

SIGNIFICANT POINTS

- Truck drivers hold 45 percent of all jobs in the industry.
- Job opportunities are expected to be especially good for truck drivers and diesel service technicians.
- Opportunities are prone to rise and fall with in the movements of the economy.
- Many jobs require only a high school education.

Nature of the Industry

Firms in the truck transportation and warehousing industry provide a link between manufacturers and consumers. Businesses, and occasionally individuals, contract with trucking and warehousing companies to pick up, transport, store, and deliver a variety of goods. The industry includes general freight trucking, specialized freight trucking, and warehousing and storage.

General freight trucking uses motor vehicles, such as trucks and tractor-trailers, to provide over-the-road transportation of general commodities. This industry segment is further subdivided based on distance traveled. Local trucking establishments carry goods primarily within a single metropolitan area and its adjacent non-urban areas. Long-distance trucking establishments carry goods between distant areas.

Local trucking comprised 27,000 trucking establishments in 2004. The work of local trucking firms varies with the products transported. Produce truckers usually pick up loaded trucks early in the morning and spend the rest of the day delivering produce to many different grocery stores. Lumber truck drivers, on the other hand, make several trips from the lumberyard to one or more construction sites. Some local truck transportation firms also take on sales and customer relations responsibilities, in addition to delivering the firm's products. Some local trucking firms specialize in garbage collection and trash removal or hauling dirt and debris.

Long-distance trucking comprises establishments engaged primarily in providing long-distance trucking between distant areas and sometimes between the United States and Canada or Mexico. Numbering 39,000 establishments, these firms handle every kind of commodity.

Specialized freight trucking provides over-the-road transportation of freight, which, because of size, weight, shape, or other inherent characteristics, requires specialized equipment, such as flatbeds, tankers, or refrigerated trailers. This industry sector also includes the moving industry—that is, the transportation of used household, institutional, and commercial furniture. Like general freight trucking, specialized freight trucking is subdivided into local and long-distance components. The specialized freight trucking sector contained 46,000 establishments in 2004.

Some goods are carried cross country using intermodal transportation to save time and money. Intermodal transportation encompasses any combination of transportation by truck, train, plane, or ship. Typically, trucks perform at least one leg of the trip. For example, a shipment of cars from an assembly plant

begins its journey when they are loaded onto rail cars. Next, trains haul the cars across country to a depot, where the shipments are broken into smaller lots and loaded onto tractor-trailers, which drive them to dealerships. Each of these steps is carefully orchestrated and timed so that the cars arrive just in time to be shipped on their next leg of their journey. Goods can be transported at lower cost this way, but they cannot be highly perishable—like fresh produce—or have strict delivery schedules. Trucking dominates the transportation of perishable and time-sensitive goods.

Warehousing and storage facilities comprised 13,000 establishments in 2004. These firms are engaged primarily in operating warehousing and storage facilities for general merchandise and refrigerated goods. They provide facilities to store goods; self-storage mini-warehouses that rent to the general public also are included in this segment of the industry.

The deregulation of interstate trucking in 1980 encouraged many firms to add a wide range of customer-oriented services to complement trucking and warehousing services and led to innovations in the distribution process. Increasingly, trucking and warehousing firms are providing logistical services encompassing the entire transportation process. Firms that offer these services are called third-party logistics providers. Logistical services manage all aspects of the movement of goods between producers and consumers. Among their value-added services are sorting bulk goods into customized lots, packaging and re-packaging goods, controlling and managing inventory, order entering and fulfillment, labeling, performing light assembly, and marking prices. Some full-service companies even perform warranty repair work and serve as local parts distributors for manufacturers. Some of these services, such as maintaining and retrieving computerized inventory information on the location, age, and quantity of goods available, have helped to improve the efficiency of relationships between manufacturers and customers.

Many firms are relying on new technologies and the coordination of processes to expedite the distribution of goods. Voice control software allows a computer to coordinate workers through audible commands—telling workers what items to pack for which orders—helping to reduce errors and increase efficiency. Voice control software also can be used to perform inventory checks and reordering. Some firms use Radio Frequency Identification Devices (RFID) to track and manage incoming and outgoing shipments. RFID simplifies the receiving process by allowing entire shipments to be scanned without unpacking a

load to manually compare it against a bill of lading. Just-in-time shipping is a process whereby goods arrive just before they are needed, saving recipients money by reducing their need to carry large inventories. These technologies and processes reflect two major trends in warehousing: supply chain integration, whereby firms involved in production, transportation, and storage all move in concert so as to act with the greatest possible efficiency; and ongoing attempts to reduce inventory levels and increase inventory accuracy.

Working Conditions

In 2004, workers in the truck transportation industry averaged 41.3 hours a week, compared with an average of 37.4 hours in warehousing and storage and 33.7 in all private industries.

The U.S. Department of Transportation governs work hours and many other working conditions of truck drivers engaged in interstate commerce. Long-distance drivers are not permitted to drive after having worked for 60 hours in the past 7 days or 70 hours in the past 8 days, unless they have taken at least 34 consecutive hours off duty. Drivers are required to document their time in logbooks. Many drivers, particularly on long runs, work close to the maximum time permitted because employers usually compensate them on the basis of the number of miles or hours they drive. Drivers frequently travel at night, on holidays, and on weekends to avoid traffic delays so that they can deliver their cargo on time.

Truck drivers must cope with a variety of working conditions, including variable weather and traffic conditions, boredom, and fatigue. Many truck drivers enjoy the independence and working without direct supervision found in long-distance driving. Local truck drivers often have regular routes or assignments that allow them to return home in the evening.

Improvements in roads and trucks are reducing stress and increasing the efficiency of long-distance drivers. Many advanced trucks are equipped with refrigerators, televisions, and beds for their drivers' convenience. Included in some of these state-of-the-art vehicles are satellite links with their company's headquarters, so that drivers can get directions, weather and traffic reports, and other important communications in a matter of seconds. In the event of bad weather or mechanical problems, truckers can communicate with dispatchers to discuss delivery schedules and courses of action. Satellite links allow dispatchers to track the location of the truck and monitor fuel consumption and engine performance.

Vehicle and mobile equipment mechanics, installers, and repairers usually work indoors, although they occasionally make repairs on the road. Minor cuts, burns, and bruises are common, but serious accidents typically can be avoided if the shop is kept clean and orderly and if safety practices are observed. Service technicians and mechanics handle greasy and dirty parts and may stand or lie in awkward positions to repair vehicles and equipment. They usually work in well-lighted, heated, and ventilated areas, but some shops are drafty and noisy.

Laborers, and hand freight, stock, and material movers usually work indoors, although they may do occasional work on trucks and fork lifts outside. These occupations often require a great deal of physical labor, including heavy lifting.

Safety is a major concern for the truck transportation and warehousing industry. The operation of trucks, fork lifts, and other technically advanced equipment can be dangerous without proper training and supervision. Efforts are underway to

standardize training programs to make drivers more efficient and effective truck operators. Truck drivers already must adhere to federally mandated certifications and regulations requiring them to submit to drug and alcohol tests as a condition of employment. Employers are required to perform random on-the-job checks for drugs and alcohol.

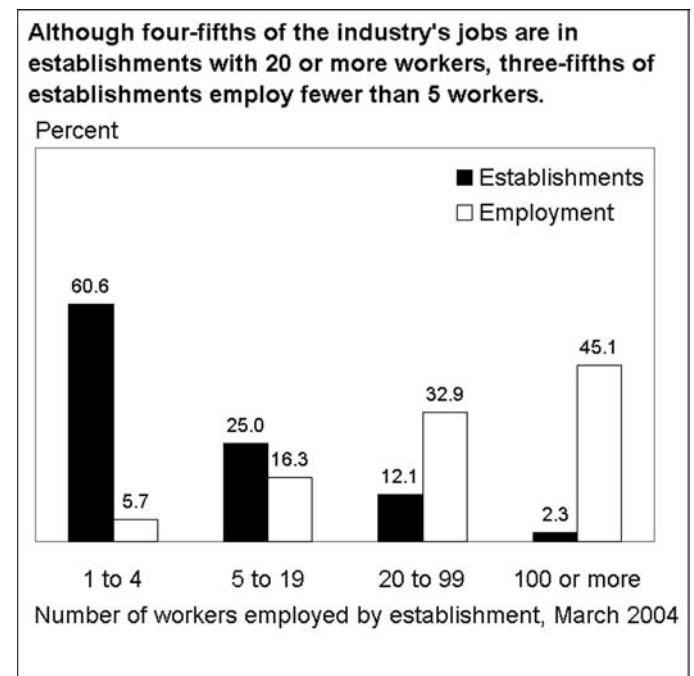
In 2003, work-related injuries and illnesses per 100 full-time workers averaged 6.8 in the truck transportation industry and 10.1 in warehousing and storage, compared with a rate of 5.0 for the entire private sector. More than 8 out of 10 on-the-job fatalities in the truck transportation industry resulted from transportation related incidents.

Employment

The truck transportation and warehousing industry provided 1.9 million wage and salary jobs in 2004. About 45 percent of the salaried jobs in the industry, 857,000, were for truck drivers. Other transportation and material moving jobs accounted for 24 percent of industry employment, while various office and administrative support occupations employed another 17 percent. Management, business, and financial occupations held 4 percent of all jobs in the industry; vehicle and mobile equipment mechanics, installers, and repairers 3 percent; and sales and related workers 2 percent. In addition to the wage and salary workers, there were an estimated 282,000 self-employed and unpaid family workers in the industry.

Most employees in the truck transportation and warehousing industry work in small establishments. About 86 percent of trucking and warehousing establishments employ fewer than 20 workers (chart 1). Consolidation in the industry has reduced the number of small, specialized firms.

Trucking and warehousing establishments are found throughout the United States, with a higher concentration around the major interstate highways and in heavily industrialized regions of the country, such as California, New Jersey, and Texas.



Occupations in the Industry

Transportation and material moving occupations account for 68 percent of all jobs in the industry (table 1). *Truck drivers and driver/sales workers*, who hold 45 percent of all trucking and warehousing jobs, transport goods from one location to another. They ensure the safe delivery of cargo to a specific destination, often by a designated time. Drivers also perform some minor maintenance work on their vehicles and make routine safety checks.

The length of trips varies with the type of merchandise and its final destination. Local drivers provide regular service while other drivers make intercity and interstate deliveries that take longer and may vary from job to job. The driver's responsibilities and assignments change according to the time spent on the road and the type of payloads transported.

Local drivers typically have regular schedules and return home at the end of the day. They may deliver goods to stores or homes or haul away dirt and debris from excavation sites. Many local drivers cover the same routes daily or weekly. Long-distance truck drivers often are on the road for long stretches of time. Their trips vary from an overnight stay to a week or more. On longer trips, drivers sometimes sleep in bunks in their cabs or share the driving with another driver.

Laborers, and hand freight, stock, and material movers help load and unload freight and move it around warehouses and terminals. Often, these unskilled employees work together in groups of three or four. They may use conveyor belts, handtrucks, pallet jacks, or fork lifts to move freight. They may place heavy or bulky items on wooden skids or pallets and have industrial truck and tractor operators move them.

Office and administrative support workers perform the daily recordkeeping operations for the truck transportation and warehousing industry. *Dispatchers* coordinate the movement of freight and trucks, and provide the main communication link that informs the truck drivers of their assignments, schedules, and routes. Dispatchers frequently receive new shipping orders on short notice and must juggle drivers' assignments and schedules to accommodate a client. *Shipping, receiving, and traffic clerks* keep records of shipments arriving and leaving. They verify the contents of trucks' cargo against shipping records. They also may pack and move stock. *Billing and posting clerks and machine operators* maintain company records of the shipping rates negotiated with customers and shipping charges incurred; they also prepare customer invoices.

Workers in installation, maintenance, and repair occupations generally enter these jobs only after acquiring experience in related jobs or after receiving specialized training. Most *vehicle and mobile equipment mechanics, installers, and repairers* require special vocational training. Service technicians and mechanics in trucking and warehousing firms perform preventive safety checks as well as routine service and repairs. Service technicians and mechanics sometimes advance to parts manager positions. *Parts managers* maintain the supply of replacement parts needed to repair vehicles. Parts managers monitor the parts inventory using a computerized system and purchase new parts to replenish supplies. These employees need mechanical knowledge and must be familiar with computers and purchasing procedures.

Sales and related workers sell trucking and warehousing services to shippers of goods. They meet with prospective buy-

ers, discuss the customers' needs, and suggest appropriate services. Travel may be required, and many analyze sales statistics, prepare reports, and handle some administrative duties.

Managerial staff provides general direction to the firm. They staff, supervise, and provide safety and other training to workers in the various occupations. They also resolve logistical problems such as forecasting the demand for transportation; mapping out the most efficient traffic routes; ordering parts and equipment service support; and scheduling the transportation of goods.

Training and Advancement

Many jobs in the truck transportation and warehousing industry require only a high school education, although an increasing

Table 1. Employment of wage and salary workers in truck transportation and warehousing by occupation, 2004 and projected change, 2004-14.

(Employment in thousands)

Occupation	Employment, 2004		Percent change, 2004-14
	Number	Percent	
All occupations	1,907	100.0	14.0
Management, business, and financial occupations			
General and operations managers	84	4.4	22.0
Transportation, storage, and distribution managers	27	1.4	18.3
Accountants and auditors	13	0.7	20.9
Accountants and auditors	6	0.3	21.4
Professional and related occupations	17	0.9	34.7
Sales and related occupations	42	2.2	21.8
Office and administrative support occupations	324	17.0	7.9
Bookkeeping, accounting, and auditing clerks	19	1.0	6.1
Customer service representatives	23	1.2	25.6
Dispatchers, except police, fire, and ambulance	34	1.8	2.1
Shipping, receiving, and traffic clerks	39	2.1	21.5
Stock clerks and order fillers	51	2.7	4.6
Secretaries and administrative assistants	23	1.2	4.1
Office clerks, general	44	2.3	5.2
Installation, maintenance, and repair occupations	85	4.4	17.4
Bus and truck mechanics and diesel engine specialists	46	2.4	13.4
Maintenance and repair workers, general	15	0.8	26.2
Production occupations	32	1.7	28.9
Transportation and material moving occupations	1,300	68.2	13.8
First-line supervisors/managers of helpers, laborers, and material movers, hand	23	1.2	6.1
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	38	2.0	17.0
Truck drivers, heavy and tractor-trailer	765	40.1	13.2
Truck drivers, light or delivery services	82	4.3	16.1
Industrial truck and tractor operators	101	5.3	18.2
Laborers and freight, stock, and material movers, hand	212	11.1	13.6
Packers and packagers, hand	36	1.9	13.7

Note: May not add to totals due to omission of occupations with small employment

number of workers have at least some college education. College education is most important for those seeking positions in management. Increasing emphasis on formal education stems from the increasing use of technology in the industry. Nearly all operations involve computers and information management systems. Many occupations—especially those involved in scheduling, ordering, and receiving—require detail-oriented people with computer skills. A growing number of employers recommend some form of formal training. Some companies provide such training in-house. Other sources of training include trade associations, unions, and vocational schools. Many companies have specific curricula on safety and procedural issues, as well as on occupational duties.

Whereas many States allow those who are 18 years old to drive trucks within their borders, the U.S. Department of Transportation establishes minimum qualifications for truck drivers engaged in interstate commerce. Federal Motor Carrier Safety Regulations require truck drivers to be at least 21 years old, have at least 20/40 vision and good hearing, and be able to read and speak English. They also must have good driving records and a commercial driver's license, which they obtain by passing a written examination and a skills test in which they operate the type of vehicle they will be driving. Commercial driver's licenses are issued by the individual States. Companies often have additional requirements that applicants must meet.

Some enter the occupation by attending training schools for truck drivers. Schools vary greatly in the quality of training they provide, but they are becoming more standardized. Many employers and a number of States support these programs.

Some large trucking companies have formal training programs that prospective drivers attend. Other companies assign experienced drivers to teach and mentor newer drivers. Local trucking firms often start drivers as truck driver helpers. Experienced and reliable truck drivers with good driving records receive better pay as well as more desirable routes, schedules, or loads. Because of increased competition for experienced drivers, some larger companies are luring these drivers with higher wages, signing bonuses, and preferred assignments. Some trucking firms hire only experienced drivers.

Some long-distance truck drivers purchase trucks and go into business for themselves. Although many of these owner-operators are successful, some fail to cover expenses and eventually go out of business. Owner-operators should have good business sense as well as truck-driving experience. Courses in accounting, business, and business mathematics are helpful, and knowledge of truck mechanics can enable owner-operators to perform their own routine maintenance and minor repairs. Some trucking companies engage in franchising, providing drivers with the means to purchase a truck while also lining up loads for them to haul.

Unskilled employees may work as helpers, laborers, and material movers in their first jobs. They must be in good physical condition because the work often involves a great deal of physical labor and heavy lifting. They acquire skills on the job and can advance to more skilled jobs, such as industrial truck operator, truck driver, shipping and receiving clerk, or supervisor.

Office and administrative support jobs in the truck transportation and warehousing industry require familiarity with computers. Shipping and receiving clerks watch and learn the skills of the trade from more experienced workers while on the job.

Stock clerks may advance to dispatcher positions after becoming familiar with company operations and procedures.

While some vehicle and mobile equipment mechanics, installers, and repairers learn the trade on the job, most employers prefer to hire graduates of programs in diesel mechanics offered by community and junior colleges or vocational and technical schools. Those with no training often start as helpers to mechanics, doing basic errands and chores, such as washing trucks or moving them to different locations. Experience as an automotive service technician is helpful because many of the skills relate to diesel technology. Experienced technicians may advance to shop supervisor or parts manager positions.

For managerial jobs in the truck transportation and warehousing industry, employers prefer persons with bachelor's degrees in business, marketing, accounting, industrial relations, or economics. Good communication, problem-solving, and analytical skills are valuable in entry-level jobs. Since trucking and warehousing firms may rely heavily on computer technology to aid in the distribution of goods, knowledge of information systems also is helpful for advancement. Although most managers must learn logistics through extensive training on the job, several universities offer graduate and undergraduate programs in logistics. These programs emphasize the tools necessary to manage the distribution of goods and may be associated with the business departments of schools. Managers hired for entry-level positions sometimes advance to top-level managerial jobs.

Marketing and sales workers must be familiar with their firm's products and services and have strong communication skills.

Outlook

The number of wage and salary jobs in the truck transportation and warehousing industry is expected to grow 14 percent from 2004 through 2014, compared with projected growth of 14 percent for all industries combined. Growth will result in many job openings because the industry is so large. There also will be openings due to replacement needs for the large number of workers who will transfer to other industries or retire. Job opportunities should be especially good for truck drivers and diesel service technicians and mechanics.

One of the main factors influencing the growth of the truck transportation and warehousing industry is the state of the national economy. Growth in the industry parallels the movements of the national economy. As the national economy grows and the production and sales of goods increases, there is an increase in the demand for transportation services to move goods from their producers to consumers. During economic downturns, the truck transportation and warehousing industry is one of the first to slow down as orders for goods and shipments decline. Competition in truck transportation is intense, both among trucking companies and, in some long-haul truckload segments, with the railroad industry. Nevertheless, trucking accounts for the bulk of freight transportation. Warehousing is expected to grow faster than the rest of the industry, although many mid-sized firms are being purchased by others in attempts to consolidate.

Additional employment growth will result from manufacturers' willingness to concentrate more on their core competencies—producing goods—while outsourcing their distribution functions to trucking and warehousing companies which can perform these tasks for less money. As firms in other industries increasingly employ the industry's logistical services, such as inventory management and just-in-time shipping, many new jobs

will be created. Also, as more consumers and businesses make purchases over the Internet, the expansion of electronic commerce will continue to increase demand for the transportation, logistical, and value-added services offered by the truck transportation and warehousing industry.

Opportunities for truck drivers are expected to be favorable. In some areas, companies have experienced difficulties recruiting adequately skilled drivers. Many people leave the career because of the lengthy periods away from home, the long hours of driving, and the negative public image that drivers face. Employment opportunities should be better among truckload carriers than among less-than-truckload (LTL) carriers because many workers prefer the working conditions of LTL carriers. Stricter requirements for obtaining—and keeping—a commercial driver's license also make truck driving a less attractive career. New restrictions on who can obtain or renew their hazardous-material endorsement should increase opportunities for those able to pass the criminal background checks now required. Opportunities for diesel service technicians and mechanics also are expected to be favorable, especially for applicants with formal postsecondary training.

Growth in the truck transportation and warehousing industry should prompt an increase in office and administrative support employment. More dispatchers, stock clerks, and shipping, receiving, and traffic clerks will be needed to support expanded logistical services across the country. However, fewer secretaries, bookkeepers, and file clerks will be needed, because computers and other automated equipment will make workers in these occupations more efficient and productive. Opportunities for those with information technology skills will be excellent.

Earnings

In 2004, average earnings in the truck transportation and warehousing industry were higher than the average for all private industry, as shown in table 2. The average wage in the trucking sector of the industry was higher than the average wage in warehousing. Earnings in selected occupations in truck transportation and warehousing appear in table 3.

Table 2. Average earnings of nonsupervisory workers in truck transportation and warehousing, 2004

Industry segment	Weekly	Hourly
All private industry	\$529	\$15.67
Truck transportation	686	16.61
General freight trucking	714	17.14
Specialized freight trucking	620	15.28
Warehousing and storage	558	14.90
Refrigerated warehousing and storage	595	15.84
Miscellaneous warehousing and storage	596	15.07
General warehousing and storage	558	14.90

Most employers compensate truck drivers with an hourly rate, a rate per mile, or a percentage of their loads' revenue. Benefits, including performance-related bonuses, health insurance, and sick and vacation leave, are common in the trucking industry.

The major union in the truck transportation and warehousing industry is the International Brotherhood of Teamsters. About 11 percent of trucking and warehousing workers are union

members or are covered by union contracts, compared with approximately 14 percent of workers in all industries combined. Since union drivers tend to make more than nonunion drivers, some trucking companies use "double breasting"—employing union as well as nonunion operating divisions in an attempt to lower labor costs. Other companies use graduated pay scales and pay lower wages for new hires. Many give pay increases after predetermined periods to those with safe driving records. Some deal exclusively with owner-operators in order to offset the cost of owning and maintaining a fleet of vehicles.

Table 3. Median hourly earnings of the largest occupations in truck transportation and warehousing, May 2004

Occupation	Truck transportation	Warehousing and storage	All industries
First-line supervisors/managers of transportation and material-moving	\$21.93	\$20.52	\$21.54
Bus and truck mechanics and diesel engine specialists	16.15	17.47	17.20
Truck drivers, heavy and tractor-trailer	17.00	17.46	16.11
Industrial truck and tractor operators	14.25	12.64	12.78
Truck drivers, light or delivery services	13.76	12.12	11.80
Shipping, receiving, and traffic clerks	12.83	12.47	11.73
Office clerks, general	10.85	11.71	10.95
Laborers and freight, stock, and material movers, hand	11.36	11.39	9.67
Stock clerks and order fillers	11.46	12.32	9.66
Packers and packagers, hand	9.71	9.75	8.25

Sources of Additional Information

For additional information about careers and training in the truck transportation and warehousing industry, write to any of the following organizations:

- American Trucking Associations, 2200 Mill Rd., Alexandria, VA 22314-4677.
- International Association of Refrigerated Warehouses, 1500 King St., Suite 201, Alexandria, VA 22314.
- International Brotherhood of Teamsters, 25 Louisiana Ave, N.W., Washington, DC 20001.
- Professional Truck Driver Institute, 2200 Mill Rd., Alexandria, VA 22314. Internet: <http://www.ptdi.org>
- Warehousing Education and Research Council, 1100 Jorie Blvd., Suite. 170, Oak Brook, IL 60523-4413. Internet: <http://werc.org>

Detailed information on the following occupations can be found in the 2006–07 *Occupational Outlook Handbook*:

- Diesel service technicians and mechanics
- Dispatchers
- Material moving occupations
- Shipping, receiving, and traffic clerks
- Truck drivers and driver/sales workers