

CHAPTER 7 SERVICE SECTORS



The following provides an overview of the contribution of the service sectors to the economy and the use of transportation by the sectors.

There are six service sectors: (1) information; (2) financial services; (3) professional and business services; (4) education and health services; (5) leisure and hospitality; and (6) other services.

The information sector consists of establishments engaging in the production and distribution of information and cultural products and the processing of data.

The financial services sector consists of services related to finance and insurance activities as well as real estate, rental, and leasing. With regards to finance and insurance, the sector includes establishments engaging in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or facilitating financial transactions. With regards to real estate, rental, and leasing, the sector includes establishments engaging in the rental or leasing of tangible (e.g., real estate, equipment, etc.) or intangible (e.g., patents) assets and establishments providing related services.

The professional and business services sector consists of professional, scientific, and technical services; management of companies and enterprises; and administrative and support and waste management and remediation services. It includes logistics consulting services used in moving goods from point of origin to point of consumption.

The education and health services sector consists of establishments that provide instruction and training (e.g., schools, universities, training centers, etc.) and establishments that provide health care and social assistance for individuals.

The leisure and hospitality sector consists of establishments providing art, entertainment, and recreation services as well as establishments providing accommodation and food services.

Other services consists of establishments providing services not captured elsewhere, such as equipment and machinery repair, religious activities, grant making, advocacy, personal care services, etc.¹

¹ U.S. Department of Labor, Bureau of Labor Statistics, Industries at a Glance, www.bls.gov/iag/tgs/iag_index_naics.htm, as of Sept. 1, 2015

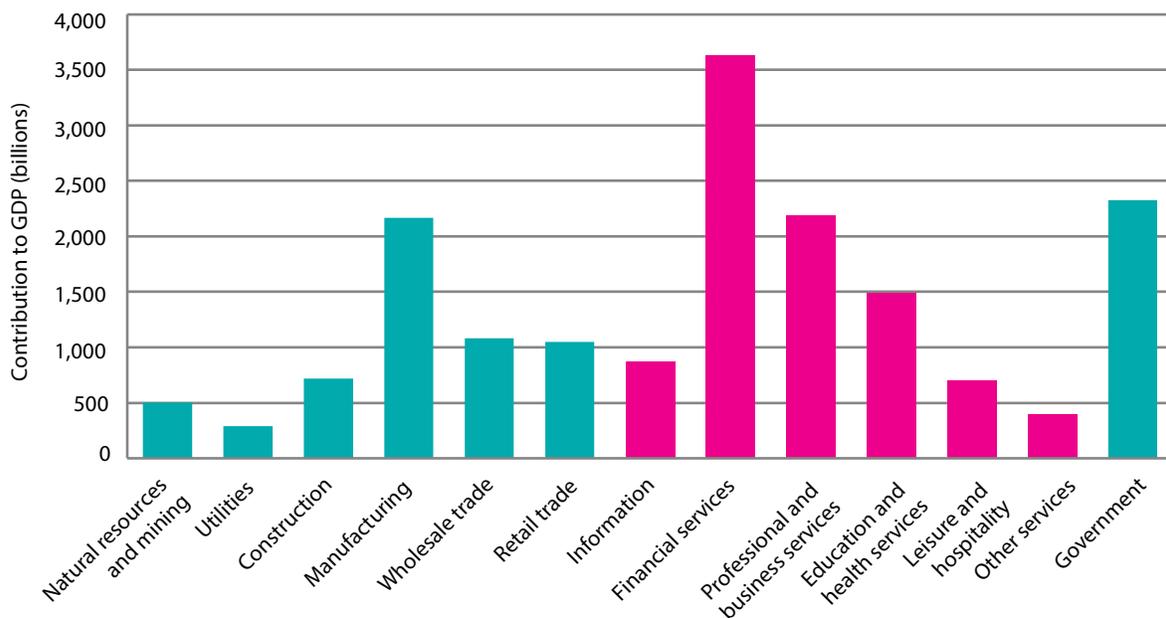
Table 7-1 Overview of the Service Sectors' Contribution to Gross Domestic Product (GDP) and Use of Transportation

Service Sectors	Value	Year (latest year where data available)
Contribution to GDP	\$9,291.7 billion	2015
Use of transportation	\$264.8 billion	2014
Amount of transportation required to produce a dollar of output		
Information	1.5¢	2014
Financial services	0.8¢	2014
Professional/ business services	2.8¢	2014
Education and health services	1.6¢	2014
Leisure and hospitality	3.2¢	2014
Other services	2.9¢	2014
Number of transportation and material moving workers		
Information	46,110	2015
Financial services	135,250	2015
Professional/ business services	1,212,040	2015
Education and health services	388,080	2015
Leisure and hospitality	299,480	2015
Other services	387,470	2015
Transportation and material moving workers as percent of sector's work force		
Information	1.7	2015
Financial services	1.7	2015
Professional/ business services	6.2	2015
Education and health services	1.2	2015
Leisure and hospitality	2.0	2015
Other services	9.7	2015
Median annual wage of transportation and material moving workers		
Information	\$27,290	2015
Financial services		
Finance and insurance	NA	2015
Real estate and rental and leasing	\$26,290	2015
Professional/business services		
Professional, scientific, and technical services	\$28,970	2015
Management of companies and enterprises	\$33,610	2015
Administrative and support and waste management and remediation services	\$23,540	2015
Education/health services		
Educational services	\$28,980	2015
Health care and social assistance	\$24,280	2015
Leisure/hospitality		
Arts, entertainment, and recreation	\$25,840	2015
Accommodation and food services	\$19,240	2015
Other services (except public administration)	\$21,540	2015
Number of trucks used	3,719 thousand	2002
Truck miles accumulated	59,708 milion	2002

NOTE: Table presents latest data available, as of Aug. 11, 2016.

Data on number of trucks and truck miles accumulated was last collected in the Vehicle Inventory and Use Survey for 2002.

SOURCE: Data for this table is drawn from figures and tables presented throughout this chapter.

Figure 7-1 Service Sectors' Contribution to Gross Domestic Product, 2015

NOTE: GDP = \$17,947 billion

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Value Added by Industry, available at <http://bea.gov> as of August 11, 2016.

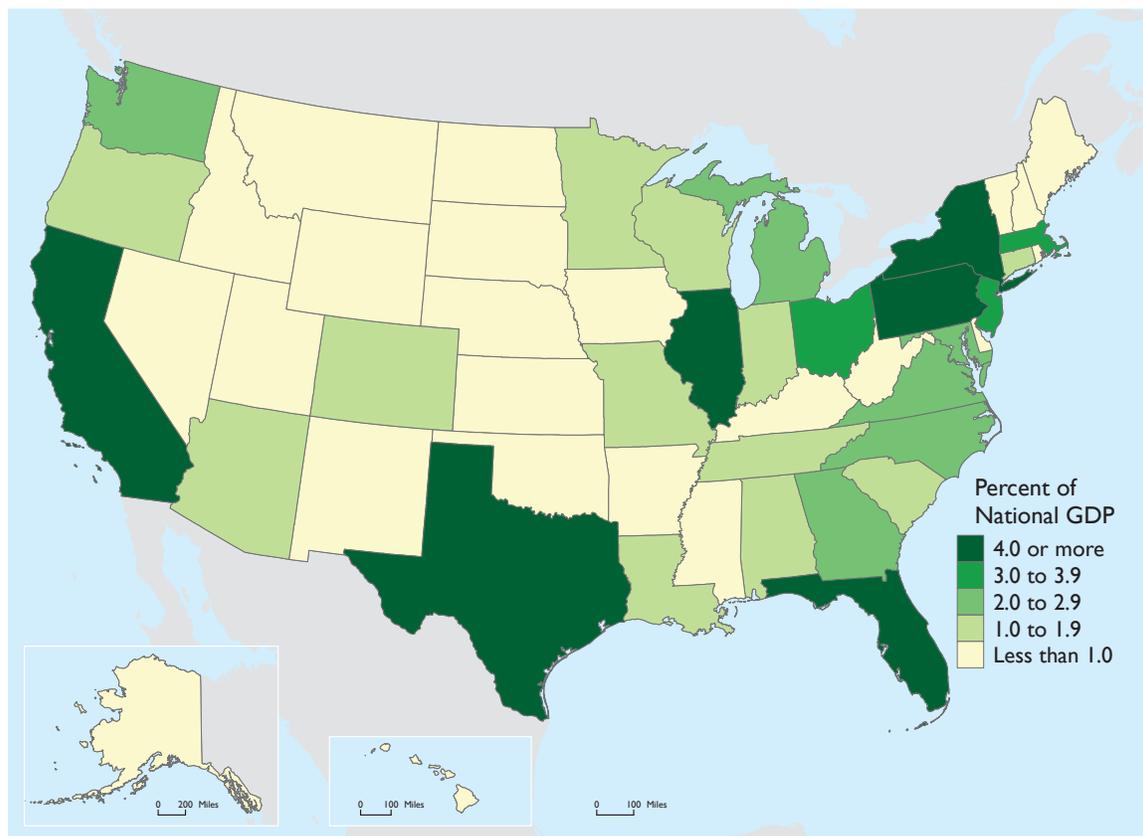
The service sectors collectively use the second largest dollar amount of transportation services. However, per dollar of output, each service sector requires less transportation than most other sectors. The service sectors collectively rely heavily on truck transportation, primarily in-house truck transportation, and employ a large number in a variety of transportation occupations such as bus drivers, light truck/delivery services drivers, commercial pilots, parking lot attendants, etc.

The contribution of the service sectors to the national economy has grown. In 1997 the service sector contributed 46.3 percent, 49.8 percent in 2007, and 51.8 percent in 2015. In 2015 the service sectors collectively contributed \$9,291.7 billion (51.8 percent) to the national economy, as measured by Gross Domestic Product (GDP). The financial services sector contributed more than all other service sectors.

The largest amount of service sector activity occurred in California (\$1,381.5 billion), followed by New York (\$970.8 billion), Texas (\$651.0 billion), Florida (\$510.0 billion), Illinois (\$420.4 billion), and Pennsylvania (\$376.7 billion)— each of which accounted for 4 percent or more of national activity in the services sectors (figure 7-2, table 7-2).

California, New York, Texas, Florida, Illinois, and Pennsylvania contributed the most to national economy related to services and the most to national activity overall (they also have the largest gross state product (GSP)). Texas contributed more to the national economy than New York in 2015, but New York contributed more in terms of service sector activity to the national economy due to significantly higher activity in information, financial services, and education and health services (Appendix A).

Figure 7-2 State Contributions to Service Related GDP (percent of national GDP related to service sector activity), 2015



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product by State, available at <http://bea.gov> as of August 2016.

Table 7-2 States Contributing 4.0 Percent or More to National GDP Related to Services in 2015

State	All service sectors (Service related GDP = \$9,291.7 billion)			All products and services (Total national GDP = \$17.8 trillion)	
	Service related GDP (billions)	Percent of national GDP related to services	Rank (1=contributes most to national GDP related to services, 51=least)	Dollar contribution to national GDP (billions)	Rank (1=contributes most to national GDP, 51=least)
California	1,381.5	14.9	1	2,458.5	1
New York	970.8	10.4	2	1,441.0	3
Texas	651.0	7.0	3	1,586.5	2
Florida	510.0	5.5	4	882.8	4
Illinois	420.4	4.5	5	775.0	5
Pennsylvania	376.7	4.1	6	689.2	6

NOTE: Latest available data do not sum to latest available industry totals (shown in figure 7-1) due to difference in source data vintage.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Gross Domestic Product by State, available at <http://bea.gov> as of August 11, 2016.

Computing the percent of service sector activity as a percent of GSP, rather than as a share of GDP, also provides useful insights to U.S. production. Nationally, California lead in service sector activity in 2015. However, service sector activity accounted for a smaller share of GSP in California (56.2 percent) than in Delaware (68.1 percent, or \$46.3 billion) and New York (67.4 percent, or \$970.8 billion)— the two States where service sector activity accounted for more than two-thirds of GSP in 2015 (see Appendix A).

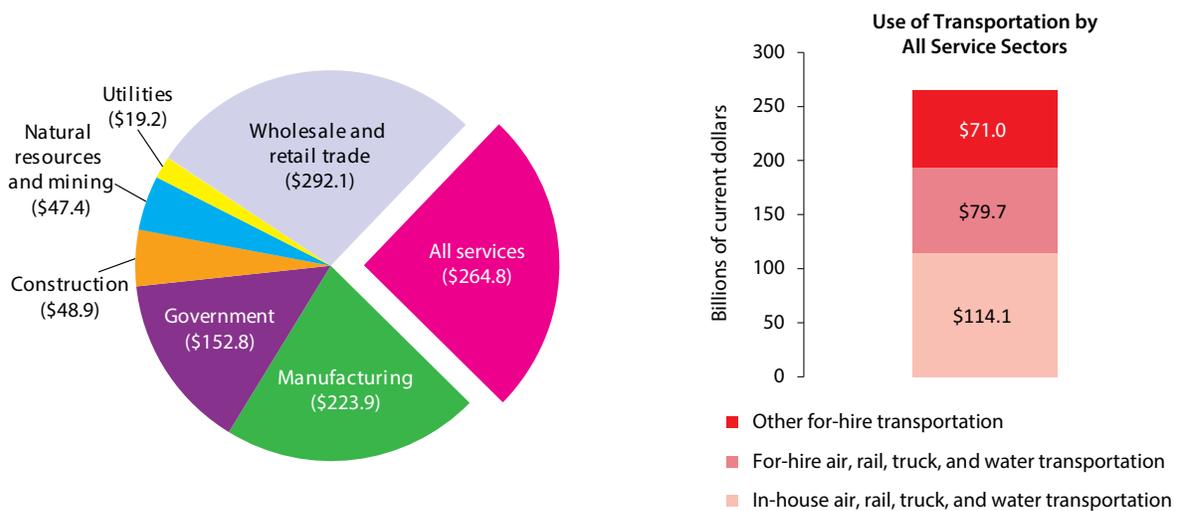
The service sectors combined were the second largest user of transportation services in 2014 (\$264.8 billion). Looking at the use of air, rail, truck, and water transportation services, the combined service sectors used more in-house operations (\$114.1 billion) than for-hire air, rail, truck, and

water services (\$79.7 billion) (figure 7-3).

The service sectors collectively used \$264.8 billion of transportation services in 2014 (figure 7-3). In 2014, the service sectors collectively used:

- Primarily truck transportation services (e.g., for transporting linens and other products to hotels), which accounted for 48.4 percent of all transportation services used by the sector.
- About 3.7 times more in-house truck operations (\$100,732 million) than for-hire truck transportation services (\$27,372 million). In-house truck transportation operations accounted for slightly more than one-third (38.0 percent) of all transportation services used by the service sectors.

Figure 7-3 Use of Transportation by the Service Sectors, 2014 (current dollars, billions)



NOTE: In-house transportation consists of transportation services (air, rail, truck, and water) provided by nontransportation industries for their own use. For-hire transportation consists of the services provided by transportation firms to industries and the public on a fee-basis. Airlines, railroads, transit agencies, common carrier trucking companies, and pipelines are examples of for-hire transportation industries. "Other" for-hire transportation includes: Transit and passenger ground transportation (excluding State and local government passenger transit); Pipeline; Sightseeing transportation and transportation support; Parcel delivery, courier, and messenger services (excluding U.S. Postal Service); Warehousing and storage; and Other transportation and support activities.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transportation Satellite Accounts, available at <http://www.bts.gov> as of August 2016.

- A relatively large amount of other transportation and support activities (sightseeing, parcel delivery, courier, and messenger services excluding U.S. Postal Service, transportation support activities such as freight loading, etc.). Other transportation and support services (e.g., sightseeing by bus or boat and vehicle cleaning services) accounted for 16.0 percent (\$42,308 million) of the transportation services used by the service sectors.
- A modest amount of for-hire transit and ground passenger transportation (e.g.,

bus transportation purchased for workers) totaling 6.9 percent (\$18,176 million) of the transportation services used by the service sectors.

- Warehousing (e.g., storage for medical records, etc.) summing to 3.8 percent (\$10,179) of all transportation services used by the service sectors (figure 7-4).

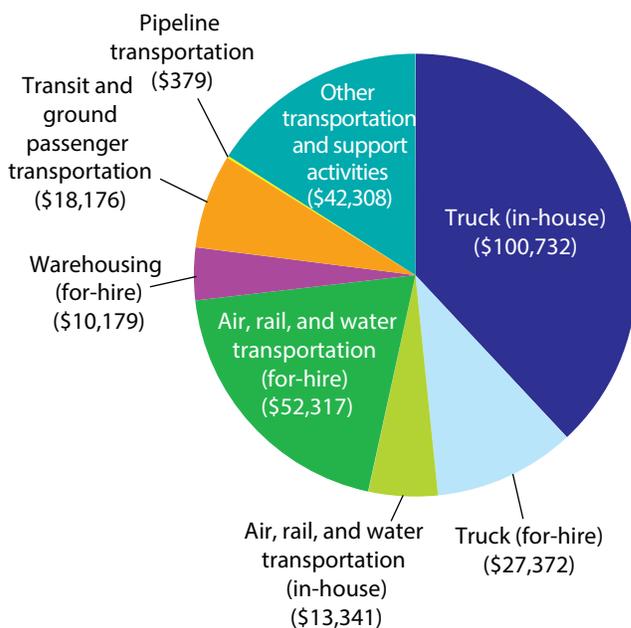
While the service sectors collectively were the second largest user of transportation services, they individually did not depend as heavily on transportation as other sectors in 2014. The leisure and hospitality sector required the most

transportation services to produce one dollar of output (requiring 3.2¢) among services sectors but much less than the wholesale and retail trade, which required the most transportation services (9.9¢) to produce one dollar of output.

Among service sectors, the other services sector (e.g., grant-making, dry cleaning, machinery repair, etc.) required the second largest amount of transportation services to produce one dollar of output (2.9¢) in 2014 followed by professional and business services (2.8¢), education and health services (1.6¢), information (1.5¢), and the financial services sector (0.8¢) (figure 7-5).

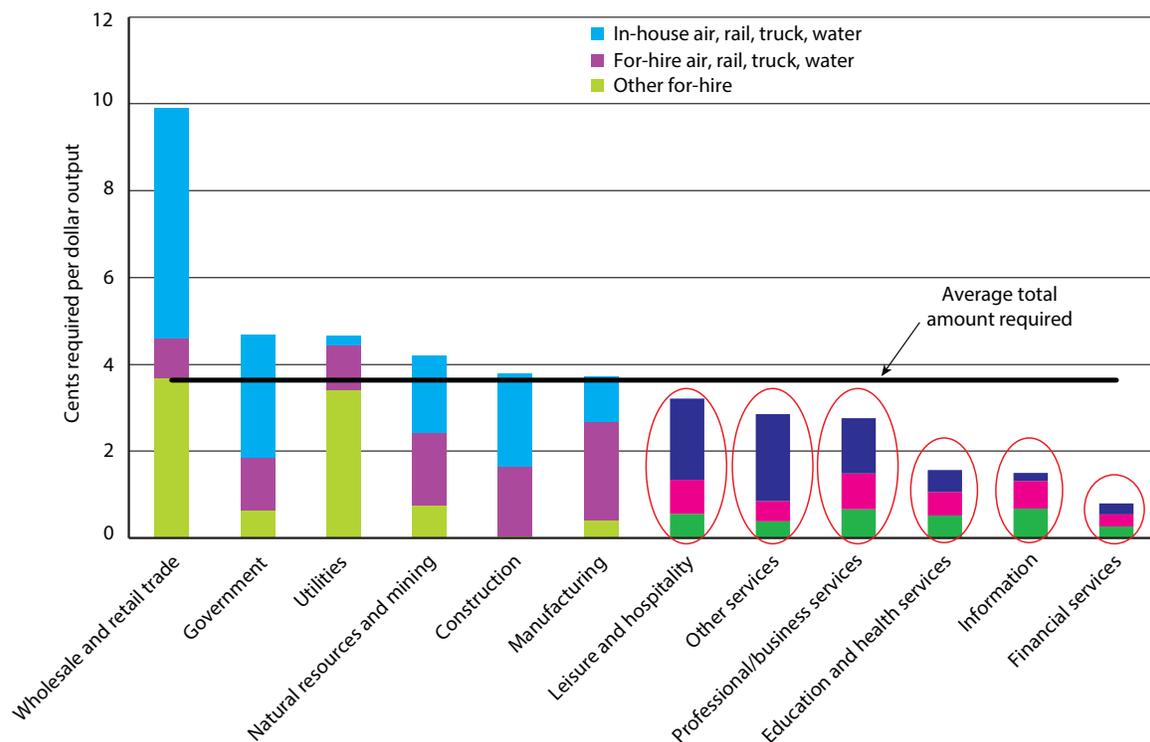
All of the service sectors relied less on transportation services than other commodities in producing output in 2014. Each service sector required 3.2¢ worth of transportation services or less to produce one dollar of output

Figure 7-4 Service Sectors' Use of Transportation by Mode, 2014



NOTE: In-house transportation consists of transportation services (air, rail, truck, and water) provided by nontransportation industries for their own use. For-hire transportation consists of the services provided by transportation firms to industries and the public on a fee-basis. Airlines, railroads, transit agencies, common carrier trucking companies, and pipelines are examples of for-hire transportation industries. Transit and passenger ground transportation excludes State and local government passenger transit. Other transportation includes sightseeing transportation.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transportation Satellite Accounts, available at <http://www.bts.gov> as of August 2016.

Figure 7-5 Transportation Required Per Dollar of Output by the Service Sectors, 2014

NOTE: In-house transportation consists of transportation services (air, rail, truck, and water) provided by nontransportation industries for their own use. For-hire transportation consists of the services provided by transportation firms to industries and the public on a fee-basis. Airlines, railroads, transit agencies, common carrier trucking companies, and pipelines are examples of for-hire transportation industries. "Other" for-hire transportation includes: Transit and passenger ground transportation (excluding State and local government transit); Pipeline; Sightseeing transportation and transportation support; Parcel delivery, courier, and messenger services (excluding U.S. Postal Service); Warehousing and storage; and Other transportation and support activities.

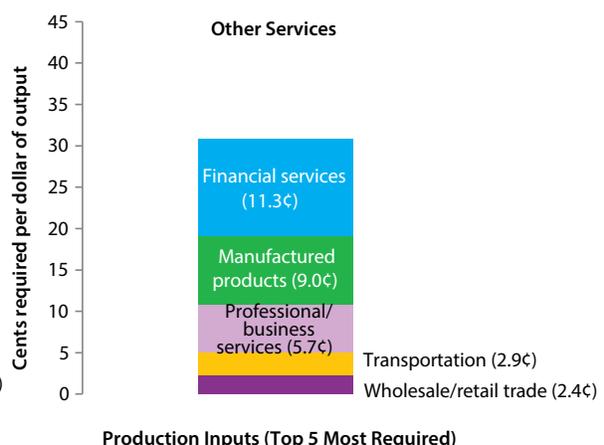
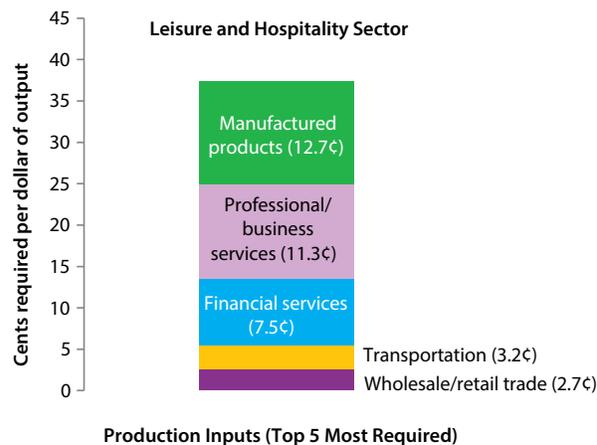
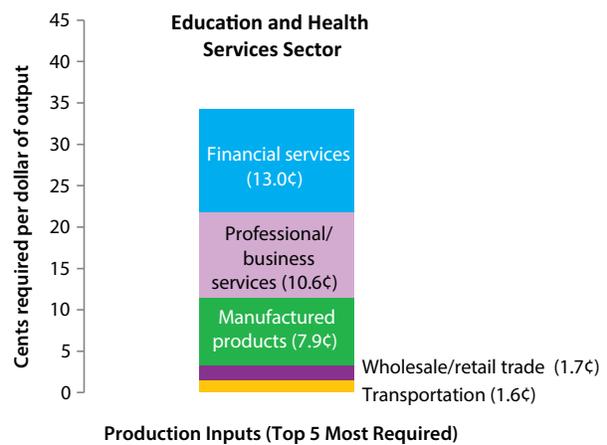
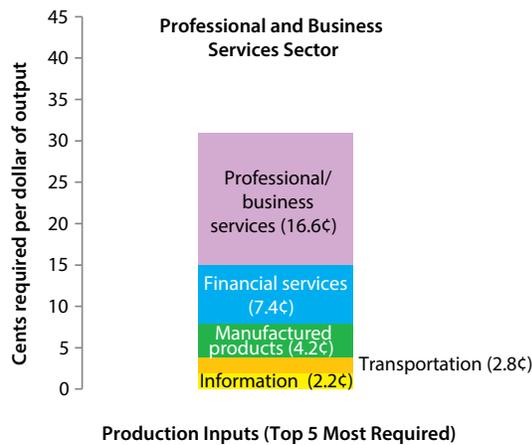
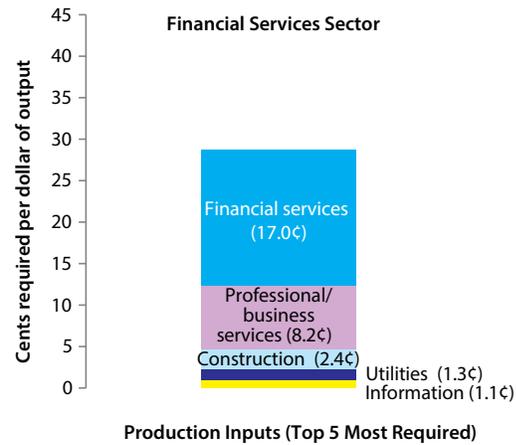
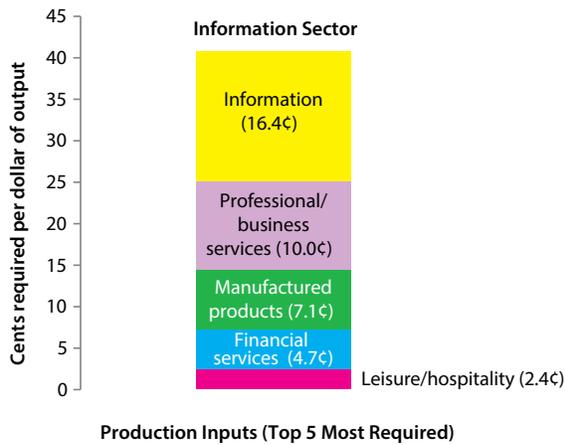
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transportation Satellite Accounts, available at <http://www.bts.gov> as of August 2016.

(figure 7-5). The leisure and hospitality service sector required the most transportation services (3.2¢) to produce one dollar of output among the service sectors but required substantially more of other commodities. For example, manufactured products (e.g., food and beverage and tobacco products) were the most important input to the leisure and hospitality services sector, with the sector requiring 12.7¢ worth to produce one dollar of output (figure 7-6).

Among the service sectors, the professional and business services sector employed the largest number in transportation and material moving

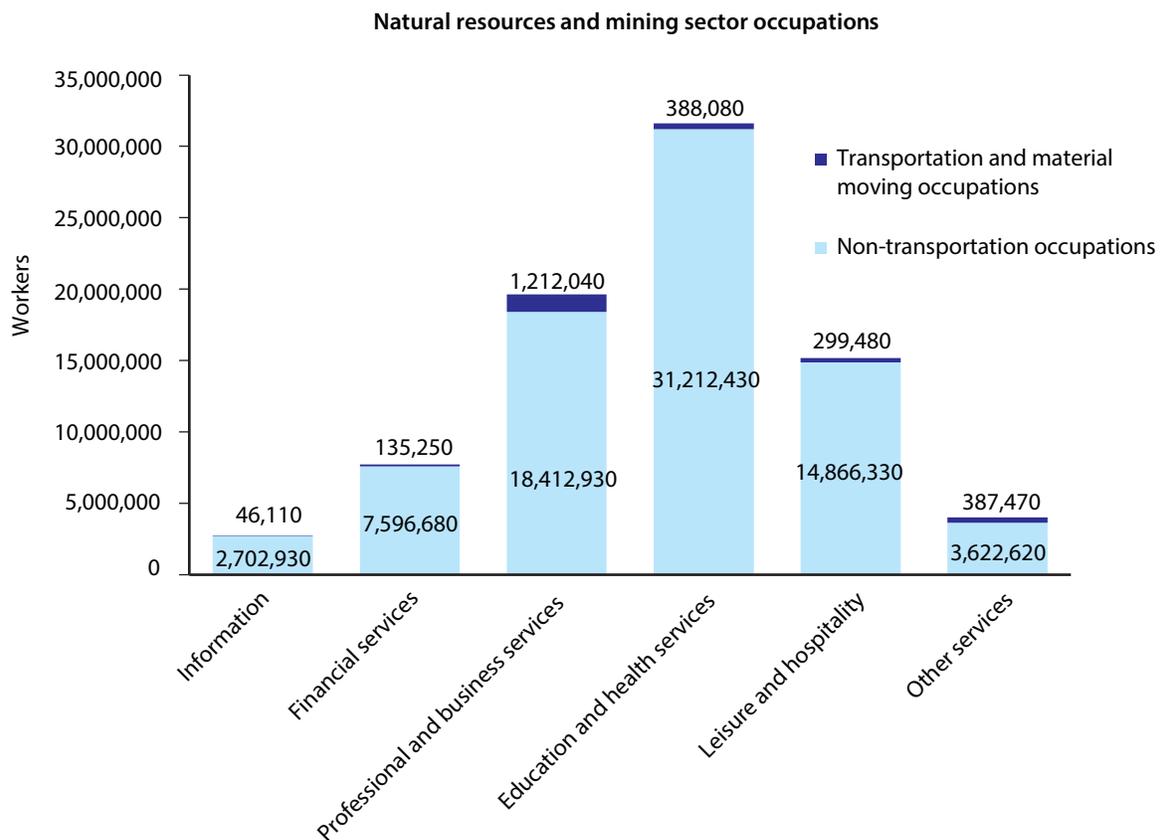
occupations (1.2 million), accounting for 6.2 percent of its work force in 2015. The education and health services sector employed the second largest in transportation and material moving occupations (388,080) in 2015, followed by the other services sector (387,470), the leisure and hospitality sector (299,480), the financial services sector (135,250), and the information sector (46,110) (figure 7-7). Transportation workers include motor vehicle operators, ship engineers, aircraft pilots and flight engineers, etc. Material moving workers support transportation activities and include occupations such as cleaners of vehicles and ship loaders.

Figure 7-6 Top 5 Most Required Inputs by the Service Sectors to Produce a Dollar of Output, 2014



NOTE: Transportation includes in-house and for-hire.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transportation Satellite Accounts, available at <http://www.bts.gov> as of August 2016.

Figure 7-7 Number of Workers Employed in the Service Sectors, 2015

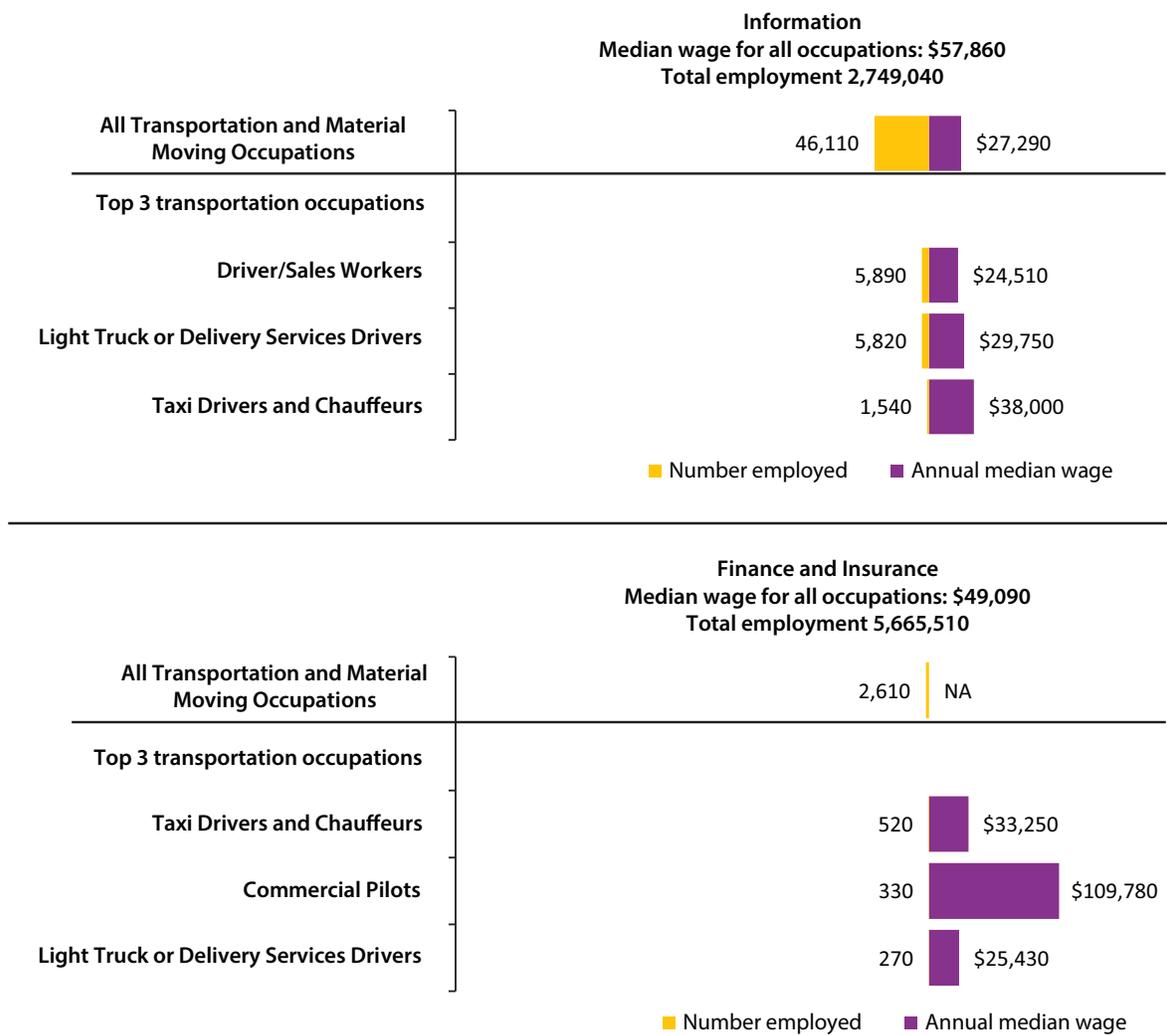
SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment and Wages, available at <http://www.bls.gov/oes> as of August 11, 2016.

Transportation and material moving workers in the all service sectors earned a lower median than workers of all occupations in the same service sector except in the arts, entertainment, and recreation sector in 2015. In the arts, entertainment, and recreation sector, transportation and material moving workers earned a median wage of \$25,840, while workers of all occupations in the arts, entertainment, and recreation industry earned a lower median wage (\$24,940) (figure 7-8).

Each service sector contains several industries. Each industry employed different types of

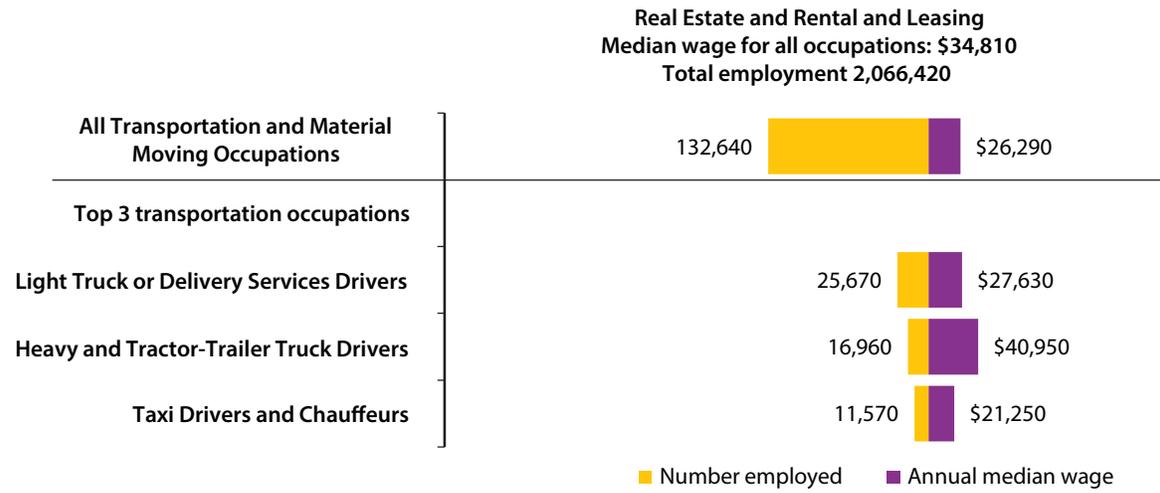
transportation workers. Most industries employed the largest number of transportation workers as motor vehicle operators, ranging from heavy and tractor-trailer truck drivers to taxi drivers and chauffeurs. Of the motor vehicle workers, driver/sales workers earned the lowest median wage. Across industries, driver/sales workers earned the lowest median wage in the accommodation and food services industry (\$18,990). The arts, entertainment, and recreation industry as well as the other services industry employed the largest number of transportation workers as parking lot attendants, who earned a relatively low median wage (roughly \$20,000) (figure 7-8).

Figure 7-8 Median Annual Wage and Employment for Most Common Transportation Occupations (top 3) in Services Sectors, 2014

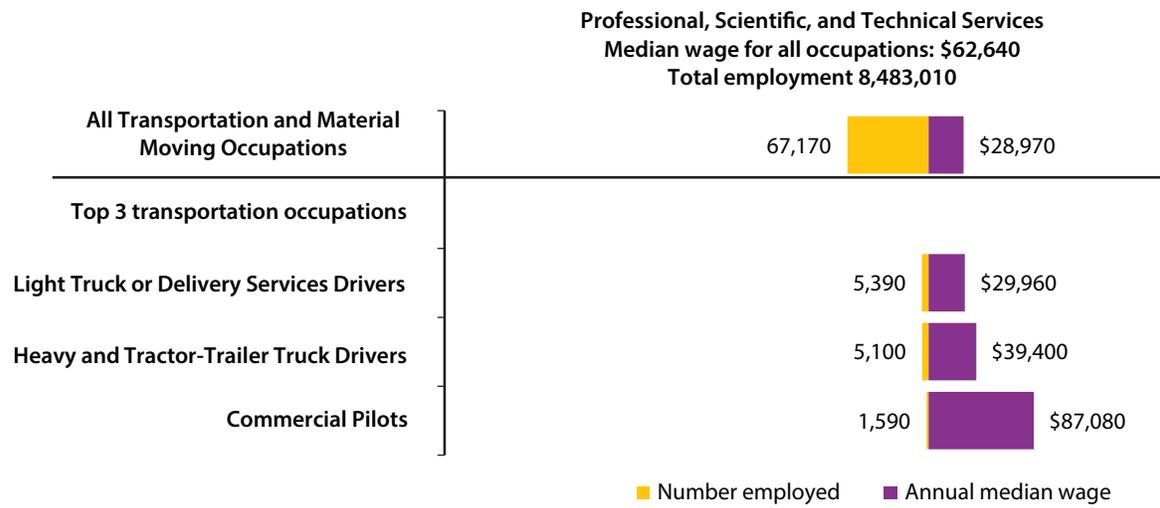


NOTE: Subsector of financial services sector. Subsectors may not sum to sector total due to rounding and data suppression.

Figure 7-8 continued

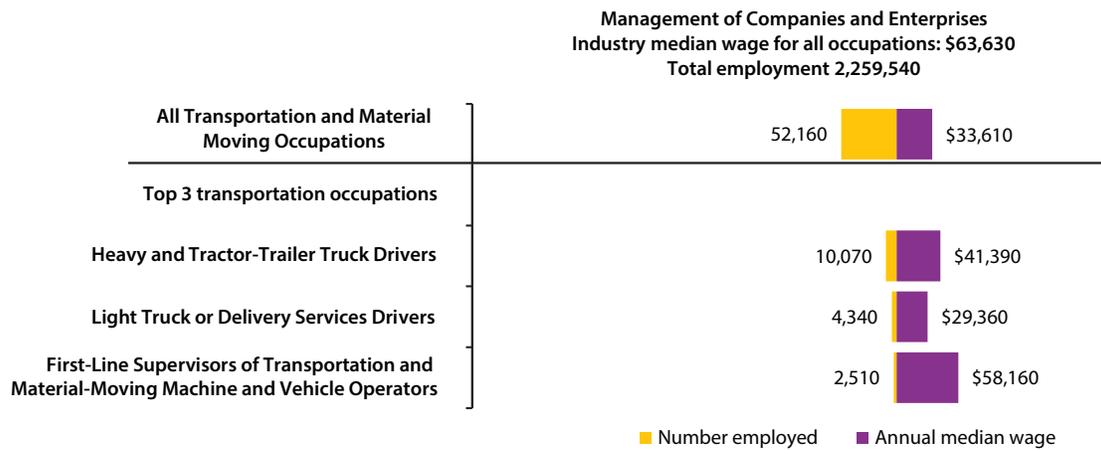


NOTE: Subsector of financial services sector. Subsectors may not sum to sector total due to rounding and data suppression.

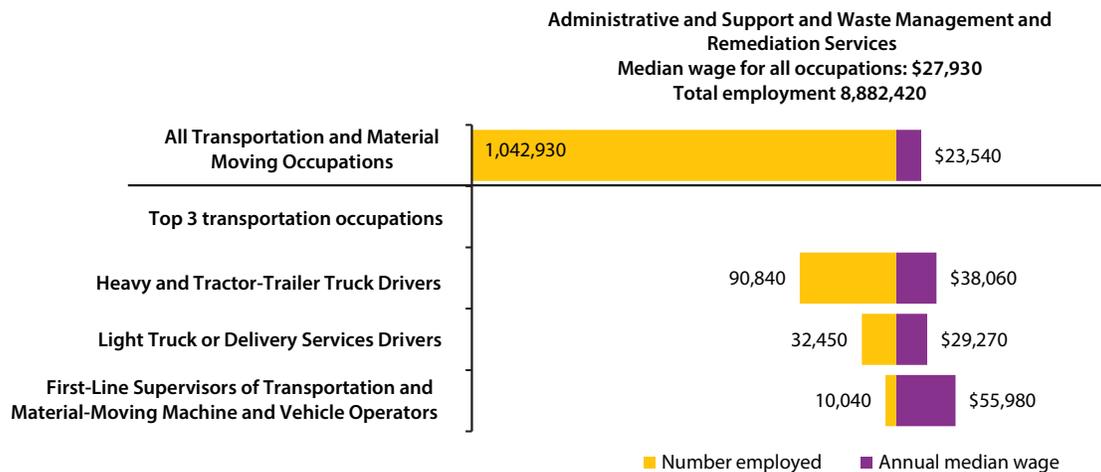


NOTE: Subsector of professional and business services sector. Subsectors may not sum to sector total due to rounding and data suppression.

Figure 7-8 continued

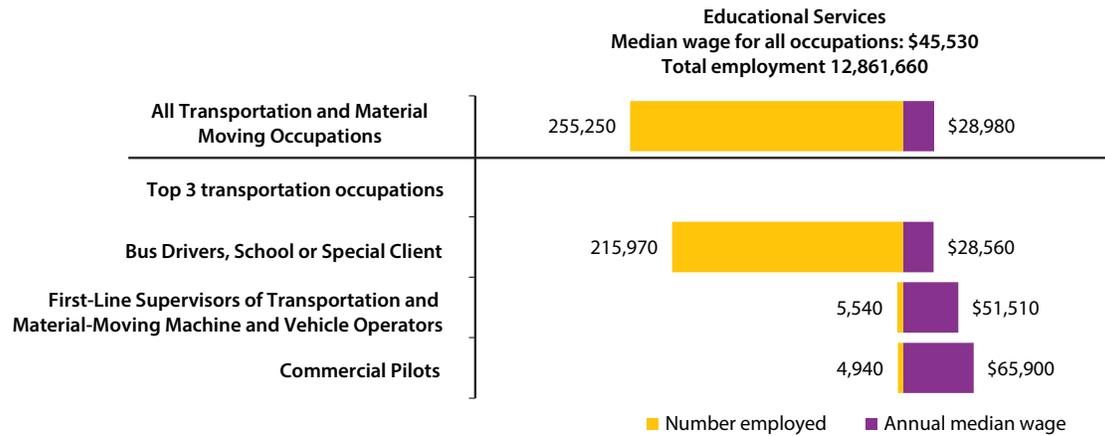


NOTE: Subsector of professional and business services sector. Subsectors may not sum to sector total due to rounding and data suppression.

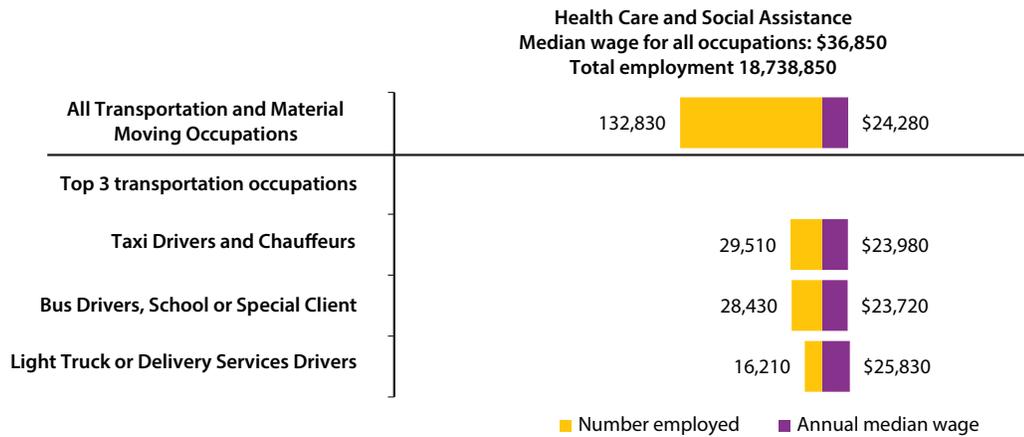


NOTE: Subsector of professional and business services sector. Subsectors may not sum to sector total due to rounding and data suppression.

Figure 7-8 continued



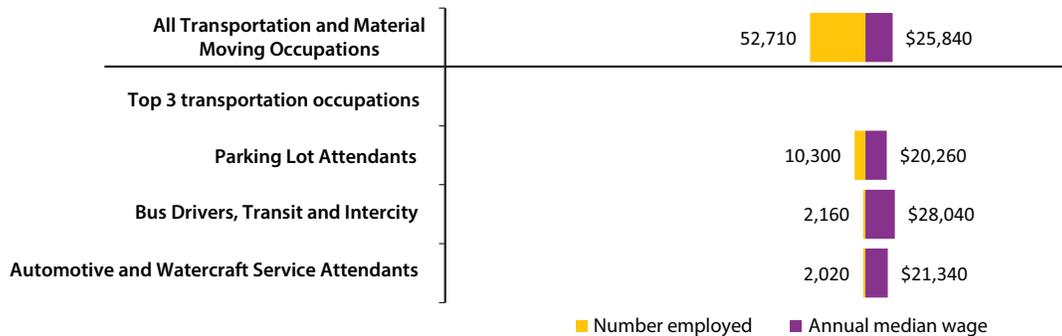
NOTE: Subsector of education and health services sector. Subsectors may not sum to sector total due to rounding and data suppression.



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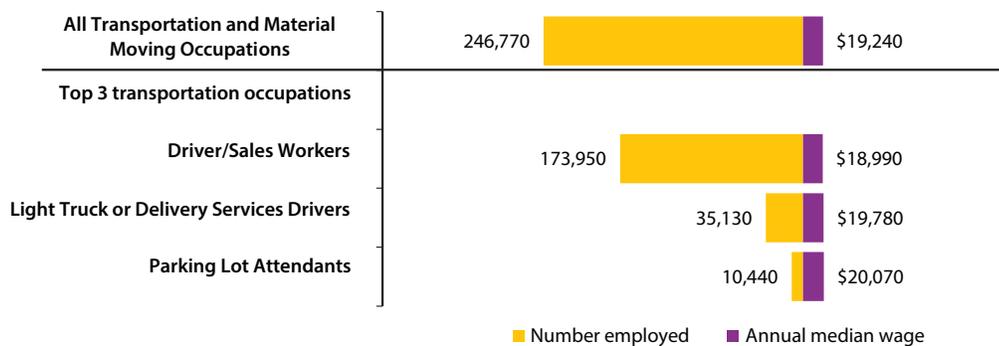
Figure 7-8 continued

Arts, Entertainment, and Recreation
 Median wage for all occupations: \$24,940
 Total employment 2,243,250



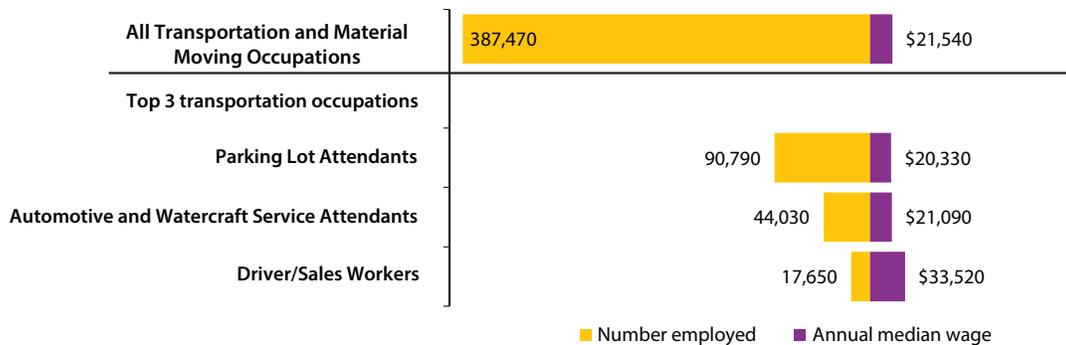
NOTE: Subsector of leisure and hospitality services sector. Subsectors may not sum to sector total due to rounding and data suppression.

Accommodation and Food Services
 Median wage for all occupations: \$19,740
 Total employment 12,922,560



NOTE: Subsector of leisure and hospitality services sector. Subsectors may not sum to sector total due to rounding and data suppression.

Other Services (except Public Administration)
 Median wage for all occupations: \$29,730
 Total employment 4,010,090



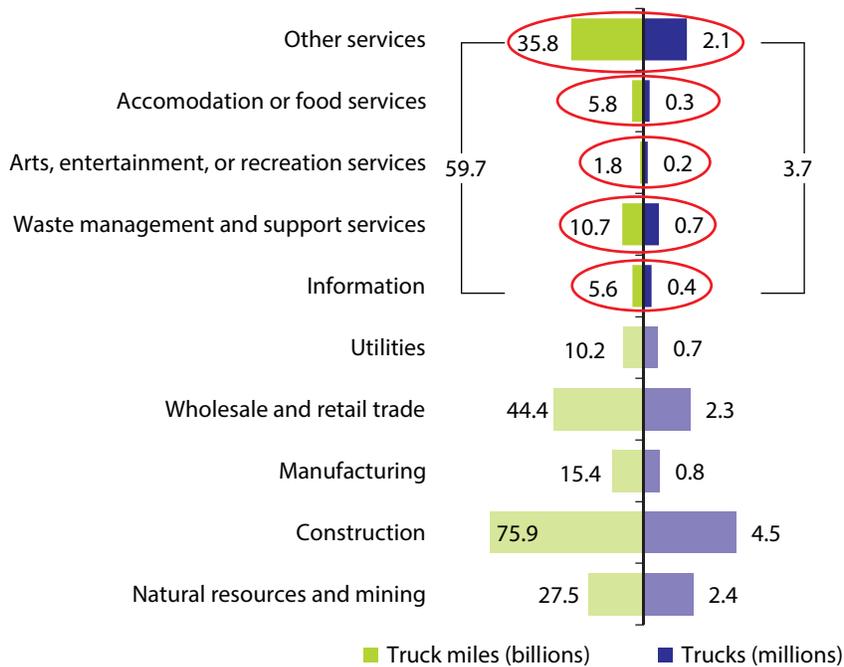
NOTE: Median wage is for all occupations within each industry (transportation and non-transportation occupations). Top three transportation occupations are the transportation occupations employing the largest number of workers and are selected from detailed occupation group in Bureau of Labor Statistics Occupational Employment and Wages table.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment and Wages, available at <http://www.bls.gov/oes> as of August 11, 2016.

The 2002 Vehicle Inventory and Use Survey (VIUS) is the most recent survey of vehicle ownership and use by industry. According to the 2002 VIUS, the service industries collectively operated, at

3.7 million, the second largest number of trucks next to the construction industry. The service industries also collectively accumulated the second largest number of truck miles (59.7 billion).

Figure 7-9 Trucks Used and Truck Miles Accumulated for Business by the Service Industries, 2002



NOTE: Totals for trucks in use only.

SOURCE: U.S. Census Bureau, 2002 Economic Census Vehicle Inventory and Use Survey, Table 2a, available at <https://www.census.gov/prod/ec02/ec02tv-us.pdf> as of August 2012

