

## Chapter 2

# The Motor Carrier industry-A Profile

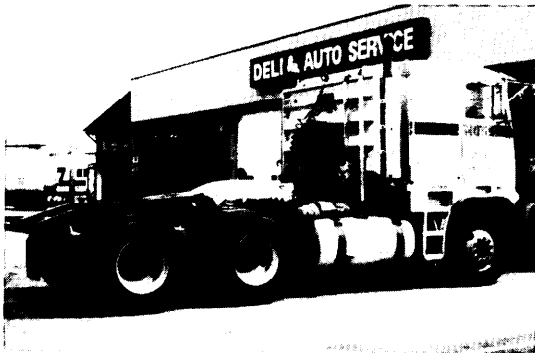


Photo credit: Tse-Sung Wu, OTA staff

**Bobtail tractor**

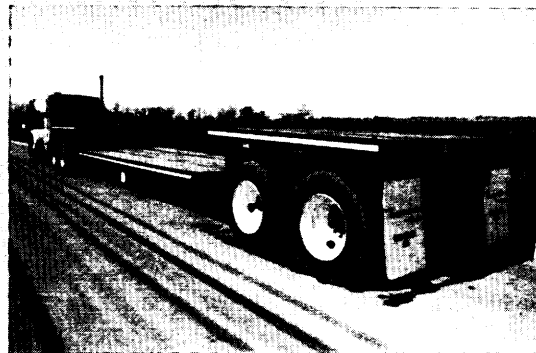


Photo credit: Land Line

**Flatbed trailer**



Photo credit: Karen Mathiasen, OTA staff

**Conventional tractor**



Photo credit: Freightliner Corp.

**Cab-over-engine tractor**



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**Tanker**

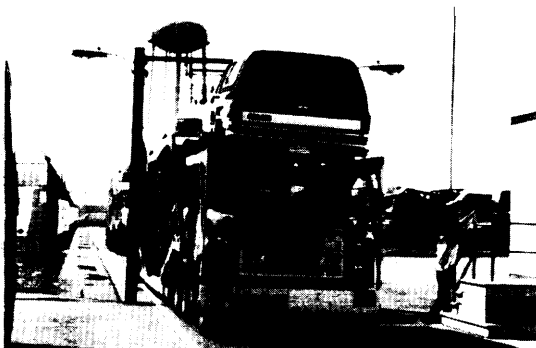


Photo credit: Karen Mathiasen, OTA staff

**Automobile carrier**

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# The Motor Carrier industry—A Profile

The motor carrier industry moves goods and materials between shippers and receivers all across the Nation and carries passengers between large and small cities. Motor carriers are our most ubiquitous freight mode, using the extensive U.S. highway network to link markets of all types, sizes, and locations and serving many points that lack rail or air service. The numbers of motor carriers grew dramatically during the 1980s, with many carriers of all sizes moving to specialize in different segments of the market. This wide variety of activities makes the industry difficult to categorize.

Nonetheless, motor carrier safety concerns and issues are best viewed in their industry context, so that policy changes to improve safety recognize and address the economic and physical characteristics of the industry. Motor carrier accidents have immediate economic impacts on carriers, drivers, and shippers of the freight being transported. However, motor carrier safety is also a prime governmental

and public concern, because carriers share the roads with automobiles and other personal-use vehicles. Moreover, the societal costs of traffic accidents are heavy. The Secretary of Transportation recently projected that the annual economic cost of highway accidents could be \$65 billion in the year 2000.<sup>1</sup>

This chapter presents an economic and business profile of the motor carrier industry, describing the vehicle fleet, industry characteristics, competitive conditions, industry trends, and major policy developments. The information focuses on the large, heavy trucks that are a prime safety concern and provides a framework for evaluating specific safety-related issues.

<sup>1</sup>U.S. Congress, House Committee on Public Works and Transportation, *The Status of the Nation Highways: Conditions and Performance*, Report of the Secretary of Transportation (Washington, DC: U.S. Government Printing Office, 1987). Cost projections are in constant 1985 dollars.

## THE NATION'S TRUCK FLEET

### Number of Trucks

Industry-wide data on the domestic trucking fleet are available from several sources, although data on the entire population of trucks, including both interstate and local carriers, suffer from severe shortcomings (see chapter 7). The Federal Highway Administration (FHWA) compiles and publishes data on all motor vehicle registrations by State. Its most recent statistical report shows a total of 176.2 million motor vehicles of all types, of which 77 percent

were automobiles, 0.3 percent were buses, and about 23 percent were trucks.<sup>2</sup> The number of commercial and private truck-tractor registrations declined by over 20 percent between 1979 and 1986. Selected registration figures are presented in table 2-1 for 1979-1986. Light trucks—pickups, panel trucks, and delivery vans, generally of 13,000 pounds or less gross vehicle weight (GVW)—dominate the population of registered trucks, making up 83 percent of

<sup>2</sup>Federal Highway Administration, *Highway Statistics—1986* (Washington, DC: U.S. Department of Transportation, 1986).

**Table 2.1.—Total U.S. Truck and Bus Registrations, 1979-86<sup>a</sup> (in millions)**

Year	Total State motor vehicle registration—all vehicles	Total truck registrations	Total commercial and private truck-tractor registrations	Private and commercial trailers	Total commercial bus registrations
1986 .....	176.2	40.2	1.1	3.4	0.11
1985 .....	171.7	39.0	1.2	3.4	0.11
1984 .....	166.5	38.0	1.1	3.2	0.11
1983 .....	163.9	36.5	1.2	3.1	0.11
1982 .....	159.5	35.3	1.2		0.11
1981 .....	158.5	34.5	1.2	3.0	0.10
1980 .....	157.3	33.6	1.4	3.3	0.10
1979 .....	153.6	33.3	1.4	3.3	0.10

<sup>a</sup>Data have some limitations, such as possible double counting for multiple registrations and reporting lag times of 16-18 months. Data are compiled by States and are supplemented by the Federal Highway Administration to reduce double counting.

<sup>b</sup>Predominantly light trucks (included 36 million pickup trucks in 1986).

SOURCE: Federal Highway Administration, *Highway Statistics* (Washington, DC: U.S. Department of Transportation, 1979-86).

the 40.2 million truck fleet. Only 1.1 million truck-tractor power units and 3.4 million commercial-type trailers and semitrailers were counted in 1986.

The Bureau of the Census has conducted surveys roughly every 5 years of various transportation activities, including a Truck Inventory and Use Survey (TIUS) as part of the Census of Transportation.<sup>3</sup> The TIUS is currently underway, and while data from the 1982 TIUS are somewhat outdated, they are the most recent available.

### Heavy Trucks

Most heavy commercial trucks travel close to 100,000 miles per year and dominate commercial interstate traffic. The small trucks and vans that comprise the vast majority of truck sales play only a minor role in interstate commerce. Figure 2-1 presents a selection of heavy truck types in silhouette, and illustrates the diversity of commercial vehicles in use on our highways. Many heavy commercial trucks employ a tractor-trailer configuration, as reflected by all but one of the truck types shown, although numerous straight trucks and dump trucks are also included in this category.

The definition of a heavy truck varies for regulatory and legislative applications by the various State and Federal authorities concerned with motor carriers. Most industry observers categorize trucks by weight rather than by actual size, because heavy trucks pose special engineering problems (mainly high axle and wheel loadings that stress the roadway) and safety hazards. Federal statute suggests one definition, because the Federal Government imposes a heavy vehicle use tax on vehicles that exceed 26,000 pounds GVW, and most loaded vehicles operating in interstate commerce exceed that level.

Total truck sales numbered 3.8 million in 1987. Trucks are categorized by various weight classes, and the two heaviest are Class 7 (26,001 to 33,000

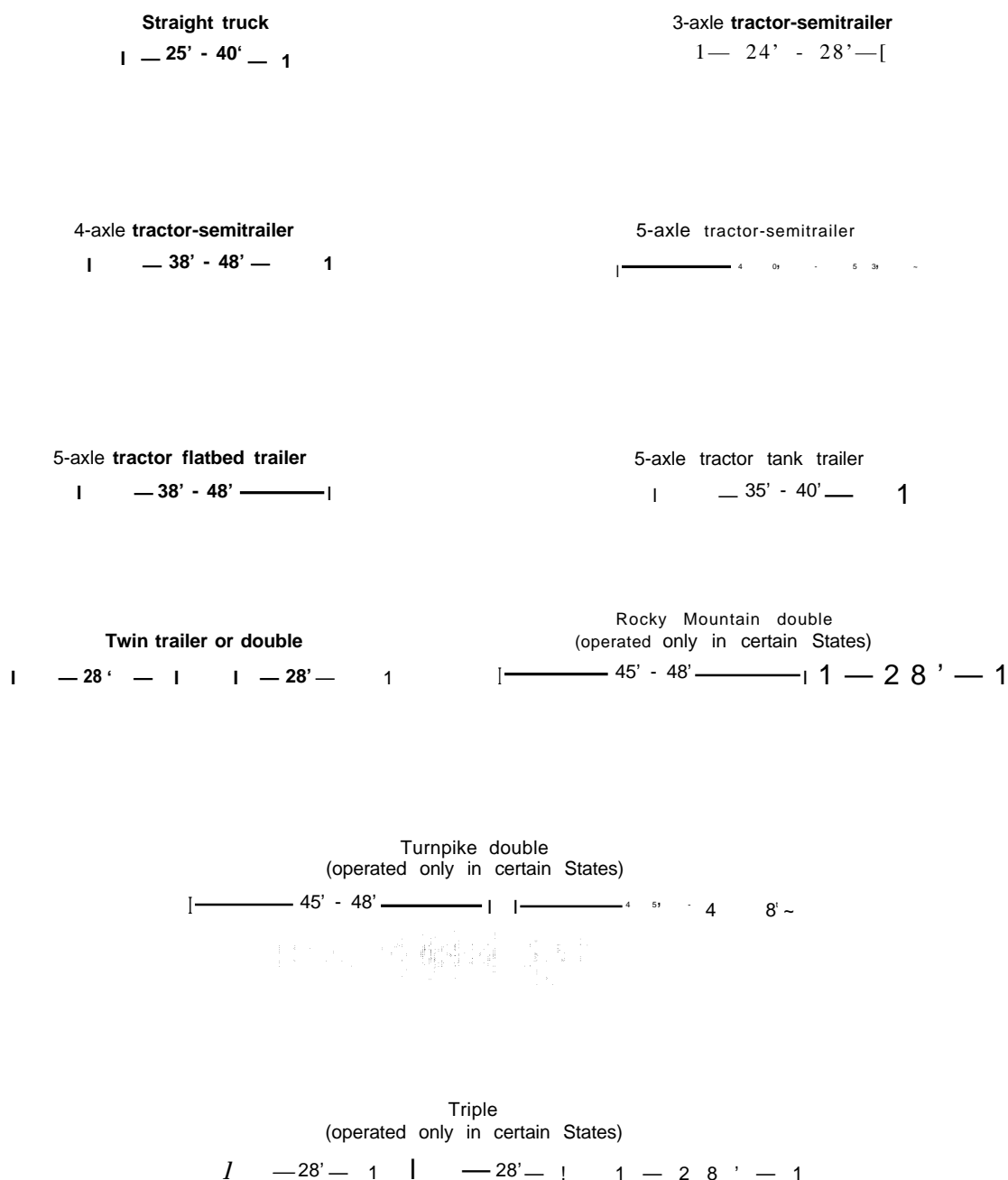
pounds) and Class 8 (33,001 pounds and over). Two relatively comprehensive sources provide data on these trucks. First, the Motor Vehicle Manufacturers Association (MVMA) reports on retail sales of trucks by weight class—selected MVMA data are presented in table 2-2. Sales of the heaviest class have fluctuated substantially over the past few years, reflecting business conditions and regulatory changes. After a slump in sales of heavy trucks in 1986, sales rebounded in 1987 and 1988, reflecting fleet renewals with more fuel efficient, durable vehicles.

A trucking industry profile presents more detailed data on trucks owned and operated by commercial enterprises (see table 2-3). Over 1.8 million trucks of Classes 6 (19,501 to 26,000 pounds), 7, and 8 were operated by more than 343,000 commercial enterprises in 1986. Just over 1 million Class 7 and 8 trucks are operated by about 180,000 businesses. Table 2-3 also shows two other descriptive classifications for users of Classes 7 and 8, by type of enterprise and by fleet size. Vehicles used in the “trucking” business are classified as “for hire,” while trucks used to transport company-owned goods as part of an overall commercial enterprise are classified as “private.” About two-thirds, or over 681,000, of the heaviest vehicles are classified as private and are operated by over 81 percent of the companies owning large trucks. The remaining one-third of the heavy truck fleet is for-hire. Private and for-hire fleets own roughly equal numbers of tractor-trailer combinations. In general, however, companies whose primary business is to provide trucking services for hire operate only about one-third of the largest trucks.

Over 84 percent of the establishments that operate Class 7 and 8 trucks own fleets of only one to five large trucks; thus a high proportion of small enterprises operate the largest trucks. A few large companies with fleets of 100 or more vehicles own nearly 40 percent of the Nation's Class 7 and 8 trucks, yet constitute only 0.4 percent of all trucking companies. These large firms include the major national for-hire trucking companies, the large private carriers, and the few large specialized carriers.

<sup>3</sup>U.S. Department of Commerce, Bureau of the Census, *Truck Inventory and Use Survey* (Washington, DC: various years).

Figure 2-1.—Truck Types



Lengths shown are typical; shorter or longer lengths are possible depending on carriers' needs and State laws.

SOURCE: Office of Technology Assessment, 1988; based on American Trucking Associations

**Table 2-2.—New Truck Sales (by gross vehicle weight, in pounds)**

Year	6,000 and less	6,001 - 10,000	10,001 - 14,000	14,001 - 16,000	16,001 - 19,500	19,501 - 26,000	26,001 - 33,000	33,001 and over	Total
1978 . . . . .	1,231,559	1,990,547	74,938	5,989	5,476	178,992	41,151	177,587	3,706,239
1979 . . . . .	1,014,016	1,594,060	19,163	2,399	4,611	163,304	46,264	192,889	3,036,706
1980 . . . . .	592,339	794,184	5,661	362	2,946	91,119	58,846	121,826	1,667,283
1981 . . . . .	629,030	816,373	311	591	2,764	85,000	52,264	114,575	1,700,908
1982 . . . . .	917,908	803,639	280	58	1,556	47,330	58,498	77,186	1,906,455
1983 . . . . .	1,370,395	849,498	223	2	1,252	47,648	59,026	85,653	2,413,897
1984 . . . . .	1,707,301	1,061,974	1,631	4	5,713	60,457	87,396	150,849	3,075,325
1985 . . . . .	1,988,434	1,057,556	19,463	0	5,345	53,471	98,406	134,230	3,356,905
1986 . . . . .	2,130,874	997,272	0	0	5,931	45,333	96,998	116,477	3,392,885
1987 . . . . .	2,475,402	1,052,958	0	366	6,085	46,473	103,188	136,938	3,821,410

SOURCE: Motor Vehicle Manufacturers Association, *Facts & Figures* (1978-1987).

**Table 2-3.—Number of Trucks Owned and Operated by Commercial Enterprises,  
Selected Data for Largest Weight Classes, 1986**

Commercial Truck Ownership for Largest Weight Classes		
	Number of companies	Number of trucks
Classes 6, 7, and 8 <sup>a</sup> . . . . .	343,176	1,806,488
Class 6 Only . . . . .	259,691	785,698
Class 7 and 8: (by company type)		
private . . . . .	151,326	681,153
for-hire . . . . .	28,651	339,637
Fleet Size for Companies Operating Class 7 and 8 Trucks		
Fleet size	Number of companies	Percent of companies
1-5 . . . . .	151,455	84.2%
6-10 . . . . .	15,379	8.5%
11-25 . . . . .	8,855	4.9%
26-50 . . . . .	2,523	1.4%
51-100 . . . . .	1,004	0.6%
100 or more . . . . .	761	0.4%

<sup>a</sup>Standard designations for truck weight classes are expressed in gross vehicle weight as follows: Class 6 is 19,501 to 26,000 pounds; Class 7 is 26,001 to 33,000 pounds; Class 8 is 33,001 pounds and over.

SOURCE: Dun & Bradstreet Marketing Service, *Profile of the Commercial Heavy Truck Market: An Industry Update* (compiled from Trinc Transportation Consultants database) (W. Newport Beach, CA: Newport Publications, 1966)

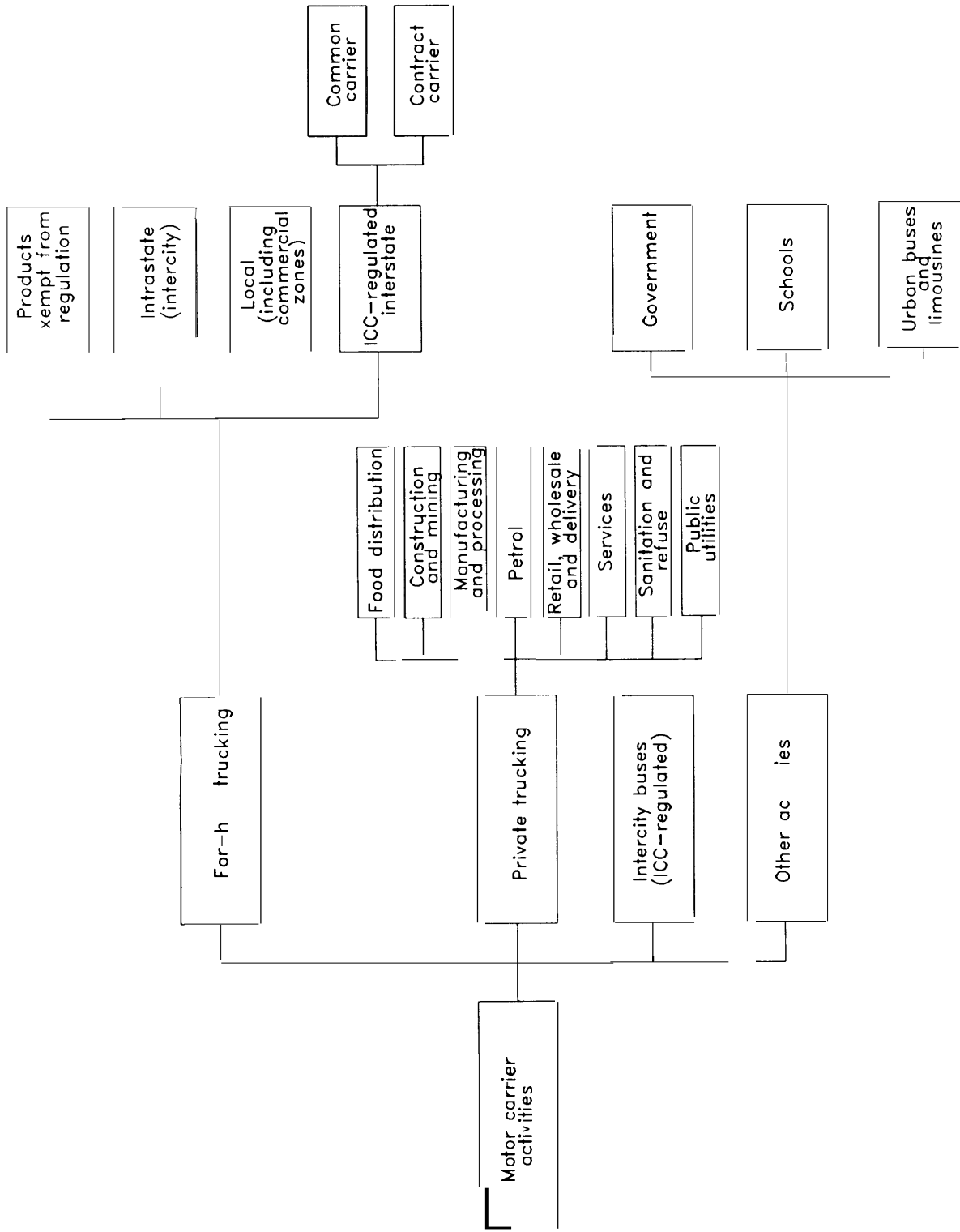
## INDUSTRY CHARACTERISTICS

Trucking is a service activity comprising many varied market segments, with the two broadest categories defined as 1) private and 2) for-hire carriers. Private carriers transport their own freight as an adjunct to their basic business and are not always considered in discussions of the trucking industry. A local baker using a delivery truck is engaged in private carriage, and so is a national chain, such as Sears, when it distributes goods in its own trucks. For-hire carriers are always considered trucking companies and are engaged to haul freight belonging to another party. For-hire carriers are subject to Federal and State economic regulations, while private

carriers are normally exempt from most of those economic regulations.

Figure 2-2 portrays the traditional division of the key types of trucking companies by primary market orientation. Changes in trucking laws and regulatory approach have blurred some of the distinctions, but the categories remain basically valid because most trucking businesses have a market specialty. However, since deregulation, a truck normally engaged in private carriage maybe operated for hire under certain circumstances. Similarly, a truck may carry products exempt from regulation, then later

Figure 2.2.—Motor Carrier Industry Organization



KEY: ICC = Interstate Commerce Commission.  
SOURCE: Office of Technology Assessment, 1988.

be leased to a carrier that has interstate authority to carry regulated commodities.

### ICC-Regulated Carriers

Carriers operating for hire in interstate commerce generally require Interstate Commerce Commission (ICC) authority and are subject to Federal economic regulations related to markets and commodities served, tariff filing, and financial responsibility. Regulated interstate for-hire carriers may operate as common carriers or as contract carriers. Common carriers are expected to provide authorized movements to any shipper requesting service according to publicly available tariffs (price lists). Contract carriers may provide services to shippers with whom they have a written contractual agreement, which normally includes service and volume commitments and a schedule of charges. With the appropriate ICC authority, carriers may function both as common carriers and as contract carriers.

*Interstate* transport refers to product movements whose origin and destination are in different States, whereas *intrastate* shipments have both origin and destination within a single State. Interstate movements by for-hire carriers may be carried in all types of equipment, but long-distance, high-volume shipments generally move in tractor-trailer combinations.

### Intrastate (Intercity)

Shipments carried for hire between two points within a State are not subject to ICC economic regulation. However, the majority of States impose economic regulations governing certification (entry), tariffs, and other requirements on intrastate motor carriers. The intensity of regulation varies by State; two States have never imposed economic regulations on truckers, and several States, Arizona and Florida for example, have completely deregulated intrastate trucking. Carriers may operate both intrastate and interstate, if properly authorized. Very few data exist regarding the operating practices and financial health of intrastate carriers.

### Intrastate (Local)

Local movement of goods for hire are usually not subject to either State or Federal economic regulations if both origin and destination are within the

same locale. Information about local trucking is limited; much local movement is private in nature, and no comprehensive data exist about local for-hire trucking. ICC has stipulated areas surrounding jurisdictions, termed "commercial zones," in which ICC regulations do not apply, even if the movement is interstate in nature. The geographic coverage of these commercial zone exemptions has been expanded over time, and further revisions are currently being considered. Until recently, the Department of Transportation (DOT) safety regulations exempted movements within commercial zones from some safety requirements, although a different definition of commercial zone was used for safety. After substantial evidence accumulated of a high number of safety violations among carriers in commercial zones, Congress began to consider legislation to eliminate these exemptions to safety regulations. DOT issued a rule in May 1988, ending the exemptions in November 1988.

### Exempt Movements

Several significant segments of interstate trucking are exempt from ICC economic regulations—for example, carriers transporting such commodities as unprocessed agricultural products, livestock, periodicals, decorative stone, and wood chips. This group of carriers typically specializes in exempt agricultural produce and seasonally shifts trucking operations from one producing region to the next. They are not required to conform to the entry or pricing requirements applied to other interstate for-hire carriers.

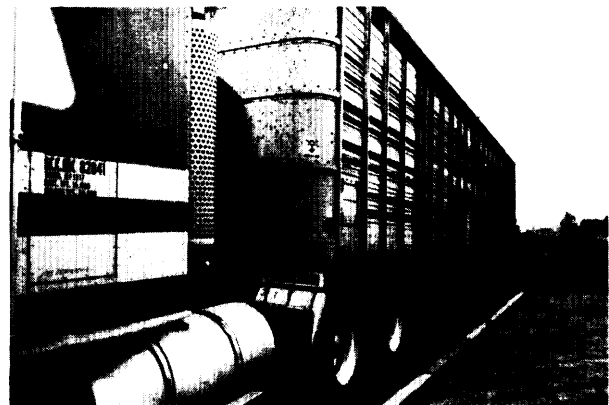


Photo credit: Land Line

Although livestock carriers are exempt from ICC economic regulations, many must comply with Federal safety regulations.



However, the exemption from economic regulation is dependent on the commodity being hauled, not the nature of the carrier organization or equipment. These carriers must still comply with DOT safety regulations and insurance requirements (if interstate carriers) and with various State trucking laws.

### Private Carriers

A large number of manufacturers, distributors, wholesalers, and retailers operate private (not for hire) trucking fleets as an adjunct to their regular business activities. These private fleets are a substitute for, and compete indirectly with, for-hire trucking services. Private fleet operators value their control over service, schedules, and equipment. In the 1980s, some corporate managements began to scrutinize traffic management and private fleet operations more closely as "profit centers."

Private fleets vary from large trucking operations of Fortune 500 firms to small one or two truck fleets used to transport goods to and from vendors and customers. These fleets dominate the portion of the carrier industry using heavy straight trucks. Smaller trucks in private fleets are apt to serve mixed purposes beyond freight movement. For example, a van or pickup truck may be used for commuting or to make sales calls. Very little aggregate data is available on the operating practices or financial conditions of private carriers.

Trucks operating as private carriers are not subject to ICC economic regulation. However, private carriers are now permitted to offer certain intercorporate and for-hire services with ICC approval. Private carriers are subject to DOT safety regulations and to various State trucking laws.

### State Requirements for Truckers

Every State has its own set of requirements for truckers engaged in freight movements, whether the movements are intrastate or interstate in nature. Historically, Federal policy has left many aspects of trucking under State jurisdiction. Each State may impose its own requirements in at least six areas, and these requirements often overlap and differ from the requirements of other States and the Federal Government.

### Vehicle Registration

Motor vehicles, including trucks, are generally required to be registered in the State of owner residence. Registration provides for vehicle identification plates (license plates) and ownership verification (title), and generates a registration fee to the home State. Commercial trucks crossing State lines encounter a variety of different registration requirements, and cannot assume reciprocity treatment as is the case for automobiles.

### Fuel Taxes

Each State may impose its own fuel tax, and such taxes represent an important source of State revenue. States generally have sought to devise collection methods that are not dependent on location of fuel purchase, but reflect fuel used and/or mileage traveled within the State by large commercial trucks. However, State requirements for the payment of fuel taxes differ substantially.

### Other Taxes

A number of States impose taxes on interstate motor carriers in addition to or in place of registration fees and fuel taxes, commonly called third-structure taxes. Third-structure taxes are usually truck-mileage taxes that may also increase with vehicle weight. These taxes are based on the finding that heavy trucks create wear and maintenance costs for the highway system that increase more than proportionately with fuel used. Eleven States imposed third-structure taxes in 1987.<sup>1</sup>

### Economic Regulations

Most States place economic requirements on intrastate freight movement; many still require carriers to file for rate increases. Carriers must seek certification to operate under various State laws governing the public convenience and necessity of their services. Safety and insurance requirements are often incorporated in these State regulations.

### Size and Weight

States have their own size and weight restrictions that apply to State and local roads not on the des-

<sup>1</sup>American Trucking Associations, Department of State Laws, "State Taxes," unpublished manuscript, January 1987.

ignated map of the National Truck Network (including the Interstate system and other specified routes). Indeed, no Federal size and weight statutes existed prior to the 1956 designation of the limited-access Interstate system. States often evaluate road conditions and route configurations as suitable for vehicles smaller in size and lighter in weight than those now allowed by Federal law. This has raised many issues about the access of large, heavy vehicles to commercial locations in a State. (See chapters 3 and 5 for further details.)

### Hazardous Cargo

Each State has concerns about hazardous cargo moving within and through the State, and a variety of State laws to regulate these movements. To qualify for Federal motor carrier safety program funds, States must adopt Federal hazardous materials regulations or similar ones and apply them to intrastate transport. Local governments have also become increasingly active in regulating the movement of hazardous cargo.

### Other Industry Characteristics

#### Equipment Type

Equipment type varies for each form of carriage, and with market conditions, cost considerations, and fleet available. The conventional combination truck in interstate service is a tractor pulling a 45- to 48-foot dry van trailer or twin 28-foot trailers. Certain Western States allow triple 28-foot trailers and a few Western and Northeastern States permit longer combinations (such as twin 45-foot trailers) on designated highways, often requiring the carrier to obtain a special permit. All States allow oversized vehicles if a special permit is obtained, although most States will grant overweight permits only for non-divisible loads. Among the many other specialized trailer types are tank trailers, flatbed trailers, refrigerated trailers, automobile rack trailers, hopper trailers for grains and ores, pole trailers, and a variety of special-purpose trailers. Trailers are not normally dedicated to run in combination with a particular tractor or driver.

#### Equipment Ownership

Truck-tractors, trailers, and other carrier equipment may be owned by the carrier or leased from

other sources. Equipment may be leased, with or without drivers, from truck leasing firms, from a separate for-hire or private carrier, or from an independent owner-operator. Each of these sources may provide one or more trucks on a permanent lease for a period of time and/or for a trip-lease for the duration of the trip. Responsibility for maintenance services varies considerably from one lease to another. The variety of ownership and leasing arrangements has grown considerably over recent years. Enforcement of safety and other requirements becomes more complex when the truck owner differs from the company using and/or driver operating the truck.

#### Owner-Operators

Owner-operators are independent trucking contractors who offer their services to a variety of customers. These small operators may haul exempt commodities, work for certificated carriers under lease arrangements, or transport regulated commodities under their own ICC operating authority.

About 80 percent of all owner-operators own and drive just one truck<sup>5</sup> and often have no fixed place of business, no maintenance shop, and very limited capital. The remaining 20 percent of independent truckers operate small fleets of up to 20 trucks and hire other drivers, even though they continue to think of themselves as owner-operators. About 75 percent of all owner-operators are leased to ICC-regulated carriers and private carriers, and about 25 percent haul exempt commodities. A 1986 survey of more than 5,300 independent truckers found that over 78 percent surveyed owned their power units or tractors, while only 26 percent owned trailers.<sup>6</sup>

Prior to regulatory reform in 1980, owner-operators typically did not possess ICC operating authority, and were not directly regulated by ICC. Over the past 8 years, many owner-operators have obtained ICC interstate authority for moving regulated commodities, comprising a major part of the

<sup>5</sup>James Johnston, Owner-Operators Independent Drivers Association of America, testimony before the Senate Committee on Commerce, Science, and Transportation, Oversight Hearing on the Motor Carrier Act of 1980, September 1985.

<sup>6</sup>*Road King*, "Drivers' Opinion Survey VI," sponsored by Associates Commercial Corp. and Unocal, unpublished manuscript, June 6, 1986.

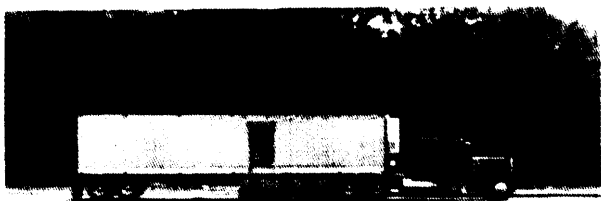


Photo credit: Tse-Sung Wu, OTA staff

Owner-operators often have their cabs equipped with sleeping berths that become the driver's home away from home.

dramatic increase in the number of ICC-regulated carriers.

Several studies in the last two decades have attempted to estimate the total number of owner-operators and to assess their financial and operating results. Because data are imprecise, these studies have produced quite different results and a wide range of estimates. Most industry observers believe that a substantial number of independent truckers have left the industry in recent years as a result of

competitive pressures leading to long and arduous working hours. Various sources indicate that at least 100,000 owner-operators remain in business.<sup>7</sup>

### Union Representation

The trucking industry has a long history of union representation. The International Brotherhood of Teamsters (IBT) is the major union representing the for-hire segment of the industry, although the unionized labor force has shrunk with the decline of the general freight, common carrier segment of the business. Slightly less than half of all truckload carriers and other parts of the trucking industry that rely on independent owner-operators employ union drivers. Private carriers, if organized, employ members of other unions as well as IBT members. Since the Motor Carrier Act of 1980, new entrants have used predominantly nonunion drivers.

<sup>7</sup>Marshall Seigel, Independent Truck Owner-Operators Association, testimony before the Senate Committee on Commerce, Science, and Transportation, Oversight Hearing on the Motor Carrier Act of 1980, Sept. 21, 1983.

## THE NATION'S BUSES

The bus industry is the passenger-carrying segment of the motor carrier industry. Buses were not major passenger carriers even in their prime, and were hit hard by increased automobile ownership and use, competition from subsidized passenger rail, and deregulation of the airlines in 1978. Competition among air carriers for intercity travel brought lower air fares that have proven a major attraction for price-sensitive passengers on long distance trips.

The bus industry has several clearly defined major segments. One large group provides intercity and interstate regular passenger route service under ICC regulation, and several other segments provide other important passenger services. These include charter operators, who offer group and tour service, school bus operators (both school district and contract service), and local transit agencies.

The intercity bus industry includes large and small carriers and a few very large, Class I carriers (see table 2--4). Industry-wide data are difficult to obtain, because regulatory changes have reduced bus company reporting requirements. The bus industry has

declined nationwide over the last 10 years—bus-miles, passengers-carried, and employee numbers all trend downward, and total operating revenues have declined since the early 1980s. For Class I carriers the decline is more striking, with the number of bus passengers declining 37.5 percent between 1980 and 1986.

The largest interstate bus companies have suffered the most severe financial reverses. Greyhound, by far the biggest bus operator, with 6,800 drivers for 3,500 buses, took over the nearly-bankrupt Trailways operation in late 1987. Both carriers had regularly reported operating losses in recent years; those losses widened in early 1987, triggering their merger.

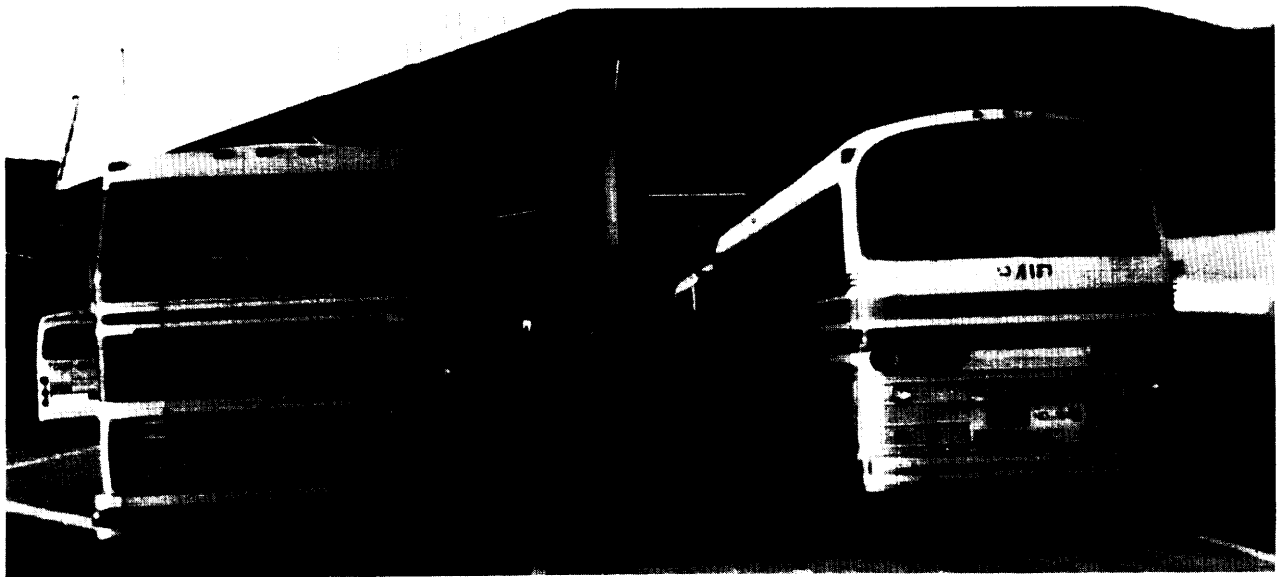
### Bus Deregulation in 1982

Competition from other travel modes *continued* after regulatory reform for interstate buses in 1982 brought needed flexibility for bus operators. Because bus ridership had declined significantly, major national operators considered the right to withdraw

**Table 2-4.—Intercity Bus Industry in the United States**  
(including operations of all carriers reporting to the interstate Commerce Commission and intrastate carders)

	1970	1975	1980	1985	1986
Number of companies . . . . .	1,000	950	1,330	NA	NA
Number of buses . . . . .	22,000	20,500	21,400	20,100	19,100
Number of employees. . . . .	49,500	46,600	49,100	43,300	40,600
Total bus-miles (millions) . . . . .	1,209	1,120	1,162	997	945
Revenue passengers (millions). . . . .	401	354	365	353	346
Revenue passenger-miles (millions) . . . . .	25,300	25,600	27,400	23,800	22,500
Operating revenues, all services (\$ millions) . . . . .		1,165	1,943	1,898	1,838
Operating expenses (millions). . . . .	812	1,098	1,811	1,839	1,781
Net operating revenue, before income taxes (\$ millions) . . . . .	89	68	132	59	57
<b>Class 1 interstate carriers only (over \$5 million annual revenue)</b>	<b>1970</b>	<b>1975</b>	<b>1980</b>	<b>1985</b>	<b>1986</b>
Number of companies . . . . .	71	84	46	43	29
Number of buses . . . . .	10,158	9,800	8,427	7,240	6,230
Number of employees. . . . .	34,383	35,140	30,950	24,210	21,090
Total bus-miles (millions) . . . . .	871	849	771	580	524
Revenue passengers (millions). . . . .	174	152	132	91	83
Revenue passenger-miles (millions) . . . . .	17,900	18,200	17,080	12,510	11,117
Operating revenues, all services (\$millions) . . . . .	722	955	1,390	1,270	1,168
Operating expenses(\$ millions). . . . .	639	893	1,311	1,212	1,115
Net operating revenue, before income taxes (\$ millions) . . . . .	83	62	79	58	53
Operating ratio . . . . .	89	94	94	95	95

SOURCE: American Bus Association and Interstate Commerce Commission data.



*Photo credit California Department of Transportation*

The intercity bus industry has faced fierce competition for passengers from private automobiles, low cost air travel, and Amtrak.

from markets, not entry, as the key regulatory issue. States, in particular had resisted discontinuing bus services, and Congress found that: "State regulation of the motor bus industry has, in certain circumstances, unreasonably burdened interstate commerce. . . ."8 Permitting smaller, regional car-

<sup>8</sup>"Bus Regulatory Reform Act of 1982, Public Law 97-261, Sec. 3.

riers to provide low-cost service was also projected as a benefit of regulatory reform.

### Safety Aspects

The number of buses operating on the highways is so much smaller than the number of trucks that bus accidents do not figure prominently in national

accident data. However, because passengers are involved, the safety record of the bus industry is highly visible, and buses are subject to broad State controls. Interstate operators encounter numerous complex and conflicting State requirements and could benefit from more uniform treatment at the State level.

At the initiative of the American Bus Association, the major intercity bus industry representa-

tive, the industry has recommended additional Federal safety regulations for interstate buses, including extension of coverage for Federal safety provisions to private and not-for-hire bus operators. Proposed legislation calls for the establishment of an office of bus safety in FHWA, and would impose relatively uniform Federal requirements on motor carriers of passengers.

## FORCES FOR ECONOMIC CHANGE IN TRUCKING

Several powerful forces have changed the trucking industry, including regulatory evolution, legislative mandates, and shifts in economic structure. This section briefly highlights these forces, focusing on developments over the past decade.

### Regulatory Shifts

Interstate for-hire trucking is and has been for years subject to regulation by ICC. In earlier years, entry, markets served, and rates were subject to detailed ICC examination and control through a complex approval/disapproval process, which came under severe criticism during the 1970s. ICC began to shift away from many regulatory strictures, especially after Presidents Ford and Carter strongly urged less regulation and made their Commission appointments accordingly. ICC interpretations became significantly less restrictive in the years just prior to 1980. Operating permits (authority to engage in interstate transportation) became much easier to obtain and collective rate-making practices by interstate motor carriers were reviewed. These ICC actions were controversial and stimulated congressional hearings and eventual passage of motor carrier legislation in 1980.

### Motor Carrier Act of 1980

The Motor Carrier Act of 1980 (MCA) represented the first major change in the statutes since 1935 and has profoundly influenced the interstate motor carrier industry by significantly altering the ICC regulatory framework. Like most major legislation, the MCA reflected years of hearings, several Administration proposals, and extensive committee deliberations. Congress found, as stated in

the act, that the motor carrier regulatory statutes were outdated and required revision. The intent of the act was to reduce unnecessary regulation and to provide explicit direction to ICC, which had been deregulating independently.

Key areas of change for the federally regulated segment include reduced requirements for new entrants, fewer restrictions on expansion by existing firms, and greater pricing freedom. However, interstate motor carriers remain subject to ICC regulation, although in a much relaxed framework.

### Surface Transportation Assistance Act of 1982

The Surface Transportation Assistance Act of 1982 (STAA), omnibus highway and transit authorizing legislation, contained provisions affecting truckers in two important economic areas, motor carrier user taxes and truck size and weight. Under the STAA, fuel taxes were increased sharply to 9 cents per gallon, from the 4-cent level that had been in effect since 1959. Moreover, the STAA enacted increases in the heavy vehicle use tax applicable to vehicles exceeding 26,000 pounds GVW. After much controversy over the heavy vehicle tax, a differential of 6 cents per gallon additional tax on diesel fuel was enacted, and the heavy vehicle use tax was rolled back. Thus, diesel trucks experienced a fuel tax increase from 4 to 15 cents per gallon in mid-1984.

In 1956, Federal law restricted vehicles using the Interstate system to 73,280 pounds, but Federal legislation passed in 1974 permitted States to raise truck weights. As a trade-off to industry for higher fuel taxes, truck size and weight restrictions were

amended in 1982 and 1983 to permit larger, heavier trucks to use the Interstate system. The STAA mandated that States allow trucks with gross weights up to 80,000 pounds to use the Interstate system, overriding lower, more restrictive weight limits in several States. The 1982 act also initiated Federal length limitations for commercial vehicles; States now cannot limit semitrailer lengths to less than 48 feet nor second-trailers in combination units to less than 28 feet. In 1983 Federal legislation prohibited States from restricting truck width below 102 inches (up from 96 inches) on the Interstate system.

The 1982 act further limited State laws by providing that no State could deny "reasonable access" for large trucks to reach terminals and other facilities from the Interstate network. That is, States must allow large, heavy trucks not only to use the Interstate but also to get on and off the Interstate and use State roads.

### The Surface Transportation and Uniform Relocation Act of 1987

This 1987 legislation provided funding for Federal-aid projects over the next 5 years and extended user taxes at current levels. No major provisions affecting motor carriers or changing their treatment were incorporated.

### Other Forces for Change

Legislative and regulatory actions are an important force affecting the trucking industry, yet they are but one component of the business environment. Other economic aspects of trucking operations are briefly outlined below.

- **Energy Costs.** Fuel prices shot upward in the late 1970s, but have declined and stabilized in recent years. Diesel fuel used by most combination trucks more than doubled in price between 1978 and 1981, and in 1986 remained

about 73 percent higher than 1978 including the higher Federal and State taxes.<sup>9</sup>

- **Inventory Policies.** Many companies have adopted "just-in-time" inventory policies, spurred on by high interest rates and a need to reduce carrying costs, putting a premium on service quality and reliability. Pressure for on-time deliveries has increased, and for-hire trucking companies have responded by stressing service, including reliable deliveries.
- **Import Growth.** Imports of manufacturer and consumer goods have grown phenomenally, while domestic production levels have been disappointing. This changes the market orientation for trucking services and equipment. Container traffic has grown rapidly, originating at ports and major rail hubs.
- **Insurance Crisis.** The cost of insurance for motor carriers rose rapidly in the mid-1980s and availability of insurance coverage became a problem. Insurance costs are a small percentage of total operating costs, but that percentage almost doubled between 1984 and 1986, to reach 3.6 percent.<sup>10</sup>
- **Highway Conditions.** Traffic growth over the past decade outpaced highway improvements. In fact, completion of the Interstate system, originally planned for 1969, has just now become a possibility with the funding provided by the 1987 act. As a result of inflation and funding constraints in the late-1970s and early-1980s, highway pavement conditions deteriorated and volume/capacity ratios increased. Poor pavement and heavy congestion pose special problems for the operation of large trucks.<sup>11</sup> Increased Federal aid in the mid-1980s brought some improvements.

<sup>9</sup>American Trucking Associations, *American Trucking Trends, 1987* (Alexandria, VA: 1987), p. 44.

<sup>10</sup>*Ibid.*, p. 28.

<sup>11</sup>Federal Highway Administration, *Status of the Nations Highways* (Washington, DC: U.S. Department of Transportation, various years),

## COMPETITIVE CONDITIONS AND INDUSTRY TRENDS

Regulatory reform and economic shifts led to dramatic changes in the motor carrier industry; these changes were magnified by the recession in late-1981

and 1982. Statutory changes in user tax levels and in allowable vehicle size and weight have also led to important industry shifts.

## For-Hire Carriers

The total number of for-hire carriers rose from 67,038 in 1978 to 89,677 in 1987, a 34 percent increase.<sup>12</sup> The primary focus of the MCA was regulatory reform for inter-state for-hire carriers, the group subject to Federal regulation. Easier entry was in fact accomplished, and the number of ICC-regulated carriers increased markedly in the late- 1970s, then steeply in the 1980s, more than doubling to almost 37,000 in 1986 (see table 2-5).

The growth has been primarily among Class III carriers, small carriers reporting revenues less than \$1 million annually. The number of Class III carriers rose from 12,900 in 1978 to 33,903 in 1986 (see figure 2-3). These numbers are dramatic, even if adjusted for company withdrawals and growth out of Class III. Meanwhile, over the same period the number of Class I and II carriers declined slightly.

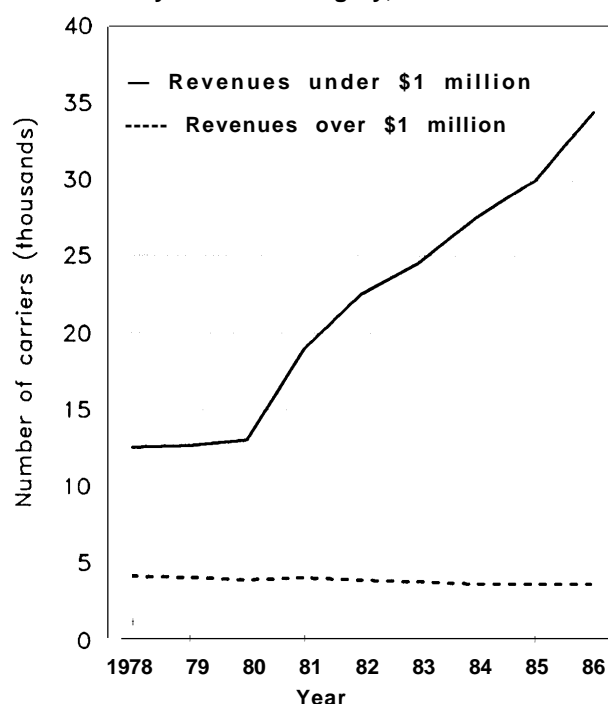
## State Requirements

State requirements for interstate motor carriers are gradually becoming more uniform and less burdensome. Congress encouraged this process through provisions of Section 19 of the MCA, which required a study of State regulations and the prospects for uniformity.<sup>13</sup> With support from DOT, the National Governors' Association undertook a multi-

<sup>12</sup>Dun & Bradstreet Marketing Service, *Profile of the Commercial Heavy Truck Market: An Industry Update*, compiled from Trinc Transportation Consultants database (W. Newport Beach, CA: Newport Publications, 1986).

<sup>13</sup>U.S. Department of Transportation and the Interstate Commerce Commission, "Uniform State Regulations," Section 19, Report to Congress, n.d.

Figure 2.3.—Number of ICC Motor Carriers by Revenue Category, 1978-86



KEY: ICC = Interstate Commerce Commission.

SOURCE: Ronald Roth, American Trucking Associations, "Trucking: An Overview and Focus on Recent Times," unpublished manuscript, September 1987, chart 14.

year information gathering and consensus-building project that has resulted in a set of recommendations for more uniform State requirements.<sup>14</sup>

<sup>14</sup>National Governors' Association, Working Group on State Motor Carrier Procedures, *Consensus Agenda* (Ames, IA: Iowa Department of Transportation, 1986). Policy endorsing the recommendations (continued on next page)

Table 2-5.—Number of ICC. Regulated Motor Carriers and Freight Forwarders

Year	Revenue classification				Freight forwarders	Total
	Class I	Class II	Class III	Other <sup>a</sup>		
1987	956	1,266	35,505	711 <sup>b</sup>	—	38,438
1986	947	1,387	33,903	71 <sup>b</sup>	—	36,948
1985	1,013	1,489	30,337	444	265	33,548
1984	1,088	1,554	27,370	469	261	30,742
1983	1,139	1,631	24,411	336	231	27,748
1982	1,144	2,139	22,059	380	241	25,963
1981	1,031	2,293	18,563	383	244	22,514
1980	947	2,164	14,610	324	193	18,238
1979	992	2,754	13,337	—	184	17,267

<sup>a</sup>Class I and Class II carriers relieved of reporting requirements.

<sup>b</sup>Includes freight forwarders.

SOURCE: Thomas J. Donahue, American Trucking Associations, testimony before the House Committee on Public Works and Transportation, Mar. 16, 1986.

## Market Share<sup>15</sup>

Domestic freight volumes and the importance of trucking may be measured in several ways. Total U.S. domestic intercity freight tonnage was relatively unchanged over the period 1980-86. However, trucks increased their share from 36.5 percent in 1980 to 40.1 percent in 1986, after some declines in the late-1970s when railroads successfully captured growth in heavy freight such as coal. Domestic intercity ton-miles reflect both weight and distance moved; in 1986 intercity ton-miles exceeded 1980 levels for the first time since sharp declines in 1981 and 1982. Trucking increased its share of intercity ton-miles from 22.3 percent in 1980 to 25.3 percent in 1986.

Trucks have traditionally carried high-value freight over shorter distances than rail and earned higher than average freight tariffs per ton-mile. In contrast, railroads carry large amounts of low-rated heavy bulk commodities such as sand, gravel, and coal. Thus, trucking revenues comprise 76 percent of all intercity freight revenues, a percentage that has gradually increased since 1980. While deregulation of both railroads and trucking occurred in 1980, motor carriers have continued to increase market share, although at a slower rate. Many motor carriers now use their fleets very productively and at low unit costs. Moreover, truck service characteristics are well-suited to the growing use of light density, high value components and the decline in traditional heavy manufacturing. Intermodal traffic is growing, and trucks play an indispensable role in it. Goods move by rail over high-density routes in double-stack containers from U.S. ports to inland intermodal transfer terminals, where distribution is completed by truck.

## Market Competition

The amount of actual and potential competition in individual markets has grown to a much greater extent than indicated by the number of certificated carriers. The authority conferred by ICC to trans-

port interstate freight is now much broader and has fewer restrictions limiting points served, commodities carried, or routes used. It has become commonplace for ICC to grant motor carrier authority to serve *all* points in the United States for general commodities, whether or not the carrier has applied for the broad authority.

## Profit Margins and Overcapacity

The motor carrier industry has continued to gain market share over the past 10 years, but profits have been elusive for many firms in the face of an increasingly competitive transportation marketplace. Regulatory reforms eased entry and permitted better capacity utilization for some carriers, while the 1981-82 recession damped factory production and shipment levels.

However, the issue of capacity is complex. The number of tractor-trailers on the road dropped over 1 percent, and the number of single-unit trucks declined 8 percent' between 1980 and 1986. At the same time truck tonnage increased almost 11 percent.

Truck-miles traveled increased nearly 30 percent per vehicle, and trailer capacity increased as wider and longer vehicles were allowed. Thus, each truck is dispatched more frequently, spends more time traveling, and carries more. Moreover, carriers seeking backhauls offer very low rates rather than return empty, so that capacity is frequently readily available at low cost. The amount of freight carried in each average truckload has remained constant (13.6 tons in 1980, declining to 13.3 in 1986). These facts all imply that despite the drop in the number of trucks, substantial unutilized trailer capacity has remained available.<sup>16</sup>

The result has been higher operating ratios (ratio of operating expenses to revenues) on average, including sharp rises in operating ratios from 1978 through 1982, followed by modest, uneven improvements in the mid-1980s. Profit margins measuring net income as a percent of sales show deterioration from 1978 through 1982, followed by irregular recovery since that time until 1987 when rate cutting was severe (see figure 2-4).

(continued from previous page)

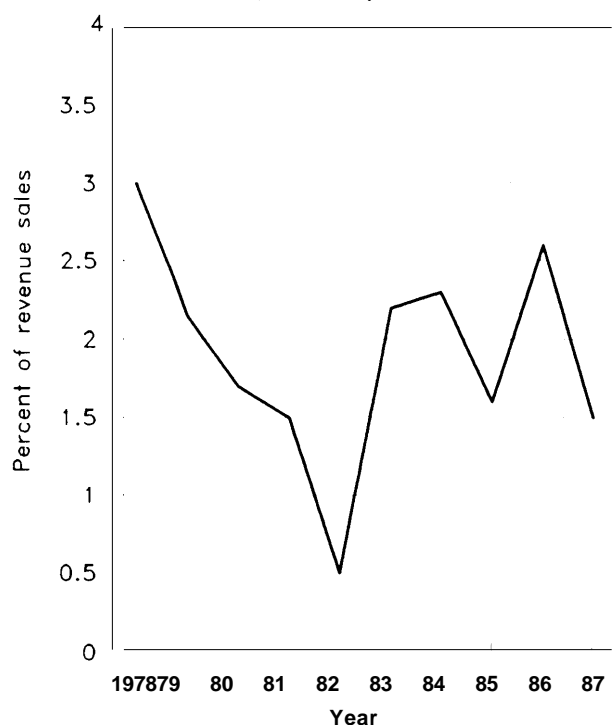
was adopted by the Governors on Feb. 26, 1986. The Working Group relied in part on the comparative information in Harrison Boyd & Associates, "Organizational Frameworks for Interstate Motor Carrier Regulation," prepared for the U.S. Department of Transportation, Federal Highway Administration, unpublished manuscript, April 1987.

<sup>15</sup>All domestic freight totals are from Transportation Policy Associates, *Transportation in America* (Washington, DC: 1986).

<sup>16</sup>Ronald D. Roth, American Trucking Associations, "Overcapacity," unpublished manuscript, July 1987.

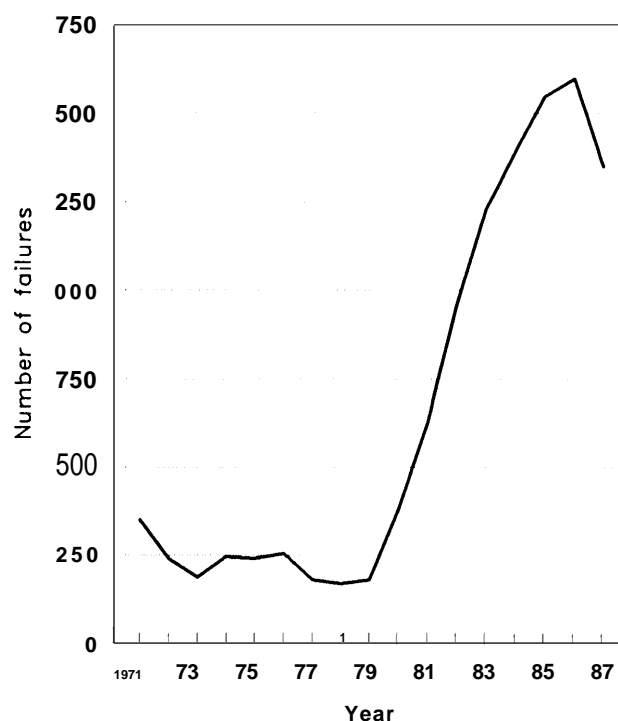


**Figure 2-4.—Net Profit Margin, 1978=87  
(all carriers)**



SOURCE: Ronald Roth, American Trucking Associations, "Trucking: An Overview and Focus on Recent Times," unpublished manuscript, September 1987, chart 14.

**Figure 2.5.— Motor Carrier Failures, 1971-87**



SOURCE: Thomas J. Donahue, American Trucking Associations, testimony before the House Committee on Public Works and Transportation, "Mar. 16, 1988.

### Business Failures

The intense, competitive atmosphere and continuing overcapacity in for-hire trucking is reflected in the large number of motor carrier failures. Failures for all for-hire trucking companies, including local and household, have risen dramatically from under 200 annually in 1978 and 1979 to over 1,500 in 1986. The pattern of failures between 1971 and 1987 is shown in figure 2-5. The failure rate remained high in the mid-1980s even during periods of sustained economic growth, and the number of failures showed its first decline in recent years during 1987. Even so about 150 of every 10,000 trucking companies failed in 1987, exceeding the rate of 115 failures for every 10,000 companies for all businesses.<sup>17</sup> Both large and small trucking companies have failed.

<sup>17</sup>Ronald D. Roth, American Trucking Associations, personal communication, July 22, 1988.

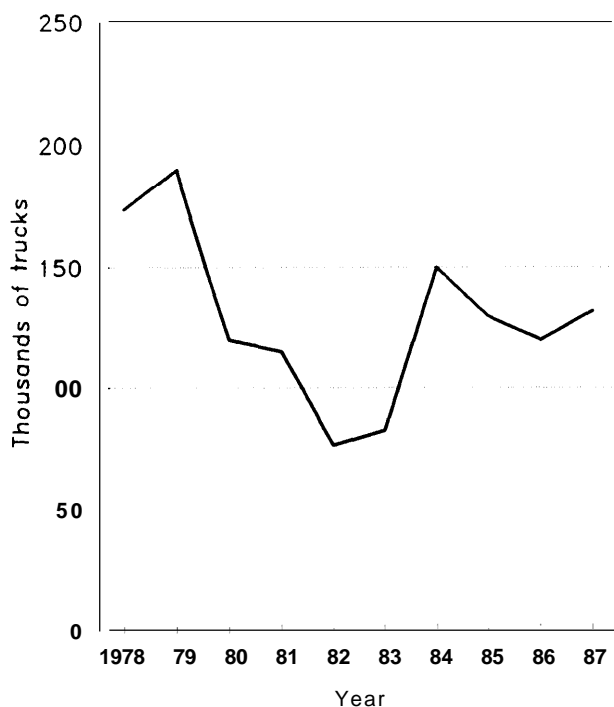
### Heavy Truck Sales

Annual sales of heavy trucks have been relatively stagnant as shown in figure 2-6. Sales of Class 8 trucks, with gross weight capability of over 33,000 pounds, remain below the 1979 level and showed declines even in the relatively prosperous years of 1985 and 1986. Such flat sales contrast sharply with record sales levels for small trucks, pickups, and vans, which have lifted the overall truck sales market. The sales trends suggest that the increased market share and expanded number of carriers have not required growth in the number of trucking units. The median age for all trucks has increased slightly from about 6 years in 1978-1979 to 7.7 years in 1986 (see figure 2-7). Fleet purchases lowered this figure slightly in 1987.

### Trailer Size

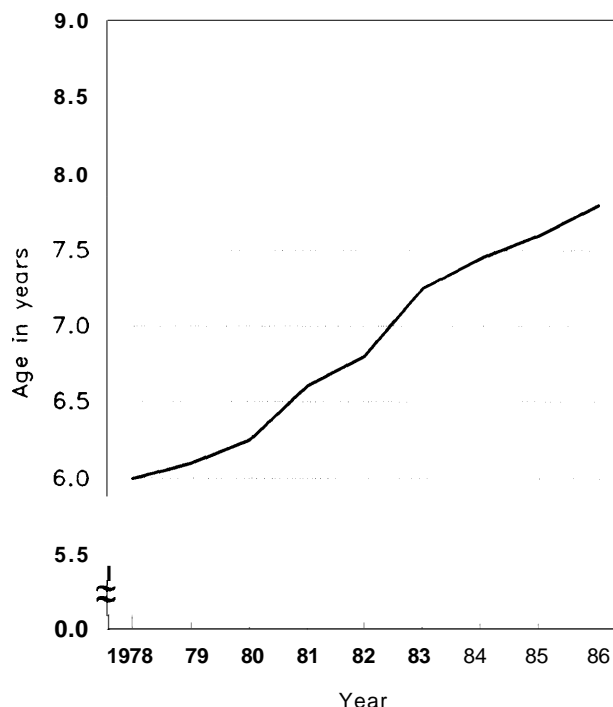
The changes in size and weight restrictions in 1982 and 1983 allowed carriers to expand capacity and

**Figure 2-6.—Sales of Trucks Weighing Over 33,000 Pounds, 1978-87**



SOURCE: Thomas J. Donahue, American Trucking Associations, testimony before the House Committee on Public Works and Transportation, Mar. 16, 1988.

**Figure 2-7.—Median Age of Trucks, 1978-86**



SOURCE: Thomas J. Donahue, American Trucking Associations, testimony before the House Committee on Public Works and Transportation, Mar. 16, 1988.

increase labor productivity—larger trailers and heavier cargo loads, where possible. Trailer producers and purchasers responded very rapidly to reconfigure the Nation's fleet of trailers. Figure 2-8 shows that 95 percent of all trailers produced in 1980 (based on samples of production shipments) were between 40 and 45 feet in length, while almost none were longer. By 1984, over 58 percent of new trailers produced were longer than 45 feet, mostly 48 feet. As of 1986, over 56 percent were over 45 feet, while 29 percent were exactly 28 feet in length, reflecting the increased use of tandem (double) trailers on the Interstate system.

Increases in trailer width have been even more dramatic. Almost all trailers produced in 1980 and 1982 were exactly 96-inches wide, as shown in figure 2-9. In 1984, less than a year after wider trucks were permitted on the Interstate system, over 70 percent of the trailers produced were 102-inches wide or more, most exactly 102 inches. In 1986, 76 percent were 102 inches or more. The trucks encoun-

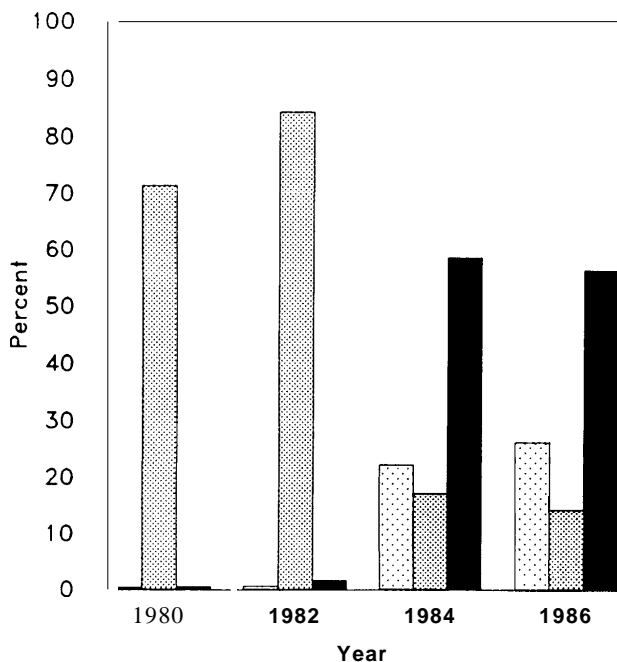
tered on our highways are indeed larger than those of just a few years ago.

### Specialization and Concentration

ICC regularly reports operating results for the 100 largest regulated motor carriers; as a group, their performance has been weak, reflecting financial pressures of recent years. Data for 1981, a good year relative to the recession that followed, show that tonnage fell almost 4 percent, while net operating income declined by over 26 percent. In 1982, revenue tons hauled fell by 11 percent, operating revenues fell by 4 percent, and net operating income fell by 62 percent. Of the 100 carriers reporting, 81 showed declines in tonnage and net operating income, and the largest carriers showed a perilous aggregate operating ratio (operating expenses divided by operating revenues) of 98.7.

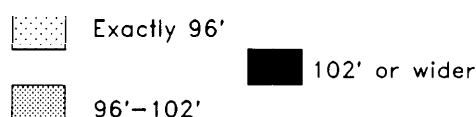
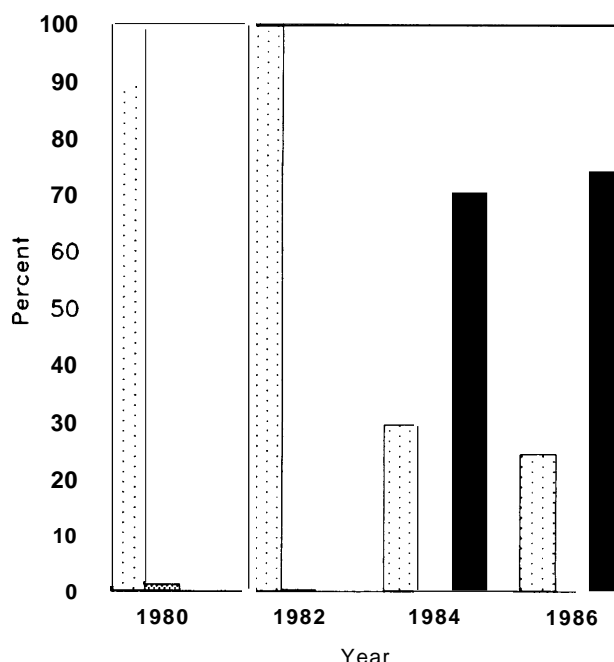
Since the recessionary period of the early 1980s, motor carrier traffic and finances have improved,

Figure 2-8.—Trailer Sales Since 1980, by Length



SOURCE: Truck Trailer Manufacturers Association, *Van Trailer Size Report*, various years.

Figure 2-9.—Trailer Sales Since 1980, by Width



SOURCE: Truck Trailer Manufacturers Association, *Van Trailer Size Report*, various years.

but not by much. In 1986, the 100 largest carriers hauled less tonnage than in 1981 but realized slightly higher net income. In 1987, tonnage increased to 181 million revenue tons, roughly the 1981 level, but profit margins were squeezed. Net income was down 48 percent, and the operating ratio reached 96.6 percent.<sup>18</sup>

### Less-Than-Truckload Carriers

A small number of the very largest trucking companies have expanded their scope and scale of operations since 1978. The ten largest carriers, by revenue, are predominantly less-than-truckload (LTL)<sup>19</sup> carriers, and they have increased their share of in-

dustry revenues from about 13.5 percent in 1978 to about 16 percent in the mid-1980s.<sup>20</sup> The three largest carriers (excluding United Parcel Service, which dwarfs them all) are all nationwide LTL specialists: Consolidated Freightways, Roadway Express, and Yellow Freight. This Big Three is gradually capturing more traffic, showing more revenue growth, and reporting lower operating ratios relative to other large carriers on average. During the 12 months ending September 30, 1987, for example, the Big Three increased their total revenues by 5.4 percent while revenue for others in the largest 100 carriers increased an average of 3.1 percent.<sup>21</sup> However, size alone is not a determining factor for profits, and well-managed small LTL carriers can also do well (see box 2-A).

<sup>18</sup>Interstate Commerce Commission, Bureau of Accounts, "Large Class I Motor Carriers of Property, Selected Earnings Data," unpublished data, n.d.

<sup>19</sup>Less-than-truckload carriers transport cargo that may come from several shippers in units that may weigh anywhere from roughly 250 pounds up to as much as 12,000 pounds.

<sup>20</sup>*Fortune*, "Blessings by the Truckload," Nov. 11, 1985, p. 138.

<sup>21</sup>Interstate Commerce Commission, op. cit., footnote 18.

### Box 2-A—A Small Less-Than-Truckload (LTL) Carrier

Numerous local and regional LTL carriers operate in special market niches despite the expansion of the large nationwide LTL carriers. One successful, full-service, relatively short-haul company markets itself as a service-oriented carrier for a specified regional market. The firm recently achieved a 99.7 percent overnight/on-time delivery record for its service territory, comprising a two-and-one-half-hour driving radius around its main terminal in the mid-Atlantic area. Company drivers haul variable size trailers (no doubles are used) to haul the 700-pound average shipment. Continuous radio communication is maintained with drivers to ensure service reliability. Most driving is done during daylight hours, and all drivers return to the home terminal every night.

Company officials believe that good rates and service result from a combination of three factors: 1) a well-functioning operating facility located in a prime terminal; 2) reliable equipment; and 3) a preventive maintenance program. A high-quality product, the company believes, also leads to the hiring and retention of self-motivated drivers, whose attitude toward the service to customers is as good as company employees.

The company weathered a severe recession in the early 1980s and has remained profitable since then. Management attributes employee loyalty, which is a great deal of credit to employees and using peer review committees to ensure that drivers perform properly, and safety. Driver compensation includes a base wage, plus a profit-sharing plan based on performance, regarding the company's overall profit.

Company employees must have a physical examination every 2 years, which the company currently does not test for drug use. The company interviews and performs background checks for each job applicant. Hiring decisions are often based on the recommendation of a current employee, and company policy is for road drivers to be brought up through the ranks. Training is provided in-house over an 8-week period. The average employee age is 37, and the average length of service is 10 years.

## Established General Freight Carriers

The general freight trucking sector as a whole has been caught between rising costs and competitive pressures on rates. The Regular Common Carrier Conference (RCCC), an association with approximately 400 members, includes most of the large, established interstate common carriers. RCCC members transport general freight and earn about 80 percent of their revenues hauling LTL. According to RCCC data, more than half (53 percent) of the full service general freight carriers went out of business between 1978 and 1986.

However, truckload (TL)<sup>22</sup> and LTL revenues for the RCCC group differ dramatically (see figure 2-10). Revenue on LTL traffic has increased slightly, while TL revenue has decreased sharply. Tonnage carried by RCCC carriers has dropped, but again with sharp differences between categories. From 1978-86, LTL tons fell 31 percent, while TL tons plummeted 63 percent.

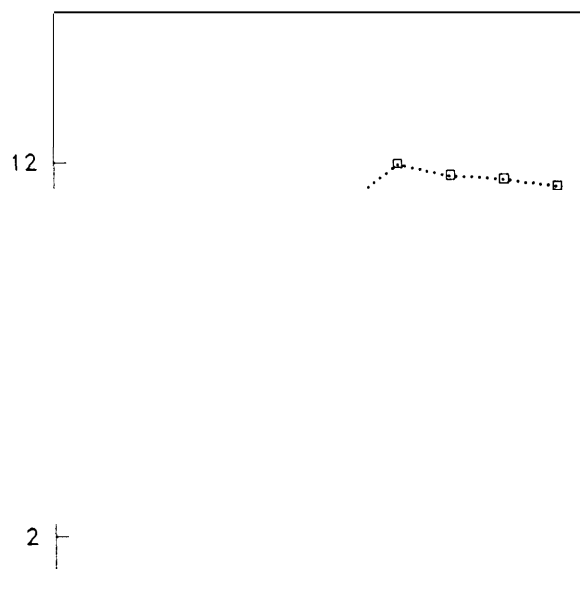
<sup>22</sup>Truckload carriers transport goods for a single shipper in full loads weighing from about 12,000 pounds to the legal maximum for their vehicle.

This established carrier group has seen its traffic erode significantly. Figure 2-11 shows that LTL-TL tonnage movements for a regularly-surveyed segment of RCCC carriers did not rebound when industrial production expanded in the mid-1980s. Presumably much of the business was captured by other carriers. Net income for 1986 was at the highest level in 10 years, but was barely above the 1978 level and has fluctuated dramatically over the period. Net income for the first 6 months of 1987 was down 61 percent compared to a year earlier.

## Truckload Carriers

TL operators easily obtained operating authority in the less regulated environment of the early 1980s and grew impressively, with owner-operators providing a large portion of capacity. TL operations are simpler than LTL and do not require intermediate handling and shipment consolidation en route to make up a trailer load. Many TL carriers have minimal communications, management, sales forces, and terminal facilities. Carrier facilities are likely to be few in number, sparsely staffed, and removed

Figure 2-10.—General Freight Trucking Industry  
Total Revenue, 1978-87



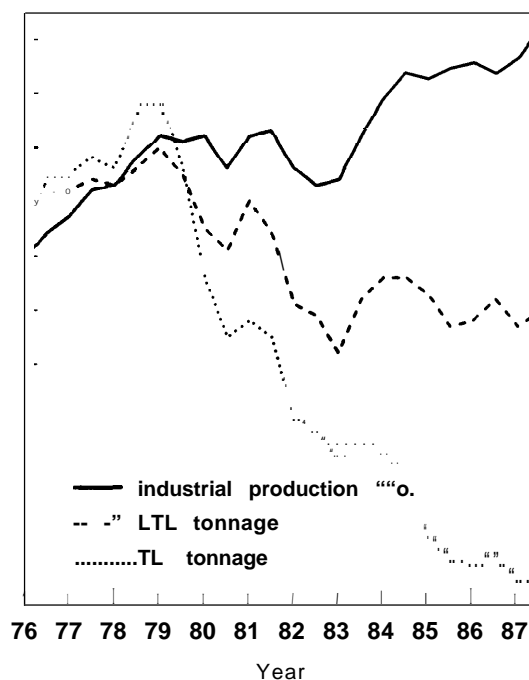
KEY: LTL = less-than-truckload; TL = truckload.

SOURCE: Regular Common Carrier Conference, testimony of James C. Haskins before the House Committee on Public Works and Transportation, Mar. 16, 1988.

from shipment origins and destinations. However, a new operating strategy is evolving in the TL market—the high-service carrier serving targeted market niches. These TL firms provide high-capacity or special equipment and utilize their assets and labor very productively (see box 2-B). To compete successfully, many owner-operators must drive long hours and accept backhauls at low rates, circumstances creating physical, psychological, and economic hardships.

Several factors are at work to tip the balance of TL operations toward larger carriers with more capital to invest. Concerned about the reliability of

Figure 2.11.—LTL/TL Tonnage,  
Adjusted Seasonally



KEY: LTL = less-than-truckload; TL = truckload.

SOURCE: Regular Common Carrier Conference, "Quarterly Survey of General Freight Carrier Operating Results, 4th Quarter," 1988.

leased equipment and drivers, carriers with sufficient resources buy their own equipment and employ company drivers. Many carriers, such as automobile haulers, operate highly specialized, complex equipment that is difficult to lease. Productivity is high enough that shippers pick high-service carriers for both service and unit price. Such carriers become a "core" carrier, taking a large portion of the freight from major shippers. Observers predict an acceleration of the core carrier concept.<sup>23</sup>

<sup>23</sup>William M. Legg and John M. Larkin, "High-Service Truckload Carriers Prospering," *Industry Week*, Apr. 4, 1988, Special Supplement; and Alex Brown & Sons, Inc., "Wrap-up of the October 29 Trucking Seminar," unpublished manuscript, December 1987.

## CONCLUSIONS

Trucking is a tremendously complex industry that defies easy classification. Numerous market segments are served by a variety of motor carriers, and gener-

alizations are tenuous at best. A highly competitive market environment in the trucking industry confronts carriers of all sizes with constant financial pres-

### Box 2-B—A Truckload Carrier

One successful medium-size truckload carrier does business in 30 States, mostly east of the Mississippi River. The company emphasizes service in its marketing strategy, and in 1986, 99.5 percent of its operations were on time or met customer service requirements. A Department of Transportation subcommittee reviewed the company's safety programs and rated the company satisfactory—the highest possible rating.

Safety is a company priority for both drivers and equipment. "Safety is our driving concern" is the company motto. The company recruits drivers from a list of nearby truck driving schools, with the goal of hiring experienced drivers. The company's training program includes all new employees, both drivers and mechanics, and emphasizes safety. The company's hiring criteria require that a new driver be an experienced company driver for at least 2 weeks, and often longer. The shortage of qualified drivers and high driver turnover are two of the company's major concerns.

The firm owns approximately 240 tractors, some tractors and 570 trailers. Equipment is largely standardized as semi-tractable units, and the company has instituted a preventive maintenance program. Regular preventive maintenance is performed at regular intervals, with major overhauls performed at the annual interval. Drivers are trained to inspect and adjust brakes and to conduct pre-trip and post-trip vehicle inspections.

The company selects new vehicle technology according to the following criteria: the product should be price competitive, proven on the road, and guaranteed by the manufacturer. New tractors are equipped with automatic slack adjusters and governed at 65 mph. The company does not plan to equip its tractors with antilock brakes, which it feels do not meet its criteria.

sure and forces difficult choices between offering rate discounts to attract business and maintaining rates to generate revenue.

Changes in economic regulation affected market entry, operations, costs and pricing, employment policies and labor relations (including wage levels), and technology development. The distinctions between various types of regulated motor carriers greatly diminished after deregulation, and entry opportunities for private carriers and owner-operators improved.

The nature and volume of the business conducted by various segments of the trucking industry has changed, becoming less predictable. Large general commodity carriers tend to specialize in LTL shipments. While many large LTL carriers have failed, a few of the largest nationwide LTL carriers have expanded and prospered. Few newly formed carriers have entered the LTL business; existing LTL carriers have competed fiercely for each other's markets. Small carriers and owner-operators have captured a larger portion of the TL market, in part

because of lowered entry barriers and more pricing freedom. New entrants tend to be small and nonunion, often coming from the ranks of owner-operators, a key part of this fleet. The interstate portion of the TL industry has become more diverse and more dispersed.

Profit margins have fallen, even for the most successful carriers, under pressure from intense price competition that is partly a result of changes in manufacturing and partly of continuing overcapacity. Expenses per ton-mile are up 75 percent since 1978, while general freight revenues per ton-mile have increased only 54 percent. Freight rates have also fallen behind price increases in the general economy, particularly for large shippers and those in highly competitive city-pair traffic lanes. Carriers that serve small shippers and those in less competitive markets have fared better.

Other factors have also changed the framework in which carriers compete.

- Unregulated commercial zones have been greatly expanded, opening larger areas to local carriers.