
BY THE COMPTROLLER GENERAL

Report To The Committee On Finance
United States Senate

OF THE UNITED STATES

The Surface Transportation Assistance Act Of 1982: Comparative Economic Effects On The Trucking Industry

The Surface Transportation Assistance Act of 1982 raised federal highway taxes for the first time in over two decades to obtain additional funds for several major transportation programs. The act also permitted larger and heavier trucks to use many federally aided highways. At the request of the Senate Committee on Finance, GAO analyzed how the economic benefits and burdens of the act will be distributed among different segments of the commercial trucking industry.

The effect of this act on a particular motor carrier will depend on the size of the carrier's additional tax burden and the carrier's ability to increase productivity and raise rates. GAO determined that these factors will vary significantly among different segments of the commercial trucking industry. Thus, some motor carriers will be comparatively better off, while others will be comparatively worse off, as a consequence of the act.





COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-210509

The Honorable Robert J. Dole
Chairman, Committee on Finance
United States Senate

Dear Mr. Chairman:

In response to your request, this report analyzes the likely economic effects of the Surface Transportation Assistance Act of 1982. Although our analysis was hindered by data limitations, we conclude that the economic benefits and burdens of the act will vary significantly across different segments of the commercial trucking industry. Certain types of motor carriers will be much better off than others as a consequence of the act.

As arranged with your office, we are sending copies of this report to interested parties. We will also make copies available to others upon request.

Sincerely yours,

A handwritten signature in cursive script that reads "Charles A. Bowles".

Comptroller General
of the United States

Enclosure

COMPTROLLER GENERAL'S
REPORT TO THE COMMITTEE ON
FINANCE
UNITED STATES SENATE

THE SURFACE TRANSPORTATION
ASSISTANCE ACT OF 1982:
COMPARATIVE ECONOMIC
EFFECTS ON THE TRUCKING
INDUSTRY

D I G E S T

In response to a request by the Senate Committee on Finance, GAO analyzed the likely economic effects of the Surface Transportation Assistance Act of 1982 on different segments of the commercial trucking industry. The act (1) authorized increased federal spending for several major transportation programs, (2) raised and restructured federal highway taxes, and (3) changed weight and size limits for trucks using federally aided highways. GAO determined that the potential economic effects of the act will vary significantly across different segments of the industry. Data limitations, however, prevented GAO from quantifying the magnitude of these effects. Also, GAO did not consider highway safety issues or the effects of any other federal or state legislation affecting the trucking industry.

ADDITIONAL TAX BURDENS VARY GREATLY

Most of the tax increases affecting truck owners are attributable to a 5-cent-a-gallon increase in motor fuel excise taxes and increases in the annual highway use tax which is based on a truck's gross vehicle weight.¹ Therefore, the size of the additional tax burdens imposed by this act will vary directly with the gross vehicle weight of trucks and the number of miles driven. GAO calculated the average size of these tax increases based on Department of Transportation projections of 1985 tax revenues, truck populations, and average annual mileage. These estimates show that owners of light trucks (those with a gross vehicle weight of less than 33,000 pounds) will experience relatively

¹Gross vehicle weight refers to the weight of an empty truck plus the maximum weight to be carried, as determined either by the truck's manufacturer at time of sale or by the truck's owner at time of registration.

small tax increases; in some cases, taxes will not increase at all. In contrast, owners of very heavy vehicles (those with a gross vehicle weight of 70,000 pounds or more) will experience tax increases averaging from \$1,506 to \$1,742 for each truck owned or from 2.40 cents to 2.56 cents for each mile traveled in 1985. (See pp. 17 to 23.)

In interviews, representatives of motor carriers expressed more concern about the nature of the new highway tax structure than about the size of these tax increases. Specifically, they characterized the annual highway use tax as "inequitable" because it is a lump-sum tax based on gross vehicle weight and not actual highway usage. Representatives of owner-operators (many of whom own very heavy trucks) also objected to the annual use tax because at least one-fourth of it must be paid at the start of a fiscal year. They believe that this could create a serious cash flow problem for their members who operate with little cash reserves. (See pp. 37 to 39.)

THE ACT SHOULD INCREASE PRODUCTIVITY

The act should increase productivity in the trucking industry for three reasons. First, it allows motor carriers to use double trailers and longer and wider vehicles on many federally aided highways. Formerly, the sizes of some truck shipments were constrained by lower limits placed on the length and width of vehicles and by state prohibitions placed on the use of double trailers. Second, the act establishes a uniform weight limit of 80,000 pounds for trucks using the Interstate Highway System. Although only Arkansas, Illinois, and Missouri maintained lower weight limits prior to the act, these lower limits had a disproportionate effect on interstate shipments because of the states' strategic locations. Third, trucking firms should also benefit from the highway and bridge improvements authorized by the act. (See pp. 24 to 28.)

ECONOMIC EFFECTS OF THE ACT WILL VARY

How a particular motor carrier will be affected by the act depends on (1) the impact of higher taxes on that carrier's operating costs, (2) the ability of that carrier to increase its productivity, and (3) the carrier's ability to raise rates.

GAO's analysis indicated that these factors vary significantly among motor carriers operating in different segments of the commercial trucking industry. Thus, some carriers will be relatively better off, while others will be relatively worse off, as a consequence of the act. (See pp. 29 to 36.)

LESS-THAN-TRUCKLOAD MOTOR CARRIERS WILL BE MUCH BETTER OFF THAN TRUCKLOAD CARRIERS

Less-than-truckload (LTL) motor carriers use both light and heavy trucks to consolidate, transport, and deliver mostly small shipments from numerous individual shippers. Nearly one-half of all the interstate ton-miles hauled by these carriers are accounted for by shipments constrained by the physical size of their trucks. These carriers should be able to haul substantially larger payloads by using the longer, wider single and double trailers permitted by the act. LTL carriers using lighter weight trucks should experience smaller tax increases, while those previously prohibited from using double trailers should be able to attain the greatest productivity benefits.

In contrast, motor carriers providing truckload (TL) service use heavy trucks to transport shipments weighing over 10,000 pounds directly between shippers and receivers. Less than 10 percent of the interstate ton-miles hauled by TL carriers are accounted for by shipments constrained by the physical size of their vehicles. Longer, wider single and double trailers will thus be of relatively little benefit to TL motor carriers.

Proportionately more interstate TL shipments than LTL shipments (32 percent versus 8 percent) were constrained by lower state weight limits. Thus, TL carriers should benefit more than LTL carriers from the uniform 80,000-pound Interstate weight limit imposed by the act. The potential productivity gains achievable by a previously weight-constrained TL carrier, however, are generally less than those achievable by a size-constrained LTL carrier.

The size of the additional tax burdens will vary primarily by truck weight. Because LTL carriers use both light and heavy trucks, they should experience smaller tax increases than TL carriers for each truck they own. Because railroads compete more effectively for TL freight than for LTL freight, LTL carriers also face less rail competition. Thus, if any act-related cost increases are passed on to shippers through rate increases, LTL carriers will lose relatively less business to rail.

Faced with smaller tax burdens and with greater ability to increase productivity and raise rates, LTL motor carriers will be much better off than TL motor carriers. (See pp. 40 and 41.)

**SHORT-HAUL MOTOR CARRIERS SHOULD BE
BETTER OFF THAN LONG-HAUL MOTOR CARRIERS**

Motor carriers that primarily provide short-haul service should be better off than those providing long-haul service for two reasons. First, short-haul carriers tend to make much greater use of lighter weight trucks. Thus, on average, the additional tax burdens for each truck imposed on short-haul motor carriers should be much smaller. Second, since railroads compete more effectively for long-haul traffic, short-haul motor carriers face relatively little rail competition. Thus, any resulting cost increases can be passed on to shippers with relatively little loss of business for short-haul motor carriers.

Insufficient data exist to conclude how the productivity benefits of the act's size and weight provisions will be distributed between short- and long-haul carriers, but long-haul carriers should receive greater benefits from highway and bridge improvements. However, considering relative tax burdens and the potential impacts of rail competition, GAO believes that short-haul carriers should be better off than long-haul carriers. (See p.41.)

**OWNER-OPERATORS WILL BE WORSE OFF
THAN THE REST OF THE INDUSTRY**

Owner-operators (small, generally one-person one-truck businesses) are concentrated in the long-haul and TL segments of the industry. As with other TL carriers, most owner-operators will have less opportunity to realize productivity increases. Compared with the rest of the industry, owner-operators will also experience larger tax increases because they use proportionately heavier trucks. Their additional tax burdens for each mile driven, however, will not necessarily be any larger than those imposed on other heavy truck owners. (See p. 21.)

As with other long-haul carriers, owner-operators should receive relatively greater benefits from highway and bridge improvements. However, they will also face greater competition from railroads than short-haul carriers. Thus, owner-operators will have less ability to recoup any act-related cost increases through higher rates. On balance, GAO believes that owner-operators will be worse off than the rest of the industry. (See pp. 41 and 42.)

AGENCY COMMENTS AND GAO'S RESPONSE

GAO requested written comments on a draft of this report from the Department of Transportation, the Interstate Commerce Commission, and the Department of the Treasury. Transportation agreed with the "general thrust of the draft report" and most of GAO's specific findings. Transportation disagreed, however, with GAO's conclusion that short-haul

carriers should be better off than long-haul carriers as a consequence of the act. GAO still believes this conclusion is valid since Transportation's comment did not consider that short-haul motor carriers face much less rail competition than long-haul motor carriers or that short-haul carriers make much greater use of light trucks that are not subject to the highway use tax.

Transportation also disagreed with GAO's statement in the draft report that owner-operators will be financially worse off. Since GAO's analysis did not quantify the act's net financial effects, GAO revised the report to indicate that owner-operators will be relatively worse off compared to the rest of the industry.

Transportation further believed that comparisons of the act's increased tax burdens should be made on the basis of each mile driven as well as on the basis of each truck owned. GAO agreed, but noted that its analysis had considered differences in miles driven to the extent that information was available. Transportation also believed that the report should include more recent financial data on the trucking industry. GAO added this additional information, which was unavailable when its review was conducted. These revisions affected neither the findings nor the conclusions of GAO's analysis. (See pp. 42 to 44).

The Interstate Commerce Commission agreed with GAO's analysis of the act's comparative economic effects, and the Department of the Treasury had no comments.

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ABBREVIATIONS

ATA American Trucking Associations, Inc.
DOT Department of Transportation
GAO General Accounting Office
GVW gross vehicle weight
ICC Interstate Commerce Commission
LTL less-than-truckload
TL truckload

CHAPTER 1

INTRODUCTION

Because of increasing concern about the deteriorating condition of the nation's highways, bridges, and mass transit facilities, the Surface Transportation Assistance Act of 1982 was passed to authorize significantly higher levels of federal spending for several major transportation programs. To finance these increased expenditures, the act raised federal highway taxes for the first time in over two decades. It also changed the existing highway tax structure to reapportion the burden among various classes of highway users and permitted the use of larger and heavier trucks on certain federally aided highways.

Concerned about the potential impact of increased taxes, the Senate Committee on Finance asked us to take a broad look at the general economic effects that the act may have on the trucking industry. Among the specific questions we were asked to address were:

- How will increased highway taxes affect the trucking industry?
- Will any adverse effects vary according to firm size?
- In view of the benefits to the trucking industry provided by the act, how will the act, overall, affect the profitability of trucking firms of various sizes?
- How does the relative profitability of trucking firms vary among large firms, medium-sized firms, and small "independent" truckers?

OBJECTIVE, SCOPE, AND METHODOLOGY

To determine how the act will affect the various types of trucking firms in the commercial motor carrier industry, we had to consider both the positive and negative economic effects of the act. On one hand, because the act significantly increases federal taxes on the tires, fuel, and equipment used to produce trucking services, the act could constitute an economic burden on the commercial motor carrier industry. On the other hand, because the act also authorizes significantly higher expenditures for highway and bridge improvements and raises existing limits on the size and weight of trucks that may be used on many of the nation's highways, the act could also be beneficial to much of the industry as trucking firms reap productivity increases made possible by these provisions.

We analyzed how the burdens and benefits of the act will be distributed among various types of commercial for-hire motor carriers. The main distinctions we make are between owner-operators (i.e., small, generally one-person one-truck businesses) and the rest of the industry, between carriers providing

primarily less-than-truckload (LTL) service and those providing truckload (TL) service, and between carriers primarily serving short-haul markets and those serving long-haul markets.

We limited the scope of our work to ascertaining the likely economic effects of the act upon the commercial trucking industry without attempting to judge the appropriateness or desirability of these effects. In addition, we did not evaluate the Department of Transportation's (DOT's) methodology for allocating highway costs to various user groups, assess whether the act has in fact made the highway tax structure more equitable, or examine the consequences of altering or modifying any of the act's provisions.

The scope of this study was also limited to the commercial, for-hire trucking industry. Thus, we did not analyze the effects of the act on enterprises that own and operate trucks as an adjunct of some other line of business, such as retailing or construction. These so-called private carriers account for about 40 percent of intercity truck ton-miles. We also did not attempt to analyze the act's impact on railroads or other competing modes of transportation. Within the commercial motor carrier industry, we did, at the Committee's request, pay special attention to the act's effects on owner-operators.

Further, our study was limited to analyzing only the potential economic effects of the Surface Transportation Assistance Act of 1982. We did not consider highway safety issues, the effects of any state or earlier federal legislation affecting the trucking industry, or any of the bills now pending in the Congress that would revise the act. Thus, we cannot say whether the differential effects of the act reinforce or offset differential effects of other recent legislative changes affecting this industry.

During this study, we interviewed officials from numerous public and private organizations, including DOT, the Interstate Commerce Commission (ICC), the Departments of Agriculture and the Treasury, associations representing owner-operators as well as those representing large trucking firms, such as Yellow Freight System Incorporated, and the International Brotherhood of Teamsters. (See appendix I for a list of the organizations we interviewed.) In these meetings, we learned what effects these various groups expected the act to have on motor carriers. We collected whatever relevant information or analyses they had available and used these materials to further our own analysis of the act.

We also used economic analysis to determine the expected economic effects of the act and predict, in general terms, what its impact will be on various types of commercial motor carriers. Although we supplemented this analysis with information gathered from many sources, the lack of certain information and time constraints still limited our approach in two major ways. First, we were unable to fully evaluate some of the estimates of

tax burdens and productivity gains that have been made by DOT and others. Second, we discovered that no adequate information is available on the costs, revenues, and earnings of the smaller firms which comprise the vast majority of motor carriers. This is particularly so for the tens of thousands of owner-operators that are of special concern to the Senate Committee on Finance. Because time did not permit us to gather this information by using survey questionnaires, we were unable to address the Committee's specific inquiry about the relative profitability of different size trucking firms. Our fieldwork was conducted from February to September 1983, and we performed our review in accordance with generally accepted government auditing standards.

REPORT PRESENTATION

In the next chapter we review the main provisions of the Surface Transportation Assistance Act of 1982, paying particular attention to provisions raising highway taxes and permitting the use of larger trucks. In chapter 3 we provide an overview of the structure and recent financial performance of the trucking industry and discuss the major relevant effects of regulatory reform. Then in chapter 4 we present and discuss some estimates of the act's tax and productivity effects on motor carriers.

In chapter 5 we analyze how the overall economic impact of the act will vary among various types of commercial motor carriers, considering differences in both the tax and productivity effects of the act as well as the relative abilities of certain types of motor carriers to raise rates. In chapter 6 we report the results of our interviews with officials representing those directly affected by this legislation. In the final chapter we present our conclusions and identify the types of trucking firms that we expect to be relatively better off and those that we believe will be relatively worse off under the provisions of the act.

CHAPTER 2

THE ACT INCREASES HIGHWAY EXPENDITURES AND TAXES AND PERMITS USE OF LARGER TRUCKS

In response to increasing concern over the deteriorating condition of the nation's highways, bridges, and mass transit facilities, the Congress enacted the Surface Transportation Assistance Act of 1982 to construct new facilities and reconstruct and repair old ones. To finance these improvements, several Highway Trust Fund taxes were increased. Several others were repealed, but on balance the act substantially increased the flow of tax revenues into the Highway Trust Fund.

HIGHER EXPENDITURES

The act authorized higher levels of federal spending for several highway programs. Among its highlights were the following features:

- Funds available for completing the Interstate Highway System were raised from \$3.225 billion to \$4 billion in fiscal year 1984 and from \$3.625 billion to \$4 billion in each fiscal year from 1985 through 1990.
- Sizable sums were authorized for the federal-aid primary, secondary, and urban highway systems in fiscal years 1983 through 1986, rising from \$3.3 billion in 1983 to \$3.9 billion in 1986. The most recent authorization for the same purpose, that for 1983 (revised by the act), had been \$2.7 billion.
- Spending for the repair and reconstruction of the Interstate Highway System was raised from an earlier authorization of \$800 million to \$1.95 billion in fiscal year 1984. Even larger amounts were authorized for expenditure in fiscal years 1985, 1986, and 1987.

The act expanded the bridge replacement and rehabilitation program. The previous authorization of \$900 million in fiscal year 1983 was replaced by one of \$1.6 billion, and larger amounts were authorized in the next 3 fiscal years.

The act extended the urban mass transit program for 4 years and authorized a higher level of spending on the program. A Mass Transit Account was established in the Highway Trust Fund from which funds may be used for capital improvements to urban mass transit systems. One-ninth of the revenues raised for the Highway Trust Fund by the federal excise tax on motor fuels is earmarked each year for the new account.

The act also contained authorizations for several other highway-related purposes. It amended some features of the various transportation programs and altered details of their administration. The act also authorized increased expenditures for the construction, reconstruction, and repair of the nation's airports.

HIGHER TAXES

The increases in spending that the act authorized will be financed by higher federal taxes. The act raised the rates of the following Highway Trust Fund taxes: (1) the excise tax on gasoline, diesel fuel, and special motor fuels; (2) the excise tax on new trucks and trailers; and (3) the annual highway use tax imposed on heavy trucks. The excise tax on highway tires was generally lowered, but not the tax on truck tires. The excise taxes on lubricating oil, truck parts and accessories, inner tubes, tread rubber, and all tires other than tires intended for use on highways were repealed. Since the excise taxes on motor fuels accounted for nearly 70 percent of all the revenues raised by these taxes in 1982 and, since the excise taxes were more than doubled by the act, that increase dominated the other tax changes. Thus, the net effect of all the increases and decreases in taxes was a sizable addition to the revenues earmarked for the Highway Trust Fund.

Not all of the tax changes take effect simultaneously. Increases in the annual heavy vehicle use tax are scheduled to be phased in between 1984 and 1988. The effective dates of increase, decrease, or repeal are set out in table 1, together with the old and new tax rates. Table 2 discloses what each tax recently yielded in revenues and is expected to yield in the future.

At the same time it increased tax rates, the Congress elected to reapportion the burden of financing the highway programs among users of the nation's highways. Acting on the basis of a study conducted by DOT¹, the Congress decided that a fairer distribution of highway tax burdens (i.e., one that was more nearly in proportion to the responsibility of various users for the costs of road and bridge construction, reconstruction, and repairs) would require the owners of heavy vehicles to pay a larger share of the costs. To impose an appreciably larger tax

¹The conclusions of the study appear in Final Report on the Federal Highway Cost Allocation Study, Report of the Secretary of Transportation to the United States Congress (U.S. Government Printing Office, 1982).

Table 1
Highway Trust Fund Tax Rates
Before and After the Surface Transportation Assistance
Act of 1982 and Effective Dates of Change

<u>Item</u>	<u>Old rate</u>	<u>Effective date of change</u>	<u>New rate^a</u>
Gasoline, diesel fuel	4 cents/gallon	4/1/83	9 cents/gallon
Trucks, trailers	Trucks with a GW of 10,000 pounds or less and trailers intended for use with such trucks: no tax Other trucks and trailers: 10 percent of manufacturer's sales price	4/1/83	Trucks with a GW of 33,000 pounds or less and trailers with a GW of 26,000 pounds or less: no tax Other trucks and trailers: 12 percent of retail sales price
Truck parts and accessories	8 percent of manufacturer's sale price	1/7/83	Repealed
Lubricating oil	6 cents/gallon	1/7/83	Repealed
Highway tires	9.75 cents/pound	1/1/84	40 pounds or less: no tax 40-70 pounds: 15 cents/pound over 40 pounds 70-90 pounds: \$4.50, plus 30 cents/pound over 70 pounds 90 pounds and over: \$10.50, plus 40 cents/pound over 90 pounds
Laminated tires	1 cent/pound	1/1/84	Repealed
Other tires	4.875 cents/pound	1/1/84	Repealed
Inner tubes	10 cents/pound	1/1/84	Repealed
Tread rubber	5 cents/pound	1/1/84	Repealed
Heavy vehicle use tax (annual)	26,000 pounds GW or less: no tax More than 26,000 pounds GW: \$3/1,000 pounds	7/1/84 ^b	Under 33,000 pounds GW: no tax 33,000-55,000 pounds GW: \$50, plus \$25/1,000 pounds over 33,000 pounds GW 55,000-80,000 pounds GW: \$600, plus \$40/1,000 pounds over 55,000 pounds from 7/1/84 to 6/30/86 \$44/1,000 pounds over 55,000 pounds from 7/1/86 to 6/30/87 \$48/1,000 pounds over 55,000 pounds from 7/1/87 to 6/30/88 \$52/1,000 pounds over 55,000 pounds after 6/30/88 80,000 pounds GW and over: \$1,600 from 7/1/84 to 6/30/86 \$1,700 from 7/1/86 to 6/30/87 \$1,800 from 7/1/87 to 6/30/88 \$1,900 after 6/30/88

^aAll of these taxes that were not repealed by the Surface Transportation Assistance Act of 1982 are scheduled to expire on September 30, 1988.

^bThe effective dates of the new rates of the heavy vehicle use tax are delayed 1 year for trucks belonging to persons who own and operate no more than five taxable trucks. Vehicles used for less than 5,000 miles on public highways are exempt from this tax.

Sources: Background and Description of Present Federal Excise Taxes, prepared by the staff of the Joint Committee on Taxation (U.S. Government Printing Office, 1982), p. 30. Summary of Present Federal Excise Taxes, prepared by the staff of the Joint Committee on Taxation (U.S. Government Printing Office, 1983), pp. 6 and 7.

Table 2

Actual and Estimated Highway Trust Fund
Tax Revenues Fiscal Years 1982-88

<u>Tax</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Gasoline, diesel fuel, special motor fuels	\$4,714	\$7,150	\$9,920	\$9,942	\$9,995	\$10,141	\$10,329
Trucks and trailers	725	610	1,102	1,397	1,578	1,702	1,850
Truck parts and accessories	224	64	-	-	-	-	-
Lubricating oil	77	13	-	-	-	-	-
Tires	672	530	250	151	160	166	173
Inner tubes, tread rubber		41	14	-	-	-	-
Heavy vehicle use tax	<u>333</u>	<u>228</u>	<u>427</u>	<u>888</u>	<u>1,022</u>	<u>1,119</u>	<u>1,059</u>
Total	<u>\$6,743^a</u>	<u>\$8,636</u>	<u>\$11,713</u>	<u>\$12,378</u>	<u>\$12,755</u>	<u>\$13,128</u>	<u>\$13,411</u>

^aRevenues are net of refunds and transfers. The 1982 amounts are actual rounded receipts and amounts for other years are estimated receipts.

Sources: For 1982, Summary of Administration's Proposed Revisions in Highway User Excise Taxes and Extension of Highway Trust Fund (S. 3044), prepared by the staff of the Joint Committee on Taxation (JCX-44-82; Nov. 30, 1982), p. 14; for other years, Summary Description of Highway-Related Revenue Provisions of the Highway Revenue Act of 1982, prepared by the Joint Committee on Taxation (JCX-60-82; Dec. 23, 1982), p. 15.

for each ton on heavy vehicles than on light vehicles, the Congress raised the rates of the heavy vehicle use tax relatively more than it raised the other Highway Trust Fund tax rates and adopted a progressive rate schedule. The owner of a truck with a gross vehicle weight (GVW)² of 80,000 pounds will pay a heavy vehicle use tax of \$1,900 or \$23.75 for each 1,000 pounds of weight in 1988 when the new, higher rates are fully phased in (except for persons who own and operate no more than five taxable trucks, as explained below). In 1982, the owner of the same vehicle paid a use tax of \$240, or \$3 for each 1,000 pounds of weight. The corresponding figures for the owner of a 40,000-pound GVW truck will be \$225 and \$5.63 in 1988, compared with \$120 and \$3 in 1982.

The higher rates of the heavy vehicle use tax will be phased in between 1984 and 1988. The Congress decided to give small owner-operators an extra year to adjust to the use-tax increase by phasing in the same rates for persons who own and operate no more than five taxable trucks between 1985 and 1989.

The structure of the tax on highway tires was also made progressive regarding tire weight to increase collections from the operators of heavy vehicles, while decreasing collections from other users. Also, the excise tax on heavy (truck) tires was increased.

Federal programs to improve highways, bridges, and mass transit facilities often require the states to finance a part of the project costs. The higher levels of federal spending that the act authorized may therefore imply larger state expenditures. Thus, these increases in federal highway taxes may soon be followed by increases in state taxes as well, as states act to raise the tax revenues they need to finance their larger contributions.

SIZE AND WEIGHT LIMITS REVISED TO PERMIT USE OF LARGER TRUCKS

Besides authorizing larger expenditures to improve the nation's highways, bridges, and mass transit systems and financing the increases with higher Highway Trust Fund taxes, the act also permits somewhat larger and heavier trucks to use certain highways. Specifically, under the provisions of the act, no state may:

- Set a maximum gross weight limit (actual weight of vehicle plus its load) less than the federal maximum limit of 80,000 pounds for vehicles using any portion of the Interstate Highway System within its borders or deny reasonable

²Gross vehicle weight refers to the weight of the empty truck plus the maximum weight to be carried, as determined by the truck's manufacturer at time of sale or the truck's owner at time of registration.

access to the System to such vehicles, on pain of losing its share of Interstate construction funds.³ Previously, states were not permitted to allow trucks weighing more than 80,000 pounds to use their interstate highways, but could, if they wished, set a lower limit. By 1982 most states allowed trucks that weighed up to the federal maximum, but three (Arkansas, Illinois, and Missouri) still had weight limits of less than 80,000 pounds.

- Limit the length of a truck semitrailer when only one trailing unit is being pulled to less than 48 feet, or limit the length of a semitrailer or trailer when two are being pulled to less than 28 feet each on vehicles using the Interstate Highway System or certain federal-aid primary system routes as designated by the Secretary of Transportation. Previously, no federal limit had been imposed. The new provision overrules the shorter limits that many states had been enforcing.
- Bar trucks with two trailing units (one of which may be a semitrailer) from using the Interstate Highway System or certain federal-aid primary system routes as designated by the Secretary of Transportation. Before the act, more than 12 states--primarily in the eastern United States--either banned the use of double trailers outright or enforced limits on the length of trucks that made double trailers impractical.
- Enforce a limit upon the width of vehicles using any portion of the Interstate System, or any other federal-aid highway as designated by the Secretary of Transportation, other than a limit of 102 inches, provided the highway has lanes designed to be at least 12-feet wide. Previously, there was a 96-inch maximum allowable width limit imposed on all vehicles (other than buses) that used the Interstate Highway System. Hawaii is exempt from this provision.

DOT stated during congressional hearings on the act that the increased limits on the length, width, and weight of trucks were intended to ameliorate the additional tax burdens that the act placed on heavy truck operators. DOT maintained that the benefits to the trucking industry from both an improved highway system and the productivity gains from increased size and weight limits would be far greater than the additional tax burdens imposed on motor carriers.

³The act, however, retains the grandfather provisions of earlier federal legislation that allow vehicles weighing more than 80,000 pounds to use the Interstate Highway System in some states. In addition to stipulating a limit on gross loaded weight, federal law also stipulates limits on the weight that may be placed on single and tandem axles.

CHAPTER 3

INDUSTRY STRUCTURE AND RECENT FINANCIAL PERFORMANCE

Until recently, the structure of the trucking industry was heavily influenced by the regulatory system established by the Motor Carrier Act of 1935. This act required that certain motor carriers receive operating authority from ICC. It also created distinctions among these regulated carriers according to whether they were authorized as contract or common carriers. Contract carriers were restricted to serving a small number of shippers under specific contractual arrangements. Common carriers, on the other hand, were granted the authority to provide trucking service to the general public. Those common carriers with regular route authority could only operate on designated routes on a scheduled basis. Irregular route common carriers, however, could operate on any route on a non-scheduled basis.

In addition to regulated motor carriers, a second major segment of the industry is comprised of the so-called "private carriers," that is, such firms as Sears and Exxon that transport their own goods and supplies. Although private carriers were not required to obtain operating authority from ICC, they were still subject to some ICC restrictions. For example, they were generally prohibited from hauling goods of other firms.

A third major segment of the industry is comprised of carriers which were exempted from all ICC regulations, including motor vehicles

- operated by farmers in transporting agricultural commodities from the farm or carrying supplies to the farm;
- used by agricultural cooperative associations; and
- used in carrying certain agricultural commodities, such as livestock, fish, and fresh fruits and vegetables.

Common and contract motor carriers account for about 40 percent of all intercity freight ton-miles hauled by trucks. Private carriers are estimated to account for another 40 percent and exempt carriers the remaining 20 percent.

IMPACT OF REGULATORY REFORM

The Motor Carrier Act of 1980 significantly affected the structure and functioning of the trucking industry by modifying or eliminating many of the operating restrictions that had been placed on motor carriers by the 1935 act. Specifically, the 1980 act eliminated restrictions prohibiting a motor carrier from operating as both a common and contract carrier, thus blurring the distinction between these two types of regulated carriers.

This act also increased the number of commodities that exempt carriers could haul, eliminated certain operating restrictions placed on regulated carriers, and encouraged greater price competition among motor carriers in general.¹

Perhaps the Motor Carrier Act of 1980's most significant effects stem from the provisions relaxing entry restrictions. The act made it easier for fit, willing, and able carriers to obtain certificates of operating authority by requiring ICC to grant such certificates unless it finds the proposed new service to be inconsistent with public convenience and necessity. Previously, applicants had to prove that their proposed new service was in the public interest. The act reversed this burden of proof by requiring existing carriers to prove that the new service is not in the public interest.

The effects of eased entry restrictions can be seen in the following statistics. Note in particular the accelerated increase in the number of ICC-regulated motor carriers since passage of the Motor Carrier Act of 1980. The average annual rate of increase from 1975 until 1980 was 2.1 percent, while the average annual rate from 1980 to 1982 was almost 10 times as great, 19.7 percent.

<u>Year</u>	<u>Number of ICC Regulated motor carriers</u>
1975	16,005
1976	16,472
1977	16,606
1978	16,874
1979	17,083
1980	18,045
1981	22,270
1982	25,722

Source: ICC

The Motor Carrier Act of 1980 not only made it easier for carriers to obtain new operating authorities, it also expanded the scope of existing authorities. Samples of permanent operating authority applications taken by ICC for 1976, 1980, and 1981

¹For common carriers, the Motor Carrier Act of 1980 directed ICC to eliminate gateway and circuitous route restrictions as well as some other operating restrictions. For contract carriers of property, it eliminated previous restrictions on the number of shippers they could serve. Increased price competition will also result because the Motor Carrier Act of 1980 phases out ICC's authority to grant antitrust immunity for certain rate-setting activities.

show a steady decline in the number of operating restrictions that they contain. With fewer operating restrictions, motor carriers are able to enter new markets more readily, which results in even greater competition.

TYPES OF MOTOR CARRIERS

The general economic effects of the Surface Transportation Assistance Act of 1982 on commercial motor carriers will depend on three factors: the impact of higher federal highway taxes on operating costs, the ability of carriers to increase productivity by using the larger capacity trucks and trailers permitted by the act, and the ability of carriers to raise rates. These factors have little to do with the regulatory classification of motor carriers. Thus, to analyze the potential economic impact of the act, we did not classify for-hire motor carriers according to whether they were common, contract, or exempt carriers. Rather, we made the following three distinctions:

- Between motor carriers providing TL service and those providing LTL service.
- Between motor carriers providing long-haul service and those providing short-haul service.
- Between owner-operators and the rest of the industry.

Motor carriers providing LTL service consolidate, transport, and distribute mostly small shipments from many individual shippers. They generally operate their own terminal facilities and are usually unionized, with most participating in the National Motor Freight Agreement with the International Brotherhood of Teamsters. They are also generally the largest and most sophisticated of trucking firms in terms of their management practices and marketing techniques. Until passage of the Motor Carrier Act of 1980, competition was somewhat restricted among LTL carriers, but now considerable entry into and exit from LTL markets has resulted in an increased level of price and service competition.

Motor carriers providing TL service transport large shipments (weighing over 10,000 pounds) directly between shippers and receivers. Some TL carriers specialize in hauling particular products, such as automobiles, steel, petroleum, or agricultural produce. Others provide transportation services under contract to certain shippers. Because terminal facilities are not required, competition among TL carriers is especially intense. TL carriers also face substantial competition from railroads because they both tend to haul heavy, high-density commodities.

Motor carriers providing long-haul trucking service (i.e., longer, generally interstate shipments over 200 miles) account for over one-half of the total ton-miles hauled by all commercial

motor carriers.² Although long-haul carriers provide both TL and LTL service, TL service predominates, accounting for about 83 percent of all interstate ton-miles. LTL shipments, on the other hand, account for only about 17 percent of all ton-miles hauled by commercial long-haul motor carriers. Long-haul motor carriers also make extensive use of heavy vehicles, with conventional tractor-semitrailer combination units accounting for the vast majority of all interstate vehicle miles traveled.³

Short-haul service (i.e., shorter, generally intrastate shipments) accounts for less than half of the total ton-miles hauled by commercial motor carriers. Unfortunately, little information is available about how much of this carriage is accounted for by TL service and how much is LTL service. The estimates contained in table 3 indicate that about 56 percent of the trucks owned by local carriers weigh less than 33,000 pounds. For carriers not classified as local carriers, only 26 percent of their trucks weigh less than 33,000 pounds. Thus, local carriers apparently make greater use of lighter trucks. Conventional tractor-semitrailer combination units account for only one-third of all local vehicle miles traveled.⁴

With regard to firm size, ICC statistics show that about 4 percent of the 25,722 regulated, for-hire motor carriers reporting to ICC in 1982 had more than \$5 million in annual revenues. About 10 percent of the regulated carriers had annual revenues of between \$1 million and \$5 million. The majority (22,059 out of 25,722) of regulated carriers were relatively small firms with annual revenues of less than \$1 million.

These figures do not include small, for-hire owner-operators who do not hold any ICC-operating authority. Although it is impossible to be precise about the number of owner-operators, the Bureau of Labor Statistics estimates that there were 220,000 self-employed motor carriers in 1982. This estimate is close to

²We are excluding private carriers from our definition of the commercial motor carrier industry. If private carriers were included, long-haul motor carriers would account for an estimated 56 percent of total ton-miles. However, the vast majority of private carriers provide short-haul service. Excluding private carriers should therefore increase the total share of ton-miles accounted for by long-haul carriers.

³This information is contained in An Investigation of Truck Size and Weight Limits Technical Supplement Volume 4, "Truck Traffic Forecasts and TS&W Limit Scenario Analysis Methods" (DOT, January 1982).

⁴An Investigation of Truck Size and Weight Limits Technical Supplement Volume 4 (DOT, January 1982).

an estimate of 230,000 owner-operators made by the Owner-Operators Independent Drivers Association of America in 1983.⁵ An estimated 70 percent of these owner-operators are one-person, one-truck businesses.

The type of service provided by owner-operators is primarily TL. Furthermore, most of this service (perhaps as much as 90 percent) is in the long-haul segment of the industry, with the rest being short-haul service. Owner-operators are important in hauling household goods (an LTL market), refrigerated products,

Table 3

Estimated 1985 Truck Populations by Weight Category and Type of Carrier^a

<u>Gross vehicle weight (thousand pounds)</u>	<u>Regulated carriers</u>	<u>Local carriers</u>	<u>Exempt carriers</u>	<u>Independent owner-operators^b</u>	<u>Total commercial</u>
Under 26	85,385	128,776	11,722	20,354	246,237
26-32.99	27,139	38,108	6,556	18,179	89,982
33-49.99	35,806	49,446	8,546	23,760	117,558
50-69.99	86,277	43,998	10,690	35,651	176,616
70-75.00	78,960	16,153	13,087	44,549	152,749
Over 75	<u>72,157</u>	<u>23,843</u>	<u>17,869</u>	<u>44,627</u>	<u>158,496</u>
Total	<u>385,724</u>	<u>300,324</u>	<u>68,470</u>	<u>187,120</u>	<u>941,638</u>

^aThese estimates are based on 1985 projections of truck populations contained in the "Final Report on the Federal Highway Cost Allocation Study" (U.S. DOT, May 1982). The two primary data sources for these projections were the 1977 Truck Inventory and Use Survey conducted by the Bureau of the Census and the National Vehicle Population Profile for Medium-Heavy Trucks compiled by the R. L. Polk Company. The latter data source was based on state truck registrations and was used by DOT to adjust for an apparent undersampling of heavy trucks in the Census study. DOT then used growth factors to derive their projections of 1985 truck populations. We disaggregated these DOT projections into 6 weight categories on the basis of information contained in "Transportation System Descriptors Used in Forecasting Federal Highway Revenues," a study undertaken by System Design Concepts for DOT.

^bThese figures are not necessarily inclusive of all owner-operators since some may be categorized as exempt carriers.

⁵As reported in a draft of their report entitled "The Economic Status of Owner-Operators: A Preliminary Investigation." According to this source, the 230,000 estimate does not include a "large number" of intrastate owner-operators.

building materials, and exempt agricultural commodities (all TL markets). The last market is especially important to owner-operators, since an estimated 30 percent of all owner-operators haul exempt agricultural products. They are facing increasing competition in this area, however, from the interstate carriage of fresh fruits and vegetables by railroads.

The 70 percent of all owner-operators who do not haul exempt commodities, lease their trucks and driving services to regulated motor carriers. Although most of these haul TL shipments, some work for LTL carriers. Their quick entry into and exit from different trucking markets allows large, established carriers to meet changes in demand without having to permanently change their scale of operation. By acting as the "spot suppliers" of the motor carrier industry, owner-operators tend to move into markets in which earnings are relatively high and out of those in which earnings are low.

Many owner-operators own very heavy vehicles. According to the information contained in table 3, 48 percent of the trucks classified as being owned by independent owner-operators have a GVW of 70,000 pounds or more. In comparison, only 29 percent of the trucks classified as being owned by commercial carriers other than owner-operators are in this category.

Another distinguishing characteristic of owner-operators is that they tend to use their equipment very intensively. One survey reported that 47 percent of those owner-operators responding drove 100,000 miles or more each year. According to another source, owner-operators engaged in interstate TL carriage average between 110,000 and 125,000 miles each year. In comparison, DOT estimates for all trucks with a GVW of 70,000 pounds or more show an average of 65,549 miles each year; lighter trucks average less than 30,000 miles annually.

RECENT FINANCIAL PERFORMANCE

Information on the financial performance of the trucking industry is limited to a relatively small number of large, regulated motor carriers. Specifically, only 3,283 of 25,722 regulated motor carriers were required to file annual and periodic financial reports with ICC in 1982. Thus, financial information on the vast majority of motor carriers, including regulated carriers with less than \$1 million in annual revenues, exempt carriers, private carriers, and unregulated owner-operators is generally unavailable.

Although no conclusive statistical evidence exists because of this paucity of data, the commercial trucking industry apparently has been adversely affected by the recent recession. Also, profits may have been depressed as a result of an increase in competitive pressure caused by regulatory reform. According to one industry source, 232 motor carriers, with 24,873 employees, have ceased operation since mid-1980. An additional 68 carriers were reported as operating under the federal bankruptcy

statutes or were voluntarily suspending or reducing their operations. Furthermore, several analyses, based on some of the unaudited financial reports filed with ICC, show a general deterioration in the financial condition of large, regulated motor carriers. For example, one analysis showed that the operating ratio, a commonly used indicator of financial health which equals operating expenses as a percentage of gross revenues, has increased from 94.45 in 1977 to 97.30 in 1981 for selected samples of regulated motor carriers.⁶ Another analysis reported that the 1982 operating ratio for its composite sample of regulated motor carriers rose to 98.29.⁷ More recent ICC information on the financial performance of the 100 largest regulated motor carriers, however, shows an improvement in their operating ratio during the second and third quarters of 1983. While these figures are suggestive of the recent financial performance of large, regulated motor carriers, they are not necessarily representative or indicative of the financial condition of the commercial motor carrier industry in general or of small carriers and owner-operators in particular. Adequate financial information is simply not available to draw conclusions about the recent financial performance of the vast majority of commercial, for-hire motor carriers.

⁶As reported in "1982: Financial Analysis of the Motor Carrier Industry," performed by Chase Manhattan Bank and jointly sponsored by the American Trucking Associations and the Union Oil Company. The sample sizes ranged from 963 carriers in 1977 to 704 in 1981.

⁷As reported in "The Effect of Increased Highway Taxes on Motor Carrier Operating Expenses and Profitability" (American Trucking Associations, April 1983).

CHAPTER 4

ESTIMATES OF ADDITIONAL TAX BURDENS AND POTENTIAL

PRODUCTIVITY GAINS

In this chapter we present and discuss estimates of the act's additional tax burdens and potential productivity effects. Some of these estimates are from studies analyzing the magnitude of the act's net benefits. Since our analysis is concerned with the distribution of the act's benefits and burdens, we take no position on whether the potential productivity gains afforded by the act will outweigh the additional tax burdens it imposes, either for truck owners as a group or for any particular segment of the commercial trucking industry. We present these estimates to show that the act's economic effects will vary among different segments of the trucking industry.

TAX BURDENS VARY BY TRUCK WEIGHT AND USAGE

Various government agencies, trade associations, and consulting firms have analyzed the act's economic effects. Almost all of the analyses we reviewed estimated the impact of higher federal highway taxes on the annual operating costs of motor carriers. Such estimates are based on either information or assumptions about the operating characteristics of different types of trucks, and on assumptions about who pays the federal excise taxes imposed on the sale of fuel, tires, and new equipment. The assumption which was almost universally made, yet seldom if ever explicitly stated, is that these taxes will be fully reflected in the prices that motor carriers pay for these products.¹

¹In fact, the extent to which excise taxes such as these are shifted forward to purchasers depends upon both supply and demand conditions in the marketplace. The Congressional Research Service, in a recent analysis of economic conditions in the U.S. petroleum market, concluded that roughly half of the tax increase on motor fuel will ultimately be reflected in a price increase. Thus, it predicted that the 5-cent-a-gallon fuel tax increase authorized by the act would lead to a price increase of 2-1/2-cents-a-gallon on average. This conclusion differs markedly from the assumption that the 5-cent-a-gallon tax increase will be fully reflected in a 5-cent-a-gallon hike in the price of motor fuel. For further information, see "Economic Impacts of an Increase in the Motor Fuel Tax," Mini Brief No. MB82247, Congressional Research Service, May 4, 1983.

For example, consider the additional tax burden placed on the owner of a tractor semitrailer with a GVW of 80,000 pounds. The act will raise the annual use tax imposed on this vehicle from \$240 to \$1,600 in 1985, an increase of \$1,360 (or 567 percent). If this vehicle is driven 70,000 miles each year and averages 5 miles a gallon, the owner of this truck will purchase 14,000 gallons of fuel each year. Assuming that the 5-cent-a-gallon increase in the federal tax on fuel is fully passed on to purchasers in the form of higher fuel prices, this truck owner will also pay \$700 more in federal fuel taxes in 1985 as a result of the act.

On the basis of additional information or assumptions about the durability of equipment and sale prices, it is also possible to estimate the increases in operating costs resulting from the higher federal excise taxes on new vehicles, trailers, and heavy tires, as well as the decreases in operating costs resulting from the repeal of federal taxes on the sale of retread rubber, inner tubes, lubricating oil, and parts and accessories. Combining these estimates yields the additional tax burden of all the federal highway tax changes authorized by the act.

Table 4 presents our estimates of the additional tax burdens imposed by the act on the owners of various types of trucks. These estimates are calculated using DOT projections of 1985 tax revenues, truck populations, and average annual mileage. They show that owners of combination tractor-trailers with a GVW of over 75,000 pounds will, on average, pay \$1,742 more in federal highway taxes for each truck they own in 1985 as a result of the act or 2.56 cents more in taxes for each mile driven; owners of 50,000- to 70,000-pound GVW vehicles, \$960 more for each truck owned or 2.99 cents more for each mile driven; and owners of trucks with a GVW of less than 26,000 pounds, \$13 more for each truck owned or 0.11 cents more for each mile driven. The positive relationship between the GVW of a truck and the amount of tax increase for each truck owned is a direct reflection of the act's intent to have the owners of heavier trucks pay a greater proportion of federal highway costs.

Because these estimates are based on information about the average operating characteristics of the vehicles in each category, truck owners who use their equipment more intensively than average will face even greater annual tax increases for each truck they own than these estimates indicate. Their additional taxes for each mile driven, however, may not necessarily be any greater.

The American Trucking Associations, Incorporated (ATA), a major industry group, has claimed that such estimates generally understate the additional tax burdens that the act will impose on so-called "typical" truck owners. ATA takes this position primarily because it believes that typical truck owners use their equipment more intensively than average. Table 5 contains some of the ATA's estimates of the annual federal highway taxes paid by typical truck owners in 1982 and 1985.

Table 4

Estimated Increases in Federal Highway
Taxes For Average Truck Owners in 1985^a

<u>Type of truck</u>	<u>Under old tax rates</u>	<u>Under new tax rates</u>	<u>Tax increase for each truck owned</u>	<u>Tax increase for each mile driven (cents)</u>	<u>Percentage tax increase</u>
Single unit under 26,000 lbs. GVW - 12,028 miles	\$ 125	\$ 138	\$ 13	.11	10.4
Single unit over 26,000 lbs. GVW - 15,474 miles	506	506	-	-	-
Combination unit under 50,000 lbs. GVW - 30,709 miles	745	1,024	279	.91	37.4
Combination unit be- tween 50-70,000 lbs. GVW - 32,156 miles	1,193	2,153	960	2.99	80.5
Combination unit be- tween 70-75,000 lbs. GVW - 62,764 miles	1,555	3,061	1,506	2.40	96.8
Combination unit over 75,000 lbs. GVW - 67,930 miles	1,699	3,441	1,742	2.56	102.5

^aThese estimates implicitly assume that all changes in the federal highway excise taxes on such items as fuel, tires, and new equipment are fully passed on to truck owners. Although 1985 is the first full year that the increased heavy vehicle use tax will be in effect, it will continue to increase from 1986 to 1988 for owners of vehicles with a GVW over 55,000 pounds. Any adjustments to 1985 tax revenue forecasts or 1985 truck population projections will affect these estimated increases in federal highway taxes.

Source: DOT, "Information on New User Fees and Truck Size and Weight Provisions in the Surface Transportation Assistance Act of 1982," and Final Report on the Federal Highway Cost Allocation Study.

Table 5

ATA Estimates of Federal Highway
Taxes for Typical Truck Owners^a

<u>Truck</u>	<u>Estimated annual federal taxes for each truck</u>		<u>Tax increase for each truck owned</u>	<u>Tax increase for each mile driven (cents)</u>	<u>Percentage tax increase</u>
	<u>1982</u>	<u>1985</u>			
2-axle truck 25,000 miles - 24,000 lbs. GVW	\$ 441	\$ 408	\$ (33) ^b	(.13) ^b	(7.5) ^b
3-axle tractor semitrailer 40,000 miles - 40,000 lbs. GVW	906	1,445	539	1.35	59.5
Dump truck 25,000 miles - 50,000 lbs. GVW	929	1,639	710	2.84	76.4
4-axle tractor semitrailer 50,000 miles - 60,000 lbs. GVW	1,153	2,386	1,233	2.47	106.9
5-axle tractor semitrailer 70,000 miles - 78,000 lbs. GVW	1,746	3,973	2,227	3.18	127.5
Truck full trailer 80,000 miles - 80,000 lbs. GVW	2,274	4,823	2,549	3.19	112.1

^aThese estimates implicitly assume that all changes in the federal highway excise taxes on such items as fuel, tires, and new equipment are fully passed on to truck owners. Although 1985 is the first full year that the increased heavy vehicle use tax will be in effect, it will continue to increase from 1986 to 1988 for owners of vehicles with a GVW over 55,000 pounds.

^bParentheses denote tax decreases.

Source: ATA

These estimates are generally higher than those presented in table 4. These estimates still indicate, however, the same positive relationship between a truck's GVW and the amount of additional tax burden for each truck owned, which ranges from an estimated tax increase of \$2,549 for the typical owner of a 80,000-pound GVW truck with full trailer to a decrease of \$33 in federal highway taxes for the typical owner of a 2-axle, 24,000-pound GVW truck.

The Congressional Research Service, the Department of Agriculture, and Data Resources Incorporated (a private consulting firm) also used the typical owner approach to estimate the act's tax impact on owner-operators of heavy trucks.² But because each of these studies used a different, yet plausible, set of economic and operating assumptions to characterize a typical owner-operator, they resulted in somewhat different estimates. Specifically, the Congressional Research Service study estimated that, compared to 1982, the operating costs for a typical owner-operator of a 80,000-pound GVW truck could increase by as much as \$1,100 in 1983 and \$3,300 in 1990 as a result of higher federal taxes. On the basis of each mile driven, the estimated tax increases are 1.10 cents in 1983 and 3.30 cents in 1990.

The Department of Agriculture's draft study estimated that, compared to 1982, a typical owner-operator hauling produce long distance in an 80,000-pound GVW truck would experience a \$3,315 increase in annual operating costs in 1985 (a 2.57-cent increase for each mile driven) as a result of the act. Data Resources Incorporated estimated that increases in federal highway taxes would cause the annual operating cost of a 80,000-pound GVW tractor-semitrailer to increase by \$2,250 in 1985 (2.25 cents for each mile driven) and \$2,500 in 1988 (2.50 cents for each mile driven) for a used truck and by \$2,650 in 1985 (2.65 cents for each mile driven) and \$2,900 in 1988 (2.90 cents for each mile driven) for a new truck.

These estimates suggest that owner-operators of very heavy vehicles will experience 1985 tax increases for each truck owned from 14 to 90 percent greater than the \$1,742 estimate, as shown in table 4. On the basis of each mile driven, however, the estimated 1985 tax increases for owner-operators range from 1.98 cents to 2.65 cents, which are not significantly different from (and some are actually lower than) the estimate of 2.56 cents for each mile driven, as shown in table 4. Thus, owner-operators may pay more for each truck each year than other heavy vehicle owners

²See "Independent Truckers: The Effect of Recent Legislation on Earnings," Report No. 83-27E, March 1, 1983, Congressional Research Service, and "The Surface Transportation Assistance Act of 1982: Carrier and Shipper Impacts," February 1983, Data Resources Incorporated. The Department of Agriculture's estimates are from a draft entitled "New Federal Highway Taxes and Impacts on Owner-Operators."

because they typically drive many more miles each year than average. They could actually pay less each mile driven, however, because the heavy vehicle use tax is a fixed-cost which declines on the basis of each mile driven as annual mileage increases.

These estimates could overstate actual tax burdens for two reasons. First, these estimates are calculated under the implicit assumption that truck owners will bear the full burden of federal highway taxes. Such an assumption implies that they not only pay the annual heavy vehicle use tax, but that they also pay the federal excise taxes on fuel, tires, and new equipment. If, in fact, the taxes imposed on the sale of such items are not fully passed on in the form of higher prices that truck owners must pay for these products, these estimates will overstate actual tax burdens. Second, truck owners could reduce their tax burdens by reducing their purchases of these items. For example, they could reduce their purchases of new tires by making greater use of retreads, which are not subject to a federal excise tax under the provisions of the act.

Table 6

**Estimates of Tax Increases for Typical
Owner-Operators of Very Heavy Trucks^a**

Source	Year			
	1983	1985	1988	1990
	<u>(dollars for each truck owned)</u>			
American Trucking Associations, Inc.	702	1,977	2,816	-
Data Resources, Inc.	(Used truck) -	2,250	2,500	-
	(New truck) -	2,650	2,900	-
Congressional Research Service	1,100	-	-	3,300
Department of Agriculture	-	3,315	-	-
	<u>(cents for each mile driven)</u>			
American Trucking Associations, Inc.	.70	1.98	2.82	-
Data Resources, Inc.	(Used truck) -	2.25	2.50	-
	(New truck) -	2.65	2.90	-
Congressional Research Service	1.10	-	-	3.30
Department of Agriculture	-	2.57	-	-

^aAll the estimates are for an 80,000-pound GVW vehicle, except for the ATA estimate which assumes a 78,000-pound GVW tractor-semitrailer. All except the Department of Agriculture's calculations, which assume the vehicle is driven an average of 129,000 miles each year, are based on the assumption that the vehicle is driven 100,000 miles each year. All increases are calculated from 1982 levels.

**ABILITY TO INCREASE PRODUCTIVITY
VARYS AMONG MOTOR CARRIERS**

Several of the studies we reviewed also assessed the act's potential benefits for motor carriers. As we noted in chapter 2, DOT testified before the Senate Committee on Finance that increases in the productivity of motor carriers made possible by this legislation would more than offset the cost increases resulting from higher federal highway taxes. Such productivity increases could result from the use of improved roads and bridges, as well as from the act's provisions allowing the use of heavier, longer, and wider trucks on certain highways. The former source of productivity gains is, of course, common to all highway users, while the latter is dependent on a motor carrier's ability to use larger capacity vehicles than was otherwise possible before the act. Relative differences in this ability will thus cause expected productivity gains to vary significantly among motor carriers.

Aggregate productivity gains for all truck owners

Although none of the studies we reviewed assessed the benefits of improved highways, several did estimate the potential benefits of the act's size and weight provisions. Specifically, DOT estimated that, by 1985, truck owners as a group will realize nearly \$5 billion annually in productivity benefits from the use of larger capacity trucks. This estimated productivity gain far outweighs the additional federal tax burden, which DOT estimates will total \$1.7 billion in 1985, and results in an estimated net benefit of \$3,240 million for all truck owners.

As table 7 indicates, DOT estimates that \$2,310 million, or almost one-half, of this productivity gain will result from the increased use of double trailers. The act's provision permitting the use of wider trucks and trailers is estimated to account for \$950 million, or 19 percent, of the total increase. The third largest source of expected productivity gains is the act's provision allowing for the use of longer vehicles, which accounts for \$850 million, or 17 percent, of the total estimated gain. Because only three so-called "barrier states"--Arkansas, Illinois, and Missouri--had maximum weight limits below 80,000 pounds before the act, the least important source of benefits is the act's weight provision, which accounts for \$830 million of the total.³

³These lower weight limits not only affected the intrastate motor carriers in these three states, but also any interstate carriers whose routes crossed these state borders. Before the act, this latter group of carriers either had to comply with the lower state weight limits of about 73,000 pounds (and thus reduce their payloads) or reroute their trips to avoid crossing these states. Either of these two alternatives resulted in increased costs.

ATA, in an analysis of DOT's productivity estimates, claimed that these estimates were overstated by \$2.3 billion. Even the ATA estimates, however, show truck owners reaping a \$829-million net benefit in 1985 as a result of the act. The size of the net benefit is considerably smaller than DOT's \$3-billion estimate because, according to ATA, DOT not only overestimated the act's productivity benefits, but also underestimated the additional tax burden.⁴

Table 7

DOT and ATA Estimates of the Act's Net Benefits for the Trucking Industry in 1985

(millions of dollars)

Productivity benefits:	<u>DOT</u>	<u>ATA</u>
Allow double trailers in the East	\$2,310	\$1,466
Allow increased vehicle widths	950	418
Allow increased vehicle lengths	850	366
Eliminate "barrier state" weight limits	<u>830</u>	<u>379</u>
Total productivity benefit	\$4,940	\$2,629
Additional tax burden	<u>-1,700</u>	<u>-1,800</u>
Net benefit	<u>\$3,240</u>	<u>\$ 829</u>

⁴We attempted to assess these disparate claims regarding the act's potential productivity effects. However, because some of these estimates were not well documented, and since our analysis concerns the distribution of the act's burdens and benefits, we did not attempt to verify them.

Although ATA's estimates show that motor carriers as a group will reap a substantial net benefit from the act, it asserted that some carriers would be unable to realize any productivity gains whatsoever because of their operating characteristics. Moreover, the ATA study claimed that productivity benefits could become illusory if carriers were financially unable to purchase any of the new, larger capacity trucks and trailers. Specifically, it identified owner-operators and specialized carriers, such as motor vehicle haulers and liquid petroleum carriers, as those likely to be made relatively worse off as a result of the act.

Productivity gains for individual motor carriers

Several other studies estimated the act's potential productivity effects on individual motor carriers. The study by Data Resources, Inc., for example, estimated the decreases in operating costs that are likely to result from using the larger capacity trucks allowed by the act. According to these estimates, shown in table 8, a truck owner who was previously restricted to pulling one 40-foot long, 8-foot wide, and 8.25-foot high trailer could realize a 17-percent decrease in operating costs if that owner switched to pulling one 45-foot long, 8.5-foot wide, and 8.25-foot high trailer as a result of the act. If the truck owner switched to pulling a wider, 48-foot long trailer, the operating costs could fall by as much as 22 percent.

The maximum potential cost savings available to this truck owner would be 33 percent, resulting from the use of two 28-foot twin trailers.⁵ However, if this motor carrier specialized in hauling a very dense, heavy commodity like steel, and thus was prevented from hauling bigger loads by a previously existing 80,000-pound weight limit, the motor carrier would be unable to realize any productivity gains from the use of a larger capacity vehicle. Similarly, motor carriers not constrained to use vehicles of significantly smaller carrying capacities before the act would realize little, if any, benefits from the act's size and weight provisions.

In Congressional Research Service's study of the act's impact, it estimated a similar range of productivity benefits for owner-operators previously constrained to pulling one 45-foot long, 8-foot wide trailer. According to this analysis, the operators able to attain the maximum productivity gains possible, would experience as much as a 32-percent increase in annual earnings. This study also noted, however, that other owner-operators would be unable to realize any productivity gains as a result of the act.

⁵These estimates are for changes in operating costs only. Total costs savings may be even greater if the use of larger capacity vehicles also results in reductions in such items as inventory and terminal costs.

Table 8

Data Resources' Estimates of the Effects of Size and Weight
Provisions for Individual Motor Carriers

<u>Trailer type</u>	<u>Capacity (cubic feet)</u>	<u>Percent of increase in carrying capacity^a</u>	<u>Percent of decrease in operating costs^a</u>
Single 40' ^b (Base case)	2,640	-	-
Single 45'	3,156	20	17
Single 48'	3,366	28	22
Double 28'	3,927	49	33

^aRelative to base case.

^bBase case assumes a width of 8 feet and a height of 8.25 feet.
Others assume an increased width of 8.5 feet as allowed by the
act.

Source: Data Resources, Inc.

Net effects of act

The studies which analyzed both the expected costs and the potential benefits of the act were also able to draw conclusions about the act's likely net effects on individual motor carriers. The study by Data Resources, Inc., for example, concluded that those carriers able to increase productivity by the use of larger capacity vehicles should experience total cost savings that generally match or outweigh the tax increases on fuel and heavy vehicles. This study went on to state, however, that a majority of carriers may be made worse off by the act, because the nature of their operations would effectively prevent them from realizing any offsetting productivity gains. It thus predicted that many marginal carriers--particularly owner-operators--would be forced into bankruptcy as a result of the legislation.

The Congressional Research Service study was the only one we reviewed which explicitly recognized that the net effect of the act depends not only on the magnitude of the tax increases and the ability to reap productivity gains from the use of larger capacity vehicles, but also on the carrier's ability to pass any tax-related cost increases on to shippers in the form of higher rates. It did not, however, analyze how, or to what extent, this could occur. Rather, the study estimated that the productivity increases resulting from the act's size and weight provisions could raise the annual net earnings of owner-operators by as much as \$4,800 in 1983 and \$6,400 in 1990 if they are able to shift all of the federal tax increases on to others. For the opposite case, the study estimated that the act could lower the annual net earnings of owner operators by \$1,100 in 1983 and \$3,300 in 1990 if they are unable to reap any productivity gains and cannot pass on any of the tax increases.

The extent to which truck owners can pass these additional tax burdens on to shippers by increasing their rates is of obvious importance in determining the impact of the act on the commercial motor carrier industry. None of the studies we reviewed, however, adequately addressed this issue. In the next chapter, we explicitly consider the factors determining whether commercial motor carriers will be able to raise their rates.

CHAPTER 5

THE IMPACT OF THE ACT WILL VARY AMONG MOTOR CARRIERS

How a particular motor carrier will be financially affected by the act depends on three critical factors:

- The impact of higher federal highway taxes on the carrier's operating costs.
- The ability of the carrier to increase productivity from the use of either larger capacity trucks or improved roads and bridges.
- The carrier's ability to raise rates.

The differences in these three factors will cause the act to have significantly different economic effects on motor carriers operating in various segments of the industry.

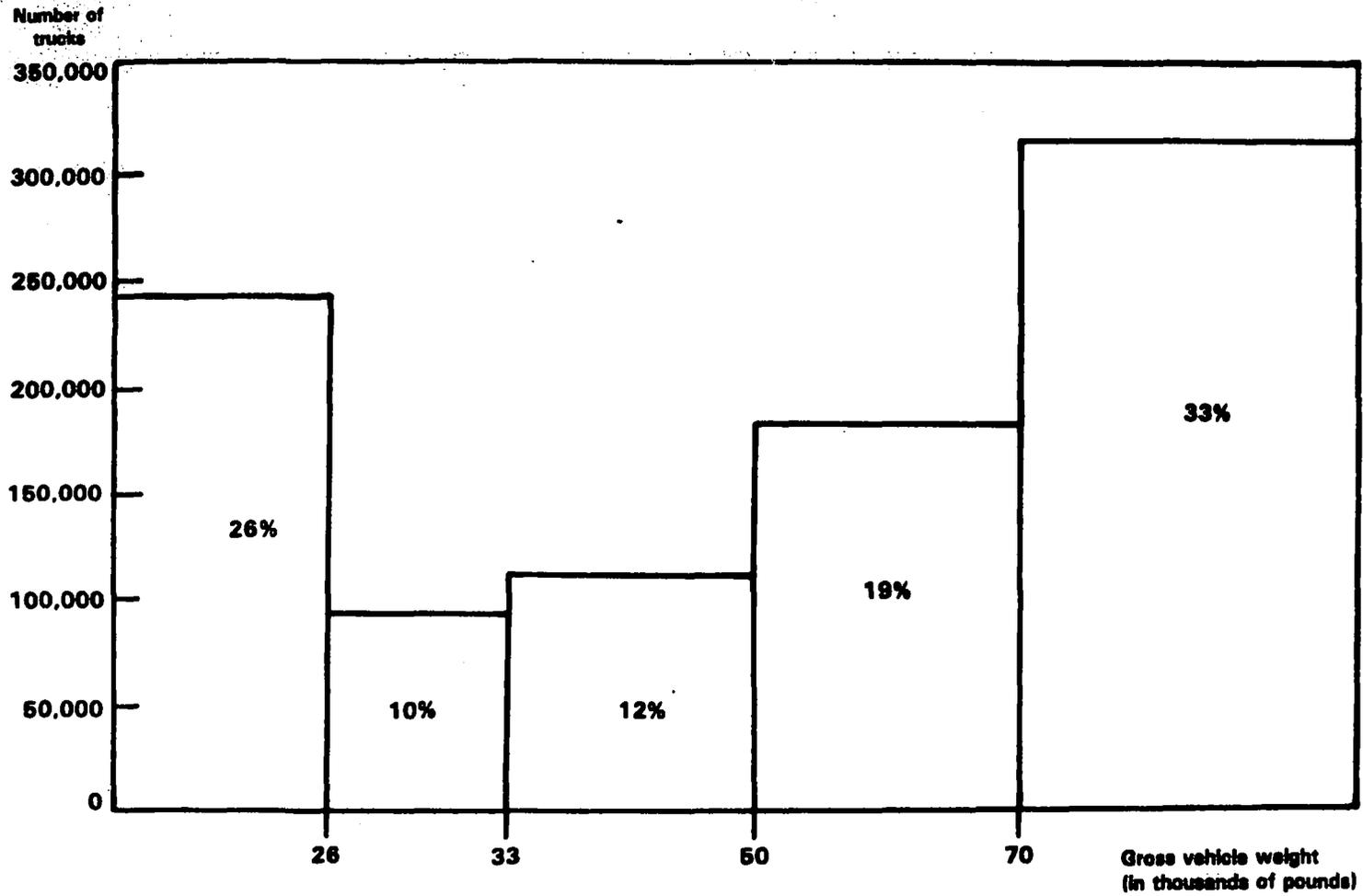
DISTRIBUTION OF TAX BURDENS

The effect of higher federal highway taxes on annual operating costs will, of course, vary directly with the number and the GVW of the trucks a motor carrier owns and operates. As table 9 shows, an estimated 33 percent of all commercial trucks have a GVW of 70,000 pounds or more. The owners of these very heavy vehicles will experience the largest annual tax increases. Specifically, according to our estimates in table 4 (p. 19), owners of very heavy vehicles will experience tax increases averaging from \$1,506 to \$1,742 for each truck or from 2.40 to 2.56 cents for each mile driven in 1985. In contrast, owners of light trucks (those with a GVW of less than 33,000 pounds) will experience relatively small tax increases; in some cases, taxes will not increase at all. These light trucks should account for about 36 percent of all commercial trucks in 1985.

Since the size of the additional tax burdens imposed by the act vary by truck weight, they will also vary across different segments of the industry. Motor carriers providing mostly TL service will generally experience relatively large tax increases as a result of the act because they use heavy trucks to haul large loads. This is particularly so for TL carriers specializing in hauling high density, heavy commodities like steel, automobiles, and petroleum. In contrast to TL carriers, LTL carriers use both light and heavy trucks. The additional tax burdens imposed on LTL carriers will thus vary to a greater extent, depending on the weight composition of a particular carrier's fleet. On average, however, the tax increase for each truck owned by an LTL carrier should be less than that for a TL carrier.

Table 9

Weight Distribution of Commercial Trucks



Source: GAO calculations based on DOT projections of 1985 truck populations.

30

Heavy trucks are also far more likely to be used in interstate carriage than in local carriage. As a result, motor carriers serving long-haul markets should experience greater tax burdens than those serving short-haul markets.

Owner-operators typically use very heavy trucks intensively, often driving over 100,000 miles each year. Therefore, they will face relatively large tax increases compared to the rest of the industry. Others have estimated the size of their additional 1985 tax burdens to be from \$1,977 to as much as \$3,315 for each truck (see table 6, p. 23) or from 1.98 cents to 2.65 cents for each mile driven.

DISTRIBUTION OF POTENTIAL PRODUCTIVITY GAINS

Some motor carriers will be able to offset the act's additional tax burdens by using the larger capacity trucks permitted by the act. Both DOT and ATA have estimated that, by 1985, these productivity gains will outweigh the additional tax burden for all truck owners as a group. These estimates include all private as well as all commercial motor carriers. The extent to which a particular commercial carrier will be able to achieve offsetting increases in productivity will depend on its ability to haul bigger payloads.

The 80,000-pound weight limit, which the act made uniform nationwide, was already established in all but three states. Thus, if the amount of cargo a particular carrier could haul in each shipment was already being constrained by a previously existing 80,000-pound weight limit, no increase in productivity could stem from the act's size and weight provisions. Similarly, if a carrier hauled mostly partial loads with existing vehicles, little, if anything, would be gained from using larger capacity trucks.

Over one-half (56 percent) of the total interstate ton-miles hauled by commercial motor carriers are either partial loads or shipments constrained by a previously existing 80,000-pound weight limit. The motor carriers hauling these shipments will not be able to increase their payloads by using larger capacity trucks and, thus, will not receive any productivity gains from the act's size and weight provisions.

A majority of the interstate ton-miles hauled by TL carriers (59 percent) are partial loads or shipments constrained by an 80,000-pound limit. Proportionately fewer interstate LTL ton-miles (48 percent) are in this category. Thus, LTL carriers have a greater opportunity than TL carriers to benefit from using the larger capacity trucks permitted by the act.

Carriers whose shipments were constrained by a weight limit of less than 80,000 pounds before the act's passage should be able to realize some increases in productivity as a result of the act. Since three states had lower limits of about 73,000 pounds,

the 80,000-pound limit imposed by the act could result in a 15- to 21-percent increase in carrying capacity for those carriers constrained by these lower limits.¹ Such carriers not only include those providing intrastate service in Arkansas, Illinois, and Missouri, but also those providing interstate service passing through these states.

Because of the geographical location of these three states in the middle of the nation (which results in their characterization as "barrier states"), the latter group of motor carriers is not insignificant. About 28 percent of the interstate ton-miles hauled by commercial motor carriers is accounted for by shipments constrained by a lower weight limit. While 32 percent of the interstate ton-miles hauled by commercial TL carriers are in this category, only 8 percent of LTL interstate ton-miles are so constrained. Thus, TL carriers should benefit more from the act's weight provision than LTL carriers.

The greatest productivity benefits from the act will result from the use of double trailers, which in some cases could increase a truck's carrying capacity by as much as 49 percent. The productivity benefits resulting from the use of longer, wider trucks and single trailers will also be significant, as they could increase carrying capacity by as much as 28 percent (see table 8, p. 27). These gains will only be attainable, however, by carriers whose shipments are constrained by the cubic carrying capacity of their present vehicles. About 16 percent of total interstate ton-miles are accounted for by such shipments. Almost one-half (44 percent) of all interstate ton-miles by LTL carriers are so constrained, while only 9 percent of interstate TL ton-miles are affected.

The relative importance of the act's size and weight provisions for TL and LTL motor carriers is illustrated by the charts in table 10.² They show that proportionately more LTL shipments than TL shipments (44 percent versus 9 percent) are constrained

¹Based on an average payload weight of 33,000-48,000 pounds.

²The information in these charts is based on our calculations using DOT-supplied data. The DOT data appear in two technical supplements to An Investigation of Truck Size and Weight Limits. Specifically, we used data from technical supplement volume 1, "Analysis of Truck Payloads Under Various Limits of Size, Weight, and Configuration" (February 1981), and technical supplement volume 7, part 1, "Carrier, Market, and Regional Cost and Energy Tradeoffs" (October 1982). These supplements contained 1985 projections of size and weight-constrained ton-miles for TL and LTL carriers. The weight-constrained projections assume six barrier states. Since there are, in fact, only three barrier states, we modified these estimates by applying a separate DOT projection of weight-constrained ton-miles which assumed only three barrier states.

by the cubic capacity of existing vehicles. Thus, LTL carriers should benefit far more than TL carriers by using the longer, wider trucks and trailers permitted by the act. These larger cubic capacity vehicles could allow LTL carriers to increase the size of their payloads by as much as 49 percent in some cases and substantially decrease their costs. On a regional basis, LTL carriers serving the eastern region of the nation stand to benefit more than other LTL carriers, because double trailers were permitted in many western states before the act.

These charts also show that proportionately more TL shipments than LTL shipments (32 percent versus 8 percent) are constrained by a lower (73,000 pound) weight limit. Thus, TL carriers should benefit more than LTL carriers from the uniform 80,000-pound weight limit imposed by the act. Weight-constrained carriers, however, will only be able to increase the size of their payloads by at most 15 to 21 percent as a result of this change. The size of the potential productivity gains achievable by TL carriers, in general, will thus be smaller than those achievable by LTL carriers.

Motor carriers should also benefit from improvements in roads and bridges made possible by the act. Faster transit times should increase the effective annual carrying capacity of existing trucks. Carriers should also benefit from reduced maintenance and replacement costs. No specific estimates of the size of these benefits have, to our knowledge, been made as yet. However, motor carriers making greater use of federally aided roads in general, and the Interstate Highway System in particular, should benefit the most. Thus, we believe that motor carriers primarily serving long-haul markets should benefit more than those serving short-haul markets.

SOME CARRIERS ARE BETTER ABLE TO RAISE RATES

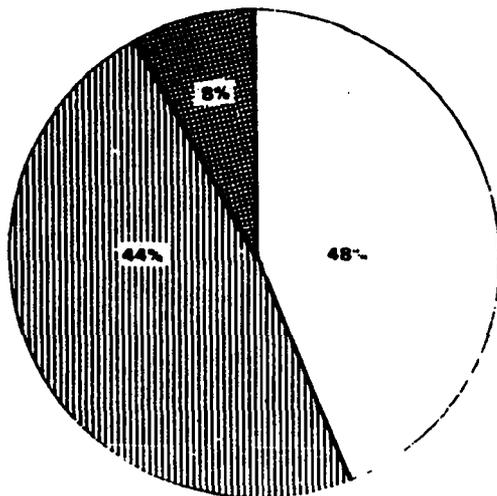
Producers of any good or service must over time earn enough in revenues to cover costs and allow a profit margin sufficient to justify remaining in business. Because commercial trucking is a highly competitive industry which has been substantially affected by both the recent recession and regulatory reform, profit margins for some carriers have been reduced. If the act causes significant cost increases for any marginally profitable trucking firms, it could force some into bankruptcy unless they are able to charge more for their services.

Motor carriers operating in markets which have substantial amounts of excess capacity will find it exceedingly difficult to raise their rates. This difficulty will most likely affect carriers hauling products and materials for industries most severely affected by the recent recession. If the current economic recovery proceeds, however, the demand for trucking services in general will increase, causing the amount of excess capacity to fall. Consequently, the ability of commercial motor carriers as a group to pass any act-related cost increases on to shippers

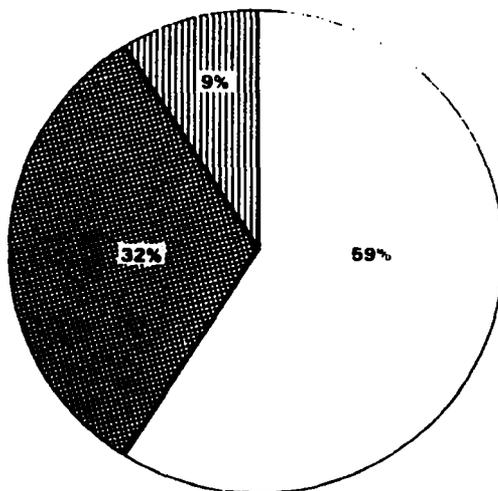
Table 10

LTL and TL Shipments by Type of Constraint

Less Than
Truckload Shipments
(17% of Interstate Ton-Miles)



Truckload Shipments
(83% of Interstate Ton-Miles)



Type of Constraint:

-  Shipments Constrained by Cubic Capacity of Vehicles
-  Shipments Constrained by 73,000 Pound Weight Limit
-  Partial Loads and Shipments Constrained by 80,000 Pound Weight Limit

in the form of higher prices would improve. In this respect, the act gives an advantage to small owner-operators because it defers increases in the heavy vehicle use tax by 1 year for persons who own and operate no more than five taxable trucks. Assuming the current economic recovery continues until July 1, 1985, the date of the first use tax increase for small owner-operators, these individuals should be in a better position to either absorb the tax increase themselves or pass it along to their customers in the form of higher prices.

To some extent, shippers will be able to deter any attempts by motor carriers to raise their rates. Their ability to do so depends on the price, suitability, and availability of alternative modes of transportation. Usually, the best substitute for truck transportation is rail transportation. Three of the primary factors that will determine the extent to which shippers will switch to rail if motor carriers raise their rates are

- the distance over which goods are shipped,
- the type of service desired, and
- the value of the goods being shipped.

The greater the distance over which goods are shipped, the more competitive the railroads are. Long-distance shippers are more likely to switch from truck to rail in response to relatively small price increases by motor carriers. Motor carriers serving long-haul markets may thus be unable to pass on any significant act-related cost increases without suffering a substantial loss of business on routes on which adequate rail service is available. Since rail is a poorer substitute for trucks over short distances, short-haul shippers will generally be much less responsive to price changes. Motor carriers serving short-haul markets will thus be better able to pass cost increases on to shippers since price increases will cause a relatively smaller decline in the demand for their services.

The ability of shippers to shift from truck to rail service also depends on the type of service they desire. Although rail and motor carriers compete for both TL and LTL freight, rail is generally more competitive with trucks providing TL service than with those providing LTL service. Shippers desiring TL service thus will be more responsive to changes in motor carrier rates. As a result, motor carriers who provide primarily TL service will be less able to raise their rates and pass on any act-related cost increases than will those carriers providing primarily LTL service.

The value of the goods being shipped also affects the extent to which shippers will switch to rail carriers. For high-value goods, transportation costs will comprise a small portion of their selling price. As a result, shippers of high-value goods will be less concerned about increases in transportation costs than will shippers of low-value goods. Motor carriers hauling high-value goods will thus be better able to raise their rates than will carriers of low-value goods.

CHAPTER 6

VIEWS OF INDUSTRY AND LABOR

During our study, we interviewed industry representatives to ascertain their opinions about how the act might affect commercial motor carriers. Specifically, we spoke with officials of ATA, the individual conferences that comprise its membership, and three associations representing owner-operators. We also contacted officials of the International Brotherhood of Teamsters and the Association of American Railroads. (See appendix I for a complete list of the organizations we contacted.)

Representatives of all the various motor carrier groups we interviewed generally expressed more concern about the nature of the new highway tax structure than about the size of the overall tax increases imposed by the act. Specifically, they characterized the annual heavy vehicle use tax as being an "inequitable," "privilege" tax because it requires lump-sum payments on the basis of GVW and not (except for the 5,000-mile exemption) actual highway usage. They consider it unfair that the owner of an 80,000-pound GVW truck driven 100,000 miles each year, for example, would pay the same amount of use tax as the owner of a similar vehicle driven only 10,000 miles.

Representatives of owner-operators also objected to the annual use tax because at least one-fourth of it must be paid at the start of a fiscal year. They believe that this could create a cash flow problem for their members, who often operate with little cash reserves.

Because of these objections, almost all of the carrier associations we contacted are lobbying for either the repeal of or a substantial reduction in the annual use tax, to be offset by an increase in the federal excise tax on diesel fuel. While such a change in the highway tax structure could be devised to yield approximate amounts of tax revenues, DOT opposes one of these so-called diesel differential bills, H.R. 2124, on the grounds that it would result in heavy trucks paying much less than their share of highway costs and lighter trucks much more than their fair share.

What a particular carrier association thought about the overall financial impact of the act depended on the type of service provided by its members. Representatives of TL carriers, such as the National Tank Truck Carriers, the National Automobile Transporters Association, the Contract Carrier Conference, and the Steel Carriers Conference, expressed a general belief that the act's additional tax burdens would greatly outweigh any productivity benefits their members would receive from the act. They felt this primarily because many of their members were already operating trucks at, or close to, the 80,000-pound weight limit before the act's passage. The act's size and weight provisions would, therefore, not enable them to carry any significantly larger payloads. One of these representatives also noted that

TL carriers would have difficulty passing on higher taxes to shippers through rate increases because of a substantial amount of excess capacity in the market for TL services. Another stated that the increased tax burdens would eventually be passed on to shippers through rate increases, but that some motor carriage would be lost to rail as a result.

Representatives of carriers providing mostly LTL services (e.g., the Film, Air, and Package Carriers Conference; the Regional and Distribution Carriers Conference; and the Regular Common Carrier Conference) expressed mixed opinions. Some expected their members to receive only minimal benefits as a result of the act. Others, however, expected their members to receive significant net benefits because the use of larger trucks would enable them to carry substantially higher payloads and offset the act's additional tax burdens. This would be particularly so, they noted, when their members were previously prohibited from hauling double trailers. One representative of LTL carriers using lighter trucks also noted that the act would actually lower the federal highway tax burden imposed on that group's members, primarily because it repealed the annual use tax on vehicles with a GVW between 26,000 and 33,000 pounds. Another representative, citing distance as a relevant factor, said that LTL carriers serving local, short-haul markets would receive relatively fewer productivity benefits compared with transcontinental LTL carriers.

We found that representatives of owner-operators were the most critical of the act. Because many of their members use very heavy trucks to haul high density truckload shipments, they believed that the act imposed additional tax burdens with little opportunity for them to achieve any offsetting gains in productivity. Switching to LTL service, they contended, would be a difficult transition for most TL owner-operators to make on their own because of the need for terminal facilities. They also believed that many TL owner-operators would resist leasing their trucks and driving services to established LTL carriers because this would entail a loss of their status as independent businesses.

Representatives of the International Brotherhood of Teamsters expected the act to have different short- and long-run effects for their members employed as drivers by commercial trucking firms. In the short-run, they expect that some Teamster drivers could lose their jobs since the act's size and weight provisions will allow motor carriers to haul the available cargo in fewer trucks. In the long-run, however, they believe that the act's productivity benefits could create more jobs if they help trucking firms survive recessionary economic conditions. They also stated their belief that some of the owner-operators they represent could benefit from the act if they invest in new, larger capacity equipment. Like the motor carrier associations we contacted, the Teamsters oppose the annual heavy vehicle use tax and support, as an alternative, an increase in the federal excise tax on diesel fuel.

Finally, we contacted a representative of the Association of American Railroads. He said that the act's productivity benefits would unquestionably outweigh the increases in federal highway taxes for the trucking industry as a whole. However, he believed that the magnitude of the net gain would be much less for motor carriers in direct competition with railroads for high density, truckload shipments. He thus expected any negative impact on rail traffic attributable to the act to be slight.

CHAPTER 7

CONCLUSIONS, AGENCY COMMENTS, AND OUR RESPONSE

The Surface Transportation Assistance Act of 1982 raised federal highway taxes for the first time in over two decades; altered the existing highway tax structure to make it more equitable; and permitted the use of longer, wider, and heavier trucks on many federally aided highways. The results of our analysis indicate that the act will have significantly different economic effects on commercial motor carriers according to the particular segments of the industry they operate in. Thus, we believe that some motor carriers will be better off than others as a result of this legislation. Specifically, our findings indicate the following:

LTL CARRIERS WILL BE MUCH BETTER OFF THAN TL CARRIERS

Since the size of the additional tax burdens imposed by the act vary substantially by truck weight, they will also vary across different segments of the commercial trucking industry. TL carriers transport large shipments weighing over 10,000 pounds directly between shippers and receivers. Because they use heavy trucks to haul large loads, motor carriers providing mostly TL service will generally experience relatively large tax increases as a result of the act. This is particularly so for TL carriers specializing in hauling high density, heavy commodities, such as steel, automobiles, or petroleum. In contrast to TL carriers, LTL carriers use both light and heavy trucks to consolidate, transport, and distribute mostly small shipments from numerous individual shippers. The tax burdens imposed on LTL carriers will thus vary to a greater extent, depending on the weight composition of a particular carrier's fleet. On average, however, the tax increase for each truck experienced by an LTL carrier should be less than that for a TL carrier.

The value of the act's size and weight provisions to motor carriers depends on the relative importance of the previously lower size and weight limits in constraining the size of their shipments. Since the former size limitations constrained far more LTL shipments than TL shipments, LTL carriers should benefit comparatively more by using the longer, wider trucks and double trailers permitted by the act. On a regional basis, LTL carriers serving the eastern region of the nation stand to benefit more than other LTL carriers, because double trailers were already permitted in many western states before the act.

The former 73,000-pound state weight limits constrained proportionately more TL shipments than LTL shipments. Thus, TL carriers should benefit more than LTL carriers from the uniform 80,000-pound weight limit imposed by the act. Weight-constrained carriers, however, will only be able to increase the size of their payloads by at most 15 to 21 percent as a result of the

act's weight provision, whereas size-constrained carriers can increase their payloads by as much as 49 percent in some cases as a result of the act's size provisions. Thus, the magnitude of the productivity gains achievable by TL carriers, in general, will be smaller than those achievable by LTL carriers. Furthermore, since railroads are generally more competitive with motor carriers providing TL service than with those providing LTL service, TL carriers will be less able than LTL carriers to pass any act-related cost increases on to shippers through rate increases. Faced with greater tax burdens, and with less ability to increase productivity or raise rates, TL carriers in general will be much worse off than LTL carriers as a result of the act.

SHORT-HAUL CARRIERS SHOULD BE BETTER OFF THAN LONG-HAUL CARRIERS

Motor carriers that primarily provide short-haul service should be better off than those providing long-haul service for two reasons. First, short-haul carriers tend to make much greater use of lighter weight trucks. Thus, on average, the additional tax burdens for each truck imposed on them by the act should be much less than those imposed on long-haul carriers. Short-haul carriers who own trucks with a GVW between 26,000 and 33,000 pounds could even pay less in federal highway taxes each year because the act repealed the annual use tax for these vehicles. Second, short-haul motor carriers face relatively little competition from railroads. Thus, any cost increases that result from the act can be passed on to shippers with relatively little loss of business for short-haul motor carriers.

Because of greater rail competition, long-haul carriers, in addition to facing greater tax burdens, will experience greater declines in business if cost increases are passed on to shippers through higher rates. Insufficient data exist to conclude how the benefits of the act's size and weight provisions will be distributed between short- and long-haul carriers, but long-haul carriers should receive greater benefits from highway and bridge improvements made possible by the act. Based on the information available, we believe that, on balance, short-haul carriers should be better off than long-haul carriers.

OWNER-OPERATORS WILL BE WORSE OFF THAN THE REST OF THE INDUSTRY

Owner-operators are concentrated in the long-haul and TL segments of the commercial trucking industry. As with other TL carriers, most owner-operators will have less opportunity to realize productivity increases from the act's size and weight provisions. Compared with the rest of the industry, owner-operators will also experience larger tax increases because they use proportionately more heavy trucks. Typically, owner-operators also drive many more miles each year than the average heavy truck owner. As a result, their tax increases for each truck will be relatively higher than the tax increases for each

truck experienced by other heavy truck owners, although their additional tax burdens for each mile driven will not necessarily be any larger. As with other long-haul carriers, owner-operators should receive relatively greater benefits from highway and bridge improvements made possible by the act. However, they also face greater competition from railroads than do short-haul carriers. Thus, they will have less ability to recoup any act-related cost increases through higher rates without losing business to the railroads. On balance, we believe that owner-operators will be worse off than the rest of the industry as a result of the act.

AGENCY COMMENTS AND OUR RESPONSE

We requested written comments on a draft of this report from DOT, ICC, and the Department of the Treasury. The major points raised by these agencies are addressed below. More specific comments and our point-by-point replies to them are contained in appendixes III through V.

DOT agreed with the "general thrust of the draft report" and our specific findings that (1) the benefits and costs of the act will not be distributed equally among various types of motor carriers, (2) LTL carriers stand to benefit more than TL carriers from the potential productivity gains afforded by the act, and (3) short-haul carriers will experience lower absolute tax increases for each truck than long-haul carriers.

DOT disagreed, however, with our conclusion that short-haul carriers will be relatively better off than long-haul motor carriers as a consequence of the act. We disagree with DOT for the following reasons. First, its position that long-haul motor carriers will be better off than short-haul motor carriers partly rests on the assumption that long-haul carriers drive more miles each year than short-haul carriers. We are unaware of any reliable information that supports this assumption. Second, DOT did not consider the information we presented in the report (pp. 13 and 14) that long-haul carriers tend to use heavy trucks, while short-haul carriers use a much higher proportion of light trucks. The annual highway use tax, which is only applied to trucks with a GVW of 33,000 pounds or more, is correspondingly less important for short-haul carriers. Third, DOT's comment does not consider that long-haul carriers face much greater competition from railroads than short-haul carriers. Consequently, long-haul carriers will experience a comparatively greater loss of business to railroads if they attempt to recoup any act-related cost increases by raising their rates.

DOT also disagreed with our statement in the draft report that the act will make owner-operators financially worse off. Since our analysis did not quantify the act's potential benefits and weigh them against the additional tax burdens it imposes, either for owner-operators or for any other segment of the industry, we revised this language in the final report to express more

clearly our finding that the act will make owner-operators relatively worse off compared to the rest of the commercial motor carrier industry. This latter group includes all carriers except owner-operators, both long- and short-haul carriers, and TL and LTL carriers.

DOT noted that motor carriers will need to invest in new equipment to obtain some of the productivity increases afforded by the act. While this is certainly true in some instances, it is not necessarily true in all cases. For example, since double trailers were allowed in western states before the act, many motor carriers already own this equipment. The act now permits these carriers to use their double trailers in eastern states that had previously prohibited them. Also, those carriers that need to acquire new equipment may choose to lease rather than to purchase. Leasing rather than purchasing will lower any investment costs that motor carriers may have to make. We have no way of estimating the size of these investment costs for different types of motor carriers or how they will affect the distribution of the act's burdens and benefits. However, for the reasons noted above, we believe that any possible effect will be minimal.

DOT also believed that we did not adequately address how the additional tax burdens imposed by the act would vary on the basis of each mile driven. However, we recognized in the draft report that the highway use tax is a fixed-annual cost which declines on the basis of each mile driven as owners of taxable trucks drive more miles each year. Thus, we agree with DOT that if the owners of certain types of trucks, or different types of motor carriers, vary significantly with regard to the average number of miles they drive each year, the increases in annual federal highway taxes imposed by the act will appear differently if calculated on the basis of each mile driven rather than on the basis of each truck owned. (The percentage increase in annual taxes will be the same, however, regardless of which basis is used.)

As DOT suggested, we revised the tables on pages 19, 20 and 23 to include estimates of additional highway taxes for each mile driven as well as for each truck owned. This additional information did not, however, affect the findings and conclusions of our analysis of how the act's benefits and costs will be distributed across various segments of the commercial motor carrier industry because these market segments are defined by the type service a motor carrier offers (TL or LTL) and the length of haul (long or short), and not by the type of truck a motor carrier uses. The results of our analysis could conceivably be affected if it were known that, on average, LTL carriers drive significantly more miles each year than TL carriers (or vice versa), or that long-haul carriers drive more miles each year than short-haul carriers. As far as we are aware, however, no reliable information exists on the annual miles driven by TL and LTL carriers and by long- and short-haul carriers.

Our analysis also considers the act's comparative effects on owner-operators. Since some information does exist that, on average, owner-operators drive substantially more miles each year than other carriers, our analysis explicitly considers this information. We stated in the draft report that high-mileage owner-operators of heavy trucks will experience relatively small tax increases for each mile driven than will low-mileage, heavy truck owners. Thus, we believe that our analysis explicitly considered any relevant information regarding differences in miles driven.

DOT further believed that the discussion of the trucking industry's recent financial performance, which was included in our draft report, was incomplete and misleading. This discussion included financial data for the year 1982. These data were the latest available to us at the time our analysis was conducted. (Regulated motor carriers reporting to ICC are not required to report their annual 1983 results until the end of January 1984.)

Further, we do not believe that this discussion was "misleading" since the financial data that DOT cites for the second and third quarters of 1983 only support what was stated in the draft report; i.e., that the commercial trucking industry's financial performance in 1982 was adversely affected by the recent recession and, therefore, was likely to improve as the current economic recovery proceeded. We did revise the report to note the recent improvement in the operating ratio for the 100 largest regulated motor carriers. It is important to note, however, that these data are only for the 100 largest common carriers. Thus, we still maintain that adequate financial information is not available to draw conclusions about the recent financial performance of the vast majority of commercial motor carriers. Also, because we did not verify the bankruptcy figures appearing in this discussion, the report states that they were "according to one industry source."

ICC stated that we had accurately identified the operational characteristics of the various segments of the commercial trucking industry and fully agreed with our principal conclusion that the act's potential economic effects will vary among these industry segments. ICC also commended us for doing an "outstanding job in developing a broad perspective on the impact which might result from the Act."

The Department of the Treasury had no comments on our draft report.

ORGANIZATIONS INTERVIEWED

--American Trucking Associations, Inc.

American Movers Conference

Contract Carrier Conference

Film, Air, and Package Carriers
Conference, Inc.

Munitions Carriers Conference

Private Carrier Conference

Regional & Distribution Carriers
Conference

Regional Common Carrier Conference

Steel Carriers Conference

--Association of American Railroads

--Independent Truck Owner-Operators
Association

--Independent Truckers Association

--International Brotherhood of Teamsters

--Maryland Independent Truckers & Drivers
Association

--National Automobile Transporters
Association

--National Tank Truck Carriers, Inc.

--Owner-Operators Independent Drivers
Association of America

ROBERT A. BENTON, MISSOURI
 BOB PACKWOOD, OHIO
 WILLIAM V. Roth, JR., DEL.
 JERRY E. BROWDER, MISS.
 JERRY H. BRADLEY, N.J.
 JOHN CHAMBERS, PA.
 DONALD W. RIEDEL, W.VA.
 DAVID C. BAKER, MISS.
 WILLIAM L. BRIDGES, CALIF.
 STEPHEN D. BYRD, MISS.
 CHARLES E. SCHLESLEY, MISS.
 GUYMON S. LIND, LA.
 LLOYD BENTON, TENN.
 SPENCER H. HANCOCK, MICHIGAN
 DONALD PATTISON, MICHIGAN, N.Y.
 GARY STUBBS, MISS.
 GARY L. BROWN, MISS.
 BILL BRADLEY, N.J.
 GEORGE A. BROWN, MISS.
 GARY STUBBS, MISS.

United States Senate
 COMMITTEE ON FINANCE
 WASHINGTON, D.C. 20510

ROBERT C. LAMBERTSON, MISSOURI
 DONALD W. RIEDEL, MISSOURI

February 4, 1983

Mr. Charles A. Bowsher
 Comptroller General of the United States
 U.S. General Accounting Office
 General Accounting Office Building
 441 G Street, N.W.
 Washington, D.C. 20548

Dear Mr. Bowsher:

The Surface Transportation Assistance Act of 1982, passed late last year, created a comprehensive transportation program to repair the Nation's roads and bridges, complete the Interstate Highway System and improve public transit facilities. The Act raises revenues for these purposes by increasing a variety of highway user fees, including the gasoline excise tax and the heavy vehicle use tax. In addition, the Act generally restructures many of the existing highway excise taxes so that the burden of highway repair and reconstruction is distributed in accordance with the relative costs of repair and reconstruction attributable to different highway users.

When the bill was considered in the Finance Committee and in the Senate, many Senators were concerned about the ability of the trucking industry to absorb a proposed increase in the heavy vehicle use tax. Many of us who agreed that heavy trucks should pay a greater relative share of highway repair costs were fearful that an increase in heavy truck user fees was not appropriate at this time.

Accordingly, the conference agreement was drafted with these concerns in mind to delay the effective date of the increase in heavy vehicle use taxes. The increase in the use tax first takes effect on July 1, 1984, by which time economic recovery from the recession is expected to be well along. For small truck fleets, no increase takes effect before July 1, 1985.

I believe it would be helpful for the General Accounting Office to take a broad look at the general economic effects that the Surface Transportation Assistance Act of 1982 may have on the trucking industry.

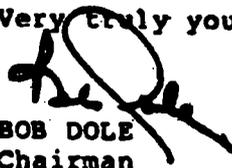
To be most helpful to the Congress, your analysis should include an examination of the following issues:

- o How have excise taxes in the past generally affected the operating costs and profitability of the trucking industry? Does the economic effect of excise taxes vary according to the size of the trucking firm?
- o Currently, how does the relative profitability of trucking firms vary among large firms, medium-sized firms and small "independent" truckers? How has trucking deregulation affected the profitability of these different sized firms?
- o Considering current business conditions for the trucking industry, and the emerging economic recovery, how will increased excise taxes affect the trucking industry? Will any adverse effects vary according to the size of the firm?
- o In view of the benefits to the trucking industry provided by the Surface Transportation Assistance Act, how will the Act, overall, affect the profitability of trucking firms of various sizes?

As your study proceeds, additional issues of concern to the Congress may arise. I hope, therefore, that you will keep in close touch with us as the study proceeds. Please contact either Richard Belas or Harry Graham of the Finance Committee staff if you need to discuss these issues in more detail or if we can be of any assistance during the preparation of your report.

I appreciate very much your willingness to undertake this work, and I look forward to seeing the results of your analysis.

Very truly yours,



BOB DOLE
Chairman



U.S. Department of
Transportation

Assistant Secretary
for Administration

400 Seventh St., S.W.
Washington, D.C. 20560

JAN 10 1984

Mr. J. Dexter Peach
Director, Resources, Community
and Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

We have enclosed two copies of the Department of Transportation's (DOT) reply to the General Accounting Office (GAO) draft report, "The Surface Transportation Assistance Act of 1982: General Economic Effects on the Trucking Industry," dated November 30, 1983.

DOT agrees with the general thrust of the draft report and its specific findings that (1) on balance, the productivity improvements afforded by the Act will outweigh the costs of the new fuel tax and user fees by a substantial margin; (2) the benefits and costs of the legislation will not be distributed equally among various types of motor carriers; (3) productivity improvements resulting from the Act will benefit less-than-truckload trucking companies to a greater extent than truckload companies; (4) short-haul motor carriers will experience lower absolute tax increases than long-haul carriers (although not necessarily on a per-mile basis); and (5) aggregate data on the financial performance of small motor carriers and independent owner-operators are not available, making it difficult to evaluate how the Act will affect owner-operators.

However, the Department disagrees with the GAO's general statement that owner-operators will be made financially worse off as a result of the Act, and with certain other statements and conclusions as discussed in our reply.

If we can further assist you, please let us know.

Sincerely,


Robert L. Fairman

GAO Note: The page references in this appendix may not correspond to the page numbers in the final report.

DEPARTMENT OF TRANSPORTATION REPLYTOGAO REPORT DATED NOVEMBER 30, 1983ONTHE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982:
GENERAL ECONOMIC EFFECTS ON THE TRUCKING INDUSTRYSUMMARY OF GAO FINDINGS AND RECOMMENDATIONS

GAO analyzed the potential economic effects of the Surface Transportation Assistance Act of 1982 (STAA) on commercial motor carriers to determine whether the Act was likely to have significant, differential economic effects on various segments of the trucking industry. In brief, GAO found that:

- o the costs and benefits of the STAA will not be distributed equally among various types of motor carriers;
- o less-than-truckload carriers will gain the greatest benefits from productivity improvements afforded by the Act;
- o short-haul carriers will pay less in increased taxes as a result of the Act than long-haul carriers; and
- o independent owner-operators will be among those in the industry made financially worse off as a result of higher truck taxes.

SUMMARY OF DEPARTMENT OF TRANSPORTATION POSITION

The Department of Transportation agrees with the general thrust of the draft report and its specific findings that (1) on balance, the productivity improvements afforded by the Act will outweigh the costs of the new fuel tax and user fees by a substantial margin; (2) the benefits and costs of the legislation will not be distributed equally among various types of motor carriers; (3) productivity improvements resulting from the Act will benefit less-than-truckload trucking companies to a greater extent than truckload companies; (4) short-haul motor carriers will experience lower absolute tax increases than long-haul carriers (although not necessarily on a per-mile basis); and (5) aggregate data on the financial performance of small motor carriers and independent owner-operators are not available, making it difficult to evaluate how the Act will affect owner-operators.

However, the Department disagrees with the GAO's general statement that owner-operators will be made financially worse off as a result of the Act, and with certain other statements and conclusions as discussed below.

POSITION STATEMENT

I. GENERAL COMMENTS

1. The Department of Transportation believes that comparisons of the increased tax burden resulting from the STAA should also be displayed on a per-mile basis, and as a percentage of total operating costs per mile, since the heavy use tax is a fixed cost which declines on a per-mile basis. While the text makes the point that the effects of increased taxes will vary among carrier types on a per-mile basis (and therefore a percentage of operating expenses) such figures are omitted from the summary tables on pages 22 and 24. Their omission exaggerates the effect of the heavy-use tax and does not permit comparison based on equivalent usage among different hypothetical weight/mileage categories. Any assessment of the Act's economic effect should therefore include an analysis based on miles driven by carrier type. GAO does not, unfortunately, assess the effects of the Act in this manner.
2. We believe GAO is in error in concluding that, on average, short-haul carriers will be relatively better off than long-haul carriers as a consequence of the STAA. For less-than-truckload carriers, the benefits from the increased cubic capacity afforded by the Act will accrue on a per-mile basis. However, in order to take advantage of these productivity gains, carriers will need to invest in new equipment. It is logical to conclude that high annual mileage carriers (and these would most likely be long-haul carriers) will make these investments sooner. Also, to the extent that less-than-truckload carriers pay increased heavy use taxes, these taxes will be lower on a per-mile basis for carriers traveling the most miles, as noted above (and of course benefits from better roads and bridges will accrue on a per-mile basis).

In addition, most benefits to truckload carriers from the removal of weight restrictions in the barrier states, and from better roads and bridges, will accrue to long-haul companies. At the same time, long-haul truckload companies will have an advantage in spreading their heavy use taxes over more miles than short-haul truckload companies. The net of these two effects should favor long-haul truckload operations over short-haul truckload operations.

In sum, within both the truckload and less-than-truckload segments, it appears that long-haul truckers will be relatively better off than short-haul truckers. (One possible exception would be intrastate, short-haul truckload carriers constrained by the 73,000 pound weight limitation that existed in the barrier states before passage of the STAA.)

3. On the basis of the points discussed above, truckload carriers engaged in long-haul operations should be relatively better off than those engaged in short-haul operations. Owner-operators are primarily long-haul, truckload truckers. Thus, we are not in agreement with GAO's comparison of large, for-hire carriers (which are predominantly long-haul, less-than-truckload companies) with owner-operators, because such a comparison excludes other segments of the industry such as short-haul truckload operators.

In addition, as the report notes, several factors will mitigate the financial impact of the new taxes on owner-operators. These include the fact that the heavy use tax for owner-operators does not take effect until July 1, 1985; new (albeit limited) business opportunities for owner-operators; an improved economic situation; and the relatively smaller per-mile cost increases compared with other segments of industry due to owner-operators' ability to spread increased taxes over extremely high annual mileage (in excess of 100,000 miles according to most estimates). Discussion of these mitigating factors should also be included in the digest of the report.

4. The discussion of "Recent Financial Performance," beginning on p. 11, is incomplete and misleading, since it was based on 1982 data and is not indicative of the current financial condition of the industry. Moreover, since there are no reliable data on bankruptcies in the trucking industry, the bankruptcy figures should be deleted. We recommend that the second paragraph of that section be replaced by the following paragraphs:

"The commercial trucking industry was adversely affected by the recent recession and experienced depressed tonnage and profits in both 1981 and 1982. Financial performance of large regulated motor carriers during 1982 was the worse since the 1930s. For the group of 100 largest common carriers tracked by the ICC -- with annual revenues of \$16 billion, or one-third of the regulated trucking industry -- revenues declined five percent, tonnage was down 11 percent, and net earnings were down 78 percent. At least 10 of these large carriers have filed for bankruptcy since 1980.

Financial performance in 1983 has improved markedly. Many large carriers substantially reduced the previous year's losses or turned profitable, and a few carriers have reported record sales and profits. Second quarter results for the top 100 common carriers showed an operating profit of \$220 million -- 80 percent above the 1982 level -- and a net profit after taxes of \$121 million. Recently released results for the third quarter of 1983 show continued improvement. Aggregate tonnage rose in the third quarter for the first time since 1979, increasing by four percent over 1982 levels. The average operating ratio -- the ratio of carrier expenses to revenues -- fell from 98.5 percent to 96.7 percent.

These results cannot be used to make generalizations about the financial performance of small regulated carriers, owner-operators, or private carriers, for which aggregate data are not available. Available evidence suggests that financial performance of motor carriers of all sizes and in all segments of the industry has been quite mixed."

SPECIFIC COMMENTS

1. The digest should prominently mention the fact that all truckers will benefit from better roads and bridges resulting from increased highway user fees (a point made elsewhere in the report).

GAO RESPONSE:

The fact that truck owners should benefit from the use of improved roads and bridges is now mentioned in the digest as well as in the report body.

2. The second bullet on p. 13 includes programs for which funding was not significantly increased by the STAA. We recommend that the paragraph be deleted and a new third bullet be added as follows:

"Funds for construction and repair of the federal-aid primary system were increased to nearly \$1.9 billion for fiscal year 1983, with annual increases from that level to \$2.45 billion in fiscal year 1986."

GAO RESPONSE:

Under the act, authorizations for the federal-aid primary system rise from \$1.85 billion in fiscal year 1983 to \$2.45 billion in fiscal year 1986. For the federal-aid secondary system, \$650 million is authorized for each fiscal year from 1983 to 1986. For the federal-aid urban system, \$800 million is authorized for each fiscal year from 1983 to 1986. We combined these figures in the report to show total authorizations for all three highway systems rising from \$3.3 billion in fiscal year 1983 to \$3.9 billion in fiscal year 1986.

3. The discussions on owner-operators (e.g., pp. v, 23, and 31) should indicate the relative magnitude of the cost increases in addition to the absolute per-truck cost increases. For example, on p. v, the following sentence should be added after the first sentence of the second paragraph:

"However, these increases will amount to only about 1.7 cents per mile, or one to three percent of annual operating expenses."

GAO RESPONSE:

We revised the draft report to show the estimated 1985 tax increases on the basis of each mile driven as well as on the basis of each truck owned.

4. Increasing the weight limit for trucks from 73,000 to 80,000 pounds does not result in productivity increases of about nine percent, as the report states (p. 45), since all of the increase is in payload. With average payloads ranging from 33,000-48,000 pounds (given an average tractor plus trailer tare weight of 25,000-40,000 pounds), an increase of 7,000 pounds in payload weight would result in a capacity increase of 15-21 percent.

GAO RESPONSE:

DOT is quite correct, and we made the appropriate revisions.

5. The report asserts (p. v) that some owner-operators will be able to switch to short-haul, less-than-truckload markets in order to gain greater benefits from the STAA. We think this statement is overly optimistic, since opportunities for owner-operators may remain limited in the less-than-truckload segment, and owner-operators generally have little flexibility to "choose" the markets in which they work. We agree that some opportunities may open up for owner-operators in private trucking as a result of a recent ICC decision allowing private carriers to lease owner-operators, but this decision has yet to be adjudicated by the courts.

GAO RESPONSE:

We stated in our draft report that, while some owner-operators may be able to switch from providing long-haul, TL service to providing short-haul, LTL service, it was difficult to predict the extent to which this might occur. Both DOT and ICC believe that the ability of owner-operators to switch into the short-haul, LTL segments of the industry is more limited than what they considered was implied by this statement. Because the magnitude of such switching, if any, is not quantifiable and, in any event, has no bearing on the results or findings of our analysis, we deleted the statement from the final report.

6. The report indicates that truckload carriers face substantial competition from railroads (p. 7). That is more the case with respect to longer hauls (over 500 miles) than for short hauls, where railroads continue to experience difficulty competing effectively against trucking firms.

GAO RESPONSE:

We agree with DOT that commercial motor carriers providing long-haul service face greater competition from railroads than do motor carriers providing short-haul service. This is why we expect short-haul motor carriers to be able to pass any act-related cost increases on to shippers in the form of higher rates with relatively little loss of business to railroads.

7. We question the figures given for the number of owner-operators on p. 10. While it is correct that the Bureau of Labor Statistics (BLS) classified 220,000 individuals as "self-employed in trucking" in 1982, our understanding of the BLS data is that these are not "motor carriers," but individuals working either as owner-operators or as truck drivers in a number of other fields, including some jobs outside of long-haul trucking, such as local pick-up and delivery, piano moving and trash hauling. As we understand the data, BLS is unable to estimate accurately how many individuals in this job classification are owner-operators working in interstate trucking, as opposed to other types of self-employed truck drivers. Other sources typically estimate the number of owner-operators at approximately 100,000-125,000.

GAO RESPONSE:

The two estimates cited in the report are for the total number of owner-operators, not just those owner-operators providing long-haul service. Obviously, the latter number will be less than the former, although it is impossible to be precise about either.

8. The report includes several references to trucks "weighing" more or less than specified weights (see, for example, pp. 8, 11 and 45). The report should make clear whether the weights refer to operating weights or rated weights. In Table 9, the horizontal axis should be labeled "Gross Registered Vehicle Weight." Also, the first sentence on p. 18 should read, "Prohibit vehicles of less than or equal to 80,000 pounds...on pain on losing its share of Interstate construction funds."

GAO RESPONSE:

The report was revised to use the term gross vehicle weight (GVW) whenever referring to the weight of an empty truck plus the maximum weight to be carried, as determined either by the truck's manufacturer at the time of sale or the truck's owner at the time of registration. Otherwise, weight refers to the actual weight of a vehicle plus its load. The sentence change suggested by DOT was made to refer specifically to a loss of Interstate construction funds.

9. On p. 39, the third sentence of the third paragraph should be revised to indicate that rail service is the primary substitute for truck service, not the "best" one. On the same page, a fourth factor -- distance from rail terminal -- should be added to the list of factors affecting shippers' decisions to use rail service.

GAO RESPONSE:

We do not believe the suggested changes are necessary. Regarding the first comment, we believe the meaning of our statement is clear. Regarding the second comment, the list of factors was not meant to be an exhaustive one, and there are certainly other factors, such as distance from terminals or quality of service, which could also affect these decisions.

10. On p. 40, the first full paragraph includes the erroneous statement that rail carriers provide less-than-truckload service. Railroads have not provided point-to-point less-than-truckload service since the 1960s. Rail TOFC service is a substitute for some types of LTL service, but it is by no means a perfect one.

GAO RESPONSE:

DOT is correct in that railroads no longer pick-up, consolidate, and deliver freight in small, LTL lots. These functions are now performed by freight forwarders, shipper associations, or in some cases even railroad-owned truck lines. However, railroads do actively compete for, and transport, significant amounts of LTL freight either by boxcar or trailer-on-flat car (TOFC). Thus, the report was revised to state that both railroads and trucks compete for both TL and LTL freight.

11. It should be recognized that a large percentage of truck equipment is leased. (There is also, according to most analysts, a substantial amount of equipment available to be leased.) Thus, it may be easier for truckers previously constrained by capacity restrictions to obtain new, more productive equipment than is acknowledged in the report.

GAO RESPONSE:

We agree with DOT that the existence of a large, active leasing market for trucks and trailers can lessen the capital requirements necessary for motor carriers to obtain new, more productive equipment. However, this consideration is not germane to our analysis because it does not affect the distribution of the act's benefits and burdens. Therefore, it affects none of our findings and conclusions regarding how the act's costs and benefits will be distributed among various segments of the commercial motor carrier industry.

Interstate Commerce Commission
Washington, D.C. 20423

OFFICE OF THE CHAIRMAN

December 20, 1983

Mr. J. Dexter Peach
Director
Resources, Community, and
Economic Development Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Peach:

Thank you for the opportunity to review the draft of a proposed report on The Surface Transportation Assistance Act of 1982: General Economic Effects on the Trucking Industry.

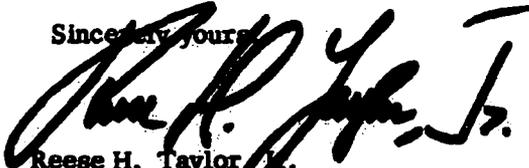
In my view, GAO has accurately identified the major characteristics of the operations of the various segments of the commercial trucking industry, and I agree fully with the draft report's general conclusion that the potential economic effects of this legislation will vary, depending on the industry segment in which a particular motor carrier operates.

Given the relatively short history of the legislation, coupled with severe data limitations and the attendant difficulty of attempting to predict the impact of deferred provisions which have not yet become effective, I believe that GAO has done an outstanding job in developing a broad perspective on the impact which might result from the Act.

For your consideration, I am enclosing some additional observations of the Commission's staff which may be helpful to you in finalizing your report.

Should you have any questions concerning the staff's comments, please contact Director J. Warren McFarland or his Associate, Bernard Gaillard, at 275-7849.

Sincerely yours,



Reese H. Taylor, Jr.
Chairman

INTERSTATE COMMERCE COMMISSION

Memorandum

TO : Chairman Taylor **DATE:** 12/16/83

FROM : J. Warren McFarland, Director
Office of Compliance & Consumer Assistance

SUBJECT : DRAFT GAO REPORT ON THE SURFACE TRANSPORTATION ASSISTANCE ACT OF 1982

This responds to your request for comments on the subject draft report. We have consulted with and considered the comments of the Office of Transportation Analysis.

Overall, with respect to Commission references, we believe the report is technically and statistically accurate. However, although the staff agrees with GAO's primary conclusion that the potential effects of the Act will vary, depending on the industry segment in which a motor carrier operates, the following staff observations are somewhat at variance with a few of the specific conclusions reached by GAO.

--Initially, the conclusion that LTL carriers will be much better off than TL carriers is probably accurate. However, the underlying rationale that this result will be achieved as LTL carriers replace their fleets with larger capacity trucks and trailers permitted by the Act, thereby maximizing payload, perhaps overstates the implicit savings. First, the greater use of larger trucks and double trailers will increase fuel and other operational costs. Second, market demands in the LTL sector dictate timely pickup and delivery schedules. Consequently, market demands and the very nature of LTL operations present more of a realistic constraint to achieving the postulated results than the physical size of trailers utilized. Therefore, while we agree that LTL carriers will be better off than TL carriers, we do have some serious reservations about the degree.

GAO RESPONSE:

Our conclusion that LTL carriers will be much better off than TL carriers is based on three reasons. First, the fact that TL carriers use heavy trucks to haul shipments weighing over 10,000 pounds, while LTL carriers use both light and heavy trucks, implies that the additional tax burdens for each truck imposed on an LTL carrier will, on average, be less than those imposed on a TL carrier. Second, because TL carriers face comparatively greater competition from railroads, they will be less able to pass any act-related cost increases on to shippers. Third, based on the relative importance of the former size and weight limits in constraining shipment sizes, LTL carriers in general should be able to achieve larger productivity gains than TL carriers.

Achieving these productivity gains will, to varying degrees, require motor carriers whose payloads were constrained by the former limits placed on vehicle size to acquire and use the larger capacity single and double trailers permitted by the act. ICC makes a valid point that the use of these larger capacity vehicles could increase fuel and other operating costs. However, it is also true that those carriers whose payloads were constrained by the former 73,000-pound state weight limits could also experience increases in operating costs as a result of hauling heavier loads. Proportionately more LTL shipments than TL shipments were constrained by the former size limits, while proportionately more TL shipments than LTL shipments were constrained by the former weight limits. Both size-constrained LTL carriers and weight-constrained TL carriers could experience some, albeit slight, increases in operating costs in order to achieve productivity increases varying from 15-to-49 percent. We do not believe, however, that any possible differences in the magnitude of these potential cost increases will have any significant effect on how the act's net benefits will be distributed between the LTL and TL segments of the commercial motor carrier industry.

ICC's second point, that the sizes of some LTL shipments are likely to be constrained by market demands and the nature of LTL operations, is also a valid one. Both of these factors account for some LTL shipments being partial loads. However, our analysis explicitly considered the proportion of LTL and TL shipments accounted for by partial loads. Thus, we have already taken these factors into account when analyzing the distribution of the act's potential productivity benefits between LTL and TL carriers.

--In a second area, we agree fully with the report's conclusion that owner-operators will be worse off as a result of this legislation for the reasons given. However, the mitigating proposition put forth by the report that some owner-operators should be able to switch to serving LTL and short-haul markets, where the effect of the Act on carriers is likely to be much less severe, in our view is too negligible to be held out as a realistic possibility in traditional LTL markets. Unlike short-haul markets where owner-operators are likely to find a niche, there are, in fact, major economies of scale barriers to entry for small and single-truck LTL operators. As recently pointed out in an article by Professor James P. Rakowski of Memphis State University, in addition to the LTL line-haul fleet, there must be an additional fleet of pickup and delivery vehicles and a system of terminals and associated equipment. Also, there must be a sophisticated communication and computer system, and a sales and marketing staff. In short, he concludes, there is a major front-end investment and long-term commitment of large amounts of capital and equipment. The more realistic assumption must be that only a very few owner-operators are capable of making the transition to meaningful LTL operations.

While the report, at least, implicitly recognizes the inherent direct entry barriers to owner-operators into the LTL sector by suggesting that such a transition could be made by leasing their vehicles and driving services to LTL and private carriers, our reaction to these assumptions is mixed. Respecting leasing to private carriers, if the Commission's decision in Ex Parte No.

MC-122 (Sub-No. 2) is upheld by the courts, we believe it will provide a beneficial and long-term financial alternative to the owner-operator which should have a significant mitigating effect on the adverse impact of the legislation. On the other hand, because of the intensity of union drivers,

and the already committed heavy investment in company equipment by most established LTL carriers, it appears likely that the transition into this segment is realistic in the short term.

The second suggestion in this scenario is that if the current economic recovery continues, many small owner-operators should be in a better position to either absorb the tax increases themselves or pass any cost increases along to their customers in the form of higher prices. We believe this view is predicated on at least two unlikely assumptions: (1) that in a recovering, but increasingly competitive market environment, revenue levels will increase sufficiently to improve owner-operator cash flow. We agree with the position expressed by owner-operators to us, that even to the extent general carrier revenues may increase as a result of increased volumes, owner-operators will still be hard pressed to meet the lump sum payments required by the legislation, and that a pump tax permitting them to pay-as-they-go is more suited to their situation; and (2) that despite historical trends, owner-operators will suddenly command the bargaining leverage to negotiate higher pay for their services with carriers or directly with shippers; we simply do not foresee either transition occurring in the short term.

GAO RESPONSE:

See our reply to DOT's comment on page 53.



DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

ASSISTANT SECRETARY

JAN 10 1984

Dear Mr. Anderson:

Thank you for the opportunity to review and comment on the GAO draft report entitled "The Surface Transportation Act: General Economic Effects on the Trucking Industry." We have carefully reviewed the draft report and do not have comments on its findings.

Sincerely,



John E. Chapoton
Assistant Secretary
(Tax Policy)

Mr. William J. Anderson
Director
General Government Division
U.S. General Accounting Office
Washington, DC 20548

(971906)