6 Household Spending On Transportation

Key Takeaways

- Transportation accounted for $1.2 trillion (9.2 percent) of total national household spending (including spending on behalf of households such as employee transit subsidies) in 2017, making transportation the fourth largest household expenditure category after healthcare, housing, and food.
- Households spent an average of $9,737 on transportation in 2017. By this measure, transportation is the second largest household expenditure category after housing because it does not include spending on behalf of households. This expenditure has increased more slowly than housing, food, and health expenditures.
- Household transportation expenditures vary by household characteristics. In 2017, rural households spent more on transportation than urban households ($10,293 versus $9,511). Households in the top fifth of income spent over five times as much on transportation as households in the bottom fifth of income ($18,190 versus $3,497).
- On average, it costs $0.59 per mile to operate and maintain a new vehicle in 2018, assuming the owner drives it 15,000 miles per year.

Introduction

Household spending on transportation represents a large expense for American households. It influences many personal decisions, including where people live and work. This chapter explores three national measures of household spending on transportation:

1. *Personal Consumption Expenditures (PCE)*, which measures total national household spending on transportation;
2. The *Consumer Expenditure Survey*, which measures individual household spending on transportation; and
3. American Automobile Association (AAA) per-mile operating costs for new vehicles.

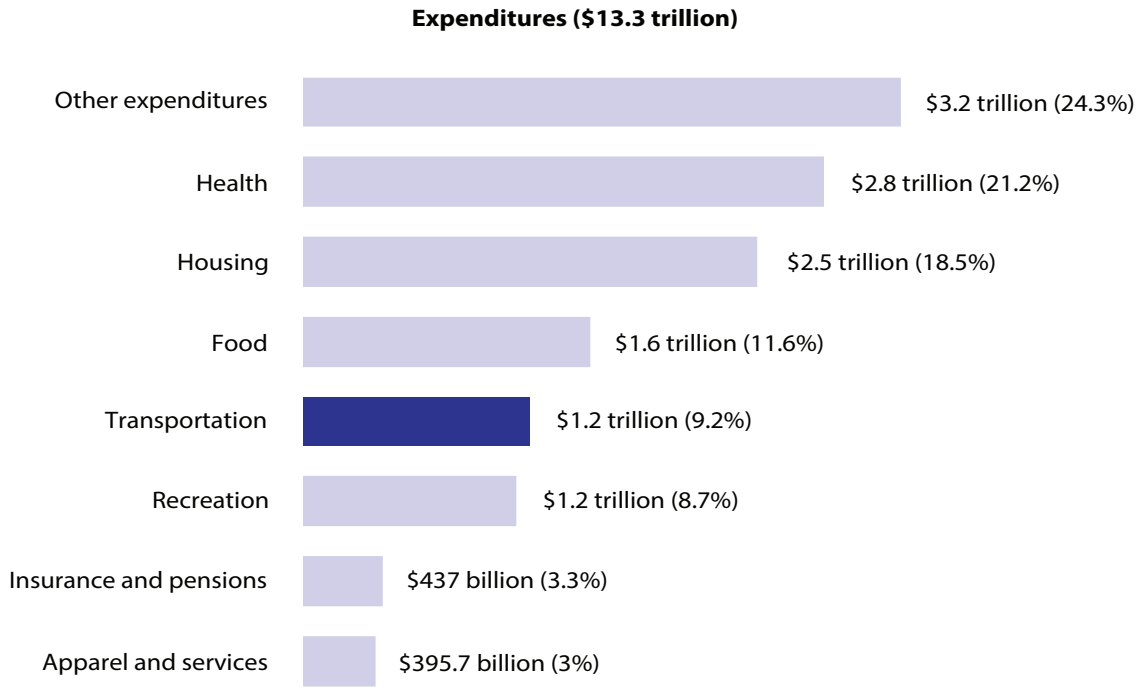
Personal Consumption Expenditures

Personal Consumption Expenditures (PCE), produced by the Bureau of Economic Analysis (BEA), is the broadest measure of consumer spending in the American economy. It measures total national household spending on goods and services. In the realm of transportation, it measures total household spending on durable goods, such as vehicles; nondurable goods, such as fuel; and services, such as for-hire transportation. PCE also measures total national transportation spending by governments, employers, and other organizations on behalf of households—for example, employee transit subsidies. The BEA produces PCE using data from a range of sources, including trade organizations, the Census Bureau, the Bureau of Labor Statistics, and the Centers for Medicare & Medicaid Services. PCE measures total national spending only; it does not measure differences in household spending by income or social group.

Transportation expenditures accounted for $1.2 trillion (9.2 percent) of PCE in 2017, making transportation the fourth largest spending category (excluding "other expenditures") after healthcare, housing, and food (figure 6-1). Transportation expenditures increased 54.6 percent, from $794.8 billion in 2000 to $1.2 trillion in 2017 (figure 6-2).[1] Total household expenditures increased 97.0 percent from $6.8 to $13.3 trillion

[1] The latest version of PCE includes data revisions going back to 2000. Dollar amounts in TET 2018 will therefore differ from dollar amounts in TET 2017.

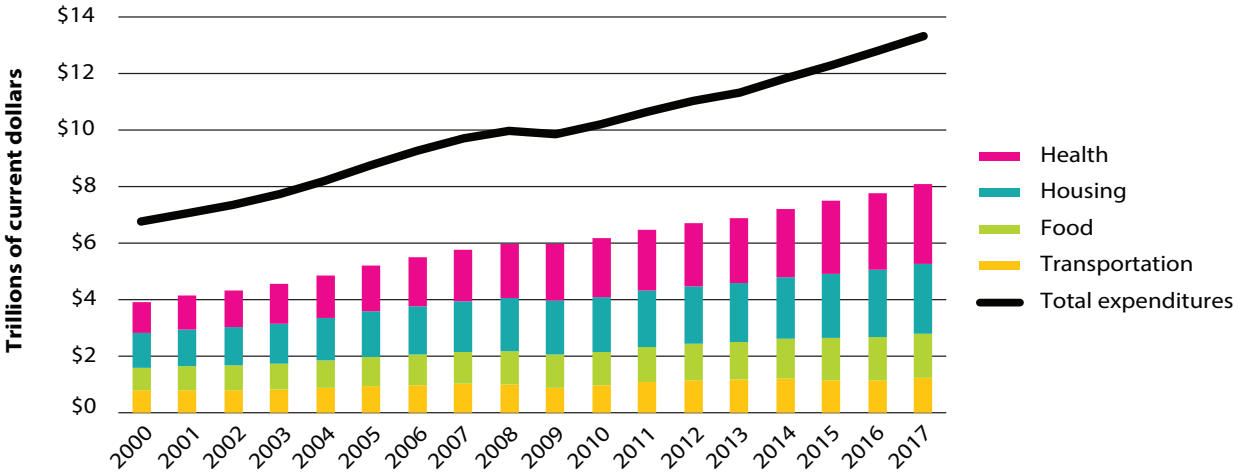
Figure 6-1 Total National Household Expenditures (Major Categories), 2017



NOTE: "Other expenditures" include alcoholic beverages purchased for off-premises consumption; furnishings, household equipment, and routine household maintenance; education; accommodations; financial services (excluding pension funds); other goods and services; net foreign travel and expenditures abroad by U.S. residents; and final consumption expenditures of nonprofit institutions serving households.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Tables, table 2.5.5, 2.4.5U, available at www.bea.gov/iTable/index_nipa.cfm as of September 2018.

Figure 6-2 Total National Household Expenditures, 2000–2017 (four largest categories, current dollars)



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Tables, table 2.5.5, 2.4.5U, available at www.bea.gov/iTable/index_nipa.cfm as of September 2018.

over the same period, outpacing growth in transportation expenditures. Expenditure growth for healthcare (155.0 percent), housing (102.9 percent), and food (93.3 percent) also outpaced expenditure growth for transportation. As a result, transportation expenditures declined from 11.8 percent of total PCE in 2000 to 9.2 percent of total PCE in 2017.

Expenditures on Personal Vehicles

Personal vehicles accounted for most of the transportation expenditures in the PCE—$1.1 trillion in 2017, or 87.8 percent of total transportation expenditures (figure 6-3).[2] This amount includes costs for purchasing, operating, and maintaining personal vehicles.

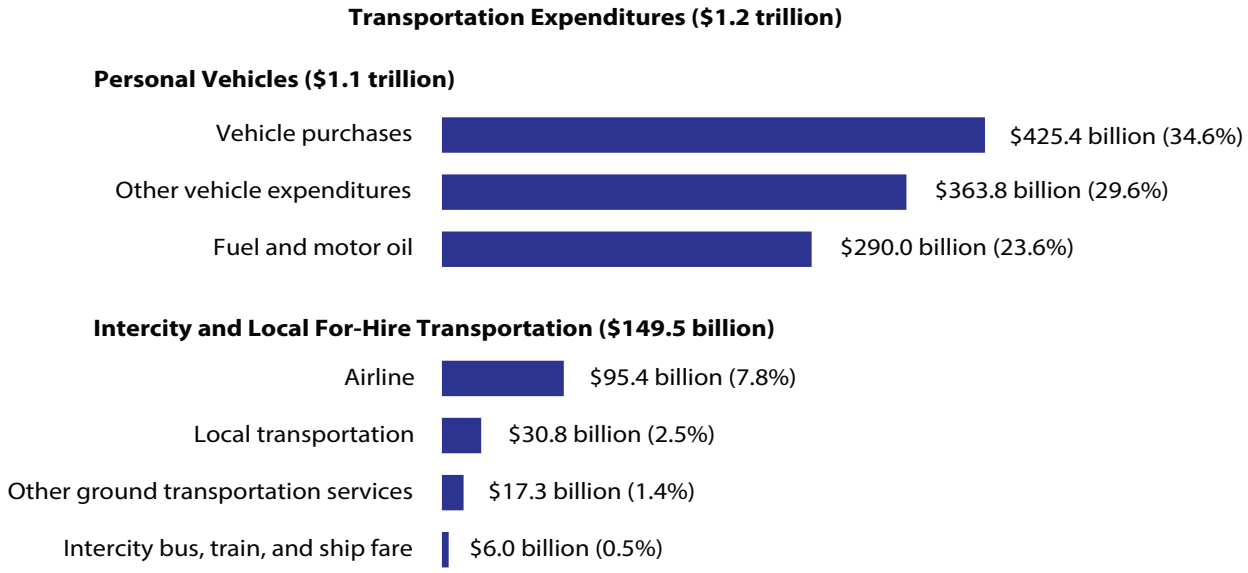
New and used vehicle purchases accounted for $425.4 billion in expenditures, or one-third of total transportation expenditures (34.6 percent) in 2017. Fuel and motor oil purchases accounted for $290.0 billion (23.6 percent) of transportation expenditures. World oil markets and national and regional refinery prices directly affect the cost of fuel and motor oil. Finally, other vehicle expenses, such as repair costs and insurance, accounted for $363.8 billion (29.6 percent) of transportation expenditures. Vehicle age, vehicle reliability, pavement conditions, prices of parts, and local market conditions affect the amount spent on repair.

Expenditures on Intercity and Local For-Hire Transportation

Expenditures on intercity for-hire transportation (between cities) and local for-hire transportation (within the same city) accounted for $149.4 billion (12.2 percent) of total transportation expenditures in 2017. Spending on air passenger travel accounted for $95.4 billion, nearly two-thirds (63.9 percent) of the $149.4 billion spent on for-hire transportation. Local for-hire transportation services accounted for $30.8 billion (20.6 percent); this category includes intracity mass transit ($20.1 billion) and local for-hire taxicabs and ride-hailing

[2] The percentages in this chapter are calculated using unrounded data and may therefore differ from percentages calculated using the rounded figures presented in this chapter.

Figure 6-3 Total National Household Transportation Expenditures, 2017



NOTE: "Other vehicle expenditures" include vehicle insurance, vehicle parts, and maintenance and repair costs. "Local transportation" includes intracity mass transit and local for-hire taxicabs and ride-hailing services.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Tables, table 2.5.5, 2.4.5U, available at www.bea.gov/iTable/index_nipa.cfm as of September 2018.

services, such as Uber and Lyft ($10.7 billion). Expenditures for other ground transportation services, such as sightseeing buses, accounted for $17.3 billion (11.6 percent). Finally, intercity bus, train, and ship fares accounted for $5.9 billion (3.9 percent) of the total.

Household Transportation Expenditures

The *Consumer Expenditure Survey (CE)*, administered by the Bureau of Labor Statistics (BLS), measures individual household spending in the United States. A nationally representative sample of households provides detailed information on expenditures, income, and household characteristics. The CE is the only Federal survey that contains information on the complete range of expenditures for individual households, including transportation.

The CE shows that households in the United States spent an average of $9,737 on transportation in 2017, making transportation the second largest household expenditure category (representing 17.4 percent of total expenditures) after housing (figure 6-4). The CE ranked transportation the second largest household expenditure category because the CE includes only direct household expenditures, whereas the PCE includes expenditures on behalf of households, e.g., healthcare paid by insurance (box 6-1).

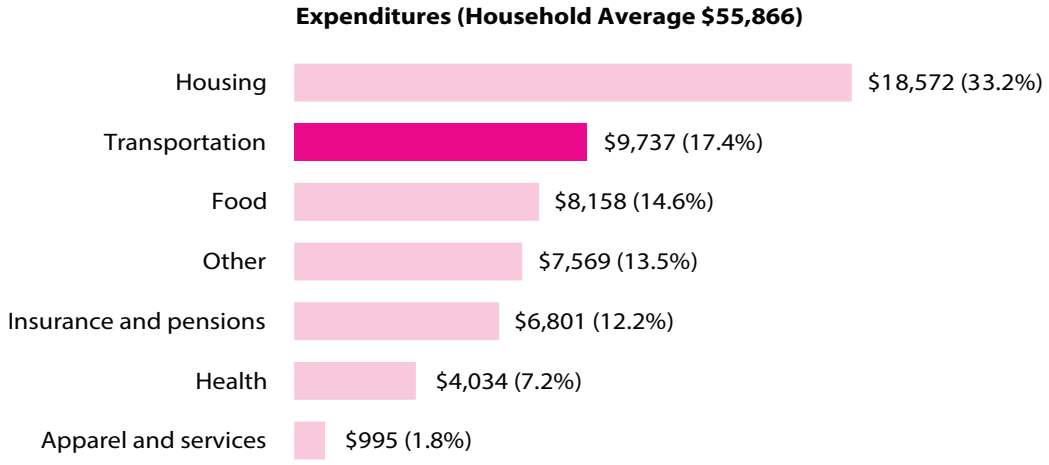
Box 6-1 Personal Consumption Expenditures and the Consumer Expenditure Survey

Personal Consumption Expenditures (PCE) includes expenditures made on behalf of households, such as healthcare premiums paid by businesses and housing assistance from nonprofits and the government. As a result, healthcare and housing expenditures are larger and account for a larger share of total expenditures than in the Consumer Expenditure Survey (CE), which only examines direct household expenditures.

For discussions about household expenditures, transportation as a percentage of *personal consumption* expenditures is the most useful measure because it includes all expenditures that society makes to meet household needs. For discussions about household budgets, transportation as a percentage of *household* expenditures is the most useful measure.

Average annual household transportation expenditures have increased more slowly than other major expenditures (figure 6-5). From 2000

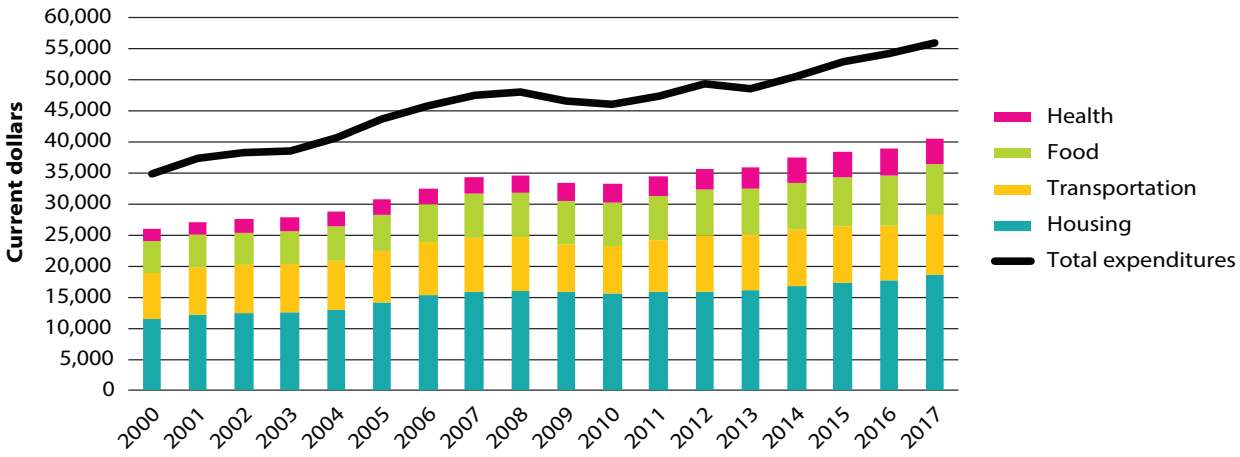
Figure 6-4 Average Individual Household Expenditures (major categories), 2017



NOTE: Amounts are calculated by the Bureau of Transportation Statistics using public-use microdata and may differ slightly from amounts calculated by the Bureau of Labor Statistics using original data.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey 2017 Microdata, available at www.bls.gov/cex as of September 2018.

Figure 6-5 Average Individual Household Expenditures, 2000–2017 (four largest categories, current dollars)



NOTE: Amounts are calculated by the Bureau of Transportation Statistics using public-use microdata and may differ slightly from amounts calculated by the Bureau of Labor Statistics using original data.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey 2017 Microdata, available at www.bls.gov/cex as of September 2018.

to 2017, transportation expenditures increased 31.3 percent, from $7,417 to $9,737, while total expenditures increased by 60.4 percent, from $34,839 to $55,866. As a result, the share of transportation expenditures declined from 21.3 percent in 2000 to 17.4 percent in 2017. In contrast, housing expenditures increased by 61.6 percent (from $11,494 to $18,572), food expenditures increased by 58.0 percent (from $5,164 to $8,158), and health expenditures increased by 108.1 percent (from $1,938 to $4,034) in the same period.

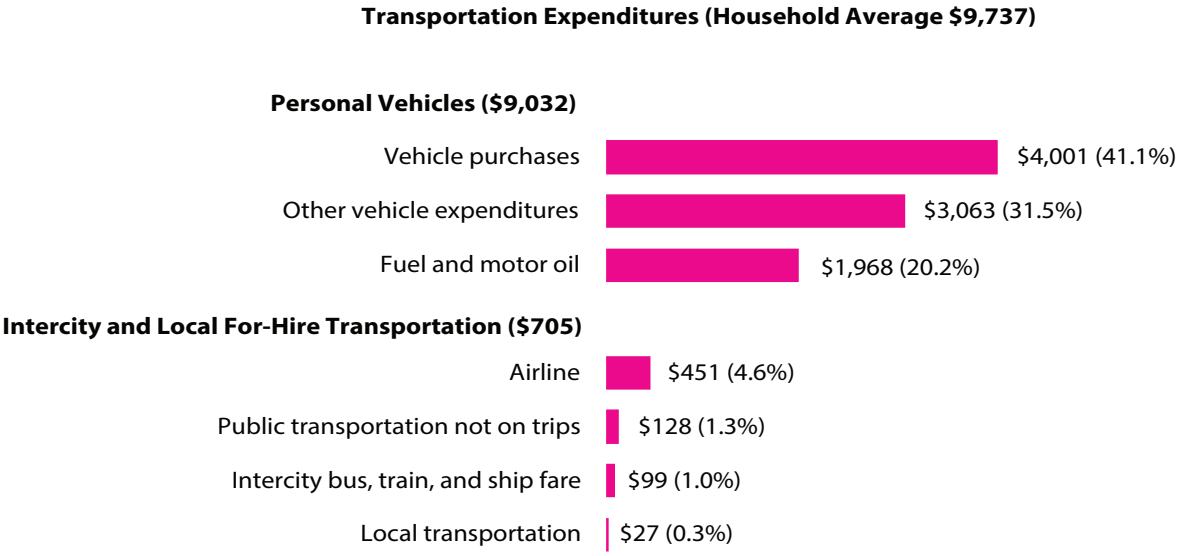
Household transportation expenditures vary by household characteristics. For example, rural households spent more on transportation ($10,293) than urban households ($9,511) in 2017, in part because rural households have higher rates of vehicle ownership and lower levels of access to public transit.[3] In 2017, rural households owned an average of 2.5 vehicles per household versus 1.8 vehicles per household for urban households. Residents of rural areas also drove 45.6 percent more miles per capita than residents in urban areas—32.2 miles versus 22.1 miles per day in 2017, respectively. In addition, households without vehicles spend lower amounts on transportation. In 2017, households without vehicles spent an average of $2,338 on transportation versus $10,157 for households with at least one vehicle. At the same time, transportation expenditures vary among households in the same socioeconomic group—namely because households have much higher expenditures in years that they purchase vehicles—and average annual expenditures cannot capture these variations.

Expenditures on Personal Vehicles

The average household devoted most of its transportation budget ($9,032 of $9,737, or 92.8 percent) in 2017 to purchasing, operating, and maintaining private vehicles (figure 6-6). Vehicle purchases accounted for 41.1 percent ($4,001) of transportation expenditures, fuel and motor oil accounted for 20.2 percent ($1,968), and other vehicle expenses, such as repairs and insurance, accounted for 31.5 percent ($3,063).

[3] For more information on travel behavior and demographics, please see U.S. Department of Transportation Federal Highway Administration, *Summary of Travel Trends: 2017 National Household Travel Survey*, available at https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf.

Figure 6-6 Average Individual Household Transportation Expenditures, 2017



NOTES: "Other vehicle expenditures" include vehicle insurance, vehicle parts, and maintenance and repair costs. "Public transportation not on trips" includes public transportation not taken as part of a trip or vacation. A trip or vacation includes trips to visit relatives or friends, business trips, recreational trips, other trips overnight or longer, and day trips of at least 75 miles away from home. "Local transportation" includes intracity mass transit and local for-hire taxicabs and ride-hailing services.
Amounts are calculated by the Bureau of Transportation Statistics using public-use microdata and may differ slightly from amounts calculated using original data. Transportation expenditures include vehicle insurance.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey 2017 Microdata, available at www.bls.gov/cex as of September 2018.

Expenditures on Intercity and Local For-Hire Transportation

Intercity and local for-hire transportation accounted for the remaining 7.2 percent ($705) of household transportation expenditures in 2017 (figure 6-6). Expenditures on trips and vacations accounted for 81.8 percent ($577) of the total:

- airline fares ($451);
- bus, train, and ship fares ($99); and
- local transportation taken during trips ($27).

Trips and vacations include trips to visit relatives or friends, business trips, recreational trips, other trips overnight or longer, and day trips of at least 75 miles away from home.

Intercity and local for-hire transportation taken while not on trips or vacations accounted for the remaining 18.2 percent ($128).

Transportation Expenditures and Income

Households spend similar percentages on transportation across all income categories except for the bottom income quintile, or the bottom fifth of households by income. In 2017 the top four income quintiles spent between 15.5 and 16.9 percent of total expenditures on transportation, while the bottom quintile spent 13.4 percent (table 6-1). Households in the top income quintile spent over five times as much as households in the bottom income quintile in 2017—$18,190 versus $3,497.

Higher income households spend more on transportation because they are more likely to own vehicles and more of them. In 2017 97.0 percent of households in the top income quintile had at least one vehicle, compared with 67.0 percent in the bottom income quintile. Households in the top income quintile owned an average of 2.8 vehicles per household in 2017, while households in the bottom income quintile owned 1.0 vehicles per household.

Table 6-1 Average Individual Household Expenditures by Income Quintile, 2017

Income range by quintile	Total annual spending	Vehicles per household	Households without any vehicles	Households with at least one vehicle	Transportation spending per household	Percentage of total spending
All quintiles	**$60,060**	**1.9**	**12%**	**88%**	**$9,576**	**15.9%**
First quintile ($0–$20,738)	$26,019	1	33%	67%	$3,497	13.4%
Second quintile ($20,739–$39,608)	$39,300	1.6	11%	89%	$6,572	16.7%
Third quintile ($39,609–$66,897)	$50,470	1.9	6%	94%	$8,532	16.9%
Fourth quintile ($66,898–$109,742)	$67,604	2.3	4%	96%	$11,099	16.4%
Fifth quintile ($109,733+)	$116,988	2.8	3%	97%	$18,190	15.5%

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey, available at www.bls.gov/cex as of September 2018.

Per-Mile Vehicle Operating Costs

The American Automobile Association (AAA) collects data on automobile operating costs annually and publishes per-mile cost estimates for new vehicles driven 15,000 miles a year for 5 years (box 6-2). On average, it costs $0.59 per mile to own and operate a new vehicle in 2018.[4] The largest expense is fixed ownership costs, which represent 67.8 percent of the total cost ($0.40 per mile). Fixed ownership costs include depreciation, vehicle insurance, license and registration fees, and finance charges. Operating costs account for the remaining 32.2 percent of the total cost ($0.19 per mile). Fuel, a highly salient cost to consumers because they see prices posted at every filling station, is the largest operating cost, representing 18.6 percent ($0.11 per mile) of the total cost. Maintenance, repair, and tires account for the remaining 13.6 percent ($0.08 per mile) of the total cost.

[4] Operating costs in TET 2018 are not comparable to operating costs in earlier editions because AAA revised its methodology in 2017.

Box 6-2 Per-Mile Vehicle Operating Expenses

The American Automobile Association (AAA) publishes per-mile vehicle operating cost estimates in *Your Driving Costs*. To calculate the costs, AAA estimates annual costs using estimated driving costs for nine vehicle types (small, medium, and large sedans; small and medium SUVs; minivans; pickup trucks; hybrid and electric cars) weighted by sales. AAA revised its methodology for estimating costs and added new vehicle types in 2017; as a result, estimates from previous years are not comparable. AAA's estimates assume that drivers drive 15,000 miles a year and trade in vehicles after 5 years. Fixed costs include depreciation, insurance, licensing, registration, taxes, and finance charges.