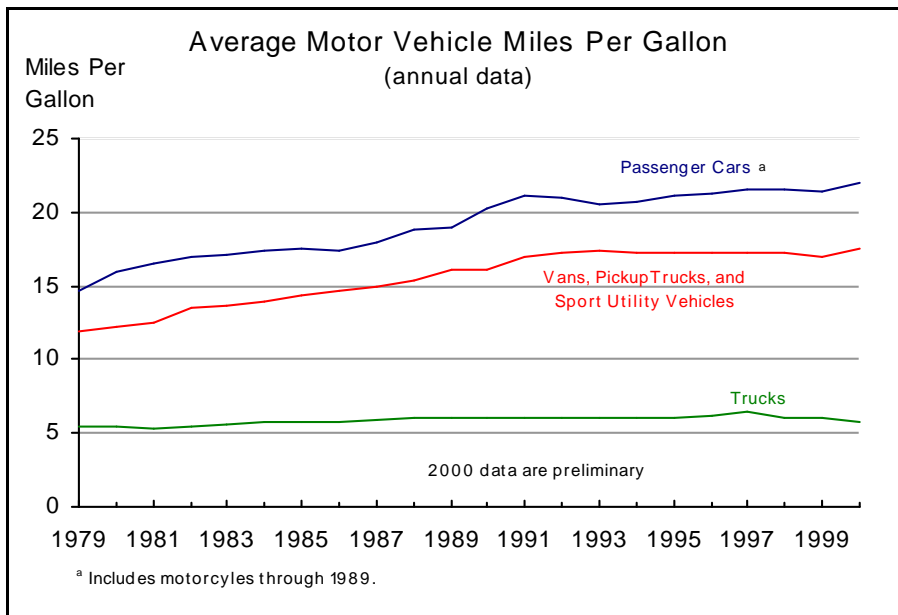
SOURCE: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, available at: <http://www.eia.doe.gov/mer>.

BTU - British Thermal Unit  
 The average heat content of motor gasoline is 129,024 BTU per gallon. One quadrillion BTU is equivalent to 7.75 billion gallons of motor gasoline.

This indicator shows the level of energy use for transportation with respect to production of GDP and the levels of personal consumption in the United States over time. Transportation energy use reflects the seasonality of personal travel.



**AVERAGE MOTOR VEHICLE MILES PER GALLON**



Average Motor Vehicle Miles Per Gallon	1999	2000*
Passenger cars	21.4	22.0
<i>Percent change from previous year</i>	-0.93	2.80
Vans, Pickup trucks, SUVs	17.0	17.5
<i>Percent change from previous year</i>	-1.16	2.94
Trucks	6.0	5.8
<i>Percent change from previous year</i>	-1.64	-3.33

\* Preliminary estimates.

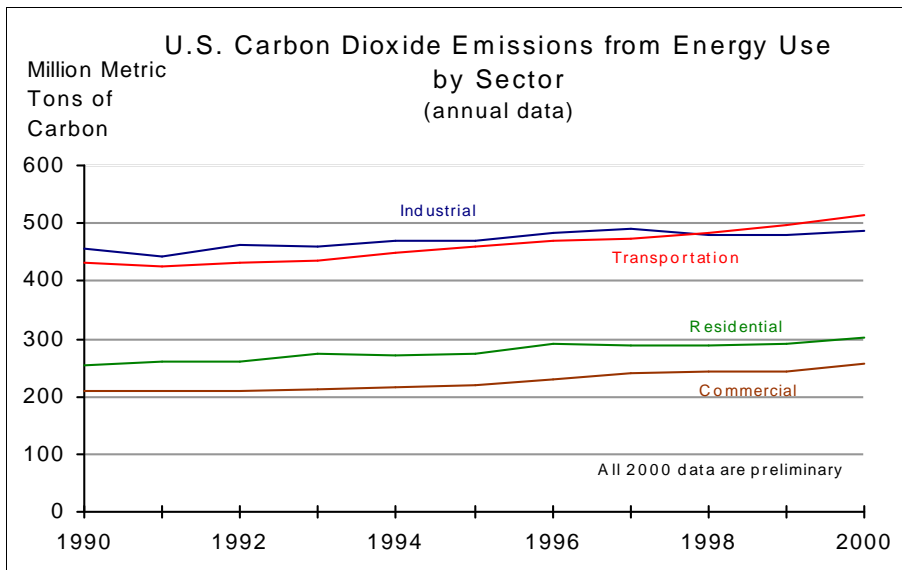
SOURCES: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*. Available at <http://www.eia.doe.gov/mer>

Since 1979, the average fuel rate of passenger cars, vans, pickup trucks, and sport utility vehicles have had an upward trend. In the 1990s, the fuel rates reached a more stable trend, and are now better than a decade ago. In 2000, the fuel rate for passenger cars reached a historical high of 22 miles per gallon. The fuel rates for trucks have not changed significantly. (The average fuel rate is calculated by dividing fuel consumption by mileage of a motor vehicle.)





**U.S. CARBON DIOXIDE EMISSIONS**



MMTC = million metric tons of carbon  
 Tons of carbon can be converted to tons of carbon dioxide by multiplying by 3.667.

Carbon dioxide is a major greenhouse gas emitted from the burning of fossil fuels.

The transportation sector surpassed the industrial sector's carbon dioxide emissions for the first time in 1998. Historically, the industrial sector was the largest emitter of carbon dioxide.

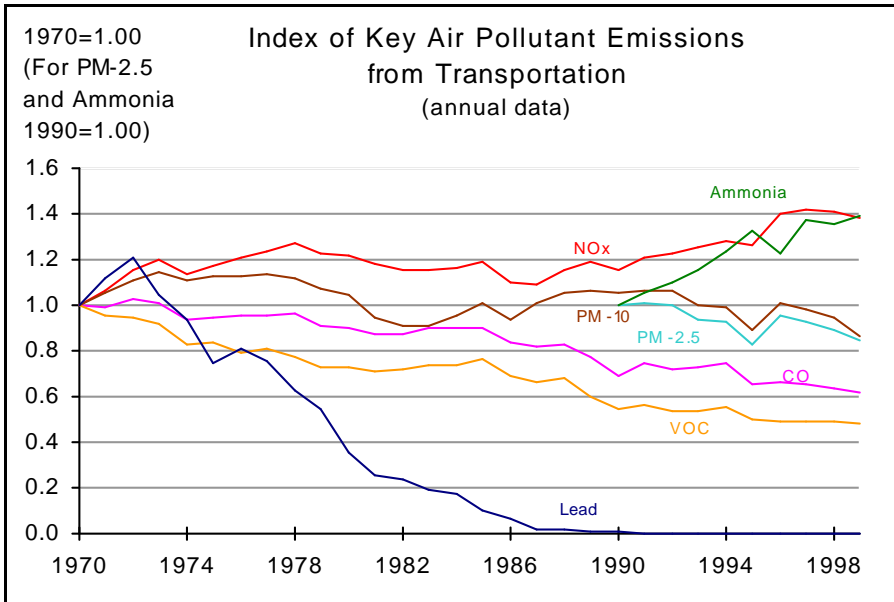
U.S. Carbon Dioxide Emissions	1999	2000*
Transportation (MMTC)	496	513
<i>Percent change from previous year</i>	2.90	3.43
Industrial (MMTC)	481	488
<i>Percent change from previous year</i>	0.21	1.46
Residential (MMTC)	290	301
<i>Percent change from previous year</i>	0.35	3.79
Commercial (MMTC)	244	256
<i>Percent change from previous year</i>	0.00	4.92

\* Preliminary estimates

SOURCES: U.S. Department of Energy, Energy Information Administration, *Emissions of Greenhouse Gases in the United States, 1990-1999*. Available at: <http://www.eia.doe.gov/oiaf/1605/ggrpt/index.html>. For 2000 numbers: U.S. Department of Energy, Energy, Information Administration, Energy-CO2 Flash estimate, available at: <http://www.eia.doe.gov/oiaf/1605/flash/sld001.htm>

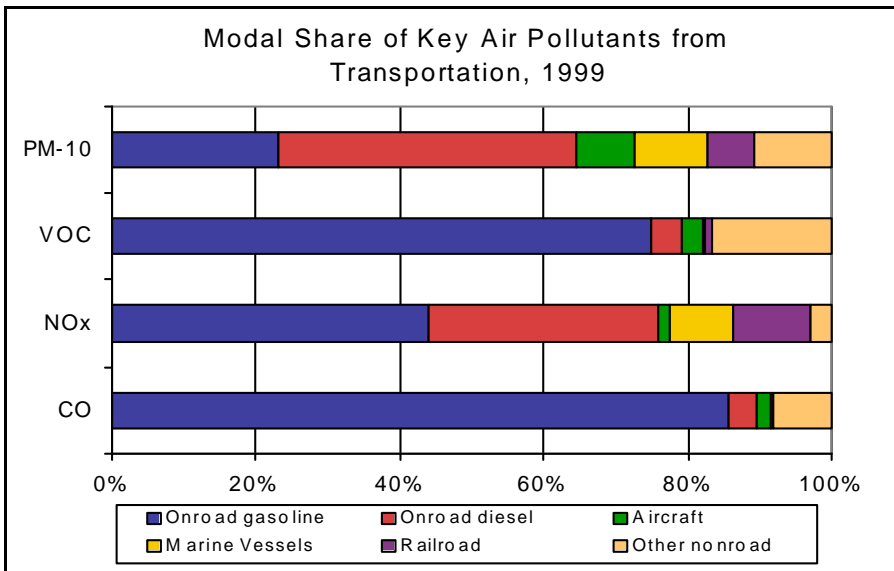


**AIR POLLUTANT EMISSIONS FROM TRANSPORTATION**



Thousands of Short Tons of Transportation Air Emissions	1998	1999
Carbon monoxide (CO)	58,108	55,773
Oxides of nitrogen (NOx)	11,522	11,306
Volatile organic compounds (VOC)	6,829	6,681
Particulate matter < 10 microns (PM-10)	475	458
Particulate matter < 2.5 microns (PM-2.5)	387	368
Ammonia	262	270
Lead	0.5	0.5

SOURCE: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards (OAQPS), National Emissions Inventory, available at: <http://www.epa.gov/ttn/chief/index.html>



Despite rapid growth in vehicle use over the past two decades, emissions of carbon monoxide (CO) and volatile organic compounds (VOC) have declined, and lead emissions have been almost eliminated, leading to improved air quality. There have been reductions in particulate emissions (PM) at the 10 micron classification. Only emissions of nitrogen oxides (NO<sub>x</sub>) remain above 1970 levels. (Ammonia and PM-2.5 were added to the list of regulated pollutants recently.)

Onroad vehicles contribute the largest share of air pollutants among all modes.

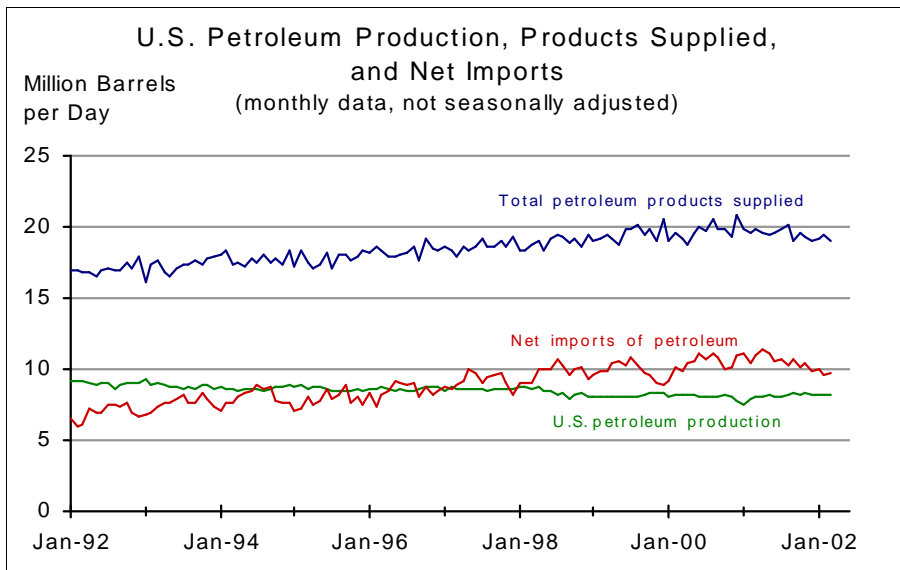


# National Security

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U.S. DEPENDENCE ON OIL IMPORTS



The United States now imports more petroleum than it produces domestically. U.S. dependence on foreign sources for a product of such critical importance to the U.S. economy and society has prompted national security concerns.

NOTE: Petroleum products supplied is a proxy for consumption.

Total Petroleum Products Supplied	Mar-01	Mar-02
Total (thousand barrels per day)	19,892	19,074
Percent change from same month previous year	3.51	-4.11

Net Petroleum Imports	Mar-01	Mar-02
Total (thousand barrels per day)	10,996	9,701
Percent change from same month previous year	11.15	-11.78

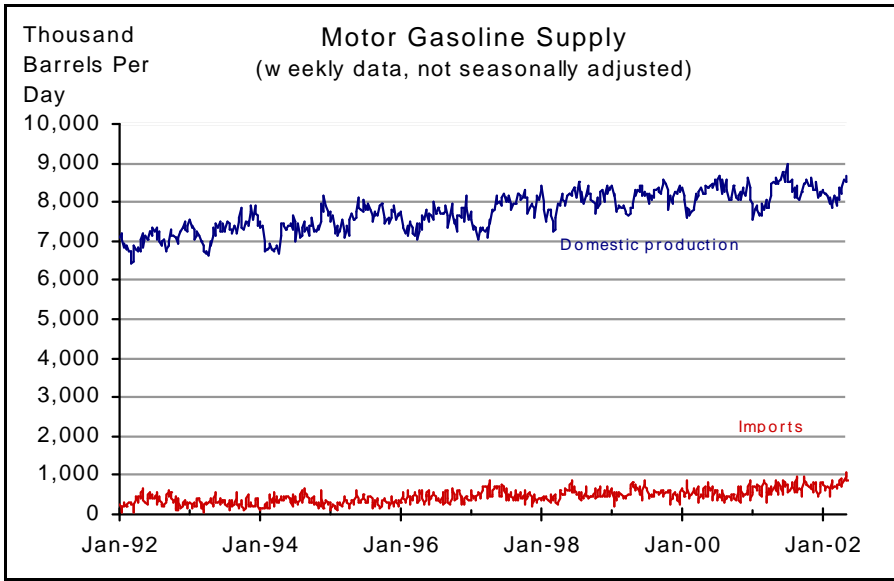
U.S. Petroleum Production	Mar-01	Mar-02
Total (thousand barrels per day)	8,102	8,183
Percent change from same month previous year	-1.86	1.00

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Energy, Energy Information Administration, *Monthly Energy Review*, April 2002, Available at: <http://www.eia.doe.gov/mer>.



**U.S. MOTOR GASOLINE PRODUCTION AND CONSUMPTION**



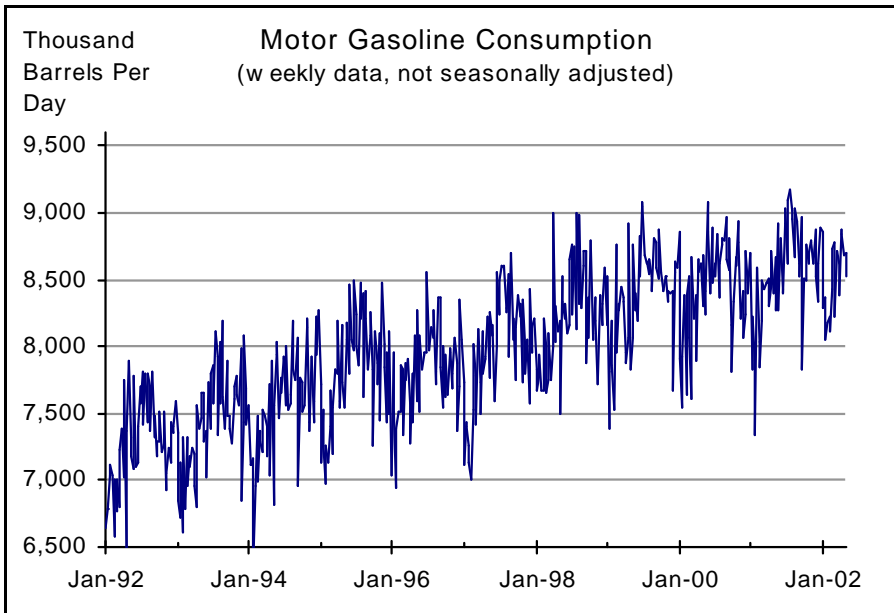
Motor Gasoline Supply (thousand barrels per day)	3-May-02	10-May-02
Production from domestic sources	8,658	8,639
Percent change from previous week	1.89	-0.22
Imports	853	844
Percent change from previous week	-19.83	-1.06

Motor Gasoline Consumption (thousand barrels per day)	3-May-02	10-May-02
Motor gasoline consumed	8,521	8,548
Percent change from previous week	-2.05	0.32

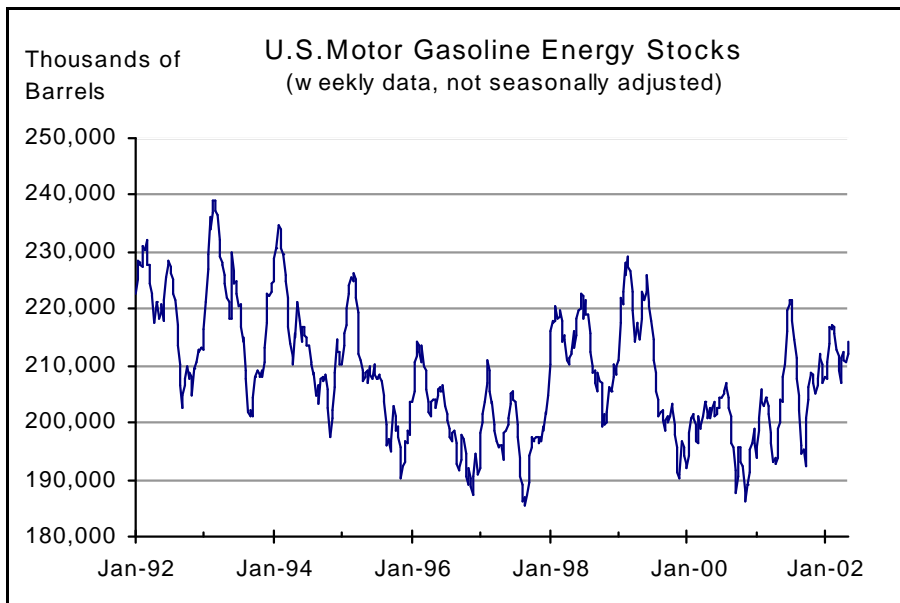
The consumption of motor gasoline in the United States is strongly seasonal, with more consumed in the summer and less consumed in the winter. On a yearly basis, the consumption of motor gasoline in the United States has been steadily increasing as vehicle-miles increased. In the week of July 20, 2001, the consumption of motor gasoline reached a record high of 9.2 million barrels per day. Thereafter, the consumption has decreased. In the most recent reporting week (May 10, 2002), the consumption was 8.5 million barrels per day, 8 percent lower than its peak in July.

Motor gasoline (more than 90 percent) is refined domestically. Anticipating the strong demand in summer, the motor gasoline supply reached its historical high in the week of June 29, 2001 with an average of 8.9 million barrels per day. By the beginning of May, motor gasoline supply declined to 8.6 million barrels per day, almost 4 percent lower than June of last year.

SOURCE: U.S. Department of Energy, Energy Information Administration, *Weekly Petroleum Status Report*, May 2002, Available at: [http://www.eia.doe.gov/oil\\_gas/petroleum/info\\_glance/gasoline.html](http://www.eia.doe.gov/oil_gas/petroleum/info_glance/gasoline.html)



MOTOR GASOLINE STOCKS



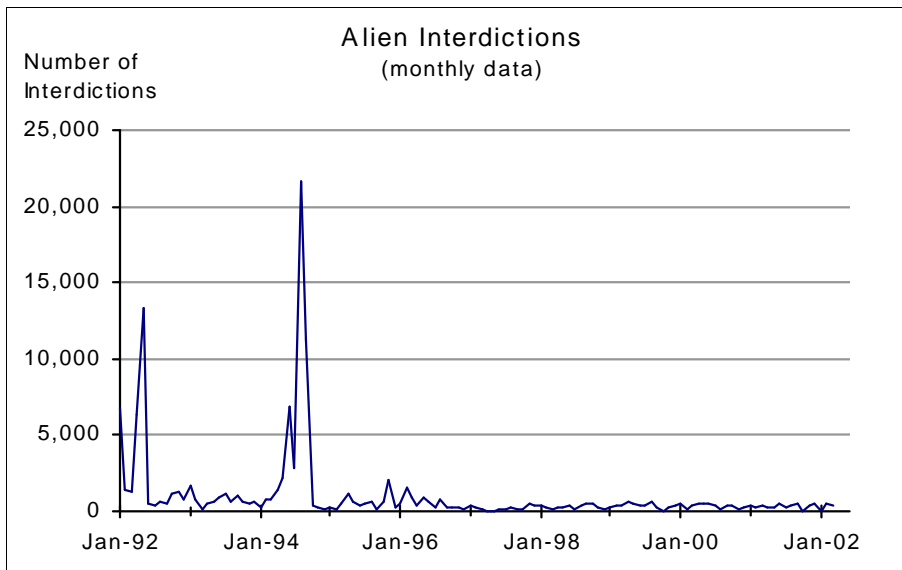
Motor Gasoline Stocks (thousands of barrels)	3-May-02	10-May-02
Stocks	214,108	217,207
Percent change from previous week	1.02	1.45

SOURCE: U.S. Department of Energy, Energy Information Administration, *Weekly Petroleum Status Report*, May 2002, Available at: [http://www.eia.doe.gov/oil\\_gas/petroleum/info\\_glance/gasoline.html](http://www.eia.doe.gov/oil_gas/petroleum/info_glance/gasoline.html)

Motor gasoline supply and consumption are balanced through changes in motor gasoline stocks. Motor gasoline stocks in the United States, average about 200 billion barrels. The recent high of motor gasoline stocks was in the week of June 29 of 2001, when the system prepared to meet higher demand in the summer. Since then the stocks have decreased. In the beginning of May, motor gasoline stocks increased to 217 billion barrels from May, but was still a decrease from the high of June 29, 2001.



INTERDICTIONS OF ILLEGAL ALIENS



Alien Interdictions	Mar-01	Mar-02
Total	351	353
Percent change from previous year	-2.77	0.57

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality.

SOURCE: U.S. Department of Transportation, U.S. Coast Guard, Office of Law Enforcement, available at: <http://www.uscg.mil/hq/g-o/g-opl/mle/amiostats1.htm>.

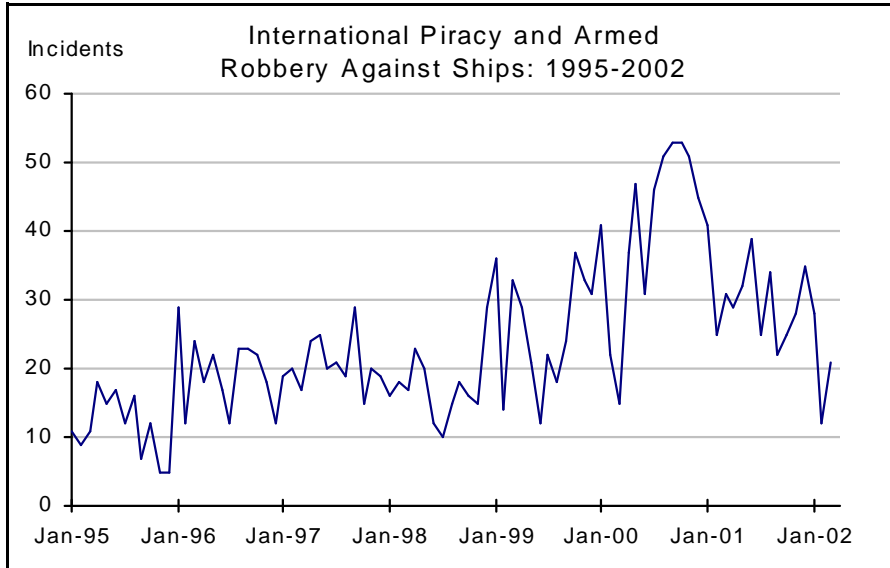
In recent years, most interdictions have involved people from Haiti, the People’s Republic of China (PRC), the Dominican Republic, and Cuba. Recently, many interdictions have occurred in the Guam region. Guam is a gateway to the continental United States from the PRC.

NOTE: In May 1992, there were 13,103 Haitian interdictions. In August 1994, there were 21,300 Cuban interdictions.

Interdiction– the interception and stopping of illegal aliens attempting to enter the United States (in this case by water or air).



INTERNATIONAL PIRACY



Piracy and Armed Robbery Against Ships	Mar-01	Mar-02
Number of Incidents	31	21
Percentage change from same month previous	106.67	-32.26

NOTE: The current value is compared to the value from the same period in the previous year to account for seasonality. Data for 2002 are preliminary.

SOURCE: United Nations International Maritime Organization (IMO), Monthly Circulars and Annual Reports 1995-2002, available at <http://www.imo.org>.

NOTE: Data for 2002 are preliminary.

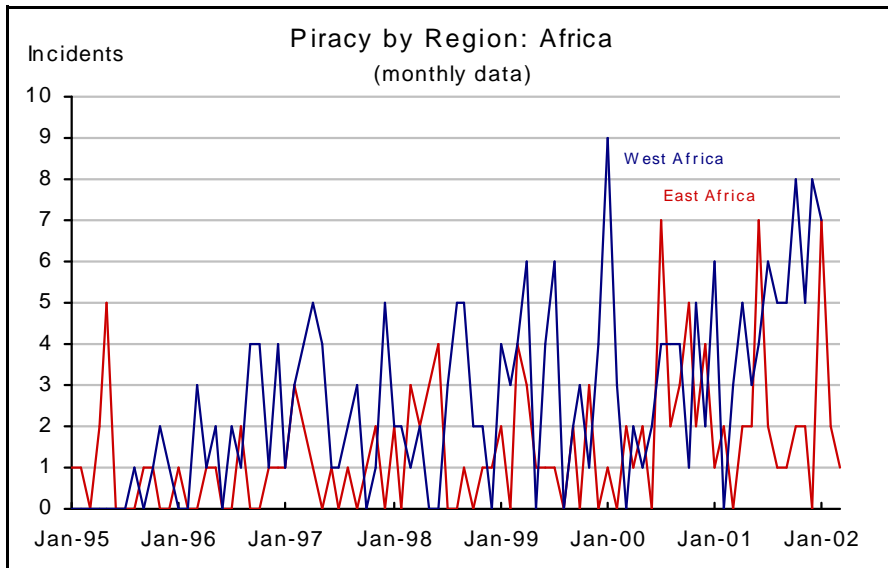
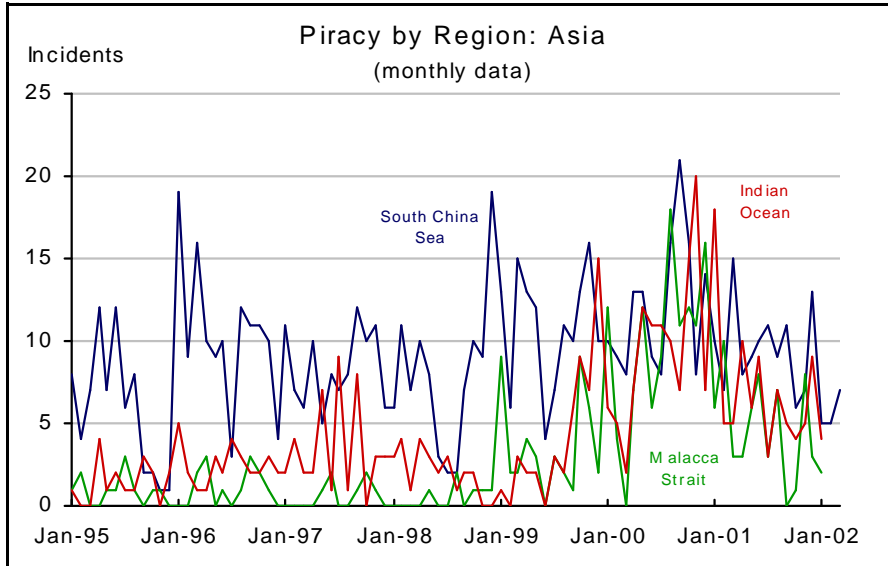
Piracy is any illegal act of violence, detention, or any act of depredation committed for private ends against a ship on the high seas or otherwise outside of the jurisdiction of a state. Incidents of armed robbery against ships, similar acts which happen while a ship is within the territorial waters of a state, have also been included.

Piracy affects the efficiency and security of the commercial shipping industry by increasing security costs, delaying shipments, and endangering the crew and cargo. In rare cases, entire ships are stolen, lost at sea, or intentionally destroyed. Although the number of incidents has declined recently, the incidents have become more violent.





INTERNATIONAL PIRACY BY REGION



NOTE: Data for 2002 are preliminary.

Piracy and Armed Robbery Against Ships	Mar-01	Mar-02
South China Sea	15	7
Percentage change from previous year	87.50	-53.33
Malacca Strait	3	4
Percentage change from previous year	NA	33.33
Indian Ocean	5	4
Percentage change from previous year	150.00	-20.00
West Africa	3	3
Percentage change from previous year	NA	0.00
East Africa	0	1
Percentage change from previous year	-100.00	NA

NOTE: Percentage changes may not be available (NA) because there were no incidents during the same month of the previous year. Data for 2002 are preliminary.

The International Maritime Organization (IMO) collects data from the International Maritime Bureau, the Baltic and International Maritime Council, the International Federation of Shippers, and maritime agencies of various countries. IMO data do not include piracy committed by government officials. Data also do not include incidents related directly to Taiwan.

**Malacca Strait:** The narrow body of water connecting the Indian Ocean with the Gulf of Thailand, South China Sea, and Pacific Ocean. The Malacca Strait is bordered by Malaysia and Singapore on the northeastern shore and by Indonesia on the southwestern shore. Includes the Singapore Strait.

**South China Sea:** For the purposes of this data, the South China Sea includes all Chinese, Indonesian, Filipino, and Malaysian coastal waters not included in the Malacca Strait. The Pacific Ocean is not included.

**Indian Ocean:** The Bay of Bengal and the Indian Ocean.

**West Africa:** Includes all African coastal waters from the Strait of Gibraltar to Cape Horn.

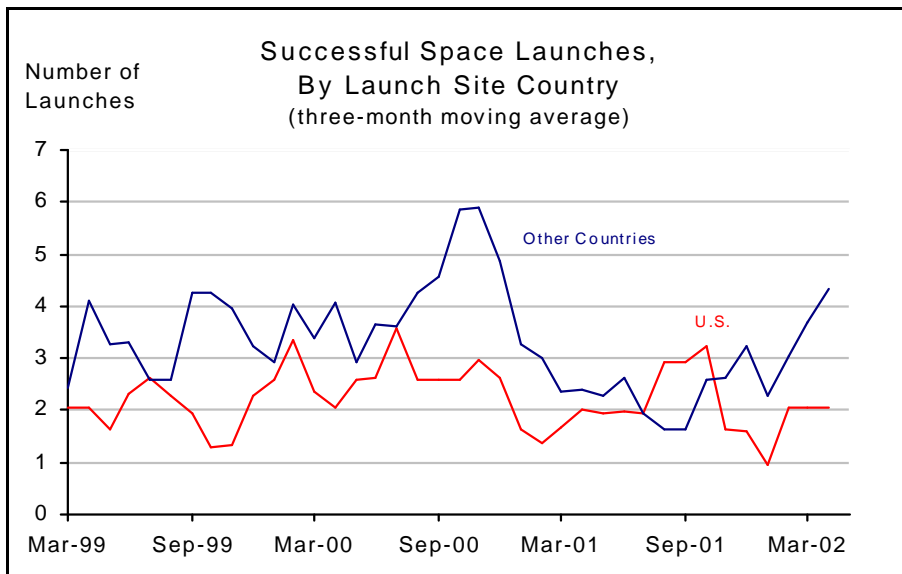
**East Africa:** Includes all African coastal waters from Cape Horn to the Red Sea.

SOURCE: United Nations International Maritime Organization, Monthly Circulars and Annual Reports 1995-2002, available at <http://www.imo.org>.

These regions are most affected by acts of piracy.



INTERNATIONAL SPACE LAUNCHES



Successful Space Launches (three-month moving average)	Apr-01	Apr-02
United States of America	2.0	2.0
<i>Percent change from same month previous year</i>	-1.16	0.64
Other Countries	2.4	4.3
<i>Percent change from same month previous year</i>	-41.42	80.94

SOURCE: National Aeronautics and Space Administration, National Space Science Data Center, Spacewarn monthly bulletins, available at <http://nssdc.gsfc.nasa.gov/spacewarn/>.

Successful space launches include all military, commercial, and government launches that deliver a payload to the proper orbit and location.

NOTE: The three-month moving average is the average number of successful launches for the most recent month and two preceding months. Launches per month have been adjusted for a 30-day month. The actual number of launches during a month is multiplied by the ratio of 30 to the number of days in that month to yield the adjusted number of launches for that month.



**A TIME SERIES ANALYSIS OF U.S. INLAND WATERWAYS TRADE**

“Owners, agents, masters, and clerks of vessels and other craft plying upon the navigable waters of the United States, and all individuals and corporations engaged in transporting their own goods upon the navigable waters of the United States, shall furnish such statements relative to vessels, passengers, freight, and tonnage as may be required by the Secretary of the Army” [from Section 11 of the Rivers and Harbors Appropriations Act of 1922 (42 Stat. 1043), as amended, and codified in 33 U.S.C. 555]. The monthly data reviewed here represent the tonnage (in millions of short tons) of all commodities transported on the U.S. inland waterways from January 1994 through March 2002.

Figure 2 provides a plot of the monthly seasonal variation, calculated over the period of January 1994 through April 2002, for the transported tonnage for inland waterway trade. The months of January and February are the lowest months for freight movement; these two months are seen as the troughs in the actual data series (as seen in Figure 1). The peaks in the series seem to occur around October, which has the highest positive seasonal variation. The summer months of July and August are strongly positive, as expected. December shows a negative impact on the overall monthly average, but this negative impact is not as strong as that exhibited by January and February. The monthly factors for March, April, June and September are not significantly different from zero.

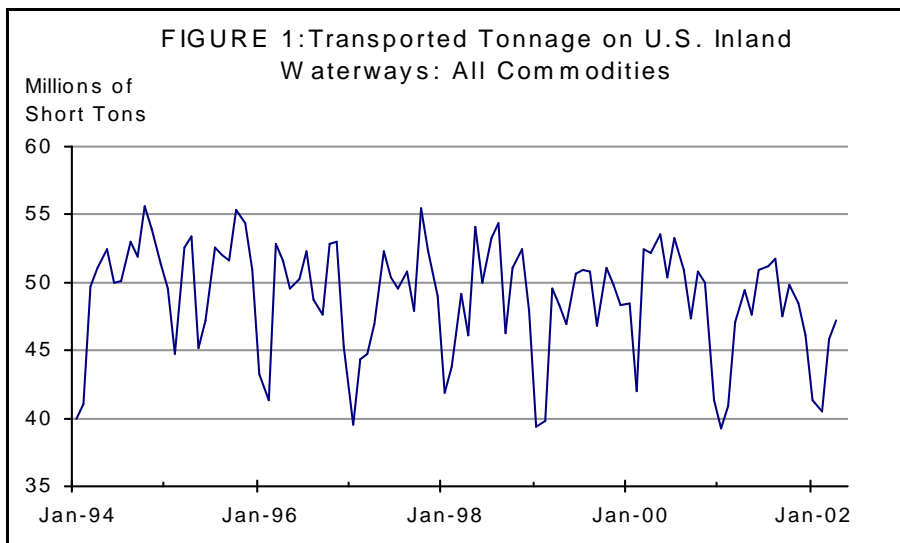
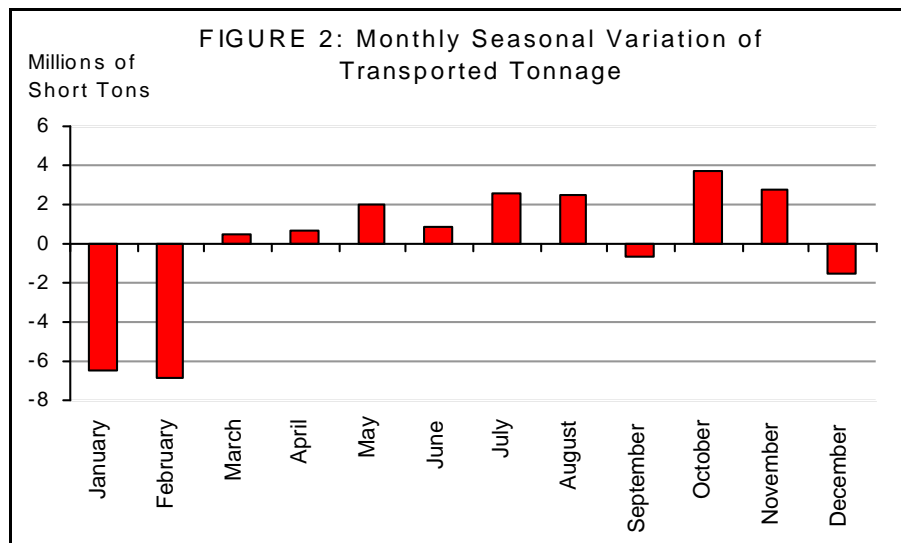


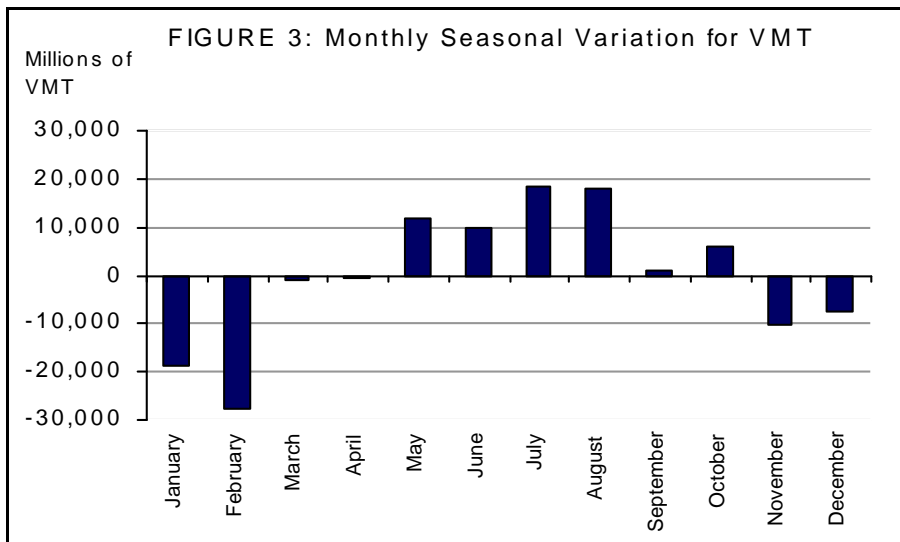
Figure 1 provides the time series plot of the monthly tonnage. As is true of other transportation data, the plot indicates strong seasonality in the data, with tonnage dropping sharply in the winter months. The issue to be studied is whether there is some significant direction to the trend underlying the seasonal variation. A cursory glance gives the impression of some downward trend—does it really exist? The next step of analysis is the measurement of the seasonality prior to the extraction of the trend.



To see how the seasonality compares to the seasonality in other modes of transportation, we have provided a plot of the seasonal variation of highway vehicle miles traveled in Figure 3 (the VMT analysis was originally provided in the September 2001 issue of Transportation Indicators).



A TIME SERIES ANALYSIS OF U.S. INLAND WATERWAYS TRADE (continued)

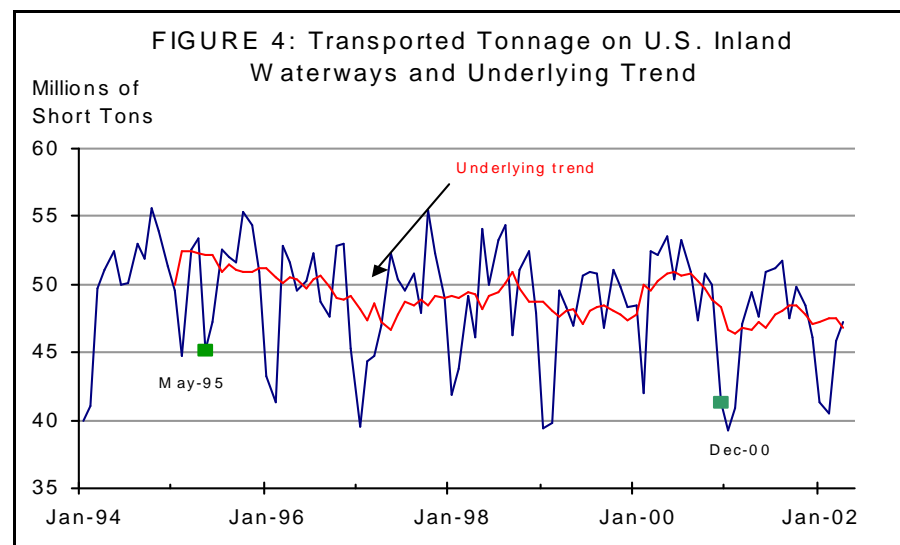


The highway VMT seasonality shows a similar pattern to the water trade data. Both experience large drops in the January and February months. For highway travel, however, the highest months are July and August, with low autumn values. Water tonnage movement, on the other hand, exhibits higher seasonality for October and November; the summer months are closer to the overall average.

The long-term pattern of the tonnage data tends to be masked by this strong seasonal pattern. The trend can be extracted as a separate component, so that long term behavior can be studied. Figure 4 provides a plot of the underlying trend compared to the actual monthly data. The long-term slope to the trend proved to be insignificant, which is confirmed by the manner in which the underlying trend tends to drift up and down over the period of seven years.

In the earlier data in this time series plot, a strong intervention was found around May 1995; this particular data point is highlighted in Figure 4. This intervention was removed prior to fitting the final trend line.

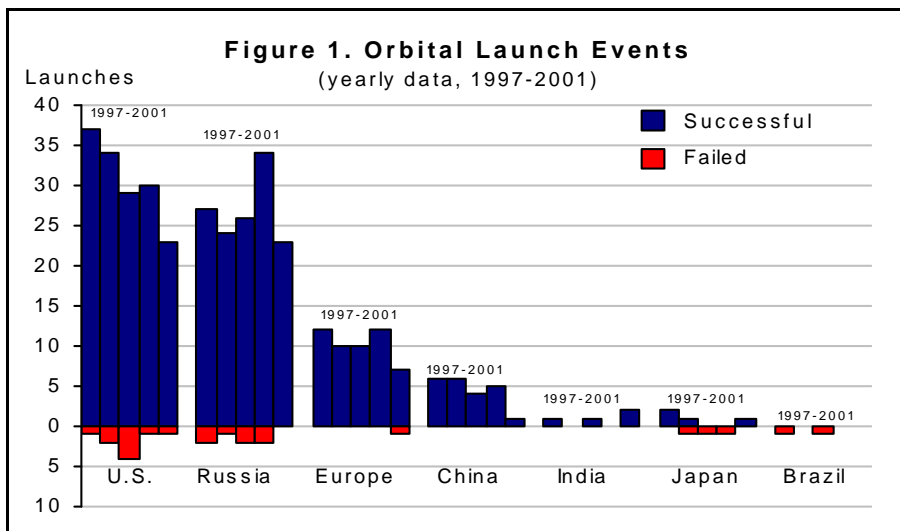
Statistical process control (SPC) procedures were applied to the model to search for additional shifts in the data. The SPC also highlighted a significant decrease in the data that could not be explained by seasonal variation alone. As the seasonal variation showed in Figure 2, December 2000 seasonality tends to be lower than the average monthly value. In fact, the trend shows a rise early in the year, followed by a significant decline in the last few months of 2000; this temporary decline may have been due to the adverse impact of the extreme heat, drought, and other disasters on agricultural products that year.



INTERNATIONAL SPACE TRANSPORTATION

Space transportation has been a priority for the United States for over 50 years. Early interest was fueled by the Cold War. The U.S.S.R. launched the first satellite, Sputnik, from Baikonur Cosmodrome on October 4, 1957. Soon after, the United States established the National Aeronautics and Space Administration (NASA) to advance space science.

Today, NASA, the U.S. Department of Defense, and the U.S. space industry are international leaders in space transportation. From 1997 to 2001, the United States launched 162 space vehicles (figure 1) [2]. Ninety-four percent of those vehicles placed their payloads into the proper orbit. There are four active launch sites in the U.S. Launches from the California-based maritime launch site, Sea Launch, have also been included in the total for U.S. launches.



NOTE: India did not launch any vehicles during 1998 or 2000. Brazil did not launch any vehicles in 1998, 2000, or 2001.

SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, Commercial Space Transportation: Year in Review (Washington, DC: annual issues), available at <http://ast.faa.gov/>.

Russia launched 141 vehicles between 1997 and 2001, and 95 percent of those vehicles successfully placed their payload into orbit [2]. Most of those launches departed from Baikonur Cosmodrome in Kazakhstan. Kazakhstan agreed to lease Baikonur Cosmodrome to Russia in 1994. Russia also utilizes two other launch sites on Russian soil for smaller launch vehicles and payloads.

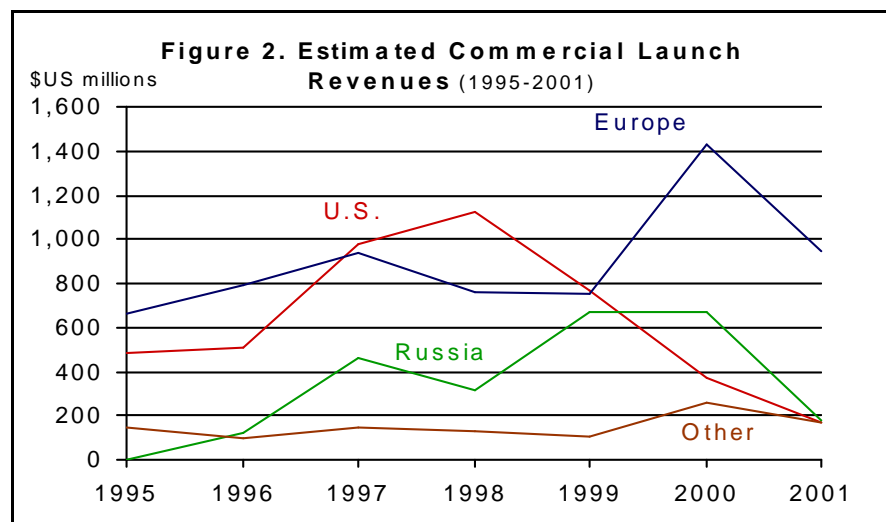
The European Space Agency (ESA) and Arianespace, a European company, launch commercial, military, and government satellites from the Centre Spatial Guyanais (CSG), in Kourou, French Guiana. Of the 52 vehicles launched from CSG between 1997 and 2001, 51 were successful— a 98% success rate [2]. China, India, and Japan have also established space programs, which successfully launched a combined 31 vehicles between 1997 and 2001. During that period, Japan, with a success rate of 57%, experienced 3 failed launches [2].

Most active launch sites create a demand for domestically manufactured space vehicles because the launch pads are compatible with those vehicles only. For example, CSG only launches vehicles manufactured by the European space industry. One of the few exceptions is Sea Launch, which uses Russian Zenit rockets.

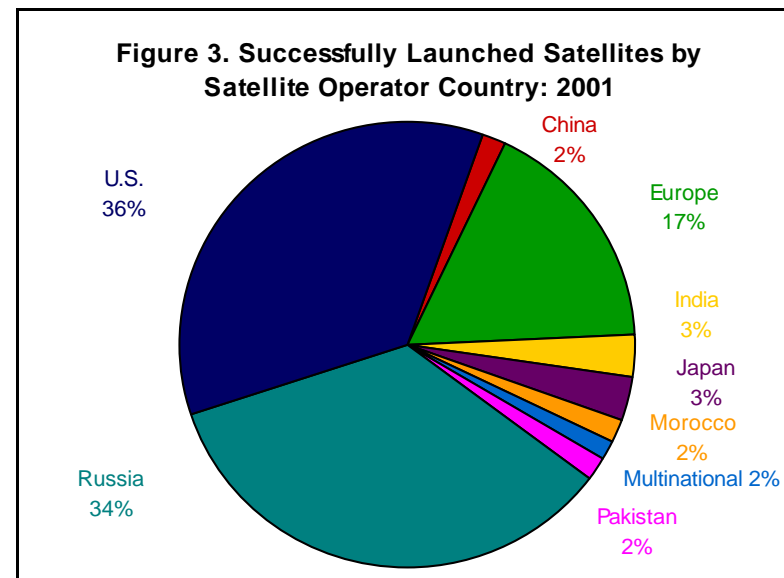


INTERNATIONAL SPACE TRANSPORTATION (continued)

Commercial launch services—launches that are not military or civil government launches—generate revenue (figure 2). Europe has become the leader in commercial launch revenues. The Centre Spatial Guyanais, in Kourou, French Guiana, collected an estimate \$948 million in revenues in 2001, nearly twice as much as all other nations combined. Launch activity declined sharply in 2001. There were 16 commercial launches, down from 35 in 2000. Commercial launch revenues declined 27 percent [2].



SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, Commercial Space Transportation: Year in Review (Washington, DC: annual issues), available at <http://ast.faa.gov/>.



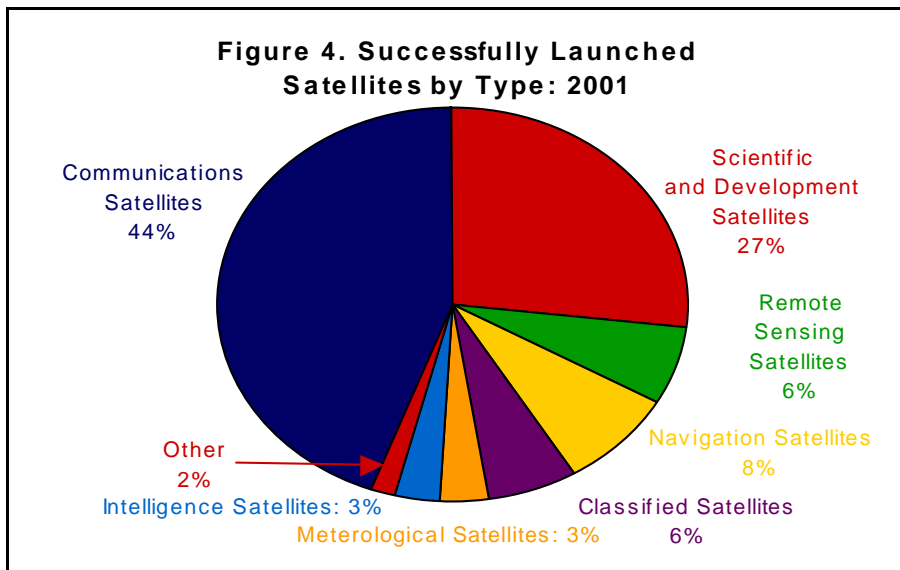
SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, Commercial Space Transportation: Year in Review (Washington, DC: annual issues), available at <http://ast.faa.gov/>.

U.S. organizations successfully launched 23 satellites in 2001— 36 percent of all satellites launched that year (figure 3). Russia put 22 satellites into orbit. Together, the U.S. and Russian organizations operate over 70 percent of the satellites placed into orbit during 2001. Two failed launches — one U.S. and one European — resulted in 4 lost satellites during 2001. Three of the lost satellites were U.S. satellites. Japan lost one satellite. Lost satellites are not included in figure 3.

In addition, a consortium of 16 countries jointly supported 13 missions to the International Space Station (ISS) in 2001. Six of the 8 crewed missions utilized NASA shuttles. The remaining missions, including 5 unmanned missions, were completed with Russian Soyuz vehicles.



INTERNATIONAL SPACE TRANSPORTATION (continued)



Military satellites play a key role in supporting the security of the United States. Satellites have improved military communication, reconnaissance, navigation, and meteorological forecasting capabilities. Thus, maintaining a strong manufacturing base and a skilled workforce capable of successful launches are national security concerns.

U.S. military navigation satellites, or global positioning satellites (GPS), are also used for many civilian applications, including transportation. GPS consists of 24 military satellites that emit radio signals. On the ground, GPS receivers use the signals to determine a precise location, altitude, and time. GPS has been integrated into the navigation systems of vehicles used for nearly all modes of transportation, including maritime, aviation, highway, rail, and transit.

Russia maintains a similar navigation satellite constellation, Global Navigation Satellite System, or GLONASS. Europe has just approved funding for a new set of navigation satellites, to be known as the Galileo Global Navigation Satellite System (GNSS), which could be completed by 2008.

NOTES:

**Communications satellite:** Television, radio, telephone, Internet, and other data transmission satellites

**Scientific and Development satellites:** Scientific research satellites and dummy payloads used for testing launch vehicles

**Remote sensing satellite:** Imaging satellites

**Navigation satellites:** GPS and GLONASS satellites

**Classified satellites:** Satellites of an unknown type and purpose

**Meteorological satellites:** Weather or environment monitoring satellites

**Intelligence satellites:** Satellites used for intelligence gathering

**Other:** Any other satellite not included in other type categories

SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Associate Administrator for Commercial Space Transportation, Commercial Space Transportation: Year in Review (Washington, DC: annual issues), available at <http://ast.faa.gov/>.

