

3 HOW MUCH DOES TRANSPORTATION COST?

Transportation requires the use of resources—labor, equipment, fuel, and infrastructure. The cost of transportation is the use of these resources. Some of these resources are purchased directly by the users of transportation—for example, fuel purchased by households for automobile travel. Many resources are purchased by firms that provide transportation services—for example, labor purchased by a railroad or fuel bought by a trucking company. In addition, governments (federal, state and local) provide most of the transportation infrastructure, such as highways.

The prices transportation companies charge for transportation services become out-of-pocket costs to travelers and freight shippers, impacting their transportation choices. Because transportation is an input to the production of almost all goods and services, transportation price changes can influence the cost of other goods and services. Transportation prices themselves are impacted by the prices of inputs, such as labor costs, fuel costs, and the costs of transportation parts. This chapter discusses costs for three segments of the transportation market:

1. businesses that use transportation in production and delivery of non-transportation goods, such as retail and grocery;
2. producers of transportation services, such as railroads, airlines, or trucking companies; and
3. business and household travelers.

When disaggregate data are not available for business and household travelers, statistics that combine business and household travelers will be used. This chapter contains a special section on fuel because it is a key input to all transportation industries and households.

Finally, while businesses and households pay prices for transportation, the prices do not fully account for air pollution, traffic congestion, or other negative effects of transportation. These unaccounted effects represent costs to society, and are known as *negative externalities*. While negative externalities are an important part of economic analysis, this chapter covers only prices paid.

Costs to Use Transportation Services

This section presents data on transportation costs from two perspectives: (1) the *Producer Price Index (PPI)* (box 3-1) and (2) the *Consumer Price Index for all Urban Consumers (CPI-U)* (box 3-2). The PPI for a particular mode of transportation measures the average change in the selling prices received by producers of transportation services. Prices are from the point of view of the seller, and thus exclude items like sales and excise taxes. The CPI-U is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.¹

Producer Price Index

The *Producer Price Index (PPI)* shows the weighted average of wholesale or producer prices. Figure 3-1 shows PPIs in the transportation industry by mode from 2003 to 2015. Rail producer PPIs prices grew by 65 percent, more rapidly than any other transportation mode. Air and water PPIs also increased during this time period, with producer prices in trucking growing at a slightly slower rate than air and water. More research is needed to better understand the reasons why PPIs change differently by mode.

¹ The CPI-U excludes rural consumers to avoid statistical sampling issues.

Box 3-1 Producer Price Indices

The *Producer Price Index (PPI)* is the weighted average of wholesale or producer prices. These are the prices charged by producers of transportation services. The PPI for a particular mode of transportation measures the average change in the selling prices received by producers. For example the rail producer price index is based on a survey of railroad prices charged to shippers. The PPI for trucking services measures the average change over time in the selling price for trucking services. The PPI is different than the Consumer Price Index which shows changes in prices from the viewpoint of the consumer or purchaser of the transportation services.

The PPI is one of the most widely used measures of price

changes for the transportation sector and is published by the Bureau of Labor Statistics (BLS). BLS surveys a sample of individual business establishments. Because prices are from the point of view of the producer of transportation services, they exclude items like sales and excise taxes. Prices are weighted by the size of establishment's revenue to create indexes for narrowly defined services (such as local specialized freight trucking excluding used goods) and are then combined by BLS into aggregated indexes (such as all trucking) using value of shipments data from economic censuses of the Bureau of the Census. BLS publishes data for both broad and more narrowly defined services and costs.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, 2016.

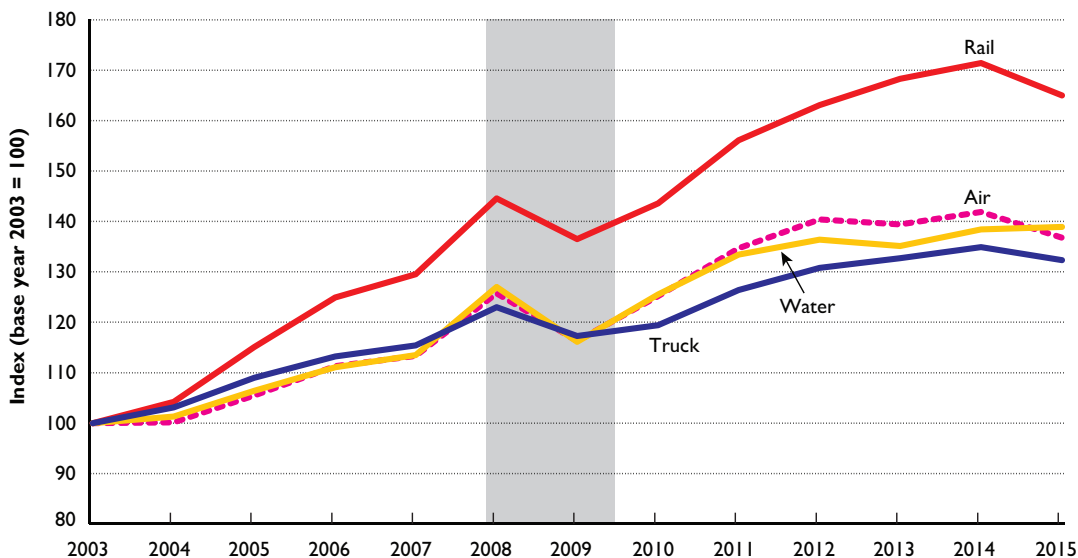
Box 3-2 Consumer Price Index for All Urban Consumers (CPI-U)

Consumer Price Index for all Urban Consumers (CPI-U) is a measure of the average change over time in the prices urban consumers paid for a market basket of consumer goods and services. Consumer Price Indexes (CPI) for particular goods and services, such as ones related to transportation, show changes in prices paid by consumers for transportation related goods and services. Comparing the CPI-U and

the CPI for transportation shows which transportation items are contributing to changes in the consumer cost of living, and comparing mode specific CPIs shows which modes of transportation are becoming more expensive relative to other modes of transportation.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, 2016.

Figure 3-1 Producer Price Indices for Providers of Selected Transportation and Warehousing Services, 2013–2015 (2003 = 100)



NOTES: Transportation Warehousing Services are defined on a North American Industry Classification System (NAICS) basis. Shaded bars indicate economic recessions.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-13, available at www.bts.gov as of August 2015.

The historic trends in the PPI show a peak across modes in 2008. The 2008 peak occurred at the end of a period of economic growth accompanied by increasing fuel prices. After a decline during the economic downturn in 2009, prices reached a new and higher level in 2011 and continued to increase through 2015. The rise in prices since

2009 has occurred during a period of economic growth.

Table 3-1 shows changes in producer prices for selected transportation industry subsectors. While transportation PPIs have often moved together, some subsectors show

Table 3-1 Detailed Producer Price Indices by Transportation Modes, 2003, 2007–2015

Mode	2003	2007	2008	2009	2010	2011	2012	2013	2014	2015
Air transportation (NAICS 481) ¹	162.1	183.7	203.8	188.5	202.9	218.3	227.6	226	230	221.7
Scheduled air transportation (NAICS 4811) ²	198.5	224.5	248.9	229.1	247.7	267.9	280.1	278.3	283.8	272.5
Scheduled freight air transportation (NAICS 481112)	100	109	127.8	119.1	130.2	145.9	155.8	156.7	157	151.4
Nonscheduled air transportation (NAICS 4812) ³	117.8	148.5	165.8	160.4	165.4	168.1	169.5	167.6	166.8	168.1
Rail transportation (NAICS 482) ³	108.8	140.9	157.3	148.5	156.2	169.8	177.4	183.1	186.5	179.5
Line-haul railroads (NAICS 482111) ⁴	121.4	157.2	175.5	165.6	174.3	189.4	197.9	204.2	208	200.2
Water transportation (NAICS 483)	100	113.5	127	116.1	125.5	133.4	136.4	135.1	138.4	138.9
Deep sea freight transportation (NAICS 483111) ⁵	219.9	230	258.3	218.8	244.8	253.8	249.9	249.2	262.5	259.2
Coastal and great lakes freight transportation (NAICS 483113)	100	130.2	141.8	137.4	146.7	158.5	166.7	165.6	167.7	226.3
Inland water freight transportation (NAICS 483211) ⁶	124.7	186.1	218.3	211.4	217.4	235.9	245.7	237.5	234.7	226.3
Truck transportation (NAICS 484)	100	115.4	123	117.3	119.4	126.4	130.8	132.7	134.9	132.3
General freight trucking (NAICS 4841)	100	116.5	123.6	117.5	119.3	126.8	132.4	134.7	137.5	134.9
General freight trucking, local (NAICS 48411)	100	119.6	130.2	126	127.2	130.5	132.8	135	135.2	135.1
General freight trucking, long distance (NAICS 48412)	100	115.9	122.2	115.5	117.5	126.1	132.4	134.7	138.1	134.9
Specialized freight trucking (NAICS 4842)	100	113.1	122.1	117.4	119.9	125.7	127.5	128.5	129.2	126.9
Used household and office goods moving (NAICS 48421)	100	108.8	112.2	112.8	114.7	122.9	124.4	124.9	126.7	126.1
Specialized freight (except used goods) trucking, local (NAICS 48422)	100	114.2	126.7	123.9	126.5	131.3	133.4	135.1	135.6	132.3
Specialized freight (except used goods) trucking, long distance (NAICS 48423)	100	114.8	123.6	113.2	115.8	121.4	122.9	123.4	123.9	121.6
Pipeline transportation (NAICS 486)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pipeline transportation of crude oil (NAICS 4861)	100	125.4	137.1	141	183.4	184.7	195.5	211.1	222.6	233
Other pipeline transportation (NAICS 4869)	100	115	121.6	128.7	133.8	137.3	144.7	150.7	160.4	168
Support activities for transportation (NAICS 488)	100	108.5	111.7	108.6	110.7	114	115.7	117.5	118.7	118.7
Support activities for water transportation (NAICS 4883)	100	112.7	117.3	116.8	120.2	123.9	128	130.4	131.7	132
Postal service (NAICS 491) ²	155	171.9	178.9	185	187.7	190.6	195.7	202.4	213.2	216.5
Couriers and messengers (NAICS 492)	100	131.5	142	141.5	153.4	168.8	179.7	189.4	198.3	203.2

NOTES: "NAICS" stands for "North American Industry Classification System." Federal statistical agencies use NAICS as the standard for classifying businesses when they collect, analyze, and publish economic data. Index base years are as follows: ¹Base year = 1992. ²Base year = 1989. ³Base year = 1996. ⁴Base year = 1984. ⁵Base year = 1988. ⁶Base year = 1990. All others are base year 2003. NA = not available.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-13, available at www.bts.gov as of July 2016.

exceptions. Transportation prices declined for all transportation modes in 2009 during the recession, except the “household and office moving” subsector of the trucking industry, which saw a modest increase in prices (0.5 percent). Overall the PPI for water transportation increased from 2013 to 2015 (135.1 to 138.9), but during the same time the PPI for inland water freight transportation declined (237.5 to 226.3).

Consumer Price Index for Urban Consumers

The *Consumer Price Index for Urban Consumers* (CPI-U) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

Economists often use the CPI-U (box 3-2) as an indicator of general price trends.

Consumer Price Indexes for particular goods and services, such as ones related to transportation, show changes in prices for those goods and services. Table 3-2 shows price changes in private and public transportation from 2014 to 2015. On average, transportation cost less in 2015 than in 2014 (table 3-2).

The *CPI-U* (box 3-2) for both private and public transportation declined from 2014 to 2015 (table 3-2). Costs for private transportation declined by 8.2 percent resulting primarily from a 27.1 percent decrease in gasoline cost as well as decreases in the cost of other fuels and

Table 3-2 Consumer Price Indexes for All Urban Consumers, Transportation Related Goods and Services

Goods and Services	2014 average	2015 average	Change from 2014 to 2015
Overall transportation	215.9	199.1	-7.8%
Private transportation	211.0	193.7	-8.2%
New and used motor vehicles ¹	100.8	100.8	-0.0%
New vehicles	146.3	147.1	0.6%
Used cars and trucks ^{1 2}	149.1	147.1	-1.3%
Motor fuel	292.4	213.1	-27.1%
Gasoline (all types)	290.9	212.0	-27.1%
Other motor fuels ¹	276.7	197.5	-28.6%
Motor vehicle parts and equ.	144.8	144.2	-0.4%
Tires	128.0	126.5	-1.2%
Motor vehicle maint. and repair	266.0	270.7	1.8%
Motor vehicle insur.	437.2	460.6	5.4%
Motor vehicle fees ¹	176.5	178.9	1.4%
Parking fees and tolls ^{1 2}	210.4	215.9	2.6%
Public transportation	276.4	268.7	-2.8%
Airline Fare	307.7	292.2	-5.0%
Other intercity	152.9	152.9	-0.0%
Intercity train fare ^{2 3}	111.1	110.0	-1.0%
Ship fare ^{1 2}	61.2	61.8	0.9%
Intracity transportation	297.4	303.9	2.2%
Intracity mass transit ^{2 4}	117.5	120.2	2.3%

NOTES: Based for indexes are as follows: ¹Indexes on a December 1997=100 base. ²Special index based on a substantially smaller sample. ³Indexes on a December 2007=100 base. ⁴Indexes on a December 2009=100 base. All others, average of 1982 to 1984=100.

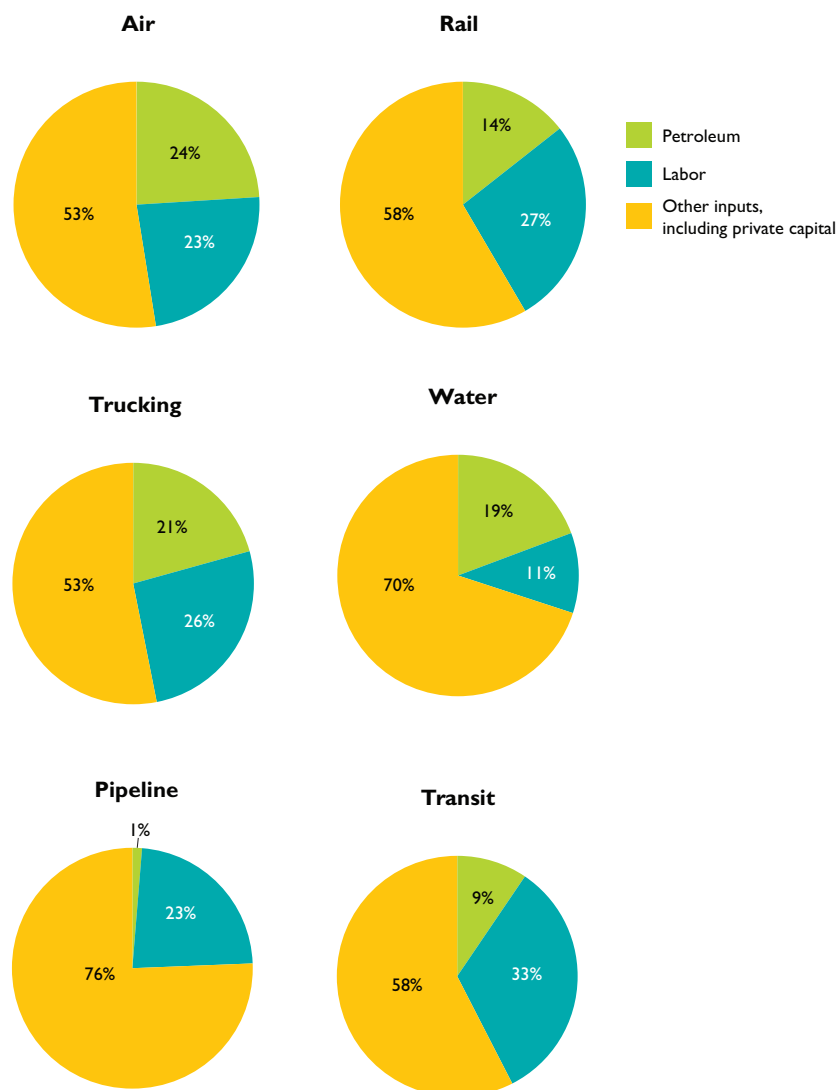
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *CPI Detailed Report*, Table 1A and 3A, Data for January 2016 available at www.bls.gov/cpi/cpid1601.pdf as of July 2016.

tires. These decreases were partially offset by increases in the cost of insurance, parking fees and tolls, and vehicle maintenance and repairs. The 2.8 percent decline in public transportation costs reflected lower intercity costs for rail travel (-1.0 percent) and air (-5.0 percent). On the contrary, intracity transportation costs increased 2.2 percent, while intracity mass transit costs increased 2.3 percent from 2014 to 2015.

Fuel Prices

Fuel prices are a cost to transportation industries and a direct cost to consumers. The cost of petroleum products is a large share of the total value of the output of for-hire transportation services, ranging as high as 24 percent for aviation and 21 percent for trucking (figure 3-2). Gasoline and motor oil also account for 27.2 of household spending on transportation, as discussed in

Figure 3-2 Input Cost Shares, by Mode, 2012



NOTE: Chapter 4 discusses labor costs in more detail.

SOURCE: BTS, 2012 Transportation Satellite Accounts, Use Table. www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/transportation_satellite_accounts/2002_2012/2012/2012_detail_use/index.html.

Chapter 6. Fuel cost is very visible to households, as news reports focus on changes in fuel prices and gas stations (by law) must post prices, making fuel prices salient to consumers in ways other prices are not.

Sales Price of Transportation Fuel

Prices for regular gasoline, No. 2 diesel (used by automobiles and trucks), jet fuel kerosene, and railroad diesel typically move together with slight variations (figure 3-3). This reflects the underlying price of crude oil from which they all are refined.

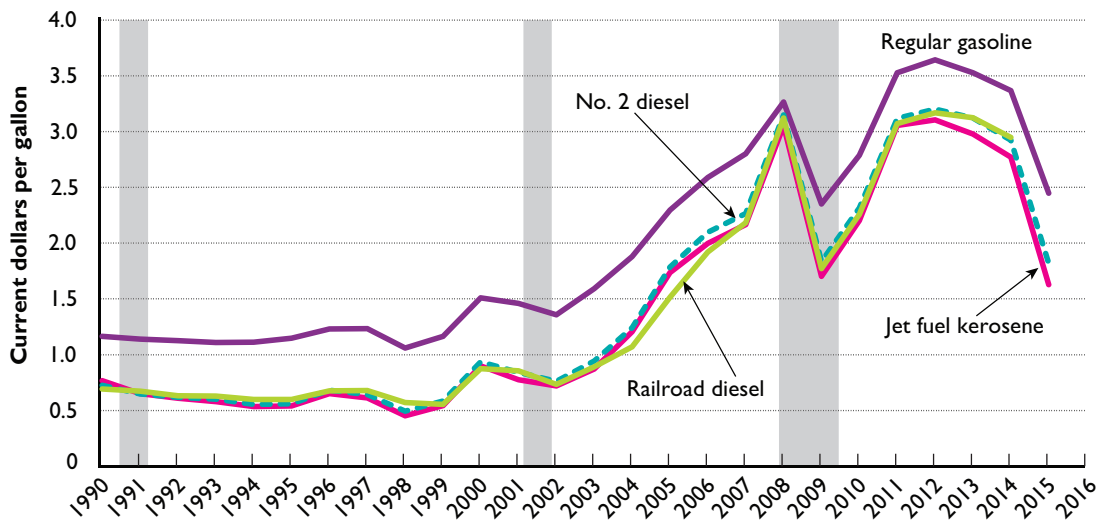
Following a decade of relatively stable fuel prices in the 1990s, fuel prices began to increase. Gasoline, No. 2 diesel fuel, and kerosene spiked to over \$3.00 per gallon in 2008. While declining sharply during the recession of 2008-2009, fuel prices began to rise again, rising above the 2008

price just after 2011. Since peaking in 2012, prices declined in 2013 through 2015. In 2015 prices declined sharply below 2009 levels for diesel fuel and kerosene, and just above 2009 levels for gasoline.

Average Motor Gasoline Prices by Region

Gasoline prices vary substantially across the United States. Prices can vary because of state and local taxes, refinery locations, fuel supplies, retail competition, and fuel regulations. Figure 3-4 illustrates average regional gasoline prices in 2015 using data from the Energy Information Administration (EIA). The averages include all grades and blends of regular gasoline. In 2015 the average gasoline price in the United States was \$2.52 per gallon. The West Coast had the highest gasoline prices in the country at \$3.04 per

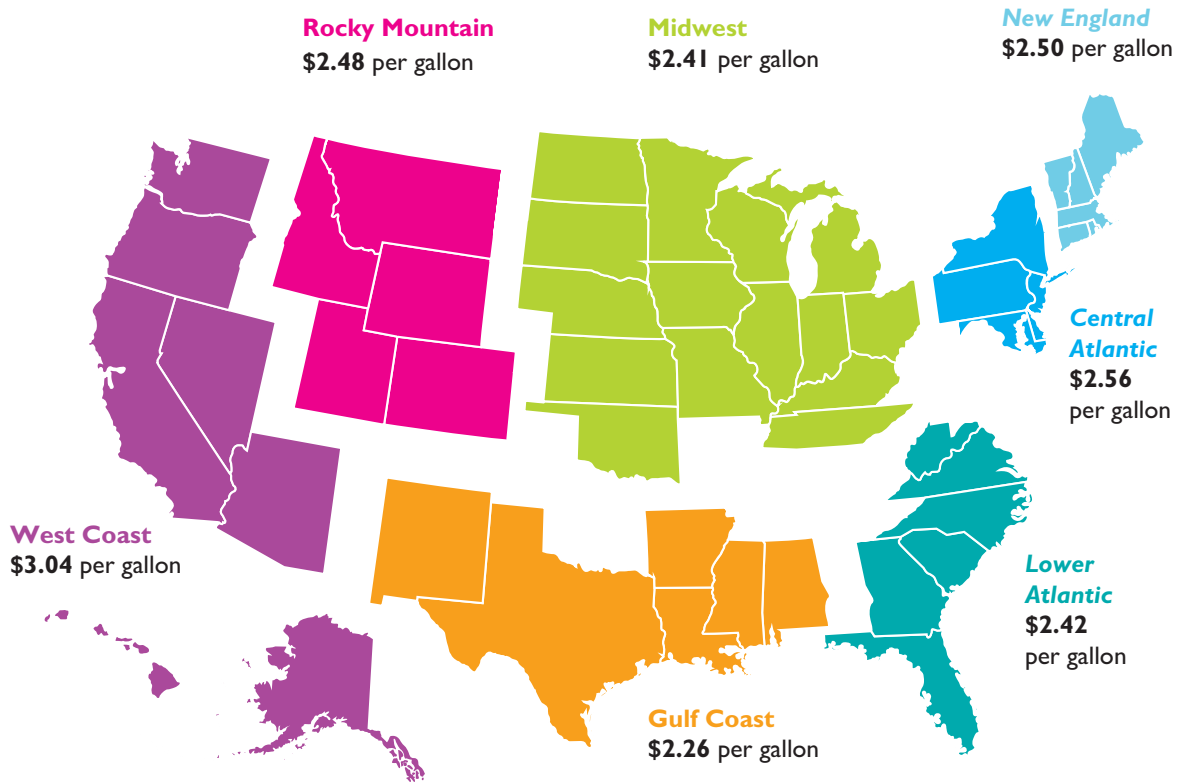
Figure 3-3 Sales Price of Transportation Fuel to End-Users, Excluding Taxes, 1990–2016 (current dollars / gallon)



NOTES: Data on the cost of railroad diesel fuel come from the Association of American Railroads. All other fuel cost data come from the Energy Information Administration. Gasoline costs are average retail prices. Highway diesel fuel and jet fuel prices are based on sales to end-users (those sales made directly to the ultimate consumer, including bulk customers in agriculture, industry, and utility). Shaded bars indicate economic recessions.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-11, available at www.bts.gov as of July 2016.

Figure 3-4 Average Retail Gasoline Prices by Region, 2015



NOTE: Average prices include all grades and formulations of regular gasoline.

SOURCE: U.S. Department of Energy, Energy Information Administration, available at www.eia.gov/dnav/pet/pet_pri_gnd_a_epm0_pte_dpgal_a.htm as of July 2016.

gallon—\$0.50 more than the Central Atlantic, which had the second-highest prices at \$2.56 per gallon. Prices were highest in California, at \$3.13 per gallon, because California requires a unique blend of gasoline to meet environmental regulations. Meanwhile, the Gulf Coast had the lowest gasoline prices at \$2.26 per gallon, or \$0.15 lower than the Midwest, which had the second-lowest prices at \$2.41 per gallon.

Costs to Deliver Transportation Services

There are two types of transportation services: freight transportation services provided to producers of goods and services (e.g., trucking and air freight); and passenger transportation services provided to both producers and household consumers. The price of freight

transportation services is a cost to producers of many goods and services, and thus impacts the prices of those goods and services. The cost of passenger transportation services directly impacts consumers as well as the prices of goods and services because producers also use passenger transportation services to conduct business.

The cost to produce transportation goods and services is measured using a variety of economic sources, such as producer price indexes for inputs, average wages, and fuel prices. From the perspective of the input producers (e.g., oil and gas companies, vehicle manufacturers), input prices represent a source of revenue for their products; but from the point of view of the transportation service providers, input prices are costs. Those costs impact the

profitability of transportation firms and the prices that transportation firms charge users for transportation services.

The major inputs to produce transportation services are labor, fuel, materials, and supplies as well as the depreciation of items like airplanes, trucks, railroad locomotives and freight cars, trucking terminals, railroad track, and other infrastructure. The depreciation represents the reduction in an asset’s value attributable to wear and tear, accidental damage, obsolescence, and aging. The depreciation and input prices impact the price of freight and passenger transportation. The next subsection presents a measure of equipment costs to the producers of transportation services. Measures of labor costs are presented in chapter 4.

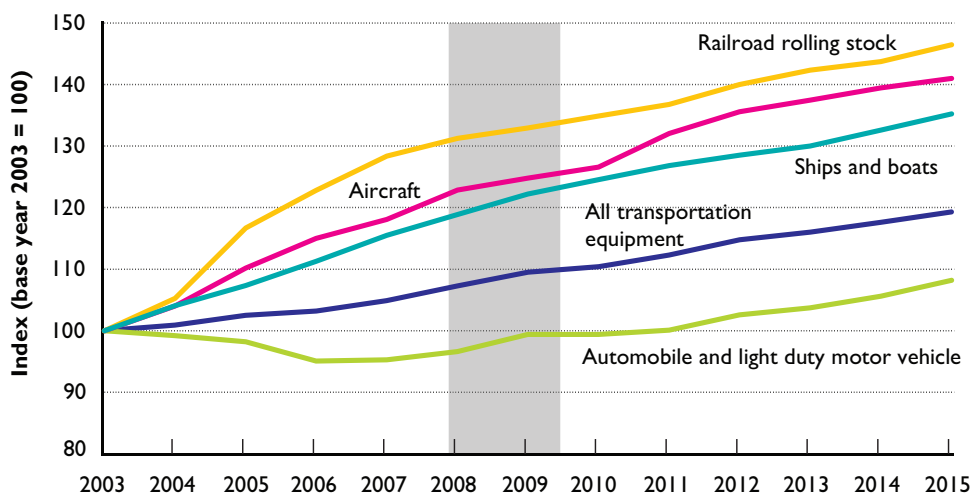
Equipment Cost

Different modes of transportation use different equipment. This equipment is primarily privately owned by the transportation service providers. Specific price indexes for transportation

equipment show how the producers’ price of transportation-related equipment changes over time (figure 3-5). The Producer Price Index (PPI) includes indexes for equipment used by transportation industries, such as aircraft, railroad cars, and heavy trucks, as well as equipment used by consumers, such as vehicles owned by households. The PPI shows the trends in transportation equipment manufacturing prices and reflect their potential impact on the cost of delivering transportation services—the higher the equipment cost, the higher the cost of delivery transportation services. The PPI for transportation equipment should not be confused with the PPIs for transportation services.

The PPIs for transportation equipment, which include indexes for automobile and light duty motor vehicles, aircraft, railroad rolling stock, ships and boats, and all transportation equipment, showed an upward trend from 2003 to 2015. An exception to this upward trend is automobile and light duty motor vehicle prices, which decreased between 2003

Figure 3-5 Producer Price Indices for Select Transportation Equipment Manufacturing, 2003–2015 (base date = 100)



NOTE: Producer Price Index data come from the U.S. Bureau of Labor Statistics. Shaded bars indicate economic recessions.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, National Transportation Statistics, Table 3-14, available at www.bts.gov as of July 2016.

and 2008, leveled off from 2009 to 2011, and finally increased from 2012 through 2015. The PPIs for railroad, aircraft, and ship and boat manufacturing showed a growth greater than that for all transportation equipment combined. This increase in equipment prices potentially impacted the profitability and purchase decisions of transportation sectors, the transportation costs for transportation users, and prices along the economic supply chain in other sectors that use transportation services, such as wholesale, retail, and warehousing and storage industries.

Costs of For-Hire Travel

Households pay for travel in two ways. First, they pay fares to use for-hire passenger transportation services, as discussed below. Second, they pay to own and operate passenger vehicles for their own use, as discussed in chapter 6 on household transportation expenditures. For-hire passenger transportation services provide *intercity* and *intracity* travel.

For-hire intercity passenger transportation consists of three modes—aviation, rail,² and scheduled bus service³ other than that provided by transit agencies (e.g., Greyhound, Bolt Bus and Megabus) (box 3-3). For-hire intracity travel includes local transit and commuter rail. Local and commuter passengers typically travel much shorter distances than intercity passengers. For example, the average trip length for intercity rail was 39.5 miles according to the 2009 NHTS, while the average trip length for transit was 7.2 miles.

Aviation Fares

Adjusted for inflation, passenger airfares decreased by 28 percent from 1993 to 2009, but increased over 4.3 percent since 2009 (figure

² Intercity rail service provided by Amtrak – commuter rail services are included with other intracity modes in Intracity Passenger Fares.

³ Up to date fare data on intercity bus is not currently available, and so is not included in this document.

Box 3-3 Average Fares

Providers of for-hire passenger transportation services such as airlines, railroads, and transit agencies charge a variety of fares for different services. The average fare for a mode is defined as the sum of all fare revenue received by the service providers in that mode, divided by the number of one-way trips.

Data on revenue and trips for air come from the U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information. Revenue is divided by trips. Baggage fees are not included in passenger revenue and free flights such as frequent flyer rewards are not included in trips.

Data on revenue and trips for rail come from Amtrak's Annual Report. The annual report gives ticket revenue per passenger mile which is multiplied by average trip length of passengers.

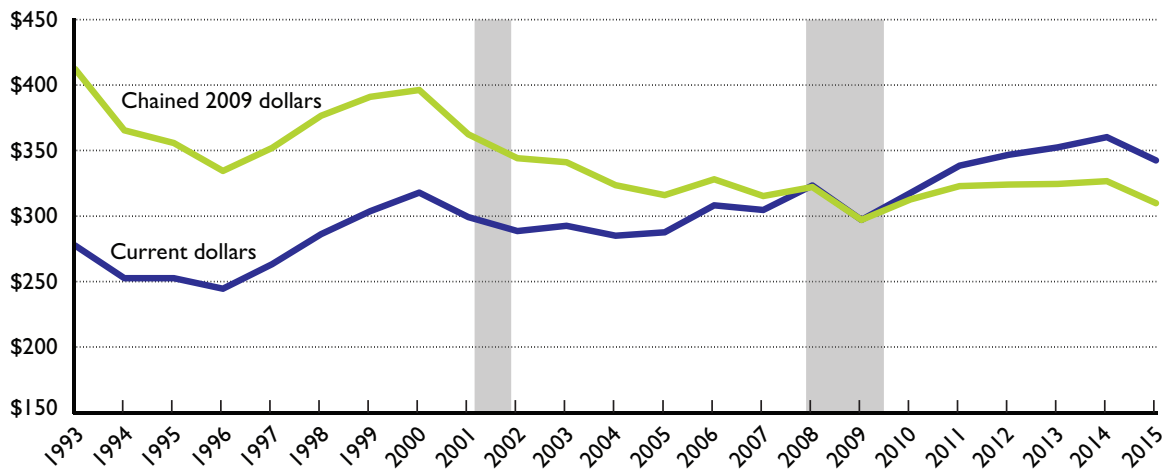
Data on commuter rail and transit come from the Federal Transit Administration's National Transit Database. For transit the revenue is divided by unlinked trips. Trips on transit often involve transfers between two buses, or a bus and rail transit. Many transit systems are only able to capture the number of boardings, and cannot link the segments into a complete one way trip, so unlinked trips (i.e., the number of times a passenger boards a transit vehicle) is used instead. If data on complete one way trips were available, it would show somewhat higher average fares for transit.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, 2016.

3-6). Average airfares were \$412 in 1993 and declined to \$334 in 1999 before recovering to \$396 in 2000. In the following decade they dropped to a low of \$297 in 2009 before slowly rebounding to \$327 in 2014, and decreasing to \$315 in 2015. All changes are shown in real chained dollars, which account for inflation and substitutions within market baskets. Fares do not include baggage or reservation fees, which airlines began to charge in 2008.

Domestic air travel includes relatively short trips of under 700 miles and trips as long as 3500 miles. Figure 3-7 shows that throughout the period from 2009 to 2015 air fares have been related to distance traveled and air fares by different distances have had similar patterns over time. Change in air fares between 2009 and

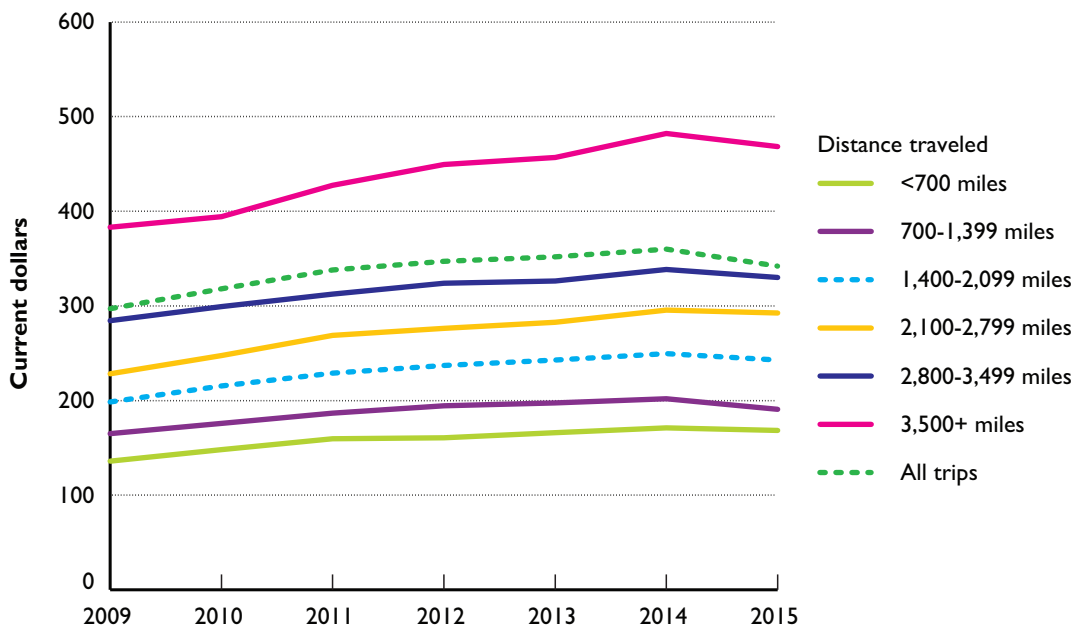
Figure 3-6 Domestic Air Fares (scheduled service), 1993 to 2015



NOTES: Domestic Air Carrier Fare: Data are from the U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, TranStats Database, T1: U.S. Air Carrier Traffic and Capacity Summary by Service Class and Air Carrier Financial Reports, Schedule P-11 and Schedule P-12. National Transportation Statistics Table 3-19 takes total revenue from these sources and divides by total trips to arrive at average fare. Fares do not include baggage fees or reservation change fees, which airlines began charging in 2008. Shaded bars indicate economic recessions.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-18, available at www.bts.gov as of July 2016.

Figure 3-7 Domestic Average Air Fares by Distance Traveled (current dollars), 2009 to 2015



NOTES: Domestic Average Air fares are determined by taking the revenue and dividing by the number of passengers. Airfare includes base fare plus taxes paid by the passenger at the time of ticket purchase. The data represent a 10% sampling of tickets obtained upon the passenger's first traveled segment. The fare does not include any additional items such as baggage fees, airline lounge access, and seat upgrades.

SOURCES: U.S. Department of Transportation, Bureau of Transportation Statistics, Office of Airline Information, 2016.

2015 ranged from an increase of 15.6 percent for trips between 700 and 1400 miles, to an increase of 28.2 percent for trips between 2100 and 2800 miles. Fares peaked in 2014 for all distance categories.

Intercity Railroad Fares

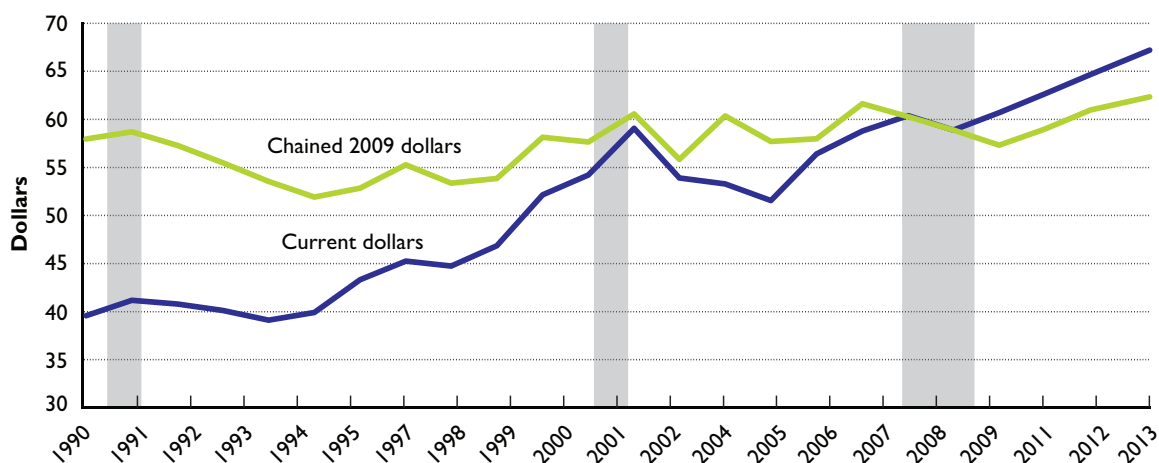
Amtrak intercity railroad fares represent a complex interaction of demand, operating costs, government subsidies, and regulation. Amtrak fares (in chained 2009 dollars) fluctuated within a narrow band from 1990 to 2013 (figure 3-8). The fares represent ticket revenue per passenger mile multiplied by average trip length of passengers except for years prior to 1997 where fares are calculated from total transportation revenues. Amtrak fares fell from about \$59 per passenger in 1991 to \$52 in 1995 and fluctuated between \$52 and \$61 from 1995 through 2003. Passenger fares began to rise again in 2004, hitting a peak

of about \$62 in 2007. Fares declined during the recession but returned to \$62 in 2013.

Commuter Railroad Fares

Commuter rail is railway passenger service that operates between a central city and adjacent suburbs. Intercity rail service such as Amtrak is excluded, except for that portion of service operated by or under contract with a public transit agency for predominantly commuter services. Predominantly commuter service means that for any given trip segment (i.e., distance between any two stations), more than 50 percent of the average daily ridership makes a return trip on the same day. Commuter rail does not include heavy rail rapid transit or light rail/streetcar transit service. Figure 3-9 shows that commuter rail fares peaked at just over \$5.00 (in chained 2009 dollars) in 2013, following a decade of increases after a low-point in 2002.

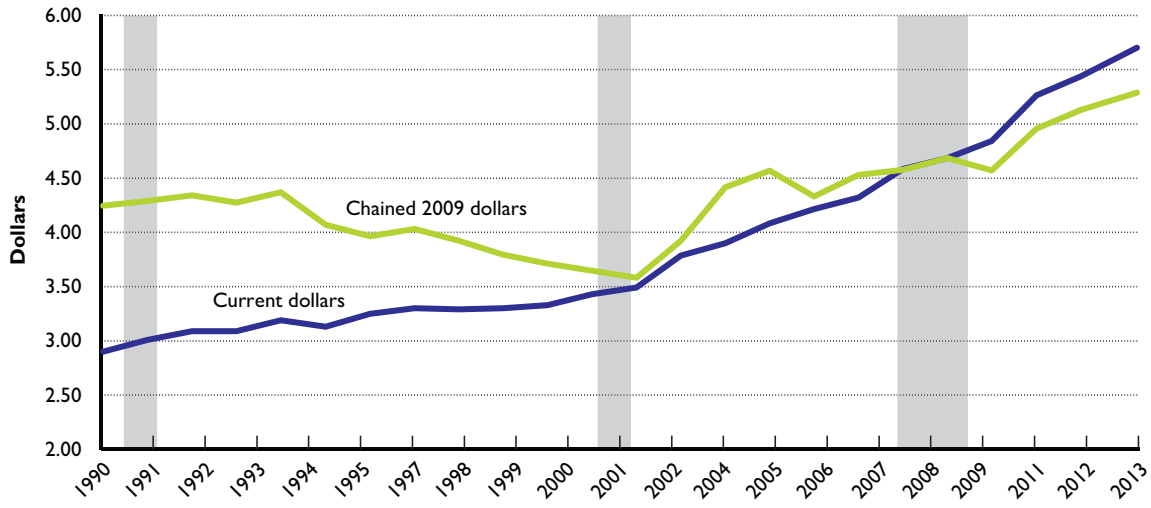
Figure 3-8 Average Amtrak Rail Fares per Average Trip Length, 1990 to 2013



NOTES: InterCity Rail/Amtrak Fare: 1997-2013: National Passenger Rail Corporation (Amtrak), Amtrak Annual Report (Washington, DC: Annual Issues) (ticket revenue per passenger mile multiplied by average trip length of passengers) For years prior to 1997 calculated as total transportation revenues / Amtrak system passenger trips, from National Passenger Rail Corporation (Amtrak), Amtrak Annual Report, Statistical Appendix (Washington, DC: Annual Issues). Shaded bars indicate economic recessions.

SOURCE: Intercity Rail/Amtrak: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-19, available at www.bts.gov as of July 2016.

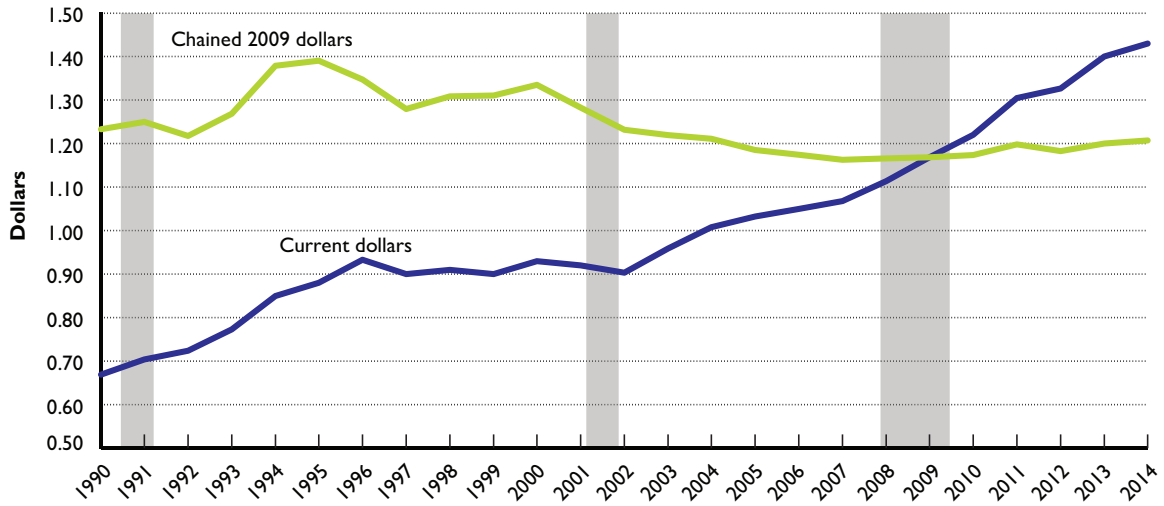
Figure 3-9 Commuter Rail Fares, 1990 to 2013



NOTE: Shaded bars indicate economic recessions.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics*, Table 3-18, available at www.bts.gov as of July 2016.

Figure 3-10 Fares for all Transit Modes per Unlinked Trip, 1990 to 2014



NOTE: Data for the year 2006 are under review by the Federal Transit Administration. An average of data for 2005 and 2007 has been substituted for the missing data. Shaded bars indicate economic recessions.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, National Transit Database.

Transit Fares

Transit modes include heavy rail (subway or metro), light rail, bus, and trolley car. Local transit fares in chained 2009 dollars have fluctuated between \$1.16 and \$1.39 per unlinked trip over the last two decades, declining only 2 percent in that period (figure 3-10).⁴

Transit fare is per unlinked trips. Unlinked trips means that a trip involving a bus to train transfer, for example, would be counted twice. Many transit agencies are unable to reflect the existence of transfers in counting trips.

⁴Transit cost is based on the average fare per unlinked trip. For example, if a passenger takes a bus at a fare of \$1, to a subway station and then takes the subway at a fare of \$2, this would be two unlinked trips with an average fare of \$1.50.