

"The Freight Transportation System  
in the United States of America: Structure,  
Operations, and Status"

presented by

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## I. Importance of Transportation in the United States

Transportation is a pervasive and vitally important function in all industrialized economies including the United States of America (United States). Transportation systems have great economic, social, environmental and political significance. The economic significance of transportation in the United States is reflected in the following:

- Over 13 percent of total U.S. business expenditures during 1986 for new plant and equipment represented outlays for transportation equipment and facilities.
- Over 10 percent of the nation's total civilian employment is in transportation or transportation related industries (about 11 million employees).
- In 1986 total annual expenditures for transportation (both passenger and freight) amounted to approximately 20 percent of the nation's Gross National Product.[1]

This paper will provide an overview of the freight transportation system in the United States with the focus on the railroad and trucking modes--the two dominant modes in the United States in terms of revenues--with some discussion of the inland and waterways industry.

Tables 1 through 3 provide an overview of the overall importance of freight transportation in the United States and the relative importance of the various modes. As Table 1 indicates, the railroad industry provides more freight services in terms of ton-miles than any other mode. Although not directly shown in Table 1, the overall volume of freight in terms of ton-miles has not significantly increased since 1970 and has virtually not increased at all since 1980. Table 2 clearly shows that while the railroads are the most important mode in terms of market share (based on ton-miles), its market share has dropped significantly since 1944 and has

continued to decline slowly since 1970. Only the trucking industry has shown some growth in market share since 1970.

Table 3 clearly indicates that the trucking industry is the dominant mode when measured in terms of revenues earned. The trucking industry earned 77 percent of all freight revenues in 1986. Railroads were second with only about 10 percent of the revenues. The difference between the relative importance of trucking in terms of ton-miles carried (25 percent) and its relative importance in terms of revenues (77 percent) reflects both the much higher revenue per ton-mile earned by trucking than other modes except air and the fact that local shipments, where trucking dominates, are included in the revenue figures and not in the ton-mile figures. The rate of growth of freight revenues has not kept up with the growth of the nation's Gross National Product. Since 1970 the freight expenditures overall have dropped from 8.2 percent of Gross National Product to 6.6 percent in 1986. This decrease has been attributed to a number of factors including the changing composition of the nation's Gross National Product (a shift from manufactured goods to services) and the increased transportation efficiencies associated with deregulation.

## II. Structure of the Freight Transportation Industry

Freight transportation services are almost exclusively provided by firms in the private sector in the United States. The structures of the railroad, trucking and water carrier industries differ in certain respects with the major difference being that all railroads are considered common carriers. The trucking industry and water carrier industry are comprised

of both for-hire carriers, some of which are common carriers and some are contract carriers and others are exempt carriers, and private carriers. The structures of these modes will be briefly reviewed.

#### A. The Railroad Industry

The railroad industry in the United States is comprised of nearly 500 different railroads. These carriers are grouped into classes according to size. Class I carriers are carriers that earn at least \$50 million in operating revenues when computed on an adjusted basis to 1978 price levels. In 1986 there were only 16 Class I railroads but these 16 carriers accounted for approximately 94 percent of the industry's revenues, 91 percent of the industry's employees and about 83 percent of total railroad mileage. [2] The remaining carriers are smaller non-Class I carriers that numerically dominate the Class I carriers. Several recent developments in the area of railroad organizational structure should be highlighted:

- In 1987 the Federal government sold its only freight railroad, Conrail, in the largest act of privatization in the history of the country
- Mainly through mergers, the number of Class I carriers has dropped from 39 to 16 between 1980 and 1986. The seven largest railroads accounted for about 86 percent of the operating revenues of all Class I carriers. [3]
- Several railroads have acquired carriers of other modes and now can offer services more like a total transportation company. These acquisitions were either prohibited or inhibited by regulations before regulatory reform. Several railroads now own major trucking firms and one owns a barge line.
- New smaller railroads have been recently created from lines abandoned or spun off by Class I carriers. Included in these new carriers are several intermediate sized carriers that can provide service at a lower cost because they use non-unionized labor.



## B. The Trucking Industry

The trucking industry's structure is much more complex than the railroad industry's structure. The motor carrier industry is comprised of heterogeneous carriers having different legal and service characteristics, and carrying different types of commodities. Regulatory reform in the trucking industry has blurred the boundaries between classes of carriers. The various components of the trucking industry are outlined in Figure 1.

According to one recent estimate, there were more than 570,000 motor carriers of freight in the United States. [4] These firms can initially be grouped into for-hire and private carrier categories. The for-hire carriers provide service to the general shipping public and charge a fee for their services. One estimate of the number of for-hire trucking companies is 90,000. [5]

Private carriers make up the overwhelming majority of trucking firms in the United States. The primary business of the firm operating a private carrier is not providing transportation. The private carrier provides service to the firm that owns or leases the vehicles and in most of the cases does not charge a fee. Regulatory reform has changed the nature and opportunities of the private carrier.

The for-hire motor carrier industry is further divided between interstate and intrastate. Interstate carriers are allowed to transport goods between two or more states while intrastate carriers are restricted to transporting goods within one state. One firm may hold the rights to provide both interstate and intrastate trucking services.

The interstate component can be broken down into either the exempt

category or regulated category. The exempt carrier is excluded from Interstate Commerce Commission (ICC) regulation if it restricts itself to hauling commodities identified by law as being exempt. The number of exempt carriers in 1983 was estimated to be 40,000. [6]

The other type of interstate for-hire carrier is the ICC-regulated carrier. The ICC-regulated for-hire carrier may be a common or contract carrier. Common carriers are required to serve the general public upon demand at reasonable rates in a nondiscriminatory fashion. A contract carrier serves shippers under specific contracts and thus does not hold itself out to serve the general public. Many firms operate as both common carriers and contract carriers.

In 1987 there almost 40,000 ICC-regulated trucking firms [7]. These carriers are classified by size according to revenues earned into three categories. The largest carriers are grouped into Class I which includes all carriers that earn at least \$5 million in revenue. Although less numerous than Class II and III carriers (there are only about 1000 Class I carriers), Class I carriers dominate the ICC-regulated component of the trucking industry in terms of revenue, earning about 80 percent of the total revenue earned by ICC-regulated carriers.[8] The common carriers are further classified into truckload (TL) operations and less-than-truck (LTL) operations. Some of the largest trucking firms in the United States are LTL carriers including Yellow Freight System, Inc., Consolidated Freightways, and Roadway. Each of these firms earned about a billion and a half dollars in revenues in 1985.[9]

Several recent, post regulatory reform developments relevant to organizational structure in the trucking industry should be noted:

- Due to almost complete deregulation of contract carriage, its growth has been very rapid with the number of carriers increasing from 4000 to 10,000 between 1979 and 1984. The contract/exempt portion of the trucking industry is expected to grow as indicated in Table 4.
- Since 1978 8,400 motor carriers have failed with several large firms going into bankruptcy.[11]
- The growth in the number of ICC-regulated carriers has been dramatic with the number of carriers going from 15,000 to nearly 40,000. Most of the new carriers have been the smaller Class III carriers.
- At the same time the number of firms has been increasing, the TL and LTL general freight sector of the industry has become more concentrated with the LTL market share held by the four largest firms increasing from 25 percent in 1980 to 36 percent in 1984.[12]
- Possibly the most significant change in the structure of the trucking industry in recent years has been the growth of ICC-licensed brokers with the number increasing from only 25 in 1978 to more than 4,000 in 1985. [13]

### C. The Water Carrier Industry

The domestic water carrier industry, often called the barge line industry, has a structure similar to the trucking industry. The regulated component of the industry, however, is much less important in the water carrier industry than in the trucking industry. More than 1,800 firms provide service on a for-hire basis but only 265 of these are regulated as common or contract carriers by the ICC. The remaining carriers operate as exempt carriers. In addition, more than 400 companies, such as public utilities and food processors, conduct private barge operations.[14]

Although there is a substantial number of firms, in particular commodity groups, for example, coal, the four largest firms have a substantial amount

of the market share. Many of the firms are small, local operators and do not provide competition for the larger water carriers.

### III. Operating and Service Characteristics

Describing the operating and service characteristics of the railroads in the United States is easier than describing the same characteristics for the motor carriers of freight because of the the nonhomogeneous nature of the trucking industry. The three modes reviewed--trucking, rail and water carriers--do vary with respect to average costs per ton-mile and quality of service. Shippers in the United States normally view trucking service to be superior to rail and water carrier service with respect to transit time (speed), reliability (dependability), security (loss and damage issues), and accessibility (ability of carrier or system to provide direct, dock-to-dock service. Capability, the ability of a carrier to provide the equipment and facilities required for the movement of a particular commodity, might be a service characteristic which favors the railroad. On balance, however, motor carriers are perceived to provide a higher quality of service. The better service characteristics of the trucking industry translates into better customer service and lower inventory costs for the shipper. The higher the value of the commodity being shipped, the more likely it will be shipped by truck in the United State--even over long distances.

On the other hand, barge service can be obtained at a much lower cost than trucking service and in many cases much lower than rail service. Railroads can in many cases provide transportation at lower costs than the trucking industry but the cost differences are much less than in the past.



One factor causing this smaller difference is the increase in the number of non-unionized TL trucking firms that are providing service. New "Super" TL trucking firms, such as J.B. Hunt, are very cost effective because of their focus on a limited number of heavy traffic corridors. In addition, the larger and heavier trucks allowed by the Surface Transportation Act of 1982 has made the trucking industry more cost effective.

Several of the service characteristics are discussed below in additional detail.

#### A. Length of Haul

In the United States, the average length of haul by the various modes do not vary greatly. Table 5 shows the average length of haul for the various modes for the time period 1980 to 1986. The TL component of the trucking industry, which is the main competitor of railroads for transporting manufactured goods, has a much lower average haul and unlike the LTL component, is getting shorter. The average length of haul of the largest Class I motor carriers is substantially longer with Consolidated Freightways, Yellow Freight System, Inc., and Roadway Services having averages of 1,367 miles, 1,161 miles, and 1,116 miles respectively in 1983.[15]

#### B. Route Structure

One key service characteristic, accessibility, is determined largely by the route structures of the various modes. In 1986, the railroads had 147,000 miles of route, the motor carriers had 714,000 miles of highway, and waterways had 26,000 miles of route. Since 1980, the railroads have decreased their route mileage from 179,000 miles, the highway mileage has been increased from 660,000 miles, and the waterways mileage was increased by 234 miles.[16]

Special note must be made of the nearly completed National System of Interstate and Defense Highways, or Interstate Highways. Some of the decrease in the real cost of trucking over the last 30 years and much of the improvement in trucking services, particularly transit time decreases, have been tied to the development of this 42,000-mile system.

One operating characteristic of both the rail industry and the motor carrier industry is the practice of interlining. In 1980 21.4 percent of all LTL trucking shipments and 10.2 percent of all TL trucking shipments were interlined, which means that two or more carriers are involved in the transportation. The railroads interline or interchange a higher percentage. Regulatory reform included the granting of nationwide authority to trucking firms which allowed them to provide single-line service which is preferred by shippers. There are no transcontinental railroads.

#### C. Cost of Line-Haul Service

Average cost figures can be very misleading. The cost of providing rail unit-train service for coal transportation differs substantially from the cost of providing rail piggyback service. TL trucking service costs significantly less than LTL trucking service. The "Super" TL trucking firms that provide service only over heavy traffic lanes are as cost efficient as railroads in many areas. With these caveats given, the following average revenue per ton-mile figures for 1986 are provided:

- Rail--2.92 cents
- Trucking (LTL)--21.63 cents
- Trucking (TL)--9.85 cents
- Barge--.760 cents [17]

To the degree that revenue per ton-mile reflects the cost of providing the

service, these figures provide information on the costs of operating. The revenue per ton-mile is the cost to the shipper.

#### D. Recent Developments in Service and Pricing Practices

Recent developments in the trucking industry include the following:

- The largest LTL carriers have expanded the number of states they serve and the number of terminals used.
- The LTL carriers have dropped most of their TL operations.
- Common carriers have practiced widespread discounting to larger, more important customers.
- Common carriers have tailored their services to meet the individual needs of shippers and have been more selective in serving shippers.
- The entry of numerous non-unionized carriers has pressured unionized carriers to take actions to reduce labor costs including establishing non-unionized trucking firms that operate in the same markets as their unionized carriers.

Recent developments in the railroad industry include the following:

- Railroads have operated more like contract carriers and less like common carriers including using contract rates and tailoring their services to the individual needs of selected shippers.
- Railroads view themselves more as wholesalers and less as retailers of transportation services. An example of this transition is the railroads' use of third parties to arrange piggyback and containerized service.
- Railroads have greatly increased the use of double-stack train service for international traffic and are attempting to locate more domestic shipments that can use the service.
- Similar to what certain trucking firms have done, several railroads have established non-unionized subsidiaries in an attempt to lower their labor costs.

- Railroads have continued their evolution toward becoming basically a system that carries large volumes of heavy-weight, low-value commodities--bulk commodities. More than 46 percent of the industry's revenues (over 65 percent of tons hauled) are derived from four bulk commodities--coal, farm products, minerals, and chemicals.[18]

Both the railroads and the larger motor carriers have increased their use of Electronic Data Interchange (EDI) and have increasingly demanded that third parties use EDI if they want to continue working with them.

#### **IV. Government Policies Toward Freight Transportation Modes**

The role of government in transportation is extensive in the United States. The U.S. transportation industry is not only regulated in various ways but is also assisted by all levels of government. Government policies can increase and decrease the efficiency and effectiveness of the transportation system and can also affect the relative standing of the various modes. Government policies can help one mode at the expense of another mode--a claim that the railroad industry has long made with respect to how they have been regulated compared with how the trucking and barge industries were regulated.

The federal government has a number of transportation functions that can have differential impacts on the rail, trucking and barge industries. These functions have been classified in a number of ways including the following:

- (1) economic regulation;
- (2) social regulation;
- (3) planning and operation of ways;
- (4) financing and user charges;
- (5) coordination of services;



(6) intervention in services; (7) research and develop; and (8) organization and management.[19] The state governments have similar if not quite as many options to influence and affect the modes differentially. Space allows the discussion of only several of the functions.

#### A. Economic Regulation

The recent actions taken in the United States in the area of regulatory reform have had a significant impact on the modes involved in freight transportation. As noted above, the railroad industry has long argued that it was at an disadvantage under the former regulatory scheme in which it was much more regulated than the other modes. Each of the other modes had certain components that were not regulated at all or only partially regulated, e.g., the exempt trucking firms. Table 6 indicates the extent to which each of the modes are regulated. The railroads remain the most regulated with the exception of oil pipelines. The Staggers Rail Act of 1980 and particularly its contracts rates provision did allow the railroads to compete more effectively against both the barge lines and motor carriers. The exemption of piggyback and containerized traffic under the Staggers Rail Act allowed the railroads to compete more effectively against the trucking firms--particularly the TL trucking firms. Possibly the most important regulatory action was the easier entry provision of the Motor Carrier Act of 1980. The easier entry allowed non-unionized carriers to enter the industry and existing non-unionized to expand into new markets. The entry of non-unionized carriers not only put pressure on trucking firms to be more cost effective but also put pressure on railroads to be more cost effective.

## B. Social Regulation

Social regulation includes regulations pertaining to safety and the environment. Included in this category of regulation is the regulation of truck size and weight allowed on the nation's highways. These regulations exist not only to enhance the safety aspects of transportation but also to help protect the federal, state and local investments in the highway system. The change in the regulations to allow larger and heavier trucks in 1982 has had a significant impact on the cost of providing trucking service and the competitive boundary between trucking and the railroads.

## C. Financing and User Charges

This area of government policy has long been an area in which the railroads have argued that the other modes--trucking and barge lines in particular--were given a distinct advantage. In 1986 the total government outlays for transport facilities and services totalled \$83 billion with more than 70 percent coming from the state and local governments. Highways dominated the outlays, taking 73 percent of the outlays in 1986. The rivers and harbors received 3.4 percent of the \$83 billion in 1986. In contrast, the railroads received less than a billion dollars and most of that went to Amtrak to provide railroad passenger service.[20] Of course, the trucking industry shares the highways with the millions of private automobile owners and the barge lines share the inland waterways with other users including recreationists and utility firms' power plants.

The fact that the various modes receive government outlays does not mean that the carriers of these modes don't pay their fair share of the cost to the government. Although the issue of whether the trucking firms using the heavy trucks pay their fair share has long existed, the trucking

industry pays a substantial amount in highway taxes--\$16 billion in 1985.[21] In contrast, the barge industry has never paid its share of the costs of maintaining and operating the inland waterways. The barge industry did not pay any user charges for the system until 1980. The user charges it now pays covers only a portion of the cost to the Federal government.

#### D. Other Government Policies

The United States government spends very little on transportation research in terms of the government's overall research and development budget. In 1987 the federal government spent \$1.1 billion on research and development in the transportation area or about 2.2 percent of its total research and development budget. Most of that money (79 percent) was allocated to the aviation sector. The rail oriented research amounted to only 13.2 million while the highway oriented research amounted to \$82.6 million. The majority of highway research projects involved safety, however.[22]

Tax legislation can also differentially affect the various modes. The tax reform legislation of 1981 clearly favored the railroads over the trucking firms while the 1986 tax reform legislation probably favored the trucking industry over the rail industry.[23] The trucking industry is presently confronted with the cost and paperwork of complying with a number of state regulations and taxes.

### V. Final Observations

The freight transportation system in the United States is comprised of five basic modes of air, motor carrier, railroads, barge lines, and

pipelines. Air freight service, though growing rapidly, is still an insignificant part of the overall freight transportation system. Oil pipelines are responsible for a significant part of the overall ton-miles of freight service provided but obviously provide service for a very narrow range of commodities--crude oil and refined oil products. The three modes that have both significant volumes and a broad commodity base of traffic are trucking, railroads, and water carriers.

The relationship between the trucking industry and the barge line industry is largely a complementary relationship--not a competitive one. Trucks are used to transport grain and coal and other bulk commodities to and from the inland river ports. The rail industry, on the other hand, not only has a competitive relationship with the trucking industry with respect to certain commodities, mainly manufactured goods, but also has a competitive relationship with the barge industry with respect to a different set of commodities, mainly low-value bulk commodities. In addition, the railroad industry has and needs to have a complementary relationship with the trucking industry for its piggyback service and has a complementary relationship with the barge lines. The range of commodities and markets in which the railroads will have a competitive advantage is likely to become smaller. As the value of the manufactured goods become higher and the use of just-in-time inventory and production methods increases in the United States, the trucking industry will become more competitive vis-a-vis the rail industry due to its service advantages. Shippers of low-value, bulk commodities, which the railroads compete with the barge lines for, want low-cost line-haul service--the type of service that the barge lines have a competitive advantage over the railroads. This uncomfortable position of



the railroads--between the trucking companies and the barge lines--possibly explains somewhat why the railroads have acquired both trucking companies and a barge line in recent years. These acquisitions not only provide the opportunity to improve coordination in an intermodal movement but also provide an opportunity for the railroads to participate more fully in the future in freight transportation.

Several factors that might affect the competitive relationships between the railroads and the other modes and thus the allocation of freight traffic in the future are the following:

- Legislation has been introduced in Congress to partially reregulate the railroads in the areas of competitive access and maximum rates. If enacted, this legislation would reduce the ability of the railroads to be price competitive in markets in which they face severe competition.
- A driver shortage has developed in the trucking industry. The lower wages now offered by non-unionized carriers are not attracting as many drivers and the recent efforts to prevent people with drug and alcohol problems from driving have reduced the pool of possible drivers. The shortage will likely drive up the wage level somewhat, which will make trucking less competitive with the railroads, and could reduce the supply of trucking services. The railroad industry would benefit with this development.
- Advances in technology both within the transportation sector, e.g., EDI, and outside the transportation sector are likely to affect relative positions of the three basic transportation modes. The research in the area of super conductivity has potentially very severe implications for the railroad industry. Advances in super conductivity will allow the substitution of wire transmission of power for the movement of coal. As noted, coal is the most important commodity for the railroad industry.
- Changes in the supply and price of energy can have a dramatic impact on relative costs of the different

modes. Railroads and barge lines have a definite advantage over trucks in many types of markets with respect to energy efficiency.

## Notes

1. Transportation in America, Transportation Policy Associates, March 1988, p. 1.
2. "Railroad Facts 1987." Association of American Railroads, September 1987, p. 2.
3. Transportation in America, Op. Cit., p. 4.
4. John J. Coyle, Edward J. Bardi and Joseph L. Cavinato, Transportation, 2nd ed. (St. Paul: West Publishing Company, 1986), p. 120.
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6. Coyle, Bardi and Cavinato, Op. Cit., . 120.
7. Roth, Op. Cit., Chart: The Number of ICC-Regulated Motor Carriers 1961-1987.
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11. Op. Cit., Chart: The Number of Motor Carrier Failures 1971 - 87.
12. "Trucking Regulation-Price Competition and Market Structure in the Trucking Industry," U.S. General Accounting Office, February, 1987, p. 21.
13. Timothy H. Lee, Statement before the Surface Transportation Subcommittee, Committee on Commerce, Science, and Transportation, U.S. Senate, September 9, 1985, p. 91.
14. Robert C. Lieb, Transportation, 3rd ed. (Reston, VA: Reston Publishing Company, 1985), p. 102.
15. Trinc's Blue Book Trucking Industry, 1984 ed., Trinc Transportation Consultants, September 1984, pp. 72, 80 and 83.
16. Transportation in America, Op. Cit., p. 21.

17. Ibid., p. 11.
18. Laurence T. Phillips, "The Railroad Industry," Business Economics, Vol. 21, No. 2, April 1986, p. 56.
19. John L. Hazard, "The Institutionalization of Transportation Policy: Two Decades of DOT," Transportation Journal, Vol. 26, No. 1, Fall 1986, p. 25.
20. Transportation in America, Op. Cit., p. 26.
21. "American Trucking Trends 1986," American Trucking Associations, Inc., p. 34.
22. Transportation in America, Op. Cit., p. 28.
23. See K. Eric Wolfe, Vijaya Krishna, and William F. Huneke, "As Assessment of the Rail Competitive Motor Carrier Industry (1977-1986)," Journal of the Transportation Research Forum, Vol. XXVIII, No. 1, 1987, pp. 289-301.



FIGURE 1

OVERVIEW OF U.S. TRUCKING INDUSTRY

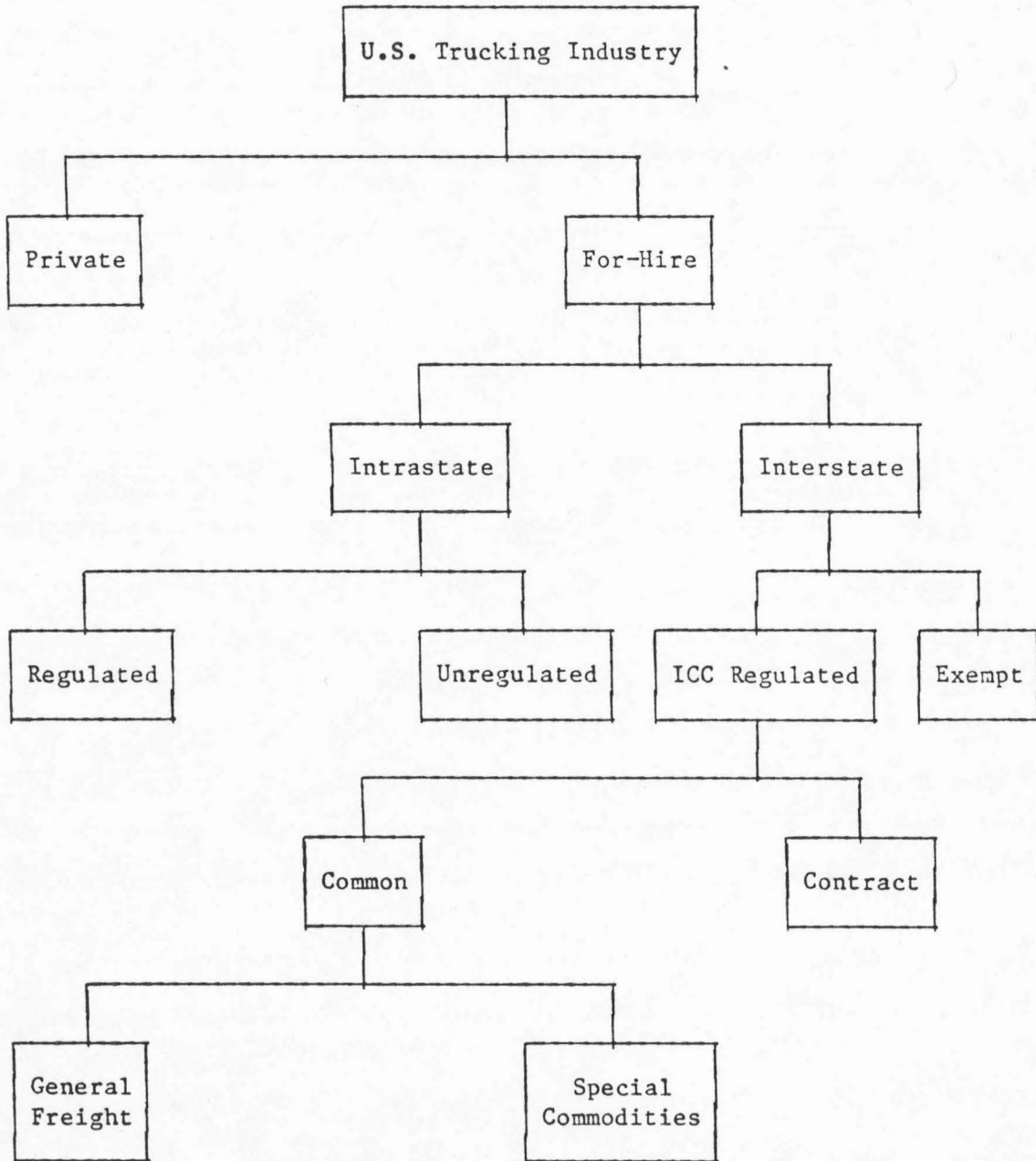


TABLE 1

VOLUME OF INTERCITY FREIGHT  
(Millions of Revenue Ton-miles)

<u>Year</u>	<u>Railroads</u>	<u>Trucks</u>	<u>Water Carriers</u>	<u>Oil Pipelines</u>	<u>Air</u>
1944	746,912	58,264	150,155	132,864	71
1960	579,130	285,483	220,253	228,626	778
1970	771,168	412,000	393,000	431,000	3,295
1975	759,000	454,000	342,000	507,000	4,000
1985	895,000	610,000	348,000	564,000	6,390
1986	896,000	627,000	393,000	579,000	7,340

SOURCE: Railroad Facts, 1987, Association of American Railroads, September 1987, p. 32.

TABLE 2

PERCENTAGE OF TOTAL VOLUME OF INTERCITY FREIGHT  
(Percent of Revenue Ton-Miles)

<u>Year</u>	<u>Railroads</u>	<u>Trucks</u>	<u>Water Carriers</u>	<u>Oil Pipelines</u>	<u>Air</u>
1944	68.6	5.4	13.8	12.2	0
1965	44.1	21.7	16.7	17.4	0
1970	39.8	21.3	15.9	22.3	.2
1975	36.7	22.0	16.6	24.5	.2
1985	36.4	24.8	15.6	22.9	.3
1986	35.8	25.1	15.7	23.1	.3

NOTE: Water carriers refer to carriers on inland rivers and canals and the Great Lakes.

SOURCE: Railroad Facts, 1987, Association of American Railroads, September, 1987, p. 32.

TABLE 3

FREIGHT REVENUES  
RAILROAD COMPARED TO UNITED STATES TOTAL

Year	Motor Carrier Revenue (\$ billions)	Rail Revenue (\$ billions)	Inland Waterways Revenue (\$ billions)	Total U.S. Freight Revenue (\$ billions)	Freight Revenues as Percent of U.S. Gross National Product
1970	62	12	.6	83	8.3
1975	85	17	1.2	115	7.3
1980	155	28	2.4	213	7.8
1983	182	27	2.4	241	7.1
1984	200	31	2.6	262	7.1
1985	209	29	2.5	275	6.9
1986	214	28	2.4	280	6.6

SOURCE: Transportation in America, Transportation Policy Associates,  
March 1988, p. 4.



TABLE 4

IMPACT OF DEREGULATION ON MARKET SHARES  
COMPONENTS OF THE TRUCKING INDUSTRY

<u>Component of Trucking Industry</u>	<u>Percentage of Trucking Market (tons)</u>			
	<u>1977</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>
Regulated Sector	28	26	25	27
Exempt/Contract	24	24	36	44
Private	48	50	39	29

SOURCE: Martin Labbe, "Strategy '84! Crossing New Business Thresholds," Fleet Owner, January 1984, p. 62.

TABLE 5  
 AVERAGE LENGTH OF HAUL OF  
 DOMESTIC INTERSTATE FREIGHT MODES  
 (MILES)

<u>Year</u>	<u>Rail</u>		<u>Trucking</u>		<u>Inland Waterways</u>
	<u>Per System</u>	<u>Per Carrier</u>	<u>LTL</u>	<u>TL</u>	
1980	590	378	503	---	425
1981	600	381	516	---	444
1982	604	403	532	---	438
1983	613	428	524	263	463
1984	617	436	532	241	448
1985	635	443	538	240	435
1986	636	444	558	222	441

SOURCE: Transportation in America, Transportation Policy Associates,  
 March 1988, p. 25.

TABLE 6

INTERCITY FREIGHT FEDERALLY REGULATED  
(Percent of Total Ton-Miles Per Mode and Overall)

Year	<u>Rail*</u>	<u>Truck</u>	<u>Oil Pipeline</u>	<u>Domestic Coastwise</u>	<u>Water Great Lakes</u>	<u>Rivers &amp; Canals</u>	<u>Air</u>	<u>Total Freight*</u>
1960	100	36.5	84.0	7.0	1.0	21.0	100	57.5
1965	100	39.0	86.0	7.4	0.9	17.7	100	62.1
1970	100	41.3	85.1	4.6	1.2	15.1	100	0.9
1975	100	44.1	84.4	4.1	0.3	15.5	100	62.6
1980	100	43.6	90.0	2.1	0.4	9.2	0	55.7
1985	93(48)	38.3	90.0	3.8	0.0	7.9	0	52.0(38.7)
1986	93(38)	30.2	90.0	2.7	0.0	8.0	0	52.5(36.2)

\*Does not include railroad contract traffic, which currently is estimated at about 35% of total rail ton-miles. Figures in parentheses are based on railroad contract traffic as being unregulated. Railroad contract rates have been used only since 1980 so no other figures are affected.

SOURCE: Transportation in America (Washington, D.C.: Transportation Policy Associates, March, 1987), p. 12.