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CTS OF CURRENT STATE LICENSING, MIT, AND FEE REQUIREMENTS ON MOTOR TRUCKS INVOLVED IN INTERSTATE COMMERCE

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April 1975
Final Report

Prepared for
FEDERAL HIGHWAY ADMINISTRATION
Offices of Research & Development
Washington, D.C. 20590

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16. Abstract

The objective of this research study was to obtain data needed to reach rational decisions regarding currently nonuniform state licensing and permit requirements on commercial interstate truckers as well as taxes and fees associated with those requirements. To obtain these data, over 750 truck drivers were interviewed at 10 locations across the country to determine the extent to which current license, permit, tax, and fee requirements pose a trucking industry problem. Eleven motor carriers were interviewed and studied in depth to gain cost and operations data and to evaluate their attitudes toward four specific alternatives to the current system. Additionally, several officials from each of nine states were personally interviewed to assess costs to the states and the attitudes of those officials toward the four alternatives.

A number of subjects were addressed including: (1) registration, fuel, and third structure tax requirements; (2) utilities commission requirements; (3) industry procedures and activities for compliance including obtaining permits, record keeping, report filing, and enforcement activities; (4) out-of-pocket costs of trucker compliance including taxes, permit costs and bond expenses; (5) differences in costs among small, medium and large fleets of trucks; (6) differences in costs among private, exempt and regulated carriers; (7) apportionment, prorating and reciprocity; and (8) the effect of a federally administered system of taxes.

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UNITED STATES GOVERNMENT

Memorandum

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SUBJECT: Transmittal of Research Report: "Effect of Current State Licensing, Permit, and Fee Requirements on Motor Trucks Involved In Interstate Commerce"

DATE: SEP 22 1975

In reply refer to: HRS-40

FROM: Director, Office of Research
Washington, D.C. 20590

TO: Regional Federal Highway Administrators
Regions 1, 3-10

This report offers information which can help improve administration of State requirements relating to legalization of Interstate trucking operations. Sufficient copies are provided to assure that in each State it can be distributed to all agencies and legislative bodies concerned with this matter. Your assistance in this distribution is requested.

Originating as a result of concerns expressed to Congress and the Secretary of Transportation early in 1974, this research reviews and evaluates the direct and indirect costs associated with the present system of State licensing, permit and fee requirements for operation of motor trucks in Interstate commerce. Truckers' costs of compliance and State costs of administration are analyzed for four major categories of requirements, namely: (1) vehicle registration, (2) motor fuel taxes, (3) third structure taxes, and (4) Public Utilities Commission permits.

Based on data published by FHWA and the Interstate Commerce Commission, an interview survey of truck operators and fleet owners, and an on-site study of selected State agencies, the report concludes that the multiplicity and nonuniformity of the present system rather than any single requirement is the chief cause of complaint, and the cumulative burden of compliance is greatest on independent and small fleet regulated carriers.

State agencies, seeking to facilitate administration of their requirements, have formed compacts for reciprocity or proration of fees on regional bases. These arrangements are described and evaluated, together with a proposed plan for combining these methods. Possible Federal certification of Interstate truck operations with proration of fees back to the States is also discussed.

A limited number of additional copies of this report are available for official use from the Office of Research. Copies for public use are available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22151.

Charles F. Scheffey

EXCUTIVE SUMMARY

This report provides information on problems experienced by the trucking industry in complying with the current system of State requirements for legalization of Interstate trucking operations. It was initiated through a research contract effort conducted by the Midwest Research Institute, and managed by the Office of Research, Federal Highway Administration (FHWA).

The report concentrates on four categories of legalization requirements, namely: vehicle registration fees, motor fuel taxes, third structure taxes, and public utilities commission permits. The study found that each State typically requires two to four items of clearance for Interstate truck passage, and that from State to State, compliance procedures and fees differ substantially. States have attempted to ease the administration of this system by entering into regional compacts providing for reciprocity, proration of fees collected by a base State, or combinations of both techniques. Currently, however, no single Interstate compact system operates nationwide, or, within its region, covers all of the four major categories of requirements mentioned above.

Direct and indirect costs to truckers of complying with the present system are analyzed by reference to data gathered from standard statistical reports and interviews of 750 truck drivers and a selected group of fleet owners. The study showed that annual taxes -- consisting of registration fees, fuel taxes and third structure taxes -- can amount to $2,500 per vehicle for commercial Interstate trucks. Other miscellaneous fees and out-of-pocket expenses contribute to the direct cost of compliance. Major indirect costs include recordkeeping, report preparation, and bonding fees. Individual State compliance costs for each truck, exclusive of taxes, range from $15.50 for large private carriers to $75 for small regulated carriers.

Compliance costs vary more because of flat size than because of carrier type (private, contract, or common). The reason is that indirect costs (obtaining permits, recordkeeping, filing reports, etc.) are relatively greater for small fleets where the driver himself often has to handle these tasks. For some small carriers, the indirect burden of compliance equals to the direct cost of taxes.

The survey of truckers at 10 sites throughout the United States showed that they generally were most concerned with: (1) lower speed limits, (2) prices and availability of fuel, (3) size and weight limits, and (4) State licensing and permit requirements -- in that order. When queried about their specific problems with State requirements, the survey indicated that the average trucker was concerned with the following: (1) motor fuel taxes, (2) trip permits, (3) utilities commission requirements, (4) truck licenses, (5) size and weight permits, and (6) ton-mile taxes as creating the most burdensome compliance problems. The truckers' complaints were that fees were too high, reporting forms were too time consuming and numerous, and recordkeeping took too much time. The study concludes that the cumulative effect of all the requirements, rather than any single requirement, creates the burden which is the source of complaint.

Significant amounts of tax revenue are derived from registration, fuel, and third structure taxes on commercial Interstate trucks, whether administered with reciprocity or proration agreements. In terms of revenue, there is little difference between the two systems, except in corridor States which appear to have an advantage of proration where few trucks are based in the State, but there is heavy road use by trucks based elsewhere.

Costs to States are related to the number of vehicles processed. On a per vehicle basis, there is little difference between reciprocity and prorationing. However, applied to total annual costs, States must consider that a prorationing system requires that revenues for each vehicle must be shared with other States. Costs of administering fuel taxes and third structure taxes appear to be approximately equal to costs of administering registration requirements. Utilities commission permit fees are generally set to cover administrative costs and produce no net revenue.

Average costs of administering registration requirements is about $1.00 per vehicle. Mileage-related taxes which are processed on a fleet basis averaged $55.00 per vehicle in the States covered in this study. The report also found that duplication of effort exists in processing fuel tax reports and prorated registrations.

The study evaluated four possible methods of reducing legalization costs to truckers and States, namely: nationwide reciprocity; nationwide proration of fees by truckers' base States; a combination system of reciprocity for registrations and proration of other fees and taxes; and Federal legalization of Interstate truck operations with proration of fees back to States.

The study concluded that nationwide reciprocity was seriously limited because mileage-related taxes could not be accommodated. Proposed Federal preemption of legalization processing generally was opposed by States, and advantages of nationwide prorationing and apportionment could be achieved by a State-administered system capable of expansion to cover both fixed fees and mileage-related taxes. Administrative costs for such a combination proration and apportionment system appeared to be greater than a reciprocity system, but about equal to the present costs of administering proration systems.

PREFACE

This report was prepared under Contract No. DOT-FH-11-7989, Modification 3, for the Department of Transportation, Federal Highway Administration. The work reported here was conducted during the period 1 June 1974 to 15 April 1975.

Dr. William Glauz was the project manager and also participated in writing the report section and appendices dealing with the Truck Driver Survey. Barrie M. Hutchinson was the principal investigator and participated in all phases of the research, but with special attention to determining truckers' compliance costs with state requirements. Barry Sanders was responsible for work relating to the impact of current proposed systems on the states and determining the attitudes of state officials toward the proposed alternatives.

MRI personnel who contributed significantly to this research include Chuck Romine (data collection); Mike Sharp and Rose Bartels (statistical analysis); and Marcia Corbett, Rosemary Moran, and Cathy Wilton (data reduction and analysis).

We are indebted to scores of truckers and many state officials who assisted us. Particularly, we are grateful to the 11 carriers who related their individual cost experiences to us and served as case studies in this report. We are equally grateful to officials from the states of California, Colorado, Florida, Kansas, Massachusetts, Missouri, Pennsylvania, Texas, and Virginia who shared with us accounts of the administrative activities and costs relating to their state's requirements.

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I. INTRODUCTION

A. Background

Trucks transport virtually every item found in our homes or offices and many of the products used in their construction. In addition to the variety of products transported, trucks are important because of the geographic extent of their service. Motor trucks serve every part of the nation and often represent the only mode which reaches many of our decentralized population centers. Thousands of rural and suburban communities owe their very existence to the unique service offered by motor carriers. For that reason the health of those communities, indeed, the health of the nation, depends to a large extent on a healthy commercial trucking industry.

In the winter of 1973 to 1974 a small portion of the trucking industry took drastic measures to inform the American public that all was not well within the industry. The reference, of course, is to the "independent truckers' shutdown" which started in Lamar, Pennsylvania, and spread to other parts of the country. Spokesmen for the independent truckers, who were interviewed at the time, posted several grievances including speed limits which were lowered to 55 mph, fuel prices which had doubled and tripled in only a few months, and the nonavailability of fuel which resulted from a severe fuel shortage. Those complaints were all understood by the American motorists. Each of us in our personal driving dealt daily with lowered speed limits, high fuel prices and sometimes waiting lines at gasoline stations. But the independent truckers' spokesmen cited other complaints peculiar to trucking and with which the American motoring public is not familiar. One such complaint had to do with the truckers' difficulties in obtaining and maintaining clearances required for legal operations in the various states.

In the briefest of terms, clearance problems stem from the following factors:

- Each state typically requires two to four items of clearance.

- From state to state similar items often have different compliance requirements.

Limited (and sometimes conditional) reciprocity may exist among some states for some items of clearance, but the arrangements are piecemeal attempts at standardization and seemingly not in accordance with overall systems.

The multiplicity of all the above factors create what truckers feel is an unjustifiably complex set of requirements which borders on restraint of interstate commerce. Certainly, it is a burdensome system with which total compliance can be difficult.

In a continuing effort to foster increased transportation efficiency, the U.S. Department of Transportation undertook to further define the problem and appraise several alternatives to current circumstances. The Department selected Midwest Research Institute (MRI) to contribute by expanding an ongoing study of nonuniform state trucking requirements.

B. Study Scope and Objectives

As the title implies, this report deals with the "Effects of Current State Licensing, Permit, and Fee Requirements on Motor Trucks Involved in Interstate Commerce." Thus, current state trucking requirements are considered as they apply to commercial interstate motor trucks.

Commercial interstate trucks include vehicles in both for-hire and private* operations which are engaged in over-the-road, multistate activity. In quantifying this subpopulation of all trucks we relied on the 1972 Census of Transportation, "Truck Inventory and Use Survey" (TIUS). From 100,000 records, which make up the survey sample, we assembled those with the following characteristics:

- Over-the-road (i.e., nonlocal; intercity).
- Interstate (i.e., not operated almost entirely in the base state.
- Commercial (i.e., not operated as personal transportation nor to carry personal items.

After applying a correction factor to account for "no response" answers to any of the determinants, a subpopulation of 415,557 interstate

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* See Appendix I for definitions.

commercial trucks was derived. This subpopulation is made up of private and for-hire trucks of various sizes and configurations commercially hauling all varieties of products.

Of this subpopulation, 79.4% (329,755 units) are in the weight group designated "heavy-heavy," greater than 26,000 lb (11,793 kg) gross vehicle weight. Vehicles in the heavy-heavy weight group account for 92.8% of all miles driven by commercial interstate motor trucks. Because of the preponderance of heavy-heavy vehicles and the mileage attributable to that group, the analyses and the report will emphasize the situations faced by operators of heavy-heavy trucks.

For the most part, these operators drive large, five-axle, diesel-powered, tractor-semitrailer combinations of a gross vehicle weight (GVW) approaching 73,280 lb (33,239 kg). During the course of their travels, these men and women are required to comply with a myriad of federal, state, and local requirements. State requirements, including taxation and control measures, are probably the most pervasive and burdensome of all requirements and are the object of this study.

Three state taxes affecting interstate trucking are covered. They include registration taxes, fuel taxes, and third structure taxes (highway-user taxes which are not registration or fuel taxes). In addition, one control mechanism is covered--regulatory requirements which are administered by the states' utilities commissions. These four items comprise the current system of state tax and control measures.

Both the current system and four proposed alternative systems have been studied. Qualitative and quantative impacts on both the trucking industry and the states were investigated. The investigation was not aimed at identifying the optimum structure of taxes and controls, but rather to provide a rational insight with respect to creating a streamlined administrative system which might accomodate a variety of state tax structures. By streamlining compliance requirements, the burden to interstate truckers may be lessened, while the states will not be adversely affected.

C. Report Organization

This report consists of nine sections. Following this introductory section, state requirements on interstate truckers are described in Section II. This description is supported by Appendix A. A survey

of truck drivers was conducted as part of the investigation, and the results are reported in Section III. Appendices B, C, D, E, and F support Section III. Section IV includes a description of trucker activities which are necessary to comply with state requirements, and the nature of direct and indirect costs to truckers. This general discussion is followed by an analysis of compliance costs borne by specific trucking industry segments and is reported in Section V. This section is supported by Appendices G and H which deal respectively with the direct and indirect costs to truckers. In Section VI four alternatives to the present system of state tax and control measures are evaluated from the point of view of easing the burden on the trucking industry. Section VII parallels Section V and contains a report of the analysis of administrative costs borne by the states under the present system of state tax and control measures. In Section VIII the four alternative proposals are evaluated with respect to the impact each would have on the states if implemented. Section VIII is a parallel of Section VI. Although summaries accompany Sections II through VIII, Section IX presents major conclusions and findings of the investigations. Appendix I is a glossary.

II. CURRENT STATE REQUIREMENTS ON INTERSTATE TRUCKERS

During the past 30 to 40 years increasing highway system needs, combined with rapidly inflating highway construction and maintenance costs, has led state authorities to reevaluate their methods of highway financing. Much argument and debate has accompanied the various proposed methods of assigning highway costs, and no universally acceptable method has been adopted. Despite this difference of opinion, all states have developed highway-user tax structures. Registration taxes and motor fuel taxes (first and second structure taxes) are the underpinnings of most highway-user tax structures and are sometimes joined by third structure taxes (highway-user taxes other than registration and fuel taxes). In addition to the three tax structures, most states maintain utilities commission requirements designed both to eliminate illegal commercial motor carrier transportation and to protect shippers and consignees with insurance.

A general description of state requirements follows below. Details of the characteristics of each tax and control mechanism by state are contained in Appendix A.

A. Registration Taxes (First Structure Taxes)

Vehicle registration is the periodic listing of equipment with cognizant authorities. Originally designed as a means of identification, vehicle registration quickly became a revenue mechanism. Thus, vehicle registration came to be accompanied by registration taxes (often euphemistically and inaccurately referred to as registration fees).*

The registration tax is a "set-up" tax. That is, the vehicle cannot be legally operated until the registration, including the payment of the registration tax, is complete. Other imposts, such as fuel taxes and third structure taxes, accrue as the vehicle is used on the highways.

From the outset, the provision of roads by the various jurisdictions has given rise to the question of reciprocity, namely: May a motor vehicle registered in a foreign jurisdiction use roads in a local jurisdiction without contributing toward local highway financing or construction?

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* We define fees as monies exchanged sufficient to cover the cost of administrative facilities furnished and services rendered.

Disputes arose among the states regarding the payment of highway-user taxes. As truck numbers and truck weights increased, the states began erecting barriers to the free flow of trucks across state borders. Many states sought full registration taxes from all vehicles traveling within their borders during the year. Truckers engaged in multistate operations were subject to the multiple liability of several jurisdictions. Some of these disputes, however, were settled by means of bilateral reciprocity agreements which established the mutual exchange of privileges between participating states. These agreements were founded on the premise that interstate vehicles should not be subject to duplicate taxation, but they overlooked the fact that often the tax balance was tipped disproportionately in favor of one state to the disadvantage of the other.

The tax balance problem soon became apparent and gave rise to third structure taxes which had a detrimental effect on reciprocity agreements which were affected.

Multilateral registration agreements arose after World War II. Currently, three major, multilateral agreements and scores of minor, bilateral agreements exist.

1. The Multistate Reciprocal Agreement (MRA) was formed in 1949 among 10 participating states and later expanded to include 16:

Alabama	Louisiana	North Carolina
Florida	Maryland	South Carolina
Georgia	Michigan	Tennessee
Indiana	Mississippi	Virginia
Kentucky	Missouri	West Virginia
	New Jersey	

Full registration reciprocity is granted among these states to operators who maintain a place of business in one of the 16 states and whose trucks are properly registered in that state. If an operator maintains places of business in more than one participating state, the operator is required to allocate a portion of his fleet registrations to each of the states where he maintains a place of business and operates trucks. This is known as the "basing point" principle and addresses the question of where a vehicle ought to be registered and, thus, where registration taxes are paid. The states themselves are responsible for ensuring that vehicles are registered in the proper jurisdictions as defined in the agreement.

While the simplicity of pure reciprocity is appealing to many, some states refuse to support the concept. State size and geographic location favor some states while others would suffer from few registrations and low revenues.

2. The Uniform Vehicle Registration Proration and Reciprocity Agreement, hereafter called the "Uniform Proration and Reciprocity Agreement" (UPRA), was approved by the "Western Interstate Committee on Highway Policy Problems" of the Western Conference, Council of State Governments on 5 November 1955, and became effective for the license year beginning 1 January 1956, following adoption by nine charter states. The basis of the Agreement is proportionate registration of fleets of vehicles in states where those vehicles are operated. Under the plan, the operator of a fleet may register the vehicles of the fleet in participating states including:

Arizona	Kansas	New Mexico
California	Minnesota	North Dakota
Colorado	Missouri	Oregon
Idaho	Montana	South Dakota
Illinois	Nebraska	Washington
Iowa	Nevada	British Columbia

by prorating registration fees in accordance with the following formula:

$$\frac{\text{in-state fleet miles}}{\text{total fleet miles}} \times \text{state registration tax}$$

The formula is applied for each participating state as the basis for proportional registration for the preceding 12-month period ending 31 August. Mileage reports must be filed by the fleet operator with each state separately.

The definition of fleet in the UPRA excludes operators of single trucks or combination units from prorated registration. Full registration reciprocity among participating states is afforded these small operators.

For prorating fleets, the base state--the state in which the vehicles are most frequently controlled--issues the required license plates and registration cards for each vehicle. Each participating state in which the fleet operates then issues a special identification for each fleet vehicle which must be displayed according to the laws of the individual states.

3. The International Registration Plan (IRP) is a recent (1973) approach to vehicle registration uniformity. It combines elements of both the MRA and the UPRA in an attempt at providing simple, yet equitable, registration standardization. Registration taxes are "apportioned" (allocated) in a manner similar to that of the Uniform Proration and Reciprocity Agreement. However, instead of filing applications with each of the states traveled, one application is filed with the base state, as in the Multistate Reciprocal Agreement. The base state issues a single "apportioned" base plate and cab card to each apportioned vehicle. Both the plate and the card list the states in which the interstate operator has apportioned his registration taxes. As of 1974, four states were participants in the International Registration Plan--Kentucky, Missouri, Tennessee, and Texas. However, the IRP is newly formed and has achieved a good measure of momentum under the sponsorship of the American Association of Motor Vehicle Administrators (AAMVA). In 1975, according to the "Bulletin Advisory Service" published by the American Trucking Associations, Inc., seven additional states and one Canadian province are expected to subscribe to the IRP. Those include:

Colorado	South Dakota
Minnesota	Utah
Nebraska	Virginia
Oregon	Alberta

Other states have proposed legislative changes which would allow their participation in the Plan.

Under the Uniform Proration and Reciprocity Agreement and the International Registration Plan, duplicate registration taxation is eliminated. Both plans accept mileage as an appropriate and proper mechanism for allocating registrations. Finally, both plans provide a framework which accomodates a diversity of state tax structures.

4. Bilateral Agreements, agreements between two states, effect reciprocity between those states but can cause confusion to operators. A large number of both formal and informal agreements exist. It is not practical due to their complexity to examine these agreements in detail.

Table A-I of Appendix A presents various aspects of vehicle registration by state. The tax basis for both tractors and trailers is identified as well as the computed registration tax for a typical five-axle diesel tractor-trailer combination with a GVW of 72,000 lb.

State participation in multilateral registration agreements is indicated. Finally, the availability of trip permits in lieu of registration is shown.

It is interesting to note the range of registration taxes among states. The annual tax varies from less than $100 to over $1,500. At the low end of the range is Colorado which relies little on its registration fee for revenue. It maintains a third structure, ton-mile tax computed at different rates on loaded miles and empty miles traveled within the state, in addition to fuel taxes. Vermont, at the high end of the range, has few trucks, no diesel fuel tax, and no third structure tax. Thus, Vermont's reliance on truck registration taxes is very heavy.

B. Fuel Taxes (Second Structure Taxes)

In the development of highway-user tax structures, fuel taxes were the first to be proposed (by Oregon in 1917). Today, they are the most important single source of highway revenues, and all states except Vermont* tax diesel fuel used on highways. Aside from their status as revenue producers, fuel taxes are defended because they are closely related to highway use (although they do not account for differences in vehicle weight except as heavier vehicles use more fuel than lighter vehicles).

Early in the life of fuel taxes a balance problem was recognized. Simply, it was a question of whether the state in which fuel was consumed received tax on that fuel. Drivers could fill their tanks in one state where fuel prices (including state tax) were advantageous, then drive through an adjacent state where prices were higher without purchasing additional fuel or paying tax to the second state. An inequitable situation existed.

In 1942, Virginia became the first state to enforce a reporting law which ensured that truck operators either bought enough fuel within the state to support their in-state driving or that they paid tax to Virginia on the equivalant gallonage. Today, most states follow Virginia's lead.

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* Vermont assesses out-of-state trucks a retaliatory trip tax in lieu of a fuel tax, according to the American Trucking Associations' "Bulletin Advisory Service."

For interstate truckers, compliance with state fuel tax laws is complex. It usually requires the annual renewal of a fuel permit, which identifies the vehicle as belonging to a fleet registered with a state's fuel tax division, as well as the submission (filing) of periodic reports to all states in which the fleet is registered with the fuel tax division. About 60% of the states requiring fuel reports have a quarterly filing requirement and the remaining 40% require monthly reports. In a few states the prescribed period is at the discretion of the administrator. Typically, fuel reports must include: (a) total fleet miles traveled in all states; (b) total fuel consumption by the fleet in all states; (c) fleet miles traveled in the taxing state; (d) the computation of fuel consumed in the taxing state; (e) total fuel purchases in the taxing state; and (f) the determination of fuel tax liability (credit) in the taxing state. Although these requirements are typical, they are by no means universal.

Detailed records must be kept by the carrier to supply Items a, b, c, and e above. These records must reflect an accurate, state-by-state accounting of miles and fuel. They must be maintained, usually for 2 to 3 years, and are subject to audit by each state's tax authority.

Usually, carriers try to match fuel purchases with the mileage traveled in each state to avoid the accumulation of large tax liabilities or credits. Some very large carriers, however, purchase their fuel in bulk ex-tax then pay the accrued tax liability to each state traveled, thus avoiding over- or underpayment of fuel taxes.

In many states fuel tax credits are carried on the books for a limited time. When that time limit passes, credits may revert to the state. Some states provide for credit refunds to carriers, but the refund procedure is often too cumbersome or time-consuming to be of much benefit to carriers.

Fuel tax bond requirements are imposed by many states. These requirements guarantee trucker fuel tax obligations to the states. Depending on the state, bond requirements may be unconditionally required, conditionally required, or not required at all. When conditional, the posting of fuel tax bonds may be required either in cases where the individual carrier cannot prove financial responsibility or when the carrier desires to receive tax credit refunds without an audit by the fuel tax administrator.

Bond requirements range from a low of $100 in Arizona to a maximum of $50,000 in Kentucky. Frequently, the bond in each state

must be equivalent to several times the periodic fuel tax liability of the carrier. Often a minimum is set--typically at $500 to $1,000. Carriers often make use of the services of a bonding company to post surety bonds. A fee is charged by bonding companies, and the carrier operating in many states, particularly the small carrier, can be financially burdened by the expense of the service.

For the operator who is an occasional traveler into or through a particular state, it may be possible to purchase a temporary fuel permit upon entry, or less commonly, simply to provide proof of sufficient instate fuel purchases at the point of exit. Temporary fuel permits usually specify a valid time period or number of trips. The permit cost to the trucker often includes an in-lieu or equivalent tax and payment relieves the operator from further reporting requirements. Temporary or trip fuel permits are combined in some states with trip registration permits.

In some states a maximum fuel import limit is established. If an operator enters a state carrying fuel in excess of that state's limit, he usually has the choice of paying the fuel tax on the excess amount directly or of purchasing tax paid fuel at an in-state pump.

Table A-II displays by state the characteristics of fuel tax requirements which apply to virtually all large diesel trucks. Listed are the amount of the annual permit fee, the tax rate for diesel fuel,* minimum bond, report filing requirements, and trip permit information.

C. Third Structure Taxes

Highway-user taxes which do not fall into the first two structures (registration taxes and fuel taxes) are grouped together as third structure taxes. Although some disagreement stems from this negative definition, we believe three specific types of taxes deserve to be included: mileage taxes, gross receipts taxes, and fuel surtaxes. Altogether, 11 states incorporate third structure taxes into their highway tax structures affecting interstate commercial trucking. Seven states maintain some form of mileage tax, two states levy gross receipt taxes and two states collect fuel surtaxes.

Mileage taxes are formulated in several ways. Currently in use are ton-mile taxes, levied by Colorado and Wyoming, weight-mile

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* Metric rate in parenthesis.

taxes, levied by Idaho, New Mexico, New York and Oregon, and axle-mile taxes levied by Ohio. The ton-mile tax imposes a fixed rate on the actual tonnage of the vehicle and cargo moved over the actual in-state mileage. The weight-mile tax is a flat rate per mile which varies dependent on the gross weight of the vehicle. The axle-mile tax is similar to the weight-mile tax but is based on the number of axles on the truck or combination. All, of course, are based on mileage but the weight and axle-mile taxes, based on a flat rate, have record keeping and auditing advantages. For example, in complying with the Colorado ton-mile tax (TMT) the operator must record both loaded and empty weight and miles, and the tax is levied at different rates for "loaded" and "empty" miles (although a single rate can be negotiated by the carrier with tax officials of the state). Flat rate taxes are more easily applied since they increase simply as a function of in-state miles. In New York and Ohio, turnpike miles are excluded from taxable mileage.

Gross receipt taxes in two states--Arizona and Montana--are based on the concept that revenues derived from in-state operations are a measure of benefits to carriers operating over a state's highway system. Thus, the value of highway use is taxed through the gross receipts tax mechanism. The tax consists of a mill levy on revenues related to business which has its origin or destination within the state. The concept overlooks the fact that private carriers may derive as much benefit, or more, than for-hire carriers from use of a state's highways, but private carriers do not generate revenues as such for their services and, therefore, are not subject to a gross receipts tax. In Montana, there is a minimum annual gross receipts tax.

Fuel surtaxes, maintained in Kentucky and Virginia, are additional taxes on highway consumption of gasoline or "special fuels" (fuels other than gasoline including diesel oil). In both states the tax applies to all tractors and all vehicles with more than two axles. The surtax is paid with the fuel tax at the time of quarterly filing of fuel tax returns.

Table A-III displays information regarding the third structure taxes discussed above as well as retaliatory taxes levied by some states on vehicles registered in the states which maintain a third structure tax.

D. State Utilities Commission Requirements

All but four states maintain utilities commission requirements affecting commercial interstate truckers. Substantial standardization of states' utilities commission requirements has resulted from the states' adherence to the requirement standards brought forth by PL 89-170. The law authorized the National Association of Regulatory Utility Commissioners (NARUC) to determine and certify to the ICC standards for providing evidence of lawful motor carrier operations. It further required the ICC to promulgate those standards into law. This was accomplished late in 1966.

The requirements fall into four areas:

- Registration of operating authority,
- Identification of vehicles operating under those authorities,
- Presentation of evidence of insurance, and
- Designation of a resident process agent.

Not all states maintain requirements in each of the areas as shown in Table A-IV.

Registration of ICC operating authority is designed for control of regulated motor carriers. ICC regulated motor carriers are awarded operating rights or authority by the Interstate Commerce Commission. The authority specifies the products the carrier may haul and where it may haul them. In return for these franchise rights, the carrier is obligated to provide reasonable service to the public it serves. Most states require that a copy of the ICC carrier authority be filed with the state utilities commission. By having the authority on file, the state officials can determine whether the carrier is performing within the scope of its authority and obligation. Carriers of ICC, exempt commodities and private carriers (which do not hold ICC authority), are excluded from compliance with this requirement for filing authority.

In addition to filing operating rights with state commissions, carriers must register the identity of the specific vehicles operating under those rights. The states, in turn, provide the carrier with identification devices for each of its vehicles. At one time plates, cards,

decals, and stickers all served as identification devices. PL 89-170 has led to the use by most states of identification stamps which are attached to a single cab card for each vehicle.

Insurance requirements are usually part of the utilities commission requirements on truckers and serve to protect the public. Most states require carriers to file a certificate of liability insurance--some also require proof of cargo insurance. While state insurance requirements may provide protection where exempt and private carriers are concerned, ICC insurance requirements, which apply to regulated carriers, usually surpass state requirements. The ICC requirement calls for $100 to $300,000 personal liability and $50,000 property damage insurance. Table A-IV specifies individual state requirements.

Many states require that the carrier or operator file the name of a resident process agent with the utilities commission for use in case of an accident, claim or lawsuit.

The original standards promulgated in December 1966 made no mention of fees. NARUC amended the standards in 1969 to create an upper bound on fees charged by the states--$25 for the initial fee attendant to filing interstate operating authority, $10 for filing amendments, and $5 for annual identification stamps. Another amendment in 1970 allows the state to charge in excess of $5 for identification stamps if the excess is used for enforcement purposes. The amendments are to be binding on the states 5 years from their adoption.

Table A-IV displays utilities commission fees, requirements (in addition to the filing of interstate operating authority), and reciprocity agreements by state.

E. Summary

The pursuit of an equitable highway-user tax structure and functional control system by individual states has led to nonuniform requirements from state to state in the realms of vehicle registration, fuel taxes, third structure taxes, and utilities commission controls. Differences among states in the thinking or philosophy which guides the structuring of highway tax programs are responsible for existing tax differences. However, most states have come to rely on a two-structure system for taxation incorporating registration taxes and fuel taxes. Some states have instituted third structure taxes as well.

Attempts at standardizing some requirements have resulted in the existence of several standardized, yet dissimilar, vehicle registration agreements and guidelines for nationwide standardization of utilities commission requirements.

The question of reciprocity has plagued the states for many years. Since the mid-fifties the trend has been to resolve the matter through proportional tax payments in accordance with mileage driven in the various states.

III. TRUCK DRIVER SURVEY

A. Purpose

Other activities in the project elicited information from regulatory agencies and from trucking industry spokesmen. This Section of the report relates to the opinions and attitudes of the individual truck drivers, especially those who are most directly affected by regulatory requirements. The opinions and attitudes were obtained through a personal survey.

There were three basic objectives to the survey. They were: (a) to rank problems involving licensing, permits, taxes, and fees in a hierarchy of trucker problems; (b) to identify specific aspects of licensing, permits, taxes, and fees which constitute a problem; and (c) to determine the incidence of delays and attendant costs related to licensing and permits.

There are approximately 415,000 trucks in commercial, multi-state operation in the United States. Many of the drivers are faced with the multiplicity of state requirements described in Section II which are administered individually by each state in which the trucks operate. Compliance with these requirements was reported by spokesmen for independent truckers to constitute a problem for at least some groups of the trucking industry--especially those groups characterized by small fleet operations and/or the inability to plan in advance in what states their operations will take them (i.e., nonscheduled or irregular route operations). Therefore, emphasis was placed, in the conduct of the survey and in the subsequent analysis, on isolating subgroups within the trucking industry which might be expected to be particularly troubled by the regulatory requirements.

B. The Survey Instrument

The questionnaire used in the survey is presented as Appendix B. The final form represents the cumulative thoughts of numerous individuals from FHWA and MRI. Several preliminary versions were drafted and subjected to pretesting in the Kansas City area with truckers as subjects. The evolutionary process yielded changes in content, wording and format. The final survey instrument is one which yielded the most highly desired information, was reasonably easy and rapid to administer, and was generally understood by the truckers.

The survey instrument consists of three parts which provide information relating to various aspects of the current legalization situation. The parts were administered to progressively more select portions of the population of over-the-road truck drivers. Part I is general in nature and was answered by each over-the-road truck driver interviewed. Part I contains several questions which identify certain characteristics of the respondents' operations and enabled us to group the responses of drivers having similar operational circumstances.

We did not expect that truck licenses, permits, taxes, and fees would be a problem of major proportions to many of the truck drivers surveyed, because most over-the-road truck drivers are only peripherally involved in obtaining and maintaining licenses and permits for the vehicles they drive. Such drivers experience only a small proportion of the burden faced by those who execute every facet of the compliance process.

Therefore, Part II of the survey was aimed at the group of operator-drivers who legalize their own units. From each of these drivers we wished to determine: (a) his experience with various state requirements; (b) whether he has had any problems with any of these requirements; and (c) the nature of those problems. For the most part, this subpopulation consisted of independent drivers (not company affiliated) operating as part of very small fleets.

Part III of the survey seeks information regarding specific recent experience with compliance problems or costs encountered. Therefore, it addresses the subpopulation of drivers who legalize their own vehicles and who were presently enroute with cargo. This is a proper subset of the Part II respondents and excludes Part II respondents who were "between trips."

The questionnaire was administered at various locations, discussed subsequently, and the location, time, and day were recorded in case they should be needed for analysis purposes. However, the respondent's identity was kept confidential. No record was made, nor were questions asked, concerning the driver's name, company or the like.

C. Site Selection

The selection of site locations was intended to achieve a reasonable geographic dispersion. The selection was based principally upon the nine motor carrier regions specified by the Interstate Commerce Commission, as shown in Figure 1.

The survey was conducted at 10 sites, covering all but the Rocky Mountain and New England regions. Relatively few trucks operate principally in these two regions. On the other hand, two sites were chosen in each of the three regions with the highest number of trucks--the Middle Atlantic, Central, and Southern regions.

A number of types of survey locations were considered. On the basis of the pretesting, it was determined that the best cooperation could be secured at truck stops, rather than weigh stations or ports of entry. Drivers at the latter locations generally were unwilling to be delayed long enough to respond to the questionnaire. On the other hand, truck drivers were usually quite receptive and willing to cooperate at the truck stops.

The following are the specific locations used in the survey, together with a brief description of each one.

1. Carlisle, Pennsylvania - Fleming Truck Stop: This location was selected from a large number of possibilities within the Middle Atlantic Region. The truck stop is located at the interchange of U.S. Route 11 and Interstate Highway 81. Its choice was based upon the location being away from a major metropolitan area and the fact that I-81 is one of the major East-West traffic routes through Pennsylvania to the Midwest.

2. Paulsboro, New Jersey - Union 76 Truck Stop: The principal reason for selecting this location, also located within the Middle Atlantic Region, was its high density of truck traffic located between the two major metropolitan areas of New York City and Philadelphia. Contacts indicated this was a popular rest stop for independent owner-operators.

3. Doswell, Virginia - Jerrell's Truck Plaza: This site is located on Interstate Highway 95 between Richmond and Washington, D.C. The highway, a North-South traffic thoroughfare, is one of the highest traffic density segments of interstate highway in the U.S. The site is located outside of major metropolitan areas within the Southern Region.

Figure 1 - Motor Carrier Regions (Interstate Commerce Commission)

4. Atlanta, Georgia - Atlanta Truck Terminal: This location is within the City of Atlanta and is a major point where interstate truckers congregate to obtain shipments to other points outside the immediate area. Atlanta is within the Southern Motor Carrier Region.

5. Seville, Ohio - Akron 71 West Truck Stop: This site is located at the junction of two major interstate highways, I-71 and I-76, in the heavily industrialized area of Northeast Ohio. Located in the Central Region, the site was chosen in an effort to capture truckers hauling a variety of industrial goods.

6. East Gary, Indiana - Crossroads Truck Stop: This site is located within a major metropolitan area in the Central Region at the junction of U.S. Route 51 and I-94. The site is a popular rest stop for many truckers, particularly those engaged in hauling steel and steel products.

7. Cannon Falls, Minnesota - Kurt's Truck Stop: This site is located some 20 miles from the Minneapolis-St. Paul area. Though not located on a major interstate highway, it is heavily traveled by truckers operating within the area. The site is located within the Northwestern Region.

8. Kansas City, Kansas - Metro Truck Service: Most of the customers are interstate truckers who use the site as a central location within the major metropolitan industrial area.

9. Pharr, Texas - Valley Shamrock Truck Stop: This site is located in one of the major fresh vegetable and fruit producing areas of the U.S. Most of the shipments out of this area are destined for major metropolitan markets in the North and Northeast. The location is situated within the Southwestern Region.

10. Whittier, California - Zimmer's Truck Stop: This site is located on I-605, one of the major arterials from the East into the Los Angeles area.

In making the final site selection, we relied partially upon advice from independent owner-operators in an effort to ensure the possibility of encountering a reasonable proportion of them within the scope of the survey. Overall, the 10 survey locations include an excellent cross-section of various segments of the trucking industry hauling a wide variety of commodities.

The surveys were conducted essentially concurrently at all 10 sites, for the most part by professional interviewers under subcontract but in some instances by members of the project staff. The interviewing occurred in mid-September and spanned all hours of the day and night.

The intent, in driver selection, was to maximize the number of drivers who could be considered "independent"--not to obtain a randomly selected group of all truck drivers at the sites. Therefore, the interviewers were instructed to attempt to select noncompany drivers, if possible--for example, drivers not wearing company uniforms.

D. Description of Respondents

The intended goal of the survey was to interview 750 drivers, 75 from each of the 10 sites. A few extra drivers were interviewed at each site to ensure this goal. All completed questionnaires were reviewed thoroughly and, as a result of the review, a few were considered invalid for various reasons.

Table I displays the distributions of places, times, and days at which the interviews used in the analysis were conducted. The numbers from each site were nearly identical. More interviews were conducted in the afternoon hours than at any other time although substantial numbers were also conducted in the morning and in the evening, and a few (9%) were conducted between midnight and 6 a.m. Most of the interviews were conducted midweek.

The first five questions on the survey (see Appendix B) were intended to identify the drivers in certain broad classifications. The responses to these questions are shown in Table II. Generally speaking, the drivers were experienced. Three-fourths of them had over 5 years of over-the-road experience, and about 30% had over 15 years. Likewise, most of them had been in their present position for several years. About half of the drivers considered themselves independents.

To obtain a general feeling of the level of satisfaction or dissatisfaction of the drivers, they were asked, "Compared with previous years, would you say that during the past year interstate trucking has become much easier, somewhat easier, about the same, somewhat more difficult, or much more difficult." As shown in Table III, all but about 5% believe trucking to be more difficult or, at best, no different than it was in earlier years.

TABLE I

SURVEY LOCATIONS AND TIMES

	Number of Interviews
Location	
Carlisle, Pennsylvania	76
Paulsboro, New Jersey	75
Doswell, Virginia	76
Atlanta, Georgia	77
Seville, Ohio	74
East Gary, Indiana	75
Cannon Falls, Minnesota	75
Kansas City, Kansas	75
Pharr, Texas	75
Whittier, California	77
TOTAL	755
Time of Day	
Noon - 6 p.m.	382
6 p.m. - Midnight	176
Midnight - 6 a.m.	68
6 a.m. - Noon	128
TOTAL	754
Day of Week	
Sunday	0
Monday	67
Tuesday	209
Wednesday	299
Thursday	141
Friday	32
Saturday	5
TOTAL	753

TABLE II

DRIVER CHARACTERISTICS

Category Description	Number	Percentage
Years of Over-the-Road Experience		
0 - 5	187	24.8
6 - 10	180	23.9
11 - 15	157	20.8
16 - 20	89	11.8
21 - 25	64	8.5
26 - 30	44	5.8
Over 30	33	4.4
TOTAL	754	
Years in Present Position		
1 or Less	123	18.3
2 - 3	172	25.5
4 - 6	146	21.7
7 - 10	88	13.1
Over 10	145	21.5
TOTAL	674	
Type of Carrier		
Private	258	34.3
Contract	141	18.8
Common	262	34.8
Mixture of Above	29	3.9
Other	60	8.0
Unknown	2	0.3
TOTAL	752	
Self-Classification as a Driver		
Independent	361	48.4
Company	382	51.2
TOTAL	743	
Fleet Size		
1	112	14.9
2 - 5	144	19.2
6 - 19	140	18.6
Over 19	354	47.1
Don't know	1	0.1
TOTAL	751	

TABLE III

COMPARISON OF INTERSTATE TRUCKING, NOW VERSUS PREVIOUS YEARS

Comparison	Number	Percent
Much Easier	17	2.3
Somewhat Easier	24	3.2
About the Same	77	10.2
Somewhat More Difficult	131	17.4
Much More Difficult	491	65.1

Those saying it was somewhat more difficult or much more difficult were also asked why they felt that way. The responses to this open-ended question were reviewed and tabulated into several recurring categories. Some truckers gave more than one reason, so the figures in Table IV sum to more than 100%.

TABLE IV

WHY TRUCKING IS MORE DIFFICULT

Reason	Number	Percent
Speed Limits	328	52.7
Fuel Prices and Availability	217	34.8
Profit Squeeze	200	32.1
Requirements Placed on Truckers	175	28.1
Enforcement	98	15.7
Traffic	93	14.9
Licenses, Permits, Taxes, and Fees	49	7.9
Freight and Loads	48	7.7
Equipment and Maintenance	30	4.8
Working Conditions	18	2.9
Road Conditions	15	2.4
Miscellaneous	19	3.1

Clearly, the truckers were mostly concerned about speed limits, fuel prices, and general economic conditions. Twenty-eight percent mentioned general requirements which truckers must meet; but only another 8% specifically, and without prompting, included licensing, permits, taxes, and fees in their list.

The few drivers who said trucking had become easier were likewise asked for their reasons. Of the 41 drivers with that general feeling, 54% mentioned better roads or road conditions and 30% mentioned better equipment or maintenance. Six drivers said that the traffic conditions were better. No other reasons were given by more than a few drivers.

Questions 8 and 9 of Part I (see Appendix B) were asked of all drivers in order to identify which drivers would most likely be directly influenced by the paperwork and costs associated with truck legalization. The responses to these questions are given in Table V. From these responses 266 drivers were asked to respond to the questions of Part II. A "company" response could refer either to the driver's employer or a company specializing in truck license, permit, and tax service.

TABLE V

DRIVER EXPERIENCE WITH LEGALIZATION

Question	Number of Respondents
Who Handles the Paperwork	
Self	139
Company	562
Split Between Self and Company	47
Don't Know	1
Total	749
Who Pays the Taxes and Fees	
Self	195
Company	480
Split Between Self and Company	53
Company Pays and Bills Me	19
Other	2
Total	749

It was hoped that to assure reliability and a lack of bias in the survey, the drivers would not have been forewarned about the survey. However, there had been some publicity concerning MRI's contract, and

some of the trucking magazines and newsletters contained information to that effect. Therefore, to estimate the impact of this advance publicity, a question was included asking the drivers whether they had had previous knowledge of the survey. This question was in Part II and therefore asked only of 266 drivers. Of the 266, only seven (2.6%) said they had heard about the survey. On this basis, it is doubtful whether the survey results were contaminated to any significant degree by advance publicity.

E. Trucker Problem Areas

Question 7 of Part I dealt with seven types of regulations or requirements which might be considered major problems for interstate truckers at the present time. These problem areas are the following:

1. ICC regulations (routes, rates, etc.);
2. DOT regulations (equipment, safety, hours, etc);
3. State size and weight limitations;
4. State licensing, permit, and tax requirements;
5. Speed limits;
6. Fuel prices and availability; and
7. Deadheading.

The drivers were asked which of the above seven items they considered to be major problems (Question 7a); then (Question 7c) they were asked to identify which of the seven they considered to be the most serious and which they considered to be the second most serious. The drivers' responses to these questions were statistically analyzed. The responses are tabulated in Appendix C and details of the analyses are given in Appendix D. In the following paragraphs the analysis approach and the major findings are summarized.

First of all, there are a number of ways to view the driver responses to Questions 7a and 7c. For instance, one might be interested primarily in determining which one of the seven problem areas was most often considered the most serious problem area. Alternatively, one might inquire which problem area was rated either first or second in

seriousness by the drivers, without regard to the order. Alternatively, one might ask simply which problem areas were most often mentioned as being of concern without regard for the level of seriousness. Finally, a weighting technique might be devised to place progressively more importance on problem areas rated as being more serious.

For completeness, the results were analyzed each of these four ways. Surprisingly, it was found that all four approaches yielded essentially the same results. That is, the rank ordering of the most serious problem was the same as the rank ordering of most frequently mentioned problems regardless of seriousness, etc. Therefore, it is not necessary to discuss rank orderings of different types; the same list applies almost always to all questions.

In the analyses, the drivers were divided into groups depending on how they responded to certain other questions. Five different groupings of drivers were considered: (a) drivers classified according to who handles the paperwork on truck registrations, taxes, and fees (one subgroup consisted of those who said they did this work themselves; the other subgroup did only part or none of the paperwork); (b) drivers classified as private versus those classified as for-hire, where the private category consisted of all drivers who said they worked for a private carrier and said that they were a company driver--all others were classified as "for-hire"; (c) company versus independent drivers, based on their answers to Question 4 of Part I; (d) company drivers, subdivided into those with less than 5 years in their present position, and those with 5 or more years; and (e) independent drivers, subdivided according to whether they had less than 5 years experience in their present position or whether they had 5 or more years in their present position.

The data were analyzed using analyses of variance. Each of the five sets of groupings were analyzed separately. In each analysis the variables considered were the seven problem areas, the two subgroups, and the statistical interaction between problem areas and subgroups. The priority lists were established using the Duncan multiple range test. The consistency in the priority list determined by answering each of the four questions posed earlier was verifed using the Kendall concordance. The agreement between subgroups was measured using the Spearman correlation.

The results are summarized in Table VI for the first three of the five groupings. No differences were found which could be attributable to the experience of the drivers, so the responses for the fourth and fifth groupings are not displayed.

TABLE VI

RANKINGS OF MAJOR PROBLEM AREAS

Problem Area	Paperwork		Driver		Driver	
	Self	Other	Private	For-Hire	Company	Independent
ICC Regulations	4	5-6	5	5	5	5
DOT Regulations	6	5-6	6	6	6	6
State Size and Weight Limits	5	3	3	3	3	4
State Licensing, Permits and Tax Requirements	3	4	4	4	4	3
Speed Limits	2	1	1	1	1	2
Fuel Prices and Availability	1	2	2	2	2	1
Deadheading	7	7	7	7	7	7

There were no great differences between subgroups of drivers in their rankings of the problem areas, although some of the minor differences were statistically significant. All subgroups considered deadheading to be the least of the problem areas and all subgroups named either speed limits or fuel prices and availability as being highest in the ranking. Generally speaking, the state requirements (size and weight limits, licensing, permits, taxes, etc.) were considered more of a problem than federal requirements (ICC and DOT regulations).

Drivers who do their own legalization paperwork tended to name more of the seven areas as problems (4.41 per driver) than the other drivers (3.43 per driver). In other words, the drivers doing their own paperwork either had more problems or were more concerned about the same problems. The differences in their rank orderings of the seven areas were slight but significant.

The drivers classified as "private" were, in general, more concerned about the problem areas than the "for-hire" drivers. Their priority rankings were the same although the spread between adjacent items was not always equal. For example, drivers in the for-hire

group named speed limits as the most serious problem almost four times as frequently as fuel prices, whereas the private drivers named speed limits only 1-1/2 times as frequently as fuel prices and availability.

Independent drivers were apt to be concerned about more of the problem areas than the company drivers although, again, the rank orderings of the areas were very similar for the two subgroups.

Summarizing the concerns of drivers, then, we can say the following: at the time of the survey the truck drivers were concerned about many things. Their chief concerns were the lower speed limits and the price and availability of fuel. Size and weight limits, and state legalization requirements were intermediate among the seven problem areas suggested.

F. Other Problem Areas

After the drivers were queried about the seven problem areas of Question 7a, discussed in the previous section, they were asked if there were other major problems of interstate trucking (Question 7b). This was an open-ended question, and gave the drivers a chance to name areas of concern spontaneously.

Of the 747 drivers in the survey, 189 listed other problem areas. Some of them listed more than one problem and some simply repeated one of the seven listed in the previous question. Responses of the drivers were not uniform across the 10 sites. Proportionately more drivers in Pennsylvania, Minnesota, and Virginia named other problem areas, while drivers in New Jersey, Texas, and Ohio were least likely to respond to this question. It is not clear, however, whether this willingness to respond is related to the type of drivers being interviewed at these sites or to the characteristics of the individual interviewer at each site.

The responses were reviewed and categorized. Certain types of problems were mentioned more often than others. Those problem areas mentioned spontaneously most frequently are listed in Table VII.

The most frequently mentioned problem was truck size and weight. The subject, of course, was much publicized during the fall of 1974 as controversial legislation was being proposed. Most of the comments related to the need for uniformity among such regulations,

both between states and between road types within a state. A few drivers felt that weight limits should be increased while a few felt they should not.

TABLE VII

PROBLEM AREAS MENTIONED SPONTANEOUSLY

Problem	Number of Drivers
Uniform Sizes and Weights	18
Police Harassment	16
Traffic, Motorists, Etc.	14
Multiple Licenses	12
ICC Regulations	11
Weigh Stations/Inspections/Checks	9
DOT Regulations	8
Fuel Prices and Variations	8
Poor or Expensive Maintenance	8
Obtaining Loads	8
Hours (DOT Regulations)	7
Low Speed Limits	7
Lack of Common State Regulations	7
Too Much Weight on Front (Steering) Axle	6
Loading and Unloading Own Truck	5
Favoritism Towards Railroads	5
CB Harassment	4
Poor Truck Stops	4
Unfairness in Trip Leasing	4
Inequities Regarding Hauling of Exempt Commodities	4
Getting Paid Promptly	4

The second most commonly mentioned problem was police harassment. Although speeding was mentioned occasionally in this regard, generally no specifics were recorded. It should be noted, however, that this survey took place shortly after a truck driver died in Ohio in association with state police action, a subject of much discussion among drivers.

Multiple licensing, and a desire for a single license which would be accepted in all states, was the fourth most commonly mentioned problem. Of course it is not, strictly speaking, another problem in that it was already included in the original seven problem areas. Similarly, ICC and DOT regulations were singled out fairly often, even though they had already been mentioned. ICC regulations were mentioned by 11 drivers, usually in a vague way, and DOT requirements were mentioned by eight drivers. The latter were in addition to the seven drivers who specifically referred to the regulations concerning hours of driving time allowed. Some drivers felt that more hours should be allowed, in view of the lower speed limit, while others felt that a 10-hr driving period was already too long. One driver simply objected to the need of keeping the log book. Some drivers mentioned ICC, and others DOT, in regard to these regulations.

Lower in the list was an unexpected criticism, the practice of locating the fifth wheel on a tractor so far forward that the front axle carries, in the drivers' opinion, too much weight for safety.*

Other problem areas mentioned several times included a perceived federal favoritism toward the railroads and harassment against CB radio use. Four drivers said, in different ways, that they experienced unfair practices in trip leasing procedures, and four drivers felt that there were irregularities concerning the hauling of exempt commodities.

There were differences from site to site in the problem areas mentioned most frequently. Again, it is unclear whether this reflects a real difference in drivers and regions or whether the differences in interviews played a role. Nevertheless, the following problems were mentioned most frequently:

Kansas City, Kansas - fuel

Carlisle, Pennsylvania - maintenance, police harassment, and other traffic

Atlanta, Georgia - no common problems

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* This practice results from attempts to shorten combinations which would otherwise be overlength in certain states, yet within legal limits in others.

Doswell, Virginia	- weight on front axle, hours, other traffic and railroad favoritism
Whitter, California	- police harassment, trip leasing, and favoritism toward railroads
Seville, Ohio	- law enforcement
Paulsboro, New Jersey	- pay policies, speed limits, ICC regulations
East Gary, Indiana	- uniform size and weight, speed limits, inspection stations
Pharr, Texas	- DOT regulations, uniformity of fuel prices
Cannon Falls, Minnesota	- need for single license, uniformity of weights, police harassment, and uniformity of state regulations

G. Troublesome State Requirements

Drivers who indicated that they do some or all of their legalization paperwork or personally pay some or all of the taxes and fees were asked a series of questions in Part II of the survey, the most important of which is Question 8. It attempts to determine which state requirements cause truckers the most trouble. The other questions in Part II help to further describe the group of drivers answering these questions. The responses to these other questions are shown in Appendix E.

Briefly, nearly half the drivers doing their own paperwork or paying their own fees said they haul exempt commodities. Other categories frequently mentioned were steel and general freight. Almost three-fourths of the drivers legalized only a single truck, and only 2% dealt with six or more trucks. Half of the drivers said that they were never able to plan in advance where their next trip would take them. Only a few--less than 1%--were always able to do such advanced planning.

Most of the drivers traveled in many states in the course of the year. Only 27% said they covered less than 12 states. Their trucks were base-plated in nearly every state of the union, with Indiana being

the most commonly mentioned state (26 drivers) and with Florida, Georgia and Ohio each being named by 20 or more drivers. The state which was clearly the one with which drivers had the most difficulty with legalization was Ohio, being so named by 66 drivers. Illinois, Iowa and Missouri were mentioned by about half that number. No other state was named by more than 20 drivers.

Of the 266 drivers, 135 (about half) were enroute with a load.

Returning to Question 8, 11 state requirements were presented to the truckers. They were asked to indicate which of these they had had experience with in the last year, and then they were asked to rank them. These rank orderings were analyzed, using a weighting system for the rank orderings but including, with less weight, items checked but not ranked by the truckers. The rankings are given in Appendix C and the analysis in Appendix D.

For purposes of the analysis, the truckers were again subdivided into groups. However, rather than five groupings as were used with Question 7 of Part I, only two groupings were considered here. They were (a) the subtroup of respondents who said they did all of their own paperwork versus those who said they only did part of the paperwork (or perhaps did none of the paperwork but personally paid some of the fees), and (b) among those drivers considering themselves independent, those with less than 5 years experience versus those with five or more years of experience. The other types of groupings were not appropriate for the analysis of this question because relatively few drivers in some of the previously described subgroups were asked the questions in Part II (for example, company drivers, for-hire drivers, etc.).

As can be seen from Table VIII, motor fuel taxes were definitely regarded as the most troublesome item by all driver groups. Trip permits and PUC/PSC registration requirements were generally tied for second in rank order, although truck licensing also was said to be quite troublesome to those drivers who did not do all of their own paperwork. Among those drivers who did their own paperwork, certificates of insurance and gross receipts taxes also rated rather high.

The effect of driver experience is less clear, although there are some differences in the rank orders as given by more experienced drivers compared with those of less experienced drivers. The more experienced drivers, for example, rated gross receipts taxes as the fifth

TABLE VIII

RANKINGS OF TROUBLESOME STATE REQUIREMENTS

Rank	Drivers Who Do All Their Own Paperwork	Other Drivers	Average[a/]
1	Motor fuel taxes	Motor fuel taxes	Motor fuel taxes
2	Trip permits	Trip permits	Trip permits
3	PUC/PSC registration requirements	Truck licensing	PUC/PSC registration requirements
4	Certificate of insurance	PUC/PSC registration requirements	Truck licensing
5	Gross receipts taxes	Oversize/overweight permits	Oversize/overweight permits
6	Truck licensing	Ton-mile taxes	Ton-mile taxes
7	Ton-mile taxes	Required incidental fees	Certificate of insurance
8	Oversize/overweight permits	Certificate of insurance	Gross receipts taxes
9	Required incidental fees	Property tax	Required incidental fees
10	Property tax	Gross receipts taxes	Property tax
11	Other	Other	Other

a/ Brackets indicate items whose ranks are statistically indistinguishable.

most troublesome although the less experienced rate it 10th. These data are shown in Appendix D.

H. Causes for Troublesome State Requirements

Drivers who said they had experience and troubles with any of the state requirements for truckers were asked their reasons (Question 8c of Part II). Seven possible reasons were suggested by the interviewer. They were:

1. It's hard to keep up to date with each state's requirements;
2. Filing is required too often;
3. The forms take too much time;
4. There are too many different forms;
5. Too much record keeping is required;
6. Fees are too high; and
7. The requirement brings about enroute delay.

The responses to this question are tabulated in Table IX. The rows in this table correspond to the 11 types of state requirements and the columns represent the seven reasons for troublesomeness. The rows and the columns are arranged in order of decreasing numbers of complaints.

Review of the responses indicated that the drivers did not all interpret the stated reasons in the same way. For example, many drivers (but not the majority) said they were troubled by trip permits because the forms took too much time or that there were too many of them or that they had to be filed too frequently or that too much record keeping was required. In fact, trip permit forms are generally relatively easy to complete and do not require record keeping. What the drivers may have been saying is that they did not like to have to bother with trip permits, period.

A few general statements can be made concerning the drivers' comments. First of all, the thing that they disliked most frequently

TABLE IX

DRIVERS CITING PROBLEMS WITH STATE REQUIREMENTS

	Fees Too High	Keeping Up To Date	Forms Too Time Consuming	Too Many Forms	Delays Enroute	Too Much Record Keeping	Filing Frequency	Total
Motor Fuel Taxes	43	43	27	12	5	12	15	157
Trip Permits	24	32	16	18	30	7	8	135
PUC/PSC Registration	7	33	26	26	9	10	6	117
Truck Licensing	44	20	16	14	1	3	2	100
Ton-Mile Taxes	35	11	10	6	9	14	2	87
Gross Receipts Taxes	10	14	22	9	0	12	11	78
Oversize/Overweight Permits	10	20	17	2	18	4	1	72
Certificate of Insurance	12	29	11	1	3	0	5	61
Required Incidental Fees	26	9	3	4	4	0	1	47
Property Tax	18	1	3	4	1	4	0	31
Other	3	1	0	0	1	0	2	7
Total	232	213	151	96	81	66	53	892

about the state requirements was the tax or fee involved. This result was not unexpected. However, it is not a particularly useful result in the context of this study. The second most common complaint, however, is pertinent. The drivers complained, almost as much as they did concerning fees, about the difficulty of keeping informed of the states' requirements. This was true about nearly all of the 11 requirements, but particularly those concerning motor fuel taxes, trip permits, PUC/PSC registration, truck licensing, oversize/overweight permits and certificates of insurance. This result clearly indicates driver displeasure with the complexities of state-to-state differences in regulations and changes in requirements.

The third and fourth columns could probably be combined to indicated general displeasure with the problem of filling out the forms. Particularly bothersome in this regard was PUC/PSC registration. Drivers also felt that the forms for motor fuel taxes and for gross receipts taxes were very time consuming. We are unsure why oversize/overweight permits were placed in this category, although some drivers may have been thinking of the time required to obtain such permits rather than the time required to fill out the forms. Truck licensing forms probably are among the most complicated in those states using prorationing.

Delays enroute were singled out by the drivers relative to trip permits and oversize/overweight permits, as might be expected because there are occasional delays in obtaining such permits. On the other hand, some drivers felt that delays were incurred relative to PUC/PSC registrations and ton-mile taxes. These delays probably occur in conjunction with inspections and weigh stations.

The need for too much record keeping was cited in regard to ton-mile taxes, motor fuel taxes, gross receipts taxes, and PUC/PSC registration. These complaints are understandable, particularly in regard to the first three.

Finally, some drivers felt that filing was required too often with respect to motor fuel taxes and gross receipts taxes. Only a few drivers felt this way about the other state requirements.

I. Delays Enroute

The drivers answering the questions in Part II (those who did some or all of their truck legalization) were asked if they were enroute with a load. Of the 266 drivers asked, 135 (51.5%) were enroute. The remainder were either deadheading or waiting for a load. The drivers enroute were asked a series of questions about their trip and any delays experienced.

Generally, the trip length was great, with 83.2% of the trips being over 500 miles in length; more than 50% were over 1,000 miles. On the average, the current trip was less than half completed. The distribution was as follows: under one-fourth completed, 32.8%; one-fourth to one-half, 26.9%; one-half to three-fourths, 23.1%; and over three-fourths, 17.2%.

The drivers were asked if they had experienced any unexpected delays on the trip, and if so, the approximate duration of the delay. The responses are summarized in Table X. The table shows the number of drivers mentioning delays in each of several categories, together with the mean and median delay in the category. Both values are given because there were often a few drivers who suffered extremely long delays. For example, one driver waited 54 hr for a permit. The next longest wait for a permit was 7 hr. Thus, the distribution was skewed and the mean or average delay was substantially greater than the median delay.

TABLE X

COMMON DELAYS

Cause	Number[a/]	Mean Delay (hr)	Median Delay (hr)
Obtaining a Load	6	45.17	30
Loading/Unloading	11	31.91	9
Permit Problems	10	8.90	4
Mechanical Problems (other than tires)	16	7.25	4
Tire Failure	12	7.25	3
Inspections, etc.	4	3.00	3

a/ Out of a sample of 135 drivers enroute with a load.

The most common types of delays were mechanical in nature, with 12 drivers experiencing tire failures and 16 having other types of equipment problems. Fourteen drivers suffered procedural delays, 10 of them involving permit problems and four involving inspections and the like.

The individual responses to this question are tabulated in Appendix F. The drivers stopped in Whitter, California, clearly had experienced more delays than drivers stopped at other locations. However, almost all of these delays were the result of equipment failure. Interestingly, however, none of these drivers mentioned equipment failures or maintenance difficulties as being a problem area (see Section III-F).

J. Summary of Trucker Survey

Approximately 750 truckers were surveyed in 10 states. The survey, occurring in September 1974, was administered to a driver sample purposely structured to include as many independent owner-operators as possible.

At the time of the survey the two major concerns of the truckers were the lowered speed limits and the price and availability of fuel. The third most important problem, in the mind of many drivers, related to size and weight limits--their uniformity amongst states and within states, as well as the values such limits should take. An exception to this ordering of problems occurred among drivers classifying themselves as independents as well as those drivers who said they did their own paperwork for truck registration, taxes and fees (there was much overlap between these two groups). These groups each said that state licensing, permits and tax requirements were the third most important problem area. Other drivers rated this area fourth.

ICC regulations were generally rated the fifth major problem with DOT regulations rating sixth. Deadheading was rated last in the set of seven major problem areas presented to the drivers.

Among other problem areas suggested by the drivers, and not by the interviewer, were police harassment, other motorists, poor quality and expensive maintenance, and the practice of placing too much weight on the front axle of the tractor. Some drivers objected unloading their own truck, a perception of favoritism towards the railroads, harassment of CB radio usage, and unfair practices related to trip leasing and the hauling of exempt commodities.

Those drivers having personal experience with the paperwork or paying of fees were asked to rate various kinds of state requirements as to their troublesomeness. Among 11 requirements, the one least liked was that of paying motor fuel taxes. The drivers cited as reasons for this dislike, the fees (which they felt to be too high) and the difficulty in keeping up to date with each state's requirements. They also felt that completing the forms was too time-consuming, and that an excessive amount of record keeping was required.

Tied for second in the list were trip permits and PUC/PSC registration requirements. In both instances the drivers complained that it was difficult to keep up-to-date with the state requirements. In the case of trip permits they also disliked the delays suffered enroute and the high fees. The number and complexity of forms regarding PUC/PSC registration were cited.

Truck licensing was singled out as the next most troublesome, although not so much by drivers who do all their own paperwork as by the other drivers. High fees and state-to-state variances were again mentioned as the major problems.

Other state requirements, in order of decreasing troublesomeness, were oversize/overweight permits, ton-mile taxes, certificates of insurance, gross receipts taxes, incidental fees and property tax.

Drivers enroute with a load were queried as to delays they might have suffered on the present trip. Not counting delays incurred prior to beginning the trip, such as in attempting to find a load or in getting loaded, the most time-consuming type of delay was related to permits. Although the median delay was about 4 hr among drivers reporting such delays, drivers occasionally suffered an extremely long delay. Thus, a high amount of uncertainty may be associated with trip permit requirements. The most common type of delay, however, was associated with mechanical problems, especially tire failure. Such delays were typically 3 to 4 hr in duration but with occasional excessive delays of a day or more. Delays associated with weigh stations, inspections, etc., were seldom reported and were usually not lengthy.

IV. DESCRIPTION OF COMPLIANCE COSTS AND ACTIVITIES

This section is preparatory to Section V, "Analysis of Compliance Costs by Trucking Industry Segment." It describes compliance cost items to truckers and describes costing techniques employed.

Two types of costs of compliance with state requirements are considered in this section--direct costs and indirect costs. In determining the magnitude of each of the two types of costs, two different methods were used. The investigation of direct costs relied heavily on published materials including those promulgated by the FHWA Highway Statistics Division, the American Trucking Associations, Inc., and several commercially published trucking permit guides. Additional direct cost information was supplied in 11 in-depth, unstructured interviews* with individual trucking concerns which served as case studies. During the course of each interview, the applicability of specific state requirements on each carrier was established based on the states traveled by the carrier and the carrier type. To the extent possible, the carrier supplied direct compliance cost information for each of those requirements. When the carrier was unable to supply it, this information was reconstructed through the use of the published guides. In some cases, expenses associated with resident agent requirements and bond requirements were estimated.

Indirect costs were determined exclusively through the unstructured interviews with carriers. The nature and contents of the interviews are described in detail in Appendix G. A description of compliance costs--both direct and indirect--follows next.

A. Direct Compliance Costs

Direct costs of trucker compliance with state requirements fall into two groups; they include tax payments and charges associated with identification permit requirements and trip permits.

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* These interviews were not related to the 755 interviews conducted in association with the survey described in Section III.

1. Highway-user taxes: As described earlier, three types of state taxes on interstate truckers exist--registration or first structure taxes, fuel or second structure taxes, and a variety of third structure taxes.

a. Registration taxes: These taxes are associated with vehicle licensing, and must be paid periodically, usually annually. Registration taxes for tractor-semitrailer combination vehicles are computed by the states in a variety of ways. A common tax basis calls for the tractor to be licensed according to gross vehicle weight, and the trailer to be licensed at a nominal fixed fee. Some states, however, require that both tractor and semitrailer be licensed on the basis of individual weight. Other variations also exist. The registration tax basis for each state is detailed in Appendix A, Table A-I.

Figures published by the Highway Statistics Division/ Office of Highway Planning indicate that the average registration tax on a diesel-powered five-axle tractor-semitrailer combination of 72,000 lb (32,660 kg) gross vehicle weight in 1973 was $595.25. As a condition of registration, however, 28 states charge additional taxes, often in the form of property or "ad valorem" taxes. The addition of these charges causes the total registration tax and property tax to average in the neighborhood of $1,000. The Highway Statistics Division indicates that for private carriers the total averages $964.01, and for contract carriers the average is $1,099.85.

Some carriers, typically those in the eastern states, pay the entire amount of registration taxes to a single state. Under the basing point principle, however, a single carrier may be required to register some of its vehicles in each of a number of different states in which it maintains business facilities. Other carriers, located in the western states, very often must pay a portion of total fleet registration taxes to a number of different states in accordance with the proration agreement which exists in the western states. In the former case vehicle registrations are divided among the states. In the latter case registration taxes are shared.

b. Fuel taxes: Fuel taxes are levied by most states, usually based on gallonage consumed by a vehicle. Typically, the diesel fuel tax rate in each state is 7, 8, or 9¢/gal (1.85 to 2.38¢/liter)

as shown in Table A-II. As mileage, and thus fuel consumption increases, so does the fuel tax. According to the Highway Statistics Division, fuel taxes on a diesel-powered five-axle semi-trailer combination of 72,000 lb gross vehicle weight traveling 70,000 miles (113,000 km) during the year average $1,096.27. The same vehicle operating 100,000 miles (161,000 km) per year would pay $1,566.10 in fuel taxes.

Some of the carriers interviewed complained of double fuel taxation. This can occur when tax is paid at the pump and again, to another state in which the fuel was consumed, at the time of reporting. Many states issue credits and some will refund excess fuel tax payments. Reportedly, however, carriers are often unable to avail themselves of these adjustments because of complex procedural requirements which can involve fuel tax audit and/or approval by many states in order to qualify for adjustment in one state.

c. Third structure taxes: These costs are more difficult to assess. The difficulty arises from the fact that there are several varieties of third structure taxes and from the fact that relatively few states maintain third structure taxes in their user tax programs as shown in Table A-III. It is probable that some truckers pay no third structure taxes. Conversely, others may end up paying a disproportionate share of third structure taxes.

Fuel surtaxes, third structure tax levied in Kentucky and Virginia and not to be confused with second structure fuel taxes, amount to 2¢/gal (0.528¢/liter). Employing the Highway Statistics Division estimate of 4.9 miles/gal (2.1 km/liter) for a typical five-axle diesel-powered tractor-semitrailer combination, the total fuel surtax liability for 70,000 miles (113,000 km) of driving would be $285.71. Fuel surtax liability for the operator who drives 100,000 miles (161,000 km) exclusively in Kentucky or Virginia amounts to $408.15. Of course, it is not likely that many vehicles engaged in interstate commerce will be used exclusively in either Kentucky or Virginia, or in both states combined. Thus, most carriers will not be subjected to the full burden of the fuel surtax since it is not in effect in other states.

Three types of mileage taxes are levied by seven states. Ton-mile taxes are levied by Colorado and Wyoming, weight-mile taxes are

levied by Idaho, New Mexico, New York and Oregon, and axle-mile taxes are levied by Ohio. Mileage tax liability, computed for each of the seven states which maintains a mileage tax, is presented below.

Colorado	$2,660.70
Idaho	$3,363.50
New Mexico	$1,369.90
New York	$1,526.70
Ohio	$1,750.00
Oregon	$3,850.00
Wyoming	$2,520.00

The computations assume a five-axle tractor-semitrailer combination registered at 72,000 lb (33,000 kg) gross vehicle weight, traveled 70,000 miles (113,000 km) within each state during the year, logging 967,050 revenue ton-miles (662,429 Mton-kilometers) at an average gross weight per trip of 53,580 lb (86,228 kg).

The amount derived by averaging the seven states' mileage tax liabilities is $2,434.40. If 7/48 of a fleet's annual mileage is accumulated in the seven mileage tax states equally the annual mileage tax liability amounts to $355.02 under the same assumptions as above.

Gross receipts taxes are levied on for-hire carriers in the states of Arizona and Montana. In Arizona the tax rate is 2-1/2% on the gross receipts of in-state business. Similarly, in Montana the levy is based on the receipts related to business beginning and ending within the state, and the tax rate is 0.575%. In Montana, however, an annual minimum gross receipts tax of $30.00 per unit for common carriers and $15.00 per unit for contract carriers exists. Using the Highway Statistics Division estimated gross annual revenues of $72,529 attributable to the typical vehicle, the total gross receipts tax liability for the vehicle in Arizona is $1,813.23. In Montana it amounts to $417.04. If 2/48 of a fleet's annual revenues are derived from business in Arizona and Montana equally, the gross receipts tax liability is $46.46 for the year.

Totaling the average first, second, and third structure taxes yields an annual state user tax levy in excess of $2,500.00 per vehicle.

2. Permit fees and miscellaneous direct costs: Cost factors considered in this section include unit permit fees for identification permits, bond expenses, resident agent expenses, and trip permit costs.

Identification permits are issued by many states to signal the operator's compliance with fuel tax requirements, third structure tax requirements, utilities commission requirements, or a combination of the above. A few of the identification permits may be obtained on a one-time basis, but many must be renewed annually. For purposes of this study, permits issued on a one-time basis have been excluded from investigation. Identification permits which are annually renewable are discussed below.

Fuel tax identification permits are used as a control mechanism for the states and serve as proof that carriers are registered with the fuel tax division of the state. The direct cost of fuel tax identification permits varies substantially as displayed in Table A-II. In some states there is no fee associated with the one-time fleet registration while in other states annual registration is required, and fees range up to $12 per vehicle. The average unit fee, for those states charging a fee, is about $3.00. Occasionally, only a nominal fleet fee is charged.

Only one state requires identification permits exclusively for third structure taxes. In Colorado a letter from the state to the carrier serves to identify the carrier as registered with the ton-mile tax division of the state. The letter is duplicated, and a copy is required to be in the cab of each tractor of the fleet. There is no charge for the Colorado "GTM Letter."

Utilities commission identification permits serve as proof of compliance with State Utilities Commission requirements which are described in Section II and detailed in Table A-IV. Direct costs are associated with the one-time filing, annual renewals, and resident agent requirements. Amendments to Public Law 89-170 have attempted to set an upper limit on the one-time filing fee and annual renewal fees associated with utilities commission permits. The Amendment stipulates a $25.00 maximum fee associated with the filing of a carrier's authority,

and a $5 per vehicle maximum fee attendant to obtaining identification stamps. Despite these maximum limits, a few states charge an excess of the $25.00 one-time filing fee and the $5.00 per vehicle identification stamp fee. However, some states charge less in both categories. Annual unit fees, among states charging those fees, average about $5.00. These charges are detailed in Table A-IV.

Since utilities commission permits identify a vehicle as associated with a particular carrier (whose authority is on file with the utilities commission), trip lease carriers are subject to multiple utilities commission registrations. For example, if a for-hire operator must trip lease with various carriers in order to secure loads, he must be registered with the utilities commission of each state through which he drives on a trip, as part of each fleet for which he drives. Some operators trip lease typically 25 times per year with many different carriers, according to a truck transportation specialist who operates his own tax and permit service.

In several states, combination permits serve to identify a carrier, or a vehicle, as properly registered with more than one state agency. Virginia, for example, issues a single permit which identifies a carrier as registered both with the State Corporation Commission and with the fuel tax authority. Since Virginia's third structure tax takes the form of a fuel surtax the state has automatic registration of carriers for third structure tax purposes as well, and carriers are relieved of identifying themselves to yet another agency.

Table XI indicates by permit type and by carrier type the number of identification permits requiring annual renewal.

Exempt carriers must renew nearly 90% as many identification permits as regulated carriers, and private carriers must renew slightly over 50% of the permits required for renewal by regulated carriers. Only in the case of utilities commission permits are exempt and private carriers relieved of some of their obligations to the states.

Miscellaneous direct costs are associated with bond requirements and with utilities commission resident agent requirements. Cash or surety bonds are required by many states to ensure that a carrier will pay its tax obligation to the state. Minimum bond requirements typically range from $500 to $1,000. The amount may be fixed or variable

TABLE XI

NUMBER OF IDENTIFICATION PERMITS REQUIRING ANNUAL RENEWAL BY PERMIT TYPE AND CARRIER TYPE

Permit Type	Regulated	Exempt	Private
Fuel Tax	34	34	34
Third Structure Tax	1	1	1
Utilities Commission	40	31	4
Combination	3a/	3a/	3a/
Total	78	69	42

a/ Includes the New York Ten-Mile Tax (TMT) permit renewable every 3 years.

depending on the state. Usually, carriers employ a surety bonding agent to fulfill bond requirements. Charges for this service average about $20 per $500 bond.

Resident agent requirements, promulgated by many state utilities commissions, are often met by small carriers through the use of a third party, such as the company which insures their operations. Typically, an insurance company charges between $3 and $5 per state to arrange for a resident agent to represent a carrier.

Trip permits (in lieu of registration, fuel tax, third structure tax, and utilities commission identification permits) may be available to the operator who only occasionally drives through a particular state. Most states issue trip permits which allow the operator of a specific vehicle the privilege of highway use in that state. In addition the operator is relieved of compliance with the requirements described above. Most states issue trip permits sparingly to an individual operator. Often no more than one or two trips per month are allowed under trip permits. In most states, trip permits are regarded as temporary or emergency measures. Most often, the privileges extended by the state through issuance of a trip permit are limited to only a few days. The charges associated with trip permits are commonly between $5 and $20 per issuance.

Because of the cost of trip permits and the inconvenience involved in obtaining them, truckers interviewed in conjunction with this study preferred not to rely on trip permits as a routine substitute for annual clearances. In addition, annual clearances provide immediate equipment flexibility to operate in all states where cleared, whereas delay sometimes accompanies trip permit acquisition.

Carrier experience with direct costs, other than taxes, is discussed in Section V, "Analysis of Compliance Costs by Trucking Industry Segment."

B. Indirect Compliance Costs

The investigation of indirect costs to truckers focused on the functions which are parts of compliance activity rather than the items required for compliance with a specific tax or control mechanism as

detailed in Section II. This approach reflects the manner in which most carriers we interviewed (especially small carriers) regarded compliance. Additionally, one function may serve more than one mechanism. For example, trip records provide information which is the basis of fuel tax reporting, registration proration reporting, and, to some degree, third structure tax reporting.

Therefore, consideration of compliance activities and costs by function rather than by mechanism was judged more accurate.

Functions which were investigated include: (a) obtaining and affixing permits, (b) record keeping, (c) filing of reports, (d) enforcement, (e) various physical items, and (f) obtaining trip permits.

Two additional elements or factors which are not quantified in this report are penalty costs of noncompliance, and the cost of information gathering regarding state requirements and changes thereto. Each of the 11 cases studied incurred some penalty costs, but there is not a relationship between these costs and quantified characteristics considered in this study. Information-gathering activities could not be adequately segregated from other activities by the carrier personnel interviewed.

1. Obtaining and affixing of permits: This function relates to the identification permits described in the Subsection A concerning direct costs. Typically, identification permits are obtained for a vehicle on an annual basis. However, two circumstances can interrupt that pattern. The first occurs when an operator finds himself at his destination without authority to return with a load to his home base. In such cases, he may be able to contract on a trip-lease basis. In effect, the operator and his unit are hired by another company to operate under its authority in the operator's return direction. Since the operator no longer travels under his original authority, many states require that additional utilities commission permits identifying that operator as a part of the hiring company's fleet be obtained. This circumstance may affect a single vehicle up to 25 times per year. The second circumstance is related. It involves independent operators who sign a long-term lease (a contract of greater than 30 days duration) with a carrier. Turnover among such independent operators can be as high as 30% per year, or more. As new drivers join the company, their vehicles must be outfitted with the entire array of identification

permits. At one case study company which operates entirely with leased drivers and equipment, almost five times as much man-power was expended executing supplemental applications as was put forth on annual identification permit applications. Company-owned equipment eliminates the equipment turnover problem, and companies, large or small, which own their own vehicles do not face this problem.

The process involved for obtaining and affixing identification permits begins with the completion of application for such permits to the states. All applications must identify the carrier, and many, particularly utilities commission permit applications, must include a unit listing of all vehicles (tractors, trailers, and trucks) belonging to the fleet. The carriers interviewed did not distinguish between the two types of annual permit applications--tax identification and utilities commission identification--and most indicated the level of effort for completing either type of application is equal. The applications are submitted by the carrier and acted upon by the state. One complaint voiced by several carriers was that a few states did not process carriers' routine applications in a timely manner. Delays in receipt of valid permits occasionally caused some vehicles to be in violation of state requirements despite the carriers' attempt at compliance.

Permits take a variety of forms. In accordance with Public Law 89-170, most states' utilities commission registrations take the form of a stamp attached to a standard cab card called a "bingo card" by members of the industry. Some states, however, still require plates on the tractor and trailer, painted numbers on the door of the tractor, decals attached to the tractor cab, or identification cards which must be carried in the tractor. Fuel tax registrations generally are decals which must be attached to the tractor or cab cards which must be carried within the tractor cab. Proof of prorated vehicle registration is demonstrated by small decals displayed on a single, segmented plate. Proof of vehicle registration reciprocity sometimes requires a cab card. The carriers interviewed indicated that attaching plates and painting numbers on tractors were the most time-consuming methods of affixing permits and licenses. Stamps, decals and cab cards require less effort. Most carriers' representatives thought of affixing permits in terms of the time to array a single vehicle with all necessary cards, stamps, decals, plates and numbers.

2. Record keeping: Many records must be kept by drivers. Federal regulations require that drivers keep daily logs of their trucking activities. State requirements call for an accurate accounting of miles traveled and fuel consumed in each state. Companies may require their drivers to keep additional records. In this investigation the focus is on records maintained in order to satisfy various state requirements.

The foundation of many states' fuel tax requirements as well as proration registration requirements is a state-by-state record of miles traveled and fuel consumed. Carriers comply with these record keeping requirements by maintaining trip records. The trip records all contain essentially the same information including: origin, destination, date of trip, routes taken, miles traveled in each state, and location and amount of each fuel purchase. The maintenance of such a record requires the driver to make an entry at all fuel stops and to log mileage at each border crossing. Drivers kept complete trip records for 10 of the 11 carriers we interviewed. In the remaining case drivers were required to maintain fuel purchase records, but mileage records were reconstructed after each trip by office personnel. In the analysis in Section V, we assumed the delay cost of keeping trip records is $10.00 per hour. This estimate, which includes both driver and vehicle time, was substantiated by industry personnel.

Once the driver completes the trip record entries and the record is delivered to the office, office personnel must post the entries and tabulate totals as required. For costing this function, and all other office functions, an estimated rate of $25/day is assumed for office personnel.

Not all carriers must depend upon their drivers to maintain trip records. Regular route carriers comprise a segment of the industry which does not depend on drivers to keep trip records. This is possible because of the nature of the operation of regular route carriers. Unlike the irregular route carriers, represented by the case studies described in this report, regular route carriers are each required to remain on specified routes. Thus, the routes traveled on each trip are known, and mileage does not vary in either direction. The keeping of mileage records, therefore, can be reduced to tallies on a dispatcher's log sheet. Coupling this procedure with automatic data processing can make the job of keeping mileage records for each vehicle, and for the fleet, relatively simple.

Some large regular route carriers, and a few irregular route carriers, have created an advantageous fuel tax situation for themselves, as well. They accomplish this by purchasing fuel in bulk ex-tax and storing it at certain key points within their route structure. Since such fuel is purchased ex-tax, there is no need to match taxed purchases with consumption in each state. Fuel is dispensed to the carrier's vehicles from the company's own facilities. The accounting of fuel usage, then, becomes an affair conducted entirely within the office.

Another type of record which must be kept by carriers is an equipment listing. The listing contains the identification of all vehicles in the fleet--tractors, trailers, and trucks. It is necessary to maintain a current listing for use in applying for additional and renewal identification permits. For most smaller carriers, keeping an equipment list is not a problem, since there are few equipment changes. Larger carriers, particularly those which employ independent operators, can encounter significant turnover of personnel and vehicles. This necessitates the continual updating of the equipment list. Only the two largest carriers included in the case studies made a formal, periodic updating of the equipment list. The smaller carriers updated their listing as needed.

3. Report filing: The filing of reports is the culmination of record keeping efforts. Periodic vehicle registration proration reports, fuel tax reports, and third structure tax reports all are based on the record of mileage driven by fleet equipment in each state. Most carrier personnel interviewed in the case studies indicated there is little difference in level of effort required for the preparation of prorated vehicle registration returns and fuel tax returns. Some third structure tax returns were judged by a few interviewees as requiring a greater level of effort for various reasons. The New York gross ton-mile tax and the Ohio highway use-tax both exclude turnpike miles as miles taxable under the third structure tax law. The Arizona gross receipts tax requires information not normally kept on the trip records. The Colorado ton-mile tax may require separate calculations of loaded miles and empty miles. In the Section V analysis the differential effort involved in completing third structure tax returns was accounted for in those cases where it was a factor.

The interviewees were unanimous in their complaints of non-uniformity from state to state of the various similar report forms.

Minor inconsistencies seem to be as bothersome, and perhaps more irritating, than major differences among the forms. While the nonuniformity of forms was thought of as a nuisance by representatives of the smaller carriers interviewed, the larger carriers, which maintained computerized office operations, had spent thousands of dollars developing dozens of specialized computer programs to handle the variety of circumstances brought about by dissimilar tax and reporting forms.

Every carrier to which a state has issued user tax identification permits is required to file periodic tax reports in a timely manner regardless of the number of miles driven in the state during the period. This is true even though no taxable mileage may have been incurred on that state's highways. One owner-operator complained that he could count on being penalized every month by a particular state because his report was not filed with the state at the prescribed time. His one-man, owner-operator status kept him on the road for long periods at a time. Although he sent trip records back to his base to be processed by his bookkeeper, the trucker claimed the report could not be filed without his signature, and it was uneconomic for him to return on a monthly basis to sign the fuel tax report. Consequently, he suffered a $25 penalty each month.

4. Enforcement activities: A high indirect cost is brought about by enforcement of state requirements. Enforcement of state requirements takes two forms--on-the-road inspections, and audits. Drivers are subject to on-the-road inspections either at designated locations or randomly on the highways. Designated inspection stations exist at ports of entry (more common in western states) and at weigh stations. Roving patrols of enforcement officers may set up inspection stations anywhere within the state's highway system. Inspectors typically check to make sure the vehicle is properly registered and that appropriate fuel and utilities commission identification accompanies the vehicle. Weight and safety checks may also be made by the inspectors. Drivers report these inspections generally do not take long--often less than 15 min when everything is in order. However, drivers feel the number of inspection stops is excessive. Not uncommonly, drivers are requested to show proof of compliance with state requirements two or more times in each state. The operators interviewed in the case studies reported incidences of several hundreds of inspection stops per year.

Audits of carriers' operational records are another form of enforcement carried out by the states. In a typical audit, one or two employees of the state will visit the location of a carrier's records. The state employees will satisfy themselves with regard to the accuracy of the carrier's records, and the audit will serve as the basis for any adjustments in taxes. Generally, the audit can be completed in 1 or 2 days. Often, the states do not audit their smaller accounts as evidenced by the fact that several of the small carriers interviewed had never been exposed to an audit. Assuming a carrier's records are in order, almost no advanced preparation for an audit is required. When the auditors visit a carrier, one of the company's personnel is usually occupied assisting them for the duration of their audit.

5. Office items: Various physical items must be accounted for in determining the indirect costs of trucker compliance with state requirements. Those items which were investigated included office and storage space, equipment, postage and check-writing charges.

Office and storage space devoted to activities involving licenses, permits, taxes and fees was often a portion of the operator's home. In some cases the office installation was permanent, and in others the office area served multiple purposes. In all cases office space was minimal. The costs associated with office space and storage space were determined in one of two ways. The carrier was asked to estimate the expense of renting similar office space. If the carrier was unable to furnish the estimate, the cost of office and storage space was determined by estimating the replacement cost and depreciating that cost over a 20-year period. In either case only the prorated office cost associated with state tax and controls was determined.

Equipment usually consisted of modest office furniture--perhaps a desk and several chairs. Mechanical equipment included an adding machine or calculator and a typewriter. Some of the carriers also had copy machines. The cost of all equipment was estimated and depreciated over a 10-year period.

Postage and check writing charges were both determined based on the carrier estimate of the number of pieces of correspondence and the number of checks written to comply with state requirements. Both postage and check-writing charges were costed at 10¢ each.

6. Obtaining trip permits: Only three of the carriers obtained trip permits. The remaining eight carriers chose to obtain annual clearances at the outset of the year in all states where they anticipated traveling. Their choice was made to avoid the necessity of obtaining trip permits. Depending on the state, trip permits may be obtained either at the state border or by wire at a truck stop prior to entering the state. At a state border an operator is often able to obtain trip permits at a weigh station or port of entry. Usually, little additional time is spent obtaining a trip permit when such a stop is made. If trip permits are to be obtained by wire, the usual procedure is for the carrier or operator to call the state offices in advance of the operator's arrival at a specific truck stop. The carrier or operator informs the state issuing agency of required information including the location to which the permit must be sent. The state issuing agency processes the permit request and sends the required permit via telecopier to the specified truck stop. The process is routinely quite smooth, however, there is uncertainty with regard to when and for how long a delay will occur. One driver reports that he is forced to wait for trip permits obtained in this fashion on only 5 to 10% of his permit requests. He estimates that when he must wait, the duration is typically from 1 to 3 hr. If that estimated wait time were distributed over all permits obtained by wire, the average wait time would be about 10 min or less. Indirect cost items associated with trip permits include telecommunications expenses, driver pick-up time, and driver wait time.

C. Summary

Annual taxes, consisting of registration taxes, fuel taxes, and third structure taxes, can amount to over $2,500 per vehicle for commercial interstate trucks. Other miscellaneous fees and out-of-pocket costs of compliance also contribute to direct costs of compliance with state requirements.

The nature of existing requirements also gives rise to complex compliance activities. These include securing permits, keeping records, filing reports, and enforcement. These activities are compounded as the number of states in which a carrier operated increases. The cost of these activities as well as office expenses are indirect costs of compliance and are discussed in the next section.

V. ANALYSIS OF COMPLIANCE COSTS BY TRUCKING INDUSTRY SEGMENT

A. Industry Segmentation

Preliminary inquiries of truckers and trucking specialists indicated that, because of operating differences, some groups of truckers might experience compliance costs which are different than those of other industry groups. Early in the research study, two premises were adopted:

- Minor requirement differences exist for the various carrier types, including private, ICC exempt, and ICC regulated.
- Fleet size can affect compliance costs.

Analysis was structured to highlight the resulting differential effects. This was accomplished by segmenting the industry based on carrier type and fleet size. Three groupings along each parameter were selected for consideration:

Fleet Size	Carrier Type
Small (1-5 units)	Private
Medium (6-19 units)	ICC Exempt
Large (20 or more units)	ICC Regulated

Carrier type selection is in accordance with traditional industry descriptions. The selection of fleet size groupings is not scientific but is based on informal interviews with truckers who suggested the relative burden of compliance decreases with increasing fleet size. Arraying the heavy-heavy commercial interstate truck population by fleet size and carrier type provides the distribution presented in Table XII.

Other operational factors may affect the cost of compliance with state requirements but were not addressed in this study because of time and fund limitations. Among those factors the following may be important:

- Regular route versus irregular route operations;
- Regionalism of vehicle registration agreements; and
- Geographic extent of operation.

TABLE XII

NUMBER OF HEAVY-HEAVY COMMERCIAL INTERSTATE UNITS AND AVERAGE ANNUAL UNIT MILEAGE DISPLAYED BY FLEET SIZE AND CARRIER TYPE

Fleet Size	Carrier Type: Private	Exempt	Regulated	Total
Small (1-5 units)	61,125 units 60,349 miles	11,479 units 79,146 miles	53,216 units 70,840 miles	125,820 units 66,501 miles
Medium (6-19 units)	31,175 units 78,131 miles	5,927 units 107,773 miles	26,005 units 74,215 miles	63,107 units 79,301 miles
Large (20 units)	35,695 units 83,015 miles	5,107 units 107,781 miles	100,224 units 91,873 miles	141,026 units 90,207 miles
Total	127,995 units 71,001 miles	22,513 units 93,178 miles	179,445 units 83,076 miles	329,953 units 79,081 miles

Source: 1972 Census of Transportation "Truck Inventory and Use Survey"

We believe, however, the two most important factors have been investigated. Where significant differences due to factors not considered do occur, an explanation of the expected differences is offered and an estimate of the cost impact is given when possible.

B. Differences in Compliance Costs

Differences in compliance costs among various operations distinguished by carrier type and fleet size result from three aspects of state requirements and compliance with them. First, tax rates may vary. Second, there are some differences in the applicability of state requirements. Third, truckers report it is toughest for small carriers to comply.

1. Tax rate differential: The few variations in tax rates generally favor private trucking operations. A handful of states maintain differential vehicle registration taxes with a lower amount imposed on vehicles engaged in private trucking operations. Several states also favor household goods carriers in this regard. The tax differential, in the states where it exists, amounts to several hundred dollars in most cases (as shown in Table A-I).

Tax rate differentials do not affect all interstate truckers since not all operate in areas where rate differentials exist. Nor is the full effect of most differentials felt by other interstate truckers, because they operate in more than one state.

2. Requirement applicability: Differences in the applicability of state requirements to the various types of operators exist in the realm of utilities commission requirements and gross receipts taxes. Many states do not impose utilities commission requirements on privately operated trucks, and some states have excluded exempt commodities carriers from compliance with utilities commission requirements, as well. Gross receipts taxes, of course, do not affect private truck operations, since trucks engaged in private operations do not generate gross receipts per se. The direct and indirect effects on most private carriers resulting from exclusion from gross receipts tax requirements are minor in light of the burden of other applicable tax liabilities and required supporting reports from which there is no exclusion. The direct cost effect of exclusion from utilities commission jurisdiction is discussed subsequently.

3. Economies of scale: Carrying out the functions involved in complying with state requirements may be relatively more burdensome to small carriers than large carriers. Small operators content that very little additional compliance effort is required by incremental increases in fleet size. Thus, operators of more units enjoy a relative advantage.

C. Case Study Experience

Case study experience allows us to make observations with respect to both direct costs (other than tax rate variations) and indirect costs of compliance with state requirements. Case studies of 11 carriers were performed to this end. A brief description of each trucking entity interviewed is contained in Appendix G, and details of both direct and indirect costs of each case is contained in Appendix H. All carriers interviewed performed their own compliance functions. The carrier in Case 4 was assisted with the filing of proration reports. All carriers interviewed are irregular route carriers.

For purposes of analysis the cases were grouped according to size and according to carrier type. Small carriers, defined as those which operate 1 to five units, include Cases 1 through 5. Medium carriers, defined as operating 6 to 19 units, include Cases 6 through 9. Large carriers, operating more than 20 units, are represented by Cases 10 and 11. Private carriers are represented by Case 4 and Case 8--one case in the small carrier group and one case in the medium size group. Exempt commodities haulers are represented by Cases 1, 2, 3, 5, 6, 7 and 9 in both small and medium fleet size groups. Regulated carriers are represented by Cases 10 and 11. The following observations are based on the summaries of case study experience contained in Tables XIII and XIV. In the tables each case is characterized by fleet type, number of units, and number of states in which operations are conducted.

D. Direct Cost of Trucker Compliance with State Requirements

Direct cost factors related to permits and fees include annual fleet permit fees, annual unit permit fees, resident agent expenses, bond expenses, and trip permit expenses. Of these factors, annual fleet permit fees and resident agent expenses are relatively less important. Both

TABLE XIII

ANNUAL DIRECT FLEET COST OF PERMITS AND FEES DISPLAYED BY FACTOR FOR ELEVEN CASE STUDIES

Direct Cost Factor	Case 1 Exempt 1 unit 35 states	Case 2 Exempt 1 unit 39 states	Case 3 Exempt 3 units 12 states	Case 4 Private 3 units 26 states	Case 5 Exempt 5 units 24 states	Case 6 Exempt 8 units 16 states	Case 7 Exempt 8 units 48 states	Case 8 Private 9 units 40 states	Case 9 Exempt 12 units 42 states	Case 10[a] Regulated 365 units 39 states	Case 11 Regulated 475 units 48 states
Annual Fleet Permit Fee											
Fleet Amount	$11	$8[b]	$13	$21	$40	$10	$57	$42	$44	$59	$64
Percent of Total	1.5	0.9	2.3	2.8	5.4	1.1	2.4	3.4	1.2	0.2	0.1
Annual Unit Permit Fee (x no. units)											
Fleet Amount	$191.33	$214.75	$126	$159	$455	$648	$1,354.67	$583.50	$2626	$30,414.66	$113,900
Percent of Total	26.9	25.1	22.1	21.5	61.7	71.9	57.0	46.9	74.5	91.8	97.0
Resident Agent Expense											
Fleet Amount	$54	$38[b]	$27	-0-	$35	$15	$51	$15	$57	$90	$110
Percent of Total	7.6	4.4	4.7	0.0	4.7	1.7	2.1	1.2	1.6	0.3	0.1
Bond Expense											
Fleet Amount	$456	$596[b]	$404	$560	$208	$228	$664	$604	$800	$784	$916
Percent of Total	64.0	69.6	70.9	75.7	28.2	25.3	27.9	48.5	22.7	2.4	0.8
Trip Permit Expense											
Fleet Amount	N/A	N/A	N/A	N/A	N/A	N/A	$250	N/A	N/A	$1800	$2400
Percent of Total	N/A	N/A	N/A	N/A	N/A	N/A	10.5	N/A	N/A	5.4	2.0
Fleet Total Direct Cost	$712.33	$856.75	$570.00	$740.00	$738.00	$901.00	$2,376.67	$1,244.50	$3,527.00	$33,147.66	$117,390
Cost Per Vehicle Per State	$20.35	$21.97	$15.83	$9.49	$6.15	$7.04	$6.19	$3.46	$7.00	$3.53[a]	$5.14

a/ The division for this computation was established on the basis of 235 units cleared to operate in 25 states and 130 units cleared to operate in 27 states.

b/ A large portion of certain fleet costs for Case 2 is absorbed by other units operating together as a fleet.

TABLE XIV

ANNUAL INDIRECT COSTS PER VEHICLE DISPLAYED BY FUNCTION FOR 11 CASE STUDIES

Indirect Cost Factor	Case 1 Exempt 1 unit 35 states	Case 2 Exempt 1 unit 39 states	Case 3 Exempt 3 units 12 states	Case 4 Private 3 units 26 states	Case 5 Exempt 5 units 24 states	Case 6 Exempt 8 units 16 states	Case 7 Exempt 8 units 42 states	Case 8 Private 9 units 40 states	Case 9 Exempt 12 units 42 states	Case 10 Regulated 365 units 39 states	Case 11 Regulated 475 units 48 states	Average Per Case
Obtain & Affix Permits												
Per Vehicle Amount	$112.81	$84.31	$30.00	$16.67	$15.00	$19.38	$25.31	$12.78	$95.83	$75.75	$56.33	$50.38
Percent of Total	5.8	4.7	2.5	1.1	2.2	3.0	3.4	1.2	6.6	13.1	11.1	4.5
Record Keeping												
Per Vehicle Amount	$862.50	$750.00	$616.67	$216.67	$357.50	$262.50	$325.00	$396.67	$475.00	$394.66	$385.38	$474.78
Percent of Total	44.2	41.7	52.3	14.0	79.7	41.1	31.1	37.8	32.8	68.1	75.8	42.1
Report Filing												
Per Vehicle Amount	$233.33	$225.01	$366.67	$562.00[a]	$40.00	$21.09	$61.33	$98.06	$44.79	$6.71	$5.44	$151.31
Percent of Total	12.0	12.5	31.1	36.4	5.9	3.3	5.9	9.3	3.1	1.2	1.1	13.4
Enforcement												
Per Vehicle Amount	$540.00	$540.00	$130.00	$666.66	$52.50	$308.00	$533.75	$502.78	$802.08	$86.58	$37.47	$381.80
Percent of Total	27.7	30.0	11.0	43.2	7.7	48.2	51.1	47.9	55.3	14.9	7.4	33.8
Office Items												
Per Vehicle Amount	$201.00	$198.00	$36.33	$80.00	$34.00	$28.25	$33.75	$39.77	$32.09	$6.51	$7.11	$63.34
Percent of Total	10.3	11.0	3.0	5.2	5.0	4.4	3.2	3.8	2.2	1.1	1.4	5.6
Trip Permits												
Per Vehicle Amount	N/A	N/A	N/A	N/A	N/A	N/A	$54.69	N/A	N/A	$9.37	$17.00	$7.37
Percent of Total	0.0	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	1.2	3.3	0.7
Per Vehicle Indirect Cost	$1,949.64	$1,797.32	$1,179.66	$1,592.00	$674.00	$639.22	$1,043.83	$1,050.06	$1,449.79	$579.58	$508.73	$1,128.53
Cost Per Vehicle Per State	$55.70	$46.09	$98.30	$59.30	$28.08	$39.95	$21.75	$26.25	$34.52	$14.86	$10.60	

a/ Carrier contracts lessor to prepare and file proration reports at an annual cost of $312 per vehicle.

may be considered fixed costs of operating, and, thus, smaller carriers suffer a greater relative burden than larger carriers. The dollar amount, however, is not significant when compared to other direct costs. The use of trip permits varies with carrier objectives and, thus, is difficult to assess on a group or industry basis. Since trip permits are an alternative to annual clearances, both may serve the needs of an individual carrier. The most important direct cost factors are annual unit permit fees and bond expenses.

Annual unit permit fees are required payments for obtaining tax and utilities commission vehicle identifications. While there is no charge associated with a few permits, there is usually a charge of about $2 to $3 per unit for tax identifications and about $5 per unit for utilities commission registrations. Since these charges are on a per unit bases, no per unit variations occur due to fleet size.

Per unit variations can occur, however, as a result of varying the number of states in which permits are obtained, and because of differences in carrier type. As a carrier obtains permits in more states, the number of permits (and thus the amount of permit fees) increases. Thus, in analyzing carriers' costs, we have stated the values in terms of cost per vehicle per state for comparability. The number of permits obtained for each vehicle also depends on the requirements for different carrier types. In general, fewer utilities commission permits are required for vehicles in private operations (and to a lesser degree, exempt commodity operations) than regulated operations. The two private carriers interviewed had average permit costs of $1.83 per vehicle per state, while exempt commodities haulers and regulated carriers had a comparable cost of $4.69 and $4.48, respectively. The slightly lower cost for regulated carriers is surprising, but might be due to the more extensive use of trip permits by the regulated carriers interviewed, and the fact that some exempt commodities haulers interviewed may be obtaining more permits than absolutely necessary for their operations.

Cash or surety bonds are required by many state highway-user tax authorities. The bond is required to ensure that fuel taxes will be paid by carriers. The number of bonds posted depends on the requirements of states in which the carrier operates. The amount of the bond may be fixed or subject to the discretion of the state tax administrator as guided by state laws. Since all types of carriers are subject to similar user taxes, there are no significant differences in bond expense

due to carrier type. Because of the fixed nature of many bond requirements, however, small carriers probably suffer a greater relative burden than large carriers. Figures in Table XIII indicate 61% of direct costs for small carriers are bond expenses compared with 29% for medium carriers and 1% for the large carriers.*

In summary, the two major direct cost factors are annual unit permit fees and bond expenses. Bond expenses (some of which are fixed) constitute the major portion of direct costs for small carriers and lead to higher per vehicle costs for small carriers than for large carriers. Disregarding variation by carrier type, Table XV illustrates the adverse situation of the very small operator.

TABLE XV

ANNUAL DIRECT PERMIT AND FEE COSTS PER VEHICLE PER STATE

	Fleet Size			
	1 Unit	2-5 Units	Medium	Large
Direct Cost	$21.16	$10.49	$5.92	$4.34

The number of required permits and the associated costs, vary among carrier types and are lowest for private carriers and highest for regulated carriers. This effect is most pronounced among medium and large carriers because permit fees constitute the major portion of their direct costs. Table XVI displays for each segment the actual or estimated direct cost by mean amount, median amount, and the range of actual or anticipated experience based on the experience of the cases studied. The anticipated range of direct cost per vehicle per state is estimated to be from about $3 to about $22. The per vehicle direct cost is lowest for vehicles in large private operations and highest for vehicles in small, regulated operations.

* Bond expense figures in Table XIII in some cases were calculated, since the actual bond expense was not known by some carriers interviewed.

TABLE XVI

VARIATIONS IN ANNUAL DIRECT PERMIT AND FEE COST PER VEHICLE PER STATE
(in dollars)

Fleet Size	Carrier Type			
	All Types	Private	Exempt	Regulated
Small				
Mean	14.76	9.49[c]	16.08	N/A
Median	15.83	N/A	18.90	N/A
Range[a]	5-20	10[c]	5-20	10-20 est.
Medium				
Mean	5.92	3.46[c]	6.74	N/A
Median	6.60	N/A	7.00	N/A
Range[a]	5	5[c]	> 5	5-10
Large				
Mean	4.34	N/A	N/A	4.34
Median	4.34[b]	N/A	N/A	4.34
Range[a]	5	< 5	5	5

a/ Range rounded to nearest $5.
b/ Only two values recorded.
c/ Only one value recorded.

E. Indirect Cost of Trucker Compliance with State Requirements

In addition to direct costs, carriers experience certain indirect costs in complying with state requirements. Just as direct costs vary among carrier segments, indirect costs also may vary. Observations of such variations, based on the experience of the carriers interviewed, are described below.

As indicated in Table XIV, there are three significant indirect cost factors in complying with state requirements. The average of all case experiences points to record keeping as being the greatest source of indirect cost. Enforcement is second, and report filing is third.

Record keeping involves both the driver input on trip records and office tabulation of the information contained on those records. The experience of all cases studied indicates that the average driver cost of maintaining trip records amounts to 3 times the average office expense incurred in tabulating numbers in preparation for reporting. Substantial variation in per vehicle costs of both maintaining trip records and tabulating exists among the carriers interviewed, particularly among small carriers, but a review of the data in Appendix H, Series b, reveals no trends relating to carrier type or fleet size.*

Enforcement costs consist of both road inspections and audits. The experience of the case studies indicates that the cost of audits is insignificant when compared with the indirect costs associated with on-the-road inspections. Cases 10 and 11, which represent large and regulated carriers, experience lower indirect costs of on-the-road inspection. It is difficult to say if the lower dollar cost results either from the size of the carriers or from the regulated nature of their operation. However, information passed along by both drivers and state officials indicates that some states may expend less energy enforcing requirements on large regulated carriers. Some state officials feel these carriers are the ones most likely to be in compliance with state requirements. Thus, large, well-known, regulated carriers may experience less enforcement, while smaller carriers may be checked more often and with greater rigor in some states.

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* Only irregular route carriers were interviewed. Some regular route carriers employ a simpler method of maintaining the information required for reporting and incur less cost.

Report filing requirements are similar for all types of carriers but relatively more burdensome to small carriers. Very little incremental filing cost is incurred as the number of units reported on is increased. That is to say, the portion of fixed cost in the report filing function is large, and the variable cost portion is small. The average per vehicle filing cost for small carriers (Cases 1 through 5) is $285.40, which amounts to 20% of the total indirect costs of those small carriers. Medium carriers experience a $56.32 indirect report filing cost which amounts to 5.4% of their total indirect costs. Large carriers (Cases 10 and 11) exhibit only a $6.08 indirect report filing cost amounting to 1.1% of total costs. These figures are displayed in Table XVII and show a trend which favors large carriers.

TABLE XVII

ANNUAL INDIRECT COST PER VEHICLE OF REPORT FILING

Report Filing Cost	Fleet Size		
	Small	Medium	Large
Dollar Cost	$285.40	$56.32	$6.08
Percent of Total Indirect Costs	20.0	5.4	1.1

Less significant indirect cost factors include: (a) obtaining and affixing identification permits, (b) office items, and (c) obtaining trip permits.

The cost of obtaining and affixing identification permits amounts to a small portion of total indirect costs. Nevertheless, two observations may be drawn from the figures in Table XIV. First, there is a greater burden to very small carriers, presumably resulting from the large proportion of fixed cost to variable cost of the function. The second trend favors those larger private carriers (and possibly exempt carriers to a lesser extent) that are not required to renew as many permits per state as regulated carriers.

The expense of office items is largely fixed. Both space and equipment are fixed-cost items. Case study experience indicates that there are some economies of scale associated with these items. Thus, office items are most burdensome to very small operators and least burdensome to large carriers. No observable differences due to carrier type are expected or present.

Trip permits were not used by all of the carriers interviewed. Only 3 of the 11 carriers used trip permits to any appreciable degree in lieu of obtaining annual clearances in all states traveled. Interestingly, the two large regulated carriers (Case 10 and Case 11) both make use of trip permits. This is due, in part, both to the amount of vehicle turnover in the fleets and infrequent trips into several states where annual clearances are not obtained.

Regular route carriers would not be likely to use trip permits. The regulated nature of their operations dictates in what states they may travel and in what states they may not. None of the carriers interviewed and reported as case studies is a regular route carrier.

Overall indirect cost experience on a per vehicle per state basis reveals increasing indirect costs with decreasing fleet size, but no observable differences by carrier type. This result reflects the differential burden of report filing requirements and enforcement activities. Table XVIII displays for each segment the actual or estimated indirect cost by mean amount, median amount and the range of actual or anticipated experience, based on the experience of the cases studied. Drawing on the figures presented in the table and the trends presented in the discussion above, anticipated indirect cost per vehicle per state by fleet size is estimated in the following amounts:

Small fleet (1-5 units)	$60.00
Medium fleet (6-19 units)	$30.00
Large fleet (about 400 units)	$12.50*

* The indirect cost of record keeping for regular route carriers may be substantially less than for irregular route carriers, effecting a savings up to half this amount.

TABLE XVIII

TOTAL ANNUAL INDIRECT COST PER VEHICLE PER STATE
(in dollars)

Fleet Size	Carrier Type			
	All Types	Private	Exempt	Regulated
Small				
Mean	57.49	59.30[c]	57.04	N/A
Median	55.70	N/A	50.90	N/A
Range[a]	30-100	< 60[c]	30-100	30-100 est.
Medium				
Mean	30.62	26.25[c]	32.07	N/A
Median	30.39	N/A	34.52	N/A
Range[a]	20-40	> 25[c]	20-40	20-40 est.
Large				
Mean	12.73	N/A	N/A	12.73
Median	12.73[b]	N/A	N/A	12.73[b]
Range[a]	10-15	10-15 est.	10-15 est.	10-15[d]

a/ Range rounded to nearest $5.
b/ Only two values recorded.
c/ Only one value recorded.
d/ Regular route carriers with simplified automated record keeping might reduce indirect cost by one-half to $5.00 to $7.50 per vehicle.

F. Total Cost of Trucker Compliance with State Requirements

Combining estimated direct and indirect costs of trucker compliance with state requirements yields the total compliance cost. Table XIX contains our best estimate of total compliance cost per vehicle per state (exclusive of taxes) for each segment. Values range from $15.50 for a large private carrier to $75 for a small regulated carrier. Compliance cost variations are more a factor of fleet size than carrier type, and indirect cost variances effect the greatest differences among various fleet sizes.

TABLE XIX

REPRESENTATIVE TOTAL COSTS PER VEHICLE PER STATE (EXCLUSIVE OF TAXES) OF COMPLIANCE a/ WITH STATE REQUIREMENTS
(in dollars)

Fleet Size	Cost Type	Carrier Type		
		Private	Exempt	Regulated
Small	Direct	10.00	13.00	15.00
	Indirect	60.00	60.00	60.00
	Total	70.00	73.00	75.00
Medium	Direct	5.00	7.00	9.00
	Indirect	30.00	30.00	30.00
	Total	35.00	37.00	39.00
Large	Direct	3.00	5.00	6.00
	Indirect	12.50	12.50	12.50
	Total	15.50	17.50	18.50

a/ Irregular route carriers.

Taxes add substantially to the cost of compliance. Registration taxes averaged $964.01 per vehicle in private operations and $1,099.85 per vehicle in for-hire operations in 1973 according to the Highway Statistics

Division. Fuel tax varies with consumption and averages about $1,291.12, ranging from $985.29 to $1,759.69 depending on the segment.

Thus, the values in Table XX represent the total estimated compliance cost per vehicle for typical trucking operations in various segments of the industry.

TABLE XX

ESTIMATED PER VEHICLE COMPLIANCE COSTS FOR THREE REPRESENTATIVE TRUCKING OPERATIONS[a/]

(in dollars)

Cost Factor	Operator A	Operator B	Operator C
Direct	416.00	252.00	252.00
Indirect	1,920.00	1,080.00	525.00
Registration	1,099.85	964.01	1,099.85
Fuel Tax	1,289.80	1,273.47	1,502.04
Total	4,725.65	3,569.48	3,378.89

a/ Operator A--Exempt commodities hauler, 4 units, 32 states, average 79,000 miles per vehicle.
Operator B--Private carrier, 12 units, 36 states, average 78,000 miles per vehicle.
Operator C--Regulated carrier, 350 units, 42 states, average 92,000 miles per vehicle.

Several insights are revealed by Table XX. The bottom line indicates Carrier A incurs the highest total compliance cost per vehicle, and a look at the indirect cost figures explains why. Indirect costs vary by carrier size, and the leading indirect cost variable is the cost of filing reports. It should be noted, regarding direct costs, that the private carrier advantage (exclusion from many utilities commission requirements) is offset by the fleet size factor. The large regulated carrier is shown to incur direct costs equal to the mid-size private

carrier. The small, exempt carrier is burdened to the greatest extent with direct per vehicle costs because of the high per vehicle bond expense.

The cost analysis of the cases studied indicates that under the current system the per-vehicle effort required to administer a carrier's compliance with state requirements decreases with fleet size. Very small carriers are burdened to the greatest extent, and the relative burden decreases as fleet size increases. Section VI assesses the impact of four alternatives to the current system of tax and control of interstate trucks.

G. Summary

Because of differences in carrier type and fleet size, various segments of the trucking industry incur differential compliance costs. Some registration tax rates vary by type of carrier, and some carriers enjoy economies of scale dependent on fleet size. The following observations relate to compliance costs exclusive of taxes.

Bond expenses and permit fees are the most significant direct cost factors. Fixed bond expenses are responsible for higher direct costs for small carriers on a per vehicle basis, and per vehicle fees vary by carrier type because not all carriers must obtain the same permits to operate.

Major indirect cost factors include record keeping, enforcement activities, and report filing. Record keeping costs per vehicle do not vary with fleet size or carrier type for the carriers interviewed. Enforcement costs are lower among the large carriers than either medium or small carriers. Report filing varies by fleet size only and economies of scale favoring larger carriers are demonstrated.

Per vehicle, per state compliance costs, exclusive of taxes, range from $15.50 for large private carriers to $75 for small regulated carriers. Compliance cost variations are more a factor of fleet size than carrier type and are affected most by indirect cost differences. Vehicle registration and highway use taxes add significantly to compliance costs, about $70 per vehicle per state for an operator driving in 34 states. For some small carriers, the indirect burden of compliance equals the direct cost of taxes.

VI. ASSESSMENT OF ALTERNATIVE SYSTEMS WITH RESPECT TO CARRIERS

As demonstrated in Section V, the indirect costs of compliance with state requirements can equal the direct costs of taxes, fees, and miscellaneous expenses under current nonuniform compliance procedures. This section analyzes the anticipated effects of standardizing those procedures.

Four alternative systems of administering state requirements on interstate truckers have been selected for analysis to determine the impact of implementation:

- Nationwide reciprocity.
- Nationwide proration as practiced under the Uniform Proration and Reciprocity Agreement.
- Nationwide apportionment as practiced under the International Registration Plan.
- Federal administration.

The first three of the systems are based on administrative frameworks which are regionally operational today. Each of these three systems is viewed as providing a framework within which the various states may retain their sovereignty in the realm of user taxes on interstate commercial trucking operations. The fourth alternative system is one of federal administration of taxes and clearances with revenues reverting to the states in proportion to the interstate truck mileage driven in each state. Each alternative system is assumed to be as broad in coverage as possible combining, to the extent possible, the administration of first, second, and third structure taxes.

Utilities commission requirements, according to many state officials interviewed in conjunction with this study, are not adaptable to administration through the proposed alternative systems. The primary purpose of utilities commission requirements is not to derive revenues but to control motor carriers with regard to economic regulation and insurance protection. Assurance that a vehicle is properly insured and is operating within the limits of I.C.C. authority in one location does not guarantee that it is in compliance with requirements in other jurisdictions. These requirements are different from tax

requirements and, therefore, while they may be a continuing burden on truckers, they are not suited to inclusion in the proposed administrative systems.

The discussion which follows cites, first, the qualitative impact of the various alternatives, then focuses on the quantitative impact of the alternatives on each industry segment. Attitudes of the carrier representatives interviewed follows. Only the major direct and indirect cost factors (exclusive of taxes) are included in the analysis.

A. Qualitative Assessment of Alternatives

1. Nationwide reciprocity: A system of nationwide reciprocity involving all state taxes would eliminate most of the procedural problems of compliance faced by interstate truckers. A single vehicle registration in one state would be honored by all states. Fuel taxes would be collected by each state at the pump at the time of purchase and not related to mileage or consumption. Such a fuel tax system would eliminate fuel tax permits, bond requirements, required record keeping, and report filing. It is likely that enforcement activities could be reduced by 50% or more. Double taxation of truckers would be eliminated, and commercial interstate trucks would be almost as unrestricted as automobiles in using the highways.

However, as reported in Section VIII, a system of full tax reciprocity is not acceptable to the states. Indeed, the complexity of today's truck taxes grew because the states rejected reciprocity as the foundation of highway-user taxation. Thus, reciprocity is infeasible as a means of achieving uniformity.

2. Nationwide proration: Proration, as practiced under the Uniform Vehicle Registration Proration and Reciprocity Agreement, allows for single vehicle registrations with registration taxes divided among a number of states in accordance with fleet use in each of those states. The allocation of registration taxes is based on mileage driven in each state, and a separate return is filed with each state in which fleet miles were accumulated. Fleets consisting of less than two power units enjoy registration reciprocity.

Expanding this system to nationwide practice would increase the burden on carriers. Fuel tax and third structure tax reporting and payment would remain unchanged. Bond requirements, permit requirements, enforcement, and record keeping would continue to be carried out on a

state-by-state basis. However, nationwide implementation of this proration system would probably increase required report filing by introducing proration reports in parts of the country which currently maintain registration reciprocity and, thus, require no mileage report for registration purposes. Assuming the various tax reports would remain independent of one another, more reports would increase the indirect cost of compliance for truckers. One unit operators would remain exempt from prorationing, and the burden for these truckers would not be increased.

3. Nationwide apportionment: Apportionment, of the type practiced under the International Registration Plan, differs from prorationing under the Uniform Proration and Reciprocity Agreement in that operators' reports under the IRP are administered for every carrier by a single state--the base state--and all carriers come under the provisions of the plan. The necessity of operators' reporting to many states, as under the Uniform Proration and Reciprocity Agreement is eliminated. The IRP currently calls for a single registration plate and a single cab card, and states to which the operator apportions his registration taxes are identified on both the plate and the card.

IRP would probably have a negligible effect on enforcement activities and record keeping requirements, but several positive effects would accrue as a result of carriers' reporting to one state instead of many. Potential effects include:

- Consolidation of bond requirements;
- Elimination of tax identification permits; and
- Elimination of report filing except to one state.

Since one state would have control over the administration of the total tax payments of an individual carrier, the need for many separate cash or surety bonds is eliminated. Bond requirements could be consolidated and probably restructured along a graduated scale increasing with fleet size or projected tax liability, thereby lowering the requirements for smaller fleets.

Although record keeping requirements would not be affected, carriers would file fewer tax reports under the IRP than other systems, since an individual carrier would file apportionment reports only with its base state. A similar procedure for fuel tax reporting to the base

state could probably be instituted since current fuel tax reporting is based on mileage. To the extent that third structure taxes are based on mileage (i.e., fuel surtaxes and various weight-distance taxes--but not gross receipts taxes), these taxes could probably be administered by the base state even if that state had no third structure tax of its own.

4. Federal administration with revenue prorated back to the state: Consolidating tax payments under the watch of the federal government with receipts prorated back to the states would have very nearly the same effects on truckers as the expansion of the IRP discussed above. Bond requirements could be consolidated, the number of identification permits could be reduced, and tax report filing would decrease because of reporting to a single jurisdiction. As with the expanded IRP proposal, it is improbable that enforcement or record keeping requirements would be altered substantially.

Table XXI summarizes the major impacts on truckers of the four alternative systems.

B. Quantitative Assessment of Alternatives

The quantitative impact assessment of the four alternatives requires that the individual cost factors affected by each alternative be adjusted. Adjustments to individual cost factors will affect the various segments differently, so the costs to each of the segments must be analyzed separately as the adjustments are made.

The effect of any adjustment on the various segments combines consideration of what happens to individual cost factors--for example, is factor A eliminated, reduced by one-half or increased by 30%--with consideration of the magnitude of the specific factor in the cost structure of each segment--that is to say, does factor A comprise 30, 50, or 80% of the cost of a carrier segment? In some cases it is possible to group segments on which the impact will be equal. For example, as discussed in Section IV, indirect costs do not vary substantially by carrier type, but they do vary be fleet size. Thus, the impact of changing reporting requirements (adjustment of an indirect cost factor) may be assessed according to fleet size without regard for type of carrier.

TABLE XXI

QUALITATIVE IMPACT ON TRUCKERS OF IMPLEMENTING FOUR ALTERNATIVE TAX AND CONTROL SYSTEMS

System	Major Cost Factors				
	Bond Req.	Permit Req.	Enforcement	Record Keeping	Report Filing
Nationwide reciprocity	Eliminate	Eliminate tax permits No change for PUC permits	Reduce by 50%	Eliminate	Eliminate
Uniform proration expansion	No change	No change	No change	No change	Increase number of proration reports
IRP expansion	Consolidate (possible re-structure)	Eliminate tax permits No change for PUC permits	No change	No change	Eliminate reporting except to 1 state
Federal administration with proration to states	Consolidate (possible re-structure)	Eliminate tax permits No change for PUC permits	No change	No change	Eliminate reporting except to 1 juris-diction

For purposes of comparability, dollar savings are stated in terms of savings per vehicle per state based on the implicit assumption that interstate commercial vehicles typically operate in 25 to 45 states. The analyses follow:

1. Nationwide reciprocity: Implementation of nationwide reciprocity would eliminate two direct cost factors--bond requirements and tax permits. For computational purposes it is assumed that 100% of bond expenses would be eliminated, and a portion of direct permit fees would be eliminated in accordance with carrier type and fleet size.

For small carriers bond expense constitutes 62.0% of total direct costs. For medium carriers bond expense is 28.5%, and it is 1.1% for large carriers. No variation occurs due to type of carrier, so elimination of all bond expense would reduce total direct costs by 62.0%, 28.5%, and 1.1% for small, medium and large carriers, respectively.

The reduction in total direct costs attributable to savings in permit fees is the product of the fraction of the fees saved and the fraction of total direct costs represented by the fees.

Based on the number, type, and cost of permits required for each carrier type, 28% of permit fees would be eliminated for regulated carriers, 33% for exempt carriers and 80% for private carriers. Since permit fees make up about 35% of the direct cost of small carriers, 67% of medium carriers, and 96% of large carriers, savings can be computed for each of the nine industry segments. For example, the percentage saving of direct costs for a medium-sized private carrier would be 67% x 33% or 22%.

The percentage decreases in direct cost resulting from elimination of bond expense and a portion of permit fees can be summed to assess the total impact on direct costs of implementing nationwide reciprocity. Percent savings of total direct costs by fleet size and carrier type appears in Table XXII.

Converting percentage savings to dollar savings for each segment results in the figures in Table XXIII.

TABLE XXII

PERCENT SAVINGS OF DIRECT COST BY IMPLEMENTING NATIONWIDE RECIPROCITY

Fleet Size	Savings Factor	Carrier Type		
		Private	Exempt	Regulated
Small	Bond	62.0	62.0	62.0
	Fees	28.0	11.6	9.8
	Total	90.0	73.6	71.8
Medium	Bond	28.5	28.5	28.5
	Fees	53.6	22.1	18.8
	Total	82.1	50.6	47.3
Large	Bond	1.1	1.1	1.1
	Fees	76.8	31.7	26.9
	Total	77.9	32.8	28.0

TABLE XXIII

ESTIMATED DIRECT COST SAVINGS PER UNIT PER STATE UNDER NATIONWIDE RECIPROCITY
(in dollars)

Fleet Size	Carrier Type		
	Private	Exempt	Regulated
Small	9.00	9.57	10.77
Medium	4.11	3.92	3.78
Large	2.34	1.64	1.68

Implementation of nationwide reciprocity would alter three major indirect costs--record keeping, report filing, and, probably, enforcement. Mandatory record keeping and report filing for tax purposes would be eliminated. Since these requirements do not vary with carrier type, only carrier size need be considered. The combined cost of record keeping and report filing averages:

58.8% of small fleet indirect costs;

40.3% of medium fleet indirect costs; and

42.0% of large fleet indirect costs.

Using the data in Table XVIII (see page 68), indirect cost savings achievable by eliminating record keeping and report filing would be $32.28, $12.09, and $5.25 per vehicle per state for small, medium and large fleets, respectively.

Enforcement costs amount to 26.8, 51.3, and 6.6% of fleet costs for small, medium and large carriers. If enforcement activities and costs were reduced by one-half, the following additional indirect cost savings would result: $8.04, $7.70, and $0.41 for small, medium and large carriers, respectively.

Table XXIV summarizes total direct and indirect potential savings resulting from nationwide reciprocity. Table XXV shows these savings as a percentage of current costs.

2. Uniform proration expansion: The only effect on truckers of implementing an expanded version of the Uniform Proration and Reciprocity Agreement would be to increase the number of required reports. Currently, throughout the United States, a total of about 30 annual and quarterly proration reports are required by 18 states. Approximately 336 monthly and quarterly fuel and third structure tax reports are required as well, bringing the total of all reports required in 1 year's time by all states to 366. Assuming the same proportion of proration reports to the 18 states which currently require them, 80 additional proration reports (filed quarterly and annually) would be required under the Uniform Proration Expansion. That is a 21.9% increase of total reports. Since all carrier types are affected equally by reporting requirements, only fleet size need be considered in determining the added cost burden to industry segments.

TABLE XXIV

ESTIMATED TOTAL COST SAVINGS PER VEHICLE PER STATE
UNDER NATIONWIDE RECIPROCITY
(in dollars)

Fleet Size	Savings Type	Carrier Type: Private	Exempt	Regulated
Small	Direct	9.00	9.57	10.77
	Indirect	40.32	40.32	40.32
	Total	49.32	49.89	51.09
Medium	Direct	4.11	3.92	3.78
	Indirect	19.79	19.79	19.79
	Total	23.90	23.71	23.57
Large	Direct	2.34	1.64	1.68
	Indirect	5.66	5.66	5.66
	Total	8.00	7.30	7.34

TABLE XXV

ESTIMATED TOTAL SAVINGS UNDER NATIONWIDE RECIPROCITY
AS A PERCENT OF CURRENT COST

Fleet Size	Carrier Type: Private	Exempt	Regulated
Small	70.5	68.3	68.1
Medium	68.3	64.1	60.4
Large	51.6	41.7	39.7

Report filing activities account for 19.8, 5.4, and 0.6% of indirect costs for small, medium and large fleets, respectively. Increasing the burden of report filing by 21% has the effect of increasing indirect per vehicle per state compliance costs by $2.58 for small carriers, $0.36 for medium carriers, and $0.01 for large carriers.

3. IRP expansion: Expansion of the IRP would have an effect on both direct and indirect costs to carriers.

Direct cost savings would be brought about through the elimination of tax identification permits made possible because of consolidation of tax payments to just one jurisdiction--a carrier's base state. Additional savings might be possible through the consolidation and restructuring of bond requirements. This possibility, however, is not assessed here because it is not an integral part of the IRP expansion concept.

The direct cost savings possible by the elimination of tax identification permits under an IRP expansion are the same as with nationwide reciprocity. Table XXII (see page 78) indicates "Fees" as a percentage of direct costs by type of carrier and fleet size. Applying those percentages to the estimated direct costs in Table XIX (see page 69), yields the savings in direct costs to the various industry segments displayed in Table XXVI.

TABLE XXVI

ESTIMATED DIRECT COST SAVINGS PER VEHICLE PER STATE UNDER IRP EXPANSION
(in dollars)

	Carrier Type		
Fleet Size	Private	Exempt	Regulated
Small	2.80	1.51	1.47
Medium	2.68	1.55	1.50
Large	2.30	1.59	1.61

An indirect cost saving under the IRP expansion is achievable through a decrease in reporting requirements. Since only one jurisdiction is involved, a carrier would be required to file perhaps only 3% of the number of reports as currently--probably less than 3%. Ninety-seven percent of the report filing requirement would be done away with for all types of carriers. From Table XVII, small, medium, and large carriers would save 19.2, 5.2, and 0.6% of indirect costs, or $11.52, $1.56, and $0.07, respectively.

Total potential savings per vehicle per state under the IRP expansion are presented in Table XXVII. They represent percentage savings by segment of from 8.1 to 20.5%, as shown in Table XXVIII. Small carriers would benefit the most in terms of dollars and percent savings and private carriers would save significantly more than either exempt or regulated carriers.

4. Federal administration: The effects on compliance costs of implementing a system of federal administration of taxes with revenues prorated back to the states would not vary substantially from the cost effects achieved under the IRP expansion. The principle of the two systems is identical--a carrier reports and pays taxes to a single jurisdiction which, in turn, reimburses other jurisdictions in accordance with mileage traveled in those jurisdictions. For a display of achievable savings, see Table XXVII.

C. Trucker Attitudes Toward Alternatives

During the case study interviews with carriers, we asked for their opinions regarding the four alternative systems: (a) nationwide reciprocity, (b) uniform proration expansion, (c) IRP expansion, and (d) federal administration of taxes. The reaction was mixed. Some spokesmen had evidently given prior consideration to alleviating the burden caused by the current nonuniform system of requirements. Others had not. The opinions of the interviewees are recorded below by alternative.

1. Nationwide reciprocity: This alternative received advocacy from a single interviewee based in Florida (which is a participant in the Multistate Reciprocal Agreement and has no fuel tax reporting law). Another person interviewed mentioned reciprocity as his second choice (next to IRP expansion), but he also cited the inequity of reciprocity to the states. He favored an administration in which the states receive a fair share of tax revenues from interstate truckers in order to maintain the roads and highways which benefit truckers.

TABLE XXVII

ESTIMATED TOTAL SAVINGS PER VEHICLE PER STATE
UNDER IRP EXPANSION
(in dollars)

Fleet Size	Savings Factor	Carrier Type		
		Private	Exempt	Regulated
Small	Direct	2.80	1.51	1.47
	Indirect	11.52	11.52	11.52
	Total	14.32	13.03	12.99
Medium	Direct	2.68	1.55	1.50
	Indirect	1.56	1.56	1.56
	Total	4.24	3.11	3.06
Large	Direct	2.30	1.59	1.61
	Indirect	0.07	0.07	0.07
	Total	2.37	1.66	1.68

TABLE XXVIII

ESTIMATED TOTAL SAVINGS UNDER THE IRP EXPANSION
AS A PERCENT OF CURRENT COST

Fleet Size	Carrier Type		
	Private	Exempt	Regulated
Small	20.5	17.8	17.3
Medium	12.1	8.4	8.1
Large	15.3	9.5	9.1

2. Uniform proration expansion: This alternative was not favored as an alternative by any of the carriers interviewed. In fact, the one carrier who rank-ordered the four alternatives placed the expansion of the Uniform Proration and Reciprocity Agreement at the bottom of the order. His reasoning was that it is too complicated for truckers to file tax reports with each state.

3. IRP expansion: Five of the 11 carriers interviewed favored this proposal. It appealed to private, exempt, and regulated carriers and all size groups. Interestingly, most of the respondents who favored the IRP expansion also expressed an aversion to federal administration. Among the specific reasons mentioned by those who favor IRP expansion were the following:

- Single identification for each vehicle;
- Consolidated reporting requirements;
- Susceptibility to audit by one state only; and
- Fairness to both truckers and states.

Along with support of the IRP expansion, several carriers voiced criticism of other proposals. Of note also is the fact that the plan was endorsed by an eastern-based carrier who had only been in contact with registration reciprocity and was not familiar with the workings of any sort of proration plan.

4. Federal administration: This proposal was favored by two carriers. Both seemed to feel that the states were incapable of, or unwilling to cooperate on a plan which would aid truckers. Federal intervention was their proposed solution.

5. No change to present system: This alternative was favored by one carrier interviewed.

6. No opinion: Two carriers were unable to offer an opinion on the alternatives.

D. Summary

Quantitative analysis reveals the implementation of nationwide reciprocity, including all tax structures, would result in substantial savings to all segments of the trucking industry, and that the savings to the truckers would be greater than under any of the other three proposals. Savings to carriers would be equal under the IRP expansion or federal administration. The greatest savings under either plan would be felt by small carriers, and savings would decrease with fleet size. Some savings differential accompanies type of carrier, with private carriers saving more than either exempt or regulated carriers. Implementation of the Uniform Proration expansion would result in increased compliance costs with the greatest impact on small carriers regardless of type of carrier.

Carrier attitudes toward the four alternatives are revealed in the opinions of the eleven carriers who were formally interviewed in conjunction with this question. Five carriers favored a proposal which would expand the International Registration Plan. Federal administration was the second most frequently preferred option. However, the federal proposal was also the most controversial, since four carriers spoke out against federal administration. One trucker favored nationwide reciprocity, one favored "no change," and two offered no opinion.

VII. REVENUES AND COSTS TO THE STATES

An objective assessment of alternatives to the present system of state taxes and fees on commercial interstate trucks must consider the tax revenues to the states as well as imposts on truckers. In this section, the revenues resulting from the various states' taxes and fees are reported, and in Section VIII the impact on the states of implementing any of four alternative systems is discussed.

Estimating net receipts resulting from taxes imposed on interstate trucks is a difficult task. Neither the states nor the trucking industry keeps records which relate specifically to commercial interstate trucking including both private and for-hire carriers. The states have had no need to identify this segment from the remainder of the vehicles under their control. Additionally, until recent improvements in accounting capability through data processing techniques were made, the burden of determining the proportion of interstate commercial motor vehicles to all vehicles was practically a physical impossibility. Within the industry, the ICC records the tax experience of regulated carriers, but almost nothing is known regarding exempt and private segments of the industry. In short, very little historical data is available to indicate the relative importance of interstate commercial motor vehicles to the total tax revenues of the states.

Certain information relating to the determination of the states' net tax receipts from commercial interstate trucks is available, however. The Highway Statistics Division, Office of Highway Planning, assembles and publishes tax data collected from all the states. Statistics for the entire population of trucks relating to the various truck taxes and fees is published for each state. Two Highway Statistics Division publications were used in the analysis that follows--Highway Statistics, 1972, and Road User and Property Taxes, 1973. In addition, the Bureau of Census has published, from time to time, a "Truck Inventory and Use Survey" as part of a Census of Transportation. Based on recorded survey results, it is possible to identify truck population segments by use of numerous variables contained in the "Truck Inventory and Use Survey." Finally, the necessity of assessing the registration taxes for specific types of vehicles caused us to use the American Trucking Associations' Bulletin Advisory Service. Our approach to determining gross state tax revenues from a segment of the trucking population combined primarily these four published sources.

Still, there is no published information available relating to the cost burden to the states of administering tax and control mechanisms affecting commercial interstate trucks. That information is necessary in the analysis for calculating net tax receipts. Personal interviews were held to collect current cost information as well as attitudes of state officials regarding implementation of the four alternatives to the present system.

Time and cost limitations prevented visits to all states, so nine states were chosen as representatives. Table XXIX summarizes the selections and major reasons for choosing these states to be visited.

State revenues and costs derived from registration taxes, fuel taxes, third structure taxes and utilities regulatory commissions fees are discussed below.

A. Revenues to the State

1. Registration tax revenues: Two methods for determining registration tax revenues in the various states were used, depending on whether a state administers interstate truck registrations through reciprocity or prorationing. In the reciprocity states it is assumed that 100% of the registration tax for a vehicle is paid to one state--the vehicle's base state. Under proration, the registration taxes for fleets of trucks are allocated among numerous states in proportion to miles driven in each.

a. Registration tax revenues under reciprocity: Registration tax revenues by state for all trucks are published information. The challenge of this analysis is to determine what proportion of total tax receipts are from commercial interstate trucks. The "1972 Truck Inventory and Use Survey" provides the basis for the division of all commercial trucks by states into two groups: (1) interstate vehicles; and (2) all other trucks, which will be denoted as intrastate vehicles. Each group may be further categorized by truck type (weight class). This has been done using the following weight class descriptions:

- Light weight trucks - a 5,000 lb (2,270 kg) pick-up truck was used as a typical vehicle.

TABLE XXIX

CRITERIA UTILIZED FOR SELECTION OF STATES TO BE VISITED

State	ICC Region	Rank by Number of Reg. Trucks	Registration Agreements	Third Structure Tax	Other Reasons
California	Pac. Coast	Top 1/3	Proration	Gross Receipts (Repealed 1973)	
Colorado	Rocky Mtn.	Middle 1/3	Proration (Joining IRP)	Ton-Mile Tax	
Florida	Southern	Top 1/3	Reciprocity	None	Many exempt haulers
Kansas	Midwestern	Middle 1/3	Proration	None	Use extensive system of ports of entry
Massachusetts	New England	Lower 1/3	Bilateral Agreements	None	
Missouri	Midwestern	Top 1/3	IRP, Proration, Reciprocity	None	
Pennsylvania	Mid Atlantic	Top 1/3	Bilateral Agreements	Not significant Tax	
Texas	Southwestern	Top 1/3	IRP	None	Many exempt haulers
Virginia	Mid Atlantic	Middle 1/3	Reciprocity	Fuel Surtax	Evidence of good data

- Medium weight trucks - a 14,000 lb (6,350 kg) stake truck was used as a typical vehicle.

- Light-heavy weight trucks - a 24,000 lb (10,886 kg) van truck was used as a typical vehicle.

- Heavy-heavy (gasoline) - a 40,000 lb (18,144 kg) gasoline-powered, 3-axle tractor-semitrailer was used as a typical vehicle.

- Heavy-heavy (diesel) - a 72,000 lb (32,659 kg) diesel-powered, 5-axle tractor-semitrailer was used as a typical vehicle.

With this segmentation, it is possible to compute an estimate of each state's registration receipts by totalling the products of the number of vehicles reported in each group by the appropriate registration tax in each state. Registration taxes for each of these weight classes, by state, were taken from Highway Statistics, 1972, and from the Bulletin Advisory Service, 1974, and are displayed in Table XXX.

A comparison of tax receipts computed as above with the information published by the Highway Statistics Division revealed some significant differences. These differences were resolved by insertion of a correction factor into a general formula used to determine commercial interstate truck registration tax receipts in reciprocity states:

$$X_i' = X_i \frac{R_i}{X_i + Y_i} ,$$

where X_i' = the revised estimate of interstate registration revenues i^{th} reciprocity state

X_i = the total registration revenues computed for all interstate vehicles based in the i^{th} reciprocity state

R_i = the total actual truck and trailer registration receipts in the i^{th} reciprocity state

Y_i = the total registration revenues computed for all intrastate vehicles based in the i^{th} reciprocity state.

TABLE XXX

Typical per Vehicle Registration Tax
for All States by Truck Weight Group

State	Light Class I	Medium Class II	Lt-Heavy Class III	Hvy-Hvy (Gas) Class IV	Hvy-Hvy (Diesel) Class V
Alabama	13.00	41.73	75.00	151.00	346.00
Alaska	45.00	70.00	70.00	120.00	170.00
Arizona	13.00	65.00	128.00	303.00	523.00
Arkansas	17.00	56.06	156.00	270.00	802.00
California	20.00	59.00	170.00	221.00	474.00
Colorado	11.46	23.15	24.00	56.00	56.00
Connecticut	25.00	70.00	144.00	315.00	555.00
Delaware	20.00	54.88	118.80	217.00	383.40
Florida	38.34	73.45	114.02	311.50	471.50
Georgia	5.00	15.00	30.00	110.00	385.00
Hawaii	62.83	86.30	143.64	225.15	390.25
Idaho	17.50	30.00	55.00	102.00	102.00
Illinois	38.00	117.97	338.00	842.00	1,492.00
Idiana	16.25	53.68	120.25	310.50	485.50
Iowa	35.00	100.00	275.00	615.00	1,220.00
Kansas	15.00	29.70	125.00	345.00	1,070.00
Kentucky	10.00	24.75	160.00	495.00	771.00
Louisiana	17.10	79.48	136.29	290.00	490.00
Maine	15.00	51.49	175.00	326.00	705.00
Maryland	37.32	121.81	159.70	215.00	455.00
Massachusetts	25.00	67.10	120.00	230.00	390.00
Michigan	37.23	63.91	161.33	340.00	590.00
Minnesota	25.00	46.30	120.00	454.13	1,062.60
Mississippi	11.16	51.43	142.22	285.50	608.50
Missouri	20.50	39.10	80.50	308.00	1,008.00
Montana	17.50	22.57	103.75	121.00	771.00
Nebraska	18.00	39.76	210.00	412.00	812.00
Nevada	20.00	30.50	46.83	76.50	132.00
New Hampshire	25.00	68.42	144.00	240.00	432.00
New Jersey	40.00	95.61	178.70	310.50	544.10
New Mexico	24.50	48.64	87.50	50.50	75.50
New York	35.00	67.69	168.00	295.00	519.00
North Carolina	25.00	112.73	240.00	404.00	724.00
North Dakota	19.00	36.00	57.00	411.00	971.00
Ohio	44.27	74.83	205.91	274.20	605.25
Oklahoma	20.00	74.95	190.00	399.30	654.30
Oregon	10.65	38.98	70.00	105.00	185.00
Pennsylvania	26.00	80.00	168.00	315.00	560.00
Rhode Island	20.00	62.00	105.00	225.00	410.00
South Carolina	12.00	54.32	106.87	234.00	514.00
South Dakota	33.25	78.25	166.85	439.00	824.00
Tennessee	29.92	46.48	294.76	528.00	878.00
Texas	22.00	94.79	184.80	315.60	733.60
Utah	7.50	35.00	80.00	205.00	465.00
Vermont	43.00	138.14	291.60	515.00	1,659.30
Virginia	11.00	32.40	84.23	212.00	662.00
Washington	20.22	41.72	102.10	274.80	742.25
West Virginia	22.50	43.85	140.50	284.50	590.00
Wisconsin	35.15	59.93	265.00	487.00	962.00
Wyoming	10.00	20.00	30.00	60.00	60.00
District of Columbia	59.50	80.50	128.50	212.00	393.00

R_1 is the figure taken from Highway Statistics, 1972, representing the actual truck registration revenues collected in the i^{th} state. X_i and Y_i were computed by the described procedure using "Truck Inventory and Use Survey" data. This calculation insures that the computed estimates of intra- and interstate revenues are weighted so that their sum equals the revenues reported to FHWA. For example, in Alabama the total of the products of the number of interstate vehicles registered in each weight class and the appropriate tax rate is \$2,145,209 (X_{ALA}). Computed registration revenues for intrastate vehicles (Y_{ALA}) is \$13,078,514. The computed total registration revenues ($X_{ALA} + Y_{ALA}$) is \$15,223,723. However, the state reported total truck registration revenues (R_{ALA}) of \$17,761,000 which indicates the computed estimates are too low. To arrive at X_{ALA}, the revised estimate of interstate registration revenues, X_{ALA} was increased by a factor of $\frac{17,761,000}{15,223,723}$ to yield \$2,502,742.

b. Registration tax revenues under prorationing: Registration taxes from prorated fleets may be paid to many states, and so the methodology for determining revenues by any given state cannot be based on number of vehicles registered. Instead, the value must be backed out of total state registration tax receipts. This was accomplished by use of Highway Statistics, 1972, and the 1972 "Truck Inventory and Use Survey" in accordance with:

$$X_i' = (R_i - Y_i) + E_i \quad ,$$

where X_i' = the estimate of interstate registration revenues in the i^{th} prorate state

Y_i = the computed registration revenues from intrastate vehicles in the i^{th} prorate state

R_i = the total truck and trailer registration revenues collected in the i^{th} prorate state

E_i = the estimated proportional error added to the computed interstate registration revenues in the i^{th} prorate state.

Requirement for insertion of an error adjustment, $E_i = (0.33106)R_i$, was determined by comparison of estimated interstate revenues, $X_i = R_i - Y_i$, with actual data received through on-site visits to prorate states. A statistical evaluation of the error adjustment was performed. The

distribution of the proportional difference between reported values in the state's prorate and the computed estimates was calculated. The mean and variance of that distribution yielded a student's T-value with three degrees of freedom of 1.5879. The value equates to a probability of error of 0.1. The error adjustment, a constant, was accepted as the best estimate method available, and was applied to the formula used to estimate prorate revenues as indicated by E_i.

Table XXXI summarizes the estimated registration revenues collected by states for interstate vehicles in 1972. "R" or "P" indicates which methodology was used, based on whether the state was a reciprocity or a prorate state, respectively.

Nearly 85% of these revenues are derived from heavy-heavy registrations, based on the facts that 79% of interstate commercial vehicles are in the heavy-heavy group and greater tax rates apply to that group than other weight groups.

Figure 2 displays the relation of interstate commercial truck registration taxes to all truck registration tax receipts by state. It shows the variability of both the magnitude of truck registration tax receipts and the dependence of the states on interstate truck registrations vis-a-vis intrastate registrations.

2. Motor fuel tax revenues: Receipts from "special fuel" taxes are considered in this subsection. Special fuel taxes are taxes on those fuels other than gasoline used to propel vehicles on the highways. Gasoline taxes have been excluded from this analysis for two reasons. First, the vast majority of commercial interstate truck miles are driven by diesel-powered rigs. Second, many states do not maintain reporting requirements for gasoline users.

The method used to determine special fuel tax receipts in each state resembles the method for estimating prorated registration tax receipts. Indeed, the principle is identical. Interstate trucks pay special fuel taxes to numerous states in proportion to the miles driven in each state. Thus, from total special fuel gallons dispersed, those used by intrastate vehicles are subtracted, leaving an estimate of special fuel gallonage dispensed in each state to interstate truckers. The tax rate per gallon has been applied to determine tax receipts in each state. A correction factor ensures greater accuracy in this analysis, as with the proration receipts analysis.

TABLE XXXI

ESTIMATED INTERSTATE REGISTRATION TAX REVENUES

State	Type	Revenue	State	Type	Revenue
Alabama	R	$2,502,703	Montana	P	$3,359,473
Alaska	R	44,660	Nebraska	P	4,049,937
Arizona	P	7,187,998	Nevada	P	3,874,903
Arkansas	R	3,584,192	New Hampshire	R	741,432
California	P	11,067,120	New Jersey	R	5,776,441
Colorado	P	1,970,814	New Mexico	P	3,150,610
Connecticut	R	1,134,099	New York	R	3,455,167
Delaware	R	1,993,456	North Carolina	R	9,412,644
District of Columbia	R	54,176	North Dakota	P	<100,000
Florida	R	4,613,689	Ohio	R	11,634,415
Georgia	R	5,562,235	Oklahoma	R	4,251,480
Hawaii	R	2,244,681	Oregon	P	6,754,986
Idaho	P	1,493,888	Pennsylvania	R	11,651,955
Illinois	P	39,848,286	Rhode Island	R	745,797
Indiana	R	4,527,225	South Carolina	R	1,365,299
Iowa	P	12,080,000	South Dakota	P	<100,000
Kansas	P	8,807,889	Tennessee	R	6,168,964
Kentucky	R	1,990,110	Texas	R	10,526,408
Louisiana	R	874,431	Utah	P	2,697,423
Maine	R	1,030,064	Vermont	R	856,851
Maryland	R	1,999,439	Virginia	R	5,539,238
Massachusetts	R	9,739,264	Washington	P	15,893,063
Michigan	R	6,074,168	West Virginia	R	1,400,384
Minnesota	P	7,614,532	Wisconsin	R	4,212,489
Mississippi	R	1,930,826	Wyoming	R	98,437
Missouri	P	11,339,839			

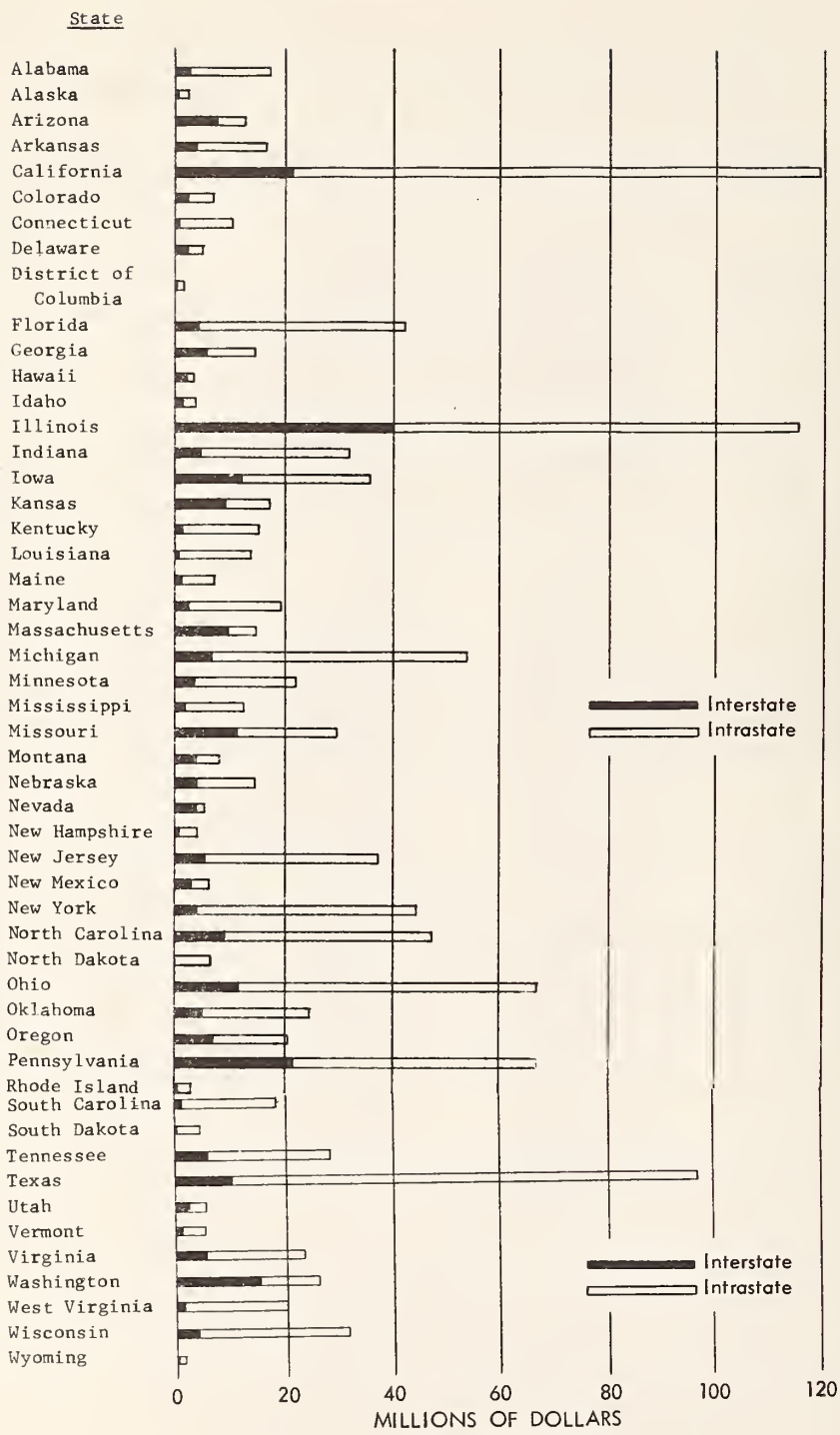

Figure 2 - Interstate and Intrastate Truck Registration Tax Receipts

The algorithm developed is:

$$X_i' = D_i - \left(\frac{\sum_{j=1}^{51} D_j}{\sum_{j=1}^{51} X_j + \sum_{j=1}^{51} Y_j} \right) Y_i \quad ,$$

where X_i' = the estimated gallons of special fuel used by interstate vehicles in the i^{th} state

D_i = the actual number of gallons of special fuel taxed for highway use by the i^{th} state as reported to FHWA

X_i = the number of gallons of special fuel used by interstate vehicles in the i^{th} state computed by the use survey tape

Y_i = the number of gallons of special fuel used by intrastate vehicles based in the i^{th} state computed by the use survey tape.

The expression in parentheses acts as a weighting factor to insure that the total gallons of diesel fuel computed from data on the truck use survey tape agrees with the actual total number of gallons of special fuel taxed.

Table XXXII summarizes the estimated total special fuel tax receipts paid to states by interstate vehicles. Only one check on these estimates is possible. Virginia is the only state we encountered which keeps separate records on tax receipts from interstate and intrastate carriers. We estimated 174 million gallons of special fuel used by interstate carriers in Virginia which compares favorably with the actual reported total of 188 million gallons. Figure 3 gives a visual interpretation of receipts from interstate carriers relative to total special fuel tax receipts.

3. Third structure tax revenues: Few generalizations can be made about the third structure taxes imposed by 11 states. Several different items are taxed including fuel, axle-miles, ton-miles, and gross receipts. In some cases first structure taxes are lower than the

TABLE XXXII

ESTIMATED INTERSTATE SPECIAL FUEL TAX REVENUES - 1972

State	Gallons	Tax/Gal	Revenue
Alabama	97,736,487	8¢	$7,818,919
Alaska	5,737,631	8¢	459,010
Arizona	92,434,288	7¢	6,470,400
Arkansas	91,327,214	8.5¢	7,762,813
California	157,551,948	7¢	11,028,636
Colorado	46,751,229	7¢	3,272,586
Connecticut	44,899,517	10¢	4,489,952
Delaware	4,847,322	8¢	387,786
District of Columbia	14,293,601	8¢	1,143,488
Florida	40,127,234	8¢	3,210,179
Georgia	194,129,484	7.5¢	14,559,711
Hawaii	1,421,930	5¢	71,097
Idaho	20,293,917	8.5¢	1,724,983
Illinois	237,558,015	7.5¢	17,816,851
Indiana	214,017,920	8¢	17,121,434
Iowa	131,690,451	8¢	10,535,236
Kansas	83,218,972	8¢	6,657,518
Kentucky	97,788,336	9¢	8,800,950
Louisiana	70,910,426	8¢	5,672,834
Maine	18,282,207	9¢	1,645,399
Maryland	54,007,213	9¢	4,860,649
Massachusetts	36,843,237	7.5¢	2,763,243
Michigan	116,848,665	7¢	8,179,407
Minnesota	77,878,816	7¢	5,451,517
Mississippi	87,629,342	10¢	8,762,934
Missouri	170,112,883	7¢	11,907,902
Montana	18,969,495	9¢	4,515,795
Nebraska	22,177,495	8.5¢	1,885,087
Nevada	38,876,562	6¢	2,332,594
New Hampshire	2,486,792	9¢	223,811
New Jersey	154,399,243	8¢	12,351,939
New Mexico	79,689,498	7¢	5,578,265
New York	104,623,490	10¢	10,462,349
North Carolina	106,190,802	9¢	9,557,172
North Dakota	24,969,179	7¢	1,747,843
Ohio	312,129,425	7¢	21,849,060
Oklahoma	36,736,092	6.5¢	2,387,846
Oregon	38,574,519	7¢	2,700,216
Pennsylvania	308,719,759	8¢	24,697,581
Rhode Island	5,918,640	8¢	473,491
South Carolina	77,488,194	8¢	6,199,056
South Dakota	27,584,276	7¢	1,930,899
Tennessee	145,582,107	8¢	11,646,569
Texas	248,316,443	6.5¢	16,140,569
Utah	33,937,107	7¢	2,375,597
Vermont	7,085,259	0¢	0
Virginia	174,296,188	9¢	15,686,656
Washington	62,087,348	9¢	5,587,861
West Virginia	71,140,303	8.5¢	6,046,926
Wisconsin	84,545,603	7¢	5,918,192
Wyoming	31,465,846	0¢	0
Total	4,457,533,960		$350,312,500

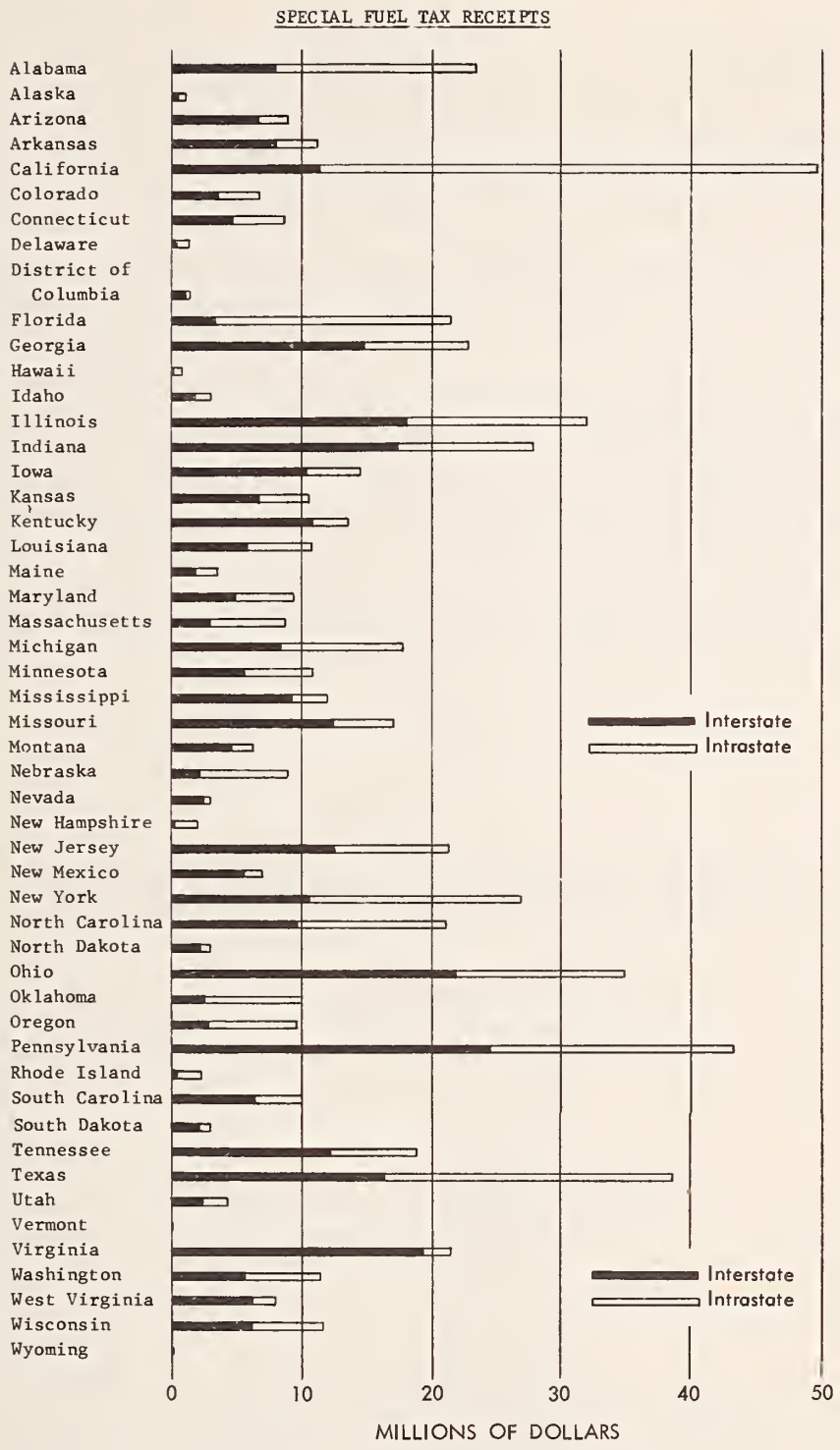

Figure 3 - Special Fuel Taxes Paid by Interstate and Intrastate Carriers

norm, compensating for the third structure tax. Tax rates vary, as well, reflecting variations in the tax philosophies held by the states. Yet, to those states which do maintain third structure taxes as an integral part of their highway-user tax program, no alternative methods of highway-user taxation seems equitable. They feel registration and fuel taxes cannot fairly assess highway usage responsibilities.

Estimating third structure tax revenues paid by commercial interstate carriers is mostly guesswork. In general, the proportion of third structure taxes paid by commercial interstate vehicles is roughly equivalent to the proportion of fuel taxes paid by that group. Mileage is the basis for computing both. That reasoning holds well for fuel surtaxes and mileage taxes but not for gross receipts taxes. However, except where estimates of third structure tax receipts were forthcoming from state officials, our estimates are based on fuel tax proportions. They are presented in Table XXXIII. Virginia's road tax or fuel surtax is added onto the fuel taxes collected through quarterly reports, requiring no additional administrative burden to interstate carriers or to the state. The estimated interstate portion of revenues resulting from this additional tax is $3,500,000.

TABLE XXXIII

ESTIMATED INTERSTATE THIRD STRUCTURE TAX REVENUES
(in dollars)

State	Total Third Structure Tax Revenue 1972	Interstate Portion
Arizona	7,664,000	5,400,000
Colorado	14,008,561	3,500,000[a/]
Idaho	5,102,000	3,100,000
Kentucky	Unknown	2,000,000
Montana	564,000	400,000
New Mexico	1,821,000	1,400,000
New York	27,321,000	11,100,000
Ohio	35,923,000	22,600,000
Oregon	27,535,000	8,300,000
Virginia	Unknown	3,500,000
Wyoming	5,729,000	3,100,000

a/ Colorado value based on estimate received from state officials.

The only other significant third structure tax observed in states visited was Colorado's ton-mile tax. Tax revenues amounted to $14,007,561 in 1972. However, much of that total is from intrastate traffic, and Colorado does not differentiate this revenue by inter and intrastate categories. Twenty-five percent of the private, regulated, and exempt carriers registered with the regulatory commission are interstate carriers. Also, interstate shipments generally go completely across the state as opposed to traveling between two internal points. Thus, probably a minimum of $3,500,000 of that revenue is attributable to interstate carriers.

A minority of states have continued using a significant third structure tax. Most of these have already withstood frequent attack and survived because the state legislatures concluded there was no other way their state could collect the tax revenues equitably in relation to highway use. A solution more promising than abandonment of these taxes appears to be that of combining the report and payment of the tax with another tax as Virginia, Kentucky, and New Mexico, and possibly others have done. Colorado is discussing enabling legislation to do the same.

4. Regulatory agency fee receipts: Revenues of regulatory agencies are from fees accompanying one-time filing of authority, amendments to authority, annual identification stamps, and trip permits. In most cases, the states consider their utilities commissions as controlling rather than taxing agencies. All states visited except Pennsylvania maintain regulatory requirements. The one-time filing fee, generally around $25.00 per carrier does not produce significant revenue to the regulatory agencies. The identification stamps range from no charge to $25.00 per vehicle. Of those states visited, only three of the eight with regulatory requirements charge more than $5.00 per ID stamp, the amount prescribed by Public Law 89-170. Only four of the eight states visited sell trip permits.

Table XXXIV summarizes approximate revenue data from the state agencies visited. The interstate portion of revenues collected in the agencies that regulate interstate vehicles ranges from an annual total of $25,000 to $1,658,420.

In order to gain an appreciation for both the total amounts of state tax and fee receipts, as well as the contribution of each mechanism to the totals, Table XXXV is presented. This analysis implies that altering receipts related to any single tax mechanism will impact the individual states differently.

TABLE XXXIV

INTERSTATE PORTION OF REGULATORY AGENCY REVENUES

State	Number of Interstate Vehicles	Types of Carriers Under Agency Control	Total Revenue
California	80,000	Exempt, Regulated	$160,000
Colorado	75,000	All	25,000
Florida	152,216	Exempt, Regulated	1,658,420
Kansas	63,979	All	677,290
Massachusetts	50,000	Exempt, Regulated	200,000
Missouri	40,000	Exempt, Regulated	1,000,000
Pennsylvania	N/A	None	0
Texas	166,065	Exempt, Regulated	450,000
Virginia	266,000	All	975,000

TABLE XXXV

PERCENT CONTRIBUTION OF EACH MECHANISM TO TOTAL INTERSTATE TAX AND FEE RECEIPTS

State	Total Receipts $1,000's	Percent Contribution to Total			
		Registration Tax	Fuel Tax	Third Structure Tax	PUC Fees
California	$22,256	49.7	49.6	0	0.7
Colorado	8,768	22.5	37.3	39.9	0.3
Florida	9,482	48.7	33.9	0	17.5
Kansas	16,143	54.6	41.2	0	4.2
Massachusetts	12,703	76.7	21.8	0	1.6
Missouri	24,248	46.8	49.1	0	4.1
Pennsylvania	36,350	32.1	67.9	0	0
Texas	27,117	38.8	59.5	0	1.7
Virginia	25,687	21.6	61.0	13.6	3.8

B. Costs to the States

The best way to develop cost values of administration of state requirements is to observe and discuss the experience of the states. Our study included visits to nine states, and the determination of administrative costs was an objective of these visits. We were largely successful but did meet with some problems. Only in the case of registration agencies in prorate states is the administration over interstate vehicles separated from that over intrastate vehicles. Furthermore, some agencies do not separate the tax administration of commercial motor vehicles from that of other entities such as passenger vehicles, railways, or cigarettes. Finally, budgets vary. In agencies quoting budget figures, most officials were uncertain of the exact extent of total costs to the state that were actually included in their budgets. The single thread of unity among states was the availability of the number of personnel working in the office administering the tax or fee. Thus, the reader is cautioned that some amount of precision has been sacrificed in calculating the following cost estimates.

The format of this subsection is similar to that of the previous one, in that registration taxes, fuel taxes, third structure taxes and regulatory requirements are treated in order.

1. Registration administration costs: Visits with representatives of registration offices indicated the existence of two unique administrative structures--one for reciprocity and one for prorationing. Each of the four states visited utilizing reciprocity agreements administer only the vehicles based in their state, and registration of these vehicles is treated in combination with all other motor vehicle registrations. Each of the five visited states administering their vehicles under an apportionment or proration system have separate proration or reciprocity offices.

a. Reciprocity administration costs: Procedures for administering interstate commercial vehicles under reciprocity are similar to those involving registrations of any other motor vehicles. Usually the same personnel perform the clerical and administrative functions for these registrations as they do for all other motor vehicles. Often the renewal date for different sizes of automobiles and trucks is varied to distribute administrative burden of heavy renewal periods over the calendar year. To this extent the average costs of administering motor vehicles in these departments are typical of the costs of administering interstate motor carrier registrations.

Functions performed by all registration offices in reciprocity states which were visited are similar. Applications generally are mailed or brought in person. If mailed, the registration tax is recomputed to verify that the correct tax has been included. The computation may be verified by hand or by electronic data processing. If the application is hand carried, the clerks generally recompute the required taxes on the spot to verify correct payment. Changes of vehicles, addresses, or other significant alterations are made to update a data bank, usually computerized. Some auditing is performed on a spot basis, or when taxes paid do not match estimated taxes. Applications generally are filed after new plates or decals are given or mailed back to the applicant.

However, there are significant additional costs, such as determining how many vehicles to base within any one state, that make the costs of registering interstate motor carriers higher. Additionally, the complexity of registering large fleets, auditing records, keeping up with addition, deletions, and other changes, adds to the burden of administering registrations of these vehicles. But, these burdens are offset by the savings in multiple registrations per each piece of paperwork and each administrative function. Most officials interviewed seemed to feel that on a per vehicle basis the cost of administering interstate trucks was not significantly different than the per vehicle cost of the entire department.

Table XXXVI includes estimated cost data for the entire motor vehicle departments of reciprocity states visited. The significantly higher unit cost in Massachusetts is because its motor vehicle budget includes enforcement and all other areas of motor vehicle administration in addition to registration. For that reason its unit cost was not included in the average cost per vehicle registered in the reciprocity states. In the other three states the weighted average cost per vehicle is approximately $0.90 per vehicle. The average of the three states' costs is $0.98 per vehicle. In no case does the cost to the states approach one-half of 1% of registration revenues. The average is 0.26%.

b. Proration administration costs: State costs of administering interstate motor vehicle registrations are more clearly defined in proration states because, generally, a separate office is assigned to administer only these registrations. In some cases, proration divisions are subordinate to the motor vehicle registration agency, or they may act as an independent entity.

TABLE XXXVI

STATE ADMINISTRATIVE COSTS OF REGISTRATION UNDER RECIPROCITY

State	Total Vehicles	Total Cost[a]	Unit Cost	Interstate Vehicles	Total Interstate Cost
Florida	4,767,000	$3,000,000	$0.63	20,143	$12,690
Massachusetts	2,821,000	18,000,000[b]	6.38[b]	8,787	56,061
Pennsylvania	6,311,000	5,500,000	0.87	35,126	30,560
Virginia	2,762,520	4,000,000	1.45	12,701	18,416

a/ Estimates for overhead, use of floor space, utilities have been included.

b/ Includes enforcement cost and is not used in determining average cost.

Procedures are similar in proration offices to those of other registration offices. However, significantly greater time is spent computing taxes, updating changes in data banks, and auditing returns.

It would appear that the cost of staffing a separate office for proration would cause significantly higher costs to states. However, the relatively large number of vehicles prorated per application as opposed to nearly a one-to-one ratio in other areas of registration causes costs per vehicle to remain relatively small. Table XXXVII shows the average per vehicle cost in proration offices, $0.82, to be similar to that of reciprocity states. Total costs are higher, however, in proration states because many more vehicles must be prorated in proration states than are fully registered in reciprocity states.

The fleet application for the entire carrier is the unit of concern to the state proration divisions, and the number of applications, not the number of vehicles, determines the amount of processing effort required. From Table XXXVII, the weighted average cost per vehicle is $0.82 and cost per carrier averages $55.31. Under prorationing, administrative costs to the states visited are as high as 5% of revenues, but average 2.5%.

TABLE XXXVII

STATE ADMINISTRATIVE COSTS OF REGISTRATION UNDER PRORATIONING

State	Interstate Carriers	Interstate Vehicles	Total Costs	Cost/ Carrier	Cost/ Vehicle
California	3,149	188,994	$450,000	$142.90	$2.28
Colorado	2,800	200,000	100,000	35.71	0.50
Kansas	6,000	229,000	175,000	29.16	0.76
Missouri	5,386	211,076	250,000	46.42	0.81
Texas	2,101	47,921	100,000	47.60	2.09

2. Fuel tax administration costs: The functions of fuel tax divisions related to interstate motor carriers generally include issuance of annual fuel license renewals and processing of regular reports (monthly or quarterly). The cost to the state is not really a function of the number of vehicles they administer, because all reports are in terms of fleet miles and fleet gallons. Therefore, the number of carriers administered determines the number of reports received, the number of audits required, the number of refunds made, etc. In fact, some fuel agencies had little idea how many vehicles were actually regulated, but knew how many carrier accounts they had.

Table XXXVIII summarizes the estimated costs to the states visited of administering fuel taxes. Florida does not maintain reporting requirements, but collects taxes at the pump. The state cost, then, of administering fuel taxes for interstate motor carriers in Florida is combined in the overall cost of fuel tax administration. Two states, Kansas and Missouri, did not provide follow-up information in time for inclusion in the analysis and report.

The administration of fuel taxes by the states is similar to the administration of prorated registrations. Costs also appear generally similar on a per carrier basis, but fuel tax administration experience is more variable. Per carrier prorated registration costs ranged from $29.16 to $142.90 whereas per carrier fuel tax administration costs ranged from $12.82 to $180.00.

As a percent of revenue, the administration of fuel taxes range from under 4% in three states (Massachusetts, Texas, and Virginia) to 13.6% in California. There does not appear to be a relationship between the number of carriers filing fuel tax returns and the ratio of administration costs to revenues.

TABLE XXXVIII

STATE FUEL TAX ADMINISTRATION COSTS

State	Carriers	Personnel	Estimate of Total Costs	Cost/Carrier
California	32,000	Unknown	$1,500,000	$46.87
Colorado	2,500	22	450,000	180.00
Florida	N/A	N/A	N/A	N/A
Kansas	Unknown	Unknown	Unknown	Unknown
Massachusetts	7,800	Unknown	100,000	12.82
Missouri	Unknown	12.5	Unknown	Unknown
Pennsylvania	16,000	127	2,000,000	125.00
Texas	7,880	30	600,000	76.14
Virginia	28,000	28	500,000	17.86

3. Third structure tax administration: Because of the administration variation of third structure tax mechanisms it is not possible to consider them all together to determine a single cost to the states. Fuel surtaxes surely are the least burdensome to the states. Their administration simply requires that the tax levy per gallon be checked by the processor as would be the case with any fuel tax report. No incremental cost is experienced. At the other extreme, mileage tax reports or gross receipts tax returns require processing steps similar to those required for fuel tax and proration reports. Based on the experience of the states visited, we would estimate the processing costs of mileage taxes and gross receipts taxes at about $55.00 per carrier. Some states have incorporated their mileage tax report into other existing reports. If 50% of the cost of processing these reports can be eliminated by consolidation, the anticipated cost per report drops to $27.50.

4. Regulatory agency costs: Of the nine states visited, one state (Pennsylvania) did not regulate interstate motor carriers at all. Three of the remaining eight, Virginia, Kansas, and Colorado, regulate all interstate carriers, and the remaining states regulate only for-hire carriers.

Functions of the regulatory agencies generally include:

. Filing of carriers' ICC authority or exempt certificates.

. Processing amendments to operating authority.

- Filing proof of minimum insurance coverage.
- Recording a designated resident agent for carriers in case of legal action of any type.
- Distributing annual identification stamps for carriers' Uniform Cab Cards.
- Enforcement.

Unit costs (costs per carrier controlled) vary greatly between intrastate and interstate carriers. Less cost is incurred controlling interstate carriers. The economic regulation, granting of authority, setting of rates, etc., of regulated interstate carriers is done by the Interstate Commerce Commission. The regulatory agencies must perform these functions for intrastate carriers in addition to the functions mentioned above. Table XXXIX summarizes the unit cost per carrier experienced by the states visited. Although the average regulatory cost per interstate carrier is about $31.00, substantial variation in the experience of individual states exists.

Most regulatory agency staffs visited are relatively small, apparently placing a higher emphasis on field personnel for enforcement purposes than other agencies visited, such as registration and fuel tax agencies. Accounting appeared to be done by hand, generally with little data processing support.

The greatest cost variable among utilities regulatory agencies is enforcement activity. Florida, which experiences the highest of interstate unit costs, takes pride in their high level of enforcement, using a group of some 60 field inspectors, performing approximately 50 audits and 50,000 inspections annually.

C. Net Revenues to the States

By combining the tax and fee receipts to the states with the cost to the states of administering the various tax and control mechanisms, the net revenues to the states visited can be determined. The receipts and costs to the states are both described in detail in this section. The net revenues derived from each tax or fee are summarized in Table XL.

TABLE XXXIX

REGULATORY AGENCY COSTS

State	Total Agency Statistics				Interstate Motor Carriers			
	No. of Carriers	Agency Personnel	Total Cost	Cost Per Carrier	No. of Carriers	Agency Personnel	Total Cost	Cost Per Carrier
California	23,900	Unknown	Unknown	Unknown	4,700	10	$ 160,000	$34.04
Colorado	20,535	37	$ 1,000,000	$ 41.84	5,354	7	200,000	37.36
Florida	19,961	72.3	1,500,000	75.15	19,132	60	1,200,000	62.72
Kansas	12,823	35	450,000	35.09	4,978	5	100,000	20.09
Massachusetts	15,779	38	500,000	31.69	7,518	8	100,000	13.30
Missouri	9,363	36.5	400,000	42.72	8,245	15	150,000	18.19
Pennsylvania	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Texas	7,700	70	1,500,000	194.81	5,700	12	250,000	43.86
Virginia	50,000	25	1,000,000	20.00	40,000	20	800,000	20.00

Weighted Average Cost per Carrier = $39.67

Weighted Average Cost per Carrier = $30.95

TABLE XL

NET TAX AND FEE REVENUES
($1,000's)

State	Registration Tax	Fuel Tax	Third Structure Tax	PUC Fees	Total
California	10,617	9,529	N/A	0	
Colorado	1,871	2,823	3,050	(175)	
Florida	4,601	3,210	N/A	458	
Kansas	8,633	Unknown	N/A	577	
Massachusetts	9,683	2,663	N/A	100	
Missouri	11,090	Unknown	N/A	850	
Pennsylvania	11,621	22,698	N/A	N/A	
Texas	10,426	15,541	N/A	200	
Virginia	5,521	15,187	3,500	175	

D. Summary

Significant amounts of tax revenue are derived from registration, fuel, and third structure taxes affecting commercial interstate trucks. Registration taxes are administered by the states generally in one of two ways--under reciprocity or through prorationing. Typically, higher taxes per vehicle are collected under reciprocity, but for fewer vehicles. More vehicles prorate their registration with a single state, but, of course, other states are awarded their share of registration taxes. Some states can benefit in terms of revenues under a proration system if few trucks are registered in the state and, yet, many miles are driven through the state by interstate trucks. Fuel taxes are mileage-related and administered in a manner similar to prorationing. Third structure taxes each represent a special case, but most are mileage-related and administered similar to prorated registrations and fuel taxes. Revenues from utilities commission fees are relatively modest compared to tax revenues.

Costs to the states are related to either the number of vehicles or carriers processed. Generally, under reciprocity each vehicle is processed separately. Prorationing, apportionment, and the other user taxes bear administrative costs related to carriers since taxes are paid on the basis of the entire fleet's operations. On a cost per vehicle basis there is little cost difference to the states between reciprocity and prorationing. However, a greater percentage

cost is incurred under prorationing since revenues per vehicle to one state must be shared with other states.

Fuel taxes are administered the same way as prorationing and the costs of administration are nearly identical. Third structure taxes are believed to bring about administrative costs about equal to those of proration or fuel tax processing. Utilities commission costs generally come close to equalling receipts and, thus, utilities commission fees do not usually provide large net revenues to the states.

VIII. ASSESSMENT OF ALTERNATIVE SYSTEMS WITH RESPECT TO THE STATES

Any alternative to the existing system of motor carrier requirements maintained by states must be acceptable to the states as well as the motor carriers. The amount of revenues the states are collecting must be maintained if they are to continue the highway maintenance and new construction these funds support. This section contains a combination of three elements: (1) expected occurrences resulting from the implementation of each of four alternative systems; (2) the impact on the states in terms of revenues and costs; and (3) the attitudes of state officials regarding each proposal.

A. Qualitative Assessment of Alternatives

Of the four major alternatives proposed to all states, three are patterned after partial, existing prototypes. The first of the alternatives is based on reciprocity of most privileges from state to state. The other three alternatives are based on allocation of taxes to states in proportion to carriers' usage of each states' highways. Our premise was that these alternatives might be expanded to include most areas of taxes and controls instead of only registrations and implemented throughout the country.

However, regulatory requirements have been excluded. Officials in most states believe that the administration of regulatory requirements under a system of allocation is not compatible with tax administration.

1. Nationwide reciprocity: This arrangement would parallel the existing treatment of passenger vehicles, i.e., a vehicle's base registration is recognized by all other states, and fuel taxes are paid at the pump wherever fuel purchases are made. An existing, partial prototype of this idea for registration of interstate motor carriers exists in the Multistate Reciprocal Agreement (MRA), in which most southeastern states participate. A problem inherent to reciprocity is that the degree of highway usage may not be reflected in the number of vehicles based in a state. The MRA has attempted to overcome this problem with a "basing point" philosophy which requires carriers to base plate their vehicles in states in proportion to highway usage. The basing point practice, however, is not expandable to include fuel purchases.

An inequitable market situation would arise regarding fuel tax, revenues under reciprocity. Fuel would be purchased advantageously in states where low prices prevailed. Those states would receive greater fuel tax revenues than others, not necessarily in relation to anything but fuel price. Thus, quantification is not meaningful.

Reciprocity would be defeated by the imposition of third structure taxes. If a state decides to levy a third structure tax, it upsets the balance established in a reciprocity environment; other states feel that to protect their own vehicles they must reciprocate (retaliate). In doing so, states could levy reciprocal taxes on vehicles entering their states, or refuse to recognize the reciprocal registration. Examples of this situation are in effect currently which create an atmosphere undesirable to both carriers and state administrators.

We consider this alternative to be unacceptable because of the inequity to the states of fuel taxes and because of the potential disruption should any state decide to alter its tax program.

2. Nationwide proration: This alternative is an expansion of the Uniform Proration and Reciprocity Agreement, an existing system aimed at providing vehicle registration uniformity and equity. Carriers under this plan allocate registration taxes to each state in which they travel in proportion to mileage driven in each state. They also report mileage and pay registration taxes directly to those states.

An interesting feature of the present Uniform Proration Agreement is its exemption from prorationing of fleets of less than two power units. One-vehicel fleets enjoy reciprocity under the Agreement. The probable reasoning behind this arrangement is that most procedures for prorating fleets of vehicles are the same regardless of whether the carrier is prorating two or 200 vehicles. The cost to a state of processing the reports of one-vehicle fleets can be greater than the state's share of allocated registration taxes.

Fuel taxes are compatible with prorationing. Presently, most states maintain mileage-related fuel tax reporting. Vehicles traveling within the boundaries of a state with regularity must file monthly or quarterly reports, indicating whether or not sufficient fuel taxes have been paid. Carriers must file a separate report with each state and reciprocity is not given to vehicles based in other states. Officials generally agreed that, as with prorate registrations, administrative costs associated with fuel tax collections are a function of the number of carriers administered, not the number of vehicles.

Third structure taxes, like fuel taxes generally, are mileage-related and present no real problem under proration. States with such taxes generally levy them on the portion of the carrier's business or miles associated with that state. Regular reports, similar to fuel tax reports, are required from carriers. Under nationwide prorationing it would be

possible to combine the tax, or at least the reporting process, with registration or fuel tax reporting except for gross receipts taxes.

3. Nationwide apportionment: The present counterpart to this system is the newly-formed, but rapidly expanding, International Registration Plan. While registration taxes are allocated (apportioned) to the states, the carrier's home state arranges for the allocation of the carrier's taxes in all states saving the carrier the burden of reporting to each state.

Other state requirements are compatible with nationwide apportionment. Indeed, the inclusion of fuel tax reporting and administration in the allocation system has been considered. Nationwide apportionment can accommodate mileage-based third structure taxes, but gross receipts taxes would present administrative problems (as they do in all systems) because of their unique tax base.

4. Federal administration: Federal administration of taxes would eliminate the active role of the states in administering tax requirements. The burden would be shifted to the federal government in order to provide uniformity among all state jurisdictions. Tax receipts collected would revert to the states in proportion to highway usage by commercial interstate trucks. Almost certainly, the states would maintain an interest in the allocation of tax receipts so it is probable that a state role, although passive, would be assumed under this system.

Revenues under federal administration could be allocated so that no state's allocation would fall below that state's current revenues. Assuming that highway use determines a state's tax revenue need, federal administration would have to incorporate a system for identifying how much truck travel occurs in each state in a given period--a carrier reporting system would serve this purpose. Allocation, in turn, would be based on those reported data. Such a system would account in future years for shifts in the distribution among the states of trucking activity.

Collections would not need to be related to any state or tax mechanism in particular, so long as sufficient total revenues could be generated by travel in all states to meet the revenue needs of all states. A uniform mileage rate could be set for each class of vehicles. A potential advantage of collections which are not related specifically to tax mecahnisms and states is that cross-subsidization (with no infusion of funds) is possible where it is not when each state must be self-sufficient.

B. Quantitative Assessment of Alternatives

Quantitative analysis of the four alternatives boils down to analysis of three fundamental types of systems--nationwide reciprocity and two types of nationwide allocation. The two types of nationwide allocation cover three alternatives: nationwide proration, nationwide apportionment, and federal administration. Under each alternative tax revenues are allocated to the states, and in that sense the three are similar. One of the three is different, however, because revenues need not be related to specific tax structures or even specific states. Under federal administration tax revenues would flow first to the federal government and then to the states. It would be the federal government's responsibility to collect total revenues sufficient for allocation to each state in accordance with its highway usage. Under both nationwide proration and nationwide allocation each state would be responsible for administering its own tax program to generate its own revenues. Thus, the following analysis considers in turn nationwide reciprocity, nationwide allocation under the states, and federal allocation of taxes.

1. Nationwide reciprocity: Registration tax revenues are the only revenues which can be assessed under nationwide reciprocity. Fuel purchases (and fuel taxes) under the system are subject to market situations, and third structure taxes are incompatible with the system.

Table XLI summarizes our analysis of the two systems. The impact (nationwide reciprocity vis-a-vis nationwide proration or nationwide apportionment) on registration tax revenues for weight group V vehicles (72,000 lb diesel, 5 axle, tractor-semitrailer combinations). The figures contained in the table are not comparable to those presented earlier in the report because the methodology used in obtaining the two sets differed and because only weight group V vehicles (which accounts for most of the motor carrier tax receipts of the states) was considered.

To develop the estimates presented in this section, two methods were employed--one for reciprocity estimates and one for allocation estimates.* To arrive at revenue estimates under nationwide reciprocity the number of weight group V vehicles registered in each state was multiplied

* For this analysis differences among the two allocation systems (nationwide proration and nationwide apportionment) are considered to have minor impact on revenues to the states. Thus, both are treated as one.

TABLE XLI

COMPUTED REGISTRATION REVENUES FOR VEHICLES IN WEIGHT GROUP V
UNDER NATIONWIDE RECIPROCITY AND NATIONWIDE ALLOCATION

State	Revenues under Nationwide Reciprocity ($1000's)	Revenues under Proration or Apportionment ($1000's)	Current System[a/]	Gain or Loss Expected under Alternate System
Alabama	1,801	1,784	R	Loss
Arizona	605	2,549	P	Loss
Arkansas	3,132	3,871	R	Gain
California	3,379	3,939	P	Loss
Colorado	218	138	P	Gain
Connecticut	1,065	1,320	R	Gain
Delaware	1,927	99	R	Loss
District of Columbia	16	296	R	Gain
Florida	4,097	999	R	Loss
Georgia	2,490	3,952	R	Gain
Idaho	138	110	P	Gain
Illinois	7,595	18,723	P	Loss
Indiana	4,542	5,487	R	Gain
Iowa	8,981	8,473	P	Gain
Kansas	3,870	7,411	P	Loss
Kentucky	2,694	3,975	R[b/]	Gain
Louisiana	642	1,834	R	Gain
Maine	788	584	R	Loss
Maryland	1,895	1,296	R	Loss
Massachusetts	1,472	762	R	Loss
Michigan	4,498	3,639	R	Loss
Minnesota	5,652	4,378	P	Gain
Mississippi	1,318	2,822	R	Gain
Missouri	4,369	9,065	P	Loss
Montana	94	781	P	Loss
Nebraska	3,276	956	P	Gain
Nevada	19	270	P	Loss
New Hampshire	509	61	R	Loss
New Jersey	5,082	4,432	R	Gain
New Mexico	33	318	P	Loss
New York	3,536	2,872	R	Loss
North Carolina	9,766	4,057	R	Loss
North Dakota	911	1,280	P	Loss
Ohio	9,954	9,975	R	Gain
Oklahoma	7,333	1,263	R	Loss
Oregon	744	379	P	Gain
Pennsylvania	11,228	9,137	R	Loss
Rhode Island	766	125	R	Loss
South Carolina	1,344	2,106	R	Gain
South Dakota	852	1,203	P	Loss
Tennessee	7,078	6,760	R[b/]	Loss
Texas	8,809	9,620	R[b/]	Gain
Utah	1,033	832	P	Gain
Vermont	1,109	625	R	Loss
Virginia	4,563	5,726	R	Gain
Washington	0	2,429	P	Loss
West Virginia	1,360	2,223	R	Gain
Wisconsin	4,914	4,303	R	Loss
Wyoming	43	100	R	Gain
	151,547	156,639		

a/ R = reciprocity P = prorationing

b/ Kentucky, Tennessee, and Texas are participants in the IRP but maintain reciprocal agreements with non-IRP states.

by the applicable tax rate. The allocated revenue estimates were derived following the same logic as any of the allocation systems. All group V vehicles registered in all states constitute the "fleet". The percentage of "fleet" miles in each of the states was computed. The product of the total number of vehicles in the "fleet" and the percentage of fleet miles driven in each state provided an estimate of equivalent registration in each state. If equivalent registration in all states are totaled, the sum equals the actual number of vehicles (allowing for rounding off). The equivalent registrations in each state were multiplied by the appropriate tax rate to produce the estimated revenue under an allocation system.

Table XLI reveals several interesing features: First, total revenues under allocation are slightly higher than revenues under reciprocity. This implies that registration taxes in some more heavily travelled states are currently higher than those of states which are travelled less. The difference in total revenues is not major, however. What is more important is the expected impact of either system on the individual states. Revenues of prorate states would be altered under nationwide reciprocity and the revenues of reciprocity states would be altered under nationwide allocation. Note that the impact on each state is unique. There are states, such as Ohio, where there is very little difference between the two revenue figures. In contrast, the estimates for Delaware are far apart, and imply that Delaware is the base state for many trucks, but it is not heavily travelled. The table shows that there are proration states which would receive greater revenues under reciprocity and reciprocity states which would fare better under an allocation system. The opposite is also true.

In order to protect all states from revenue losses (and truckers from revenue gains to the states) adjustment to tax rates must be made. Table XLII indicates which proration states must adjust tax rates and to what level (either up or down) in order to maintain registration tax revenues at current levels if nationwide reciprocity is adopted.

The estimates reveal 11 proration states would have to adjust their registration tax rates upward, and in seven the adjustment would have to be downward. The largest adjustment would occur in Montana where few trucks are base plated, but where considerable mileage is accumulated. In Montana the tax rate must increase from $771 to $6,406 if revenues from registration taxes alone are to remain at current levels. One must question if that rate would apply to in-state vehicles as well. Can they be expected to shoulder a $6,400 annual registration tax?

TABLE XLII

REQUIRED REGISTRATION TAX RATE CHANGES UNDER NATIONWIDE RECIPROCITY FOR WEIGHT GROUP V VEHICLES

State	Current System	Current Tax Rate (dollars)	Gain or Loss under Reciprocity	Tax Rate Required to Maintain Current Tax Revenue (dollars)
Alabama	R	346	N/A[a]	N/A
Arizona	P	523	Loss	2,204
Arkansas	R	802	N/A	N/A
California	P	474	Loss	553
Colorado	P	56	Gain	35
Connecticut	R	555	N/A	N/A
Delaware	R	383.40	N/A	N/A
District of Columbia	R	393	N/A	N/A
Florida	R	471.50	N/A	N/A
Georgia	R	385	N/A	N/A
Idaho	P	102	Gain	81
Illinois	P	1,492	Loss	3,678
Indiana	R	485.50	N/A	N/A
Iowa	P	1,220	Gain	1,151
Kansas	P	1,070	Loss	1,303
Kentucky	R[b]	771	N/A	N/A
Louisiana	R	490	N/A	N/A
Maine	R	605	N/A	N/A
Maryland	R	455	N/A	N/A
Massachusetts	R	390	N/A	N/A
Michigan	R	590	N/A	N/A
Minnesota	P	1,062.60	Gain	823
Mississippi	R	608.50	N/A	N/A
Missouri	P	1,008	Loss	2,091
Montana	P	771	Loss	6,406
Nebraska	P	812	Gain	237
Nevada	P	132	Loss	1,876
New Hampshire	R	432	N/A	N/A
New Jersey	R	544.10	N/A	N/A
New Mexico	P	75.50	Loss	728
New York	R	519	N/A	N/A
North Carolina	R	724	N/A	N/A
North Dakota	P	971	Loss	1,364
Ohio	R	605.25	N/A	N/A
Oklahoma	R	654.30	N/A	N/A
Oregon	P	185	Gain	94
Pennsylvania	R	560	N/A	N/A
Rhode Island	R	410	N/A	N/A
South Carolina	R	514	N/A	N/A
South Dakota	P	824	Loss	1,163
Tennessee	R[b]	878	N/A	N/A
Texas	R[b]	733.60	N/A	N/A
Utah	P	465	Gain	375
Vermont	R	1,659.30	N/A	N/A
Virginia	R	622	N/A	N/A
Washington	P	742.25	Loss	Unknown
West Virginia	R	590	N/A	N/A
Wisconsin	R	962	N/A	N/A
Wyoming	R	60	N/A	N/A

a/ N/A indicates "not applicable" since states so signified are currently reciprocity states.

b/ Kentucky, Tennessee, and Texas are participants in the IRP but maintain reciprocal agreements with non-IRP states.

The reader is cautioned that, although these estimates provide direction for further analysis and decision-making, they alone are not suitable as a basis for restructuring tax programs of the states. Detailed analyses of the impact on the entire tax program of each state would have to be carried out for purposes of restructuring.

With regard to the cost of administering a reciprocity system, the limited workload under reciprocity probably would result in the lowest administrative costs of all alternatives.

2. Nationwide prorationing and nationwide apportionment: State revenues under nationwide prorationing and apportionment would vary as discussed previously, and tax rate adjustments in reciprocity states would have to be made in order to maintain revenues at current levels under this alternative. Indeed, a greater number of adjustments would result under nationwide allocation than under nationwide reciprocity since more states currently operate under reciprocity. Table XLIII shows that 16 reciprocity states would have to adjust their tax rates upward, while 15 would have to adjust down. Delaware tax rate would have to undergo the most dramatic increase.

Revenue from second and third structure taxes would remain unaffected by implementation of either nationwide prorationing or nationwide apportionment. In effect, both fuel and third structure taxes are currently allocated.

The cost of administering either state administered allocation alternative is higher than the cost of the reciprocity alternative. However, both allocation alternatives would probably bear similar costs. Costs would be equal because while fewer fleets are processed under the IRP, more clerical effort is expended on each IRP return. Two of the states we visited were able to comment on the cost of the IRP vis-a-vis the costs of prorationing. Missouri, the only state to have actually administered registrations using both allocation systems, feels the cost of both systems is roughly the same. Colorado, which has just begun to implement the IRP system with the 1975 registration year, does not anticipate a significant change in administrative burden.

3. Federal administration: Under federal administration total tax revenues would equal current tax revenues, but collection would not necessarily be related to specific taxes or specific states. One method of taxing would be to establish a uniform mileage tax rate for each class of vehicles.

TABLE XLIII

REQUIRED REGISTRATION TAX INCREASES UNDER NATIONWIDE ALLOCATION FOR WEIGHT GROUP V VEHICLES

State	Current System[a]	Current Tax Rate (dollars)	Gain or Loss under Allocation	Tax Rate Required to Maintain Current Tax Revenues (dollars)
Alabama	R	346	Loss	349
Arizona	P	523	N/A[b]	N/A[b]
Arkansas	R	802	Gain	649
California	P	474	N/A	N/A
Colorado	P	56	N/A	N/A
Connecticut	R	555	Gain	448
Delaware	R	383.40	Loss	7,463
District of Columbia	R	393	Gain	N/A
Florida	R	471.50	Loss	1,934
Georgia	R	385	Gain	243
Idaho	P	102	N/A	N/A
Illinois	P	1,492	N/A	N/A
Indiana	R	485.50	Gain	402
Iowa	P	1,220	N/A	N/A
Kansas	P	1,070	N/A	N/A
Kentucky	R[c]	771	Gain	523
Louisiana	R	490	Gain	172
Maine	R	605	Loss	816
Maryland	R	455	Loss	665
Massachusetts	R	390	Loss	753
Michigan	R	590	Loss	729
Minnesota	P	1,062.60	N/A	N/A
Mississippi	R	608.50	Gain	284
Missouri	P	1,008	N/A	N/A
Montana	P	771	N/A	N/A
Nebraska	P	812	N/A	N/A
Nevada	P	132	N/A	N/A
New Hampshire	R	432	Loss	3,605
New Jersey	R	544.10	Gain	475
New Mexico	P	75.50	N/A	N/A
New York	R	519	Loss	639
North Carolina	R	724	Loss	1,743
North Dakota	P	971	N/A	N/A
Ohio	R	605.25	Gain	604
Oklahoma	R	654.30	Loss	4,379
Oregon	P	185	N/A	N/A
Pennsylvania	R	560	Loss	688
Rhode Island	R	410	Loss	2,512
South Carolina	R	514	Gain	328
South Dakota	P	824	N/A	N/A
Tennessee	R[c]	878	Loss	919
Texas	R[c]	733.60	Gain	672
Utah	P	465	N/A	N/A
Vermont	R	1,659.30	Loss	2,944
Virginia	R	622	Gain	496
Washington	P	742.25	N/A	N/A
West Virginia	R	590	Gain	361
Wisconsin	R	962	Loss	1,099
Wyoming	R	60	Gain	26

a/ R = reciprocity. P = prorationing.

b/ N/A indicates "not applicable" since states so signified are already proration states.

c/ Kentucky, Tennessee, and Texas are particpants in the IRP but maintain reciprocal agreements with non-IRP states.

The amount could be determined by dividing total current tax revenues associated with each class of vehicles by the mileage associated with that class. For heavy-heavy vehicles the current total tax rate per mile is between 2.5¢ and 3.0¢. If such a standard rate were to be implemented, provision for inflation adjustments would have to be included.

Administrative costs under a system of federal administration are difficult to estimate. There would no longer be the need for such extensive state administrative networks. Much of the burden would be shifted to federal jurisdiction. It is improbable, however, that federal administration would entirely displace current state efforts. Some duplication is likely, and that will add to administrative costs. The extent of additional costs would be dependent on efficiencies at both federal and state levels and is impossible to estimate.

C. State Officials' Attitudes Toward Alternatives

During the course of interviews with state officials, we asked for their opinions regarding the four alternative systems: (1) nationwide reciprocity, (2) nationwide proration, (3) nationwide apportionment, and (4) federal administration of taxes. The opinions of the interviewees are recorded by alternative.

1. Nationwide reciprocity: The sentiments of state officials, regarding nationwide reciprocity were drawn along special interest lines. Every state official in five prorate or apportionment states visited was strongly against reciprocity because they contend it does not render an equitable allocation of funds to actual highway usage. Another argurment described by two officials is the difficulty in determining where vehicles are based. Because of their exaggerated mobility, interstate vehicles frequently have no "home base" except, perhaps, a terminal where paperwork is handled, or a maintenance facility where vehicles spend down time. State officials believe that split registrations (i.e., basing tractors in states with low tractor taxes and trailers in states with low trailer taxes) cause loss of revenues because of difficulties in determining actual base of vehicle operations.

Agency officials in reciprocity states, on the other hand, generally were happy with their existing systems. Three of the four reciprocity states visited were party to agreements which embraced the basing point principle. Officials in those states maintained that reciprocity is equitable to the states on the basis of that principle.

With regard to fuel taxes, most officials interviewed expressed belief that continued reporting of special fuel usage, purchases, and taxes was important to their states' tax philosophies. Only Florida's officials, of those interviewed, believed that payment of special fuel taxes by interstate carriers at the pump is desirable. Florida's philosophy in this regard is based on the fact that the physical size of the state necessitates the purchase of fuel (and the payment of fuel taxes) in Florida in amounts comparable to actual usage. Thus, Florida can administer fuel taxes through vendors and avoid the costs of administering a fuel tax reporting system applicable to all users.

2. Nationwide proration: Representatives from the four states granting reciprocal privileges expressed concern about the cost of administering a proration system of licensing interstate commerical vehicles. Experience in states using proration has shown that, while a separate staff to handle proration is necessary, the cost per vehicle registered is not significantly higher under prorationing than under reciprocity. However, total cost of proration administration is higher because of the greater number of vehicles processed.

3. Nationwide apportionment: Surprisingly, much of the initial support for this system of allocation has come from states belonging to the Multistate Reciprocal Agreement, rather than from the Uniform Proration Agreement members. The latter have doubts about the administrative burden of computing registration taxes and of auditing the reports for all states their carriers travel into. Another point of hesitation is the variation in definition of what constitutes a fleet. In the IRP, all vehicles (over 26,000 lb (11,790 kg) G.V.W.) are considered, whereas, in the Uniform Proration Agreement, one-vehicle fleets are granted reciprocity.

Of the states visited, those most opposed to the IRP were Pennsylvania and Massachusetts, neither of which participates in a major reciprocity or prorationing agreement. Of the other seven states, four already belong or have pledged themselves as participants by 1976. Florida, an MRA participant, prefers its current reciprocity system. Two proration states, Kansas and California, still harbor enough reservations of the type described that they have thus far resisted joining.

4. Federal administration: Each agency official interviewed strongly opposed federal administration of taxes with proration of revenues back to states. Opposition was expressed because they believed the proposal would:

- Interfere with states' rights to govern their own highways;

- Cause the need for higher taxes to pay the cost of a federal agency to administer these vehicles; and

- Lead to a loss of detailed knowledge of problems and situations particular to specific states and regions.

Regarding this last item, nearly all state officials believe they were more capable of handling their specific problems, exceptions, etc., than employees centralized at the federal level.

State officials generally agreed that some standardized system would be an improvement to the existing situation. However, most felt that federal administration should be considered only as a last resort. Most officials preferred that another system be decided upon by representatives of all states, and that the federal government exert its influence to insure that all states conform to such a plan.

D. Summary

Qualitative analysis of the alternatives reveals that nationwide reciprocity is unacceptable, since second and third structure tax mechanisms are incompatible with the system. Any of the allocation systems can accomodate all three tax structures.

Among the allocation alternatives, federal administration differs from both nationwide proratioing and apportionment in that there is no need for collection under the federal plan to be related to specific states or tax mechanisms. A single mileage rate for each class of vehicles could replace first, second, and third structure tax payments to generate revenues equal to current revenues from commercial interstate vehicles.

Quantitative analysis shows that implementation of any system will impact the various states differently with respect to registration tax revenues. Second and third structure tax revenues are unlikely to change significantly under either nationwide prorationing or nationwide apportionment since both taxes are currently collected based on use.

Of the three allocation alternatives, nationwide prorationing and nationwide apportionment would have about equal administrative costs. We conjecture a federally administered system is likely to experience administrative costs at least as high as those currently borne by the states, and the states probably will continue to spend additional monies monitoring the federal system.

State officials who were interviewed held the following opinions. Each was anxious to defend the existing system in his own state. Officials in reciprocity states claimed an allocation system would be costly. Officials in proration states feared the inequity of nationwide reciprocity. Officials in all states except Florida agreed that basing fuel taxes on use in each state is important. On the whole, nationwide apportionment was the one alternative which met with least resistance, and federal administration met with unanimous opposition.

IX. CONCLUSIONS

The collection, analysis and evaluation of data from many sources has illuminated problems involving state requirements on truckers who are engaged in multistate operations. These problems stem from the multiplicity of requirements and their non-uniformity. Conclusions regarding these problems are drawn from a review of the problems as they are viewed by operators and the states. The reader is referred to the appropriate sections of the report for background information.

A. Current State Requirements on Interstate Truckers (Section II)

- Differences in taxation philosophy and in revenue needs of the states are responsible for state tax programs which vary in structure and emphasis.

- Increasingly since the 1950's, mileage has been accepted by the states as the user tax base on the operation of commercial interstate trucks, and trip records have served as the basic document supporting tax payments.

- Most states maintain, in addition to tax mechanisms, regulatory requirements the administration of which is not compatible with tax administration.

- Partially successful attempts at standardization of requirements among states have taken place with respect to vehicle registration and regulatory requirements.

B. Truck Driver Survey (Section III)

- Factors which most directly affect the economic well being of truck drivers are their most pressing problems.

- Driver's highest ranked problems, lowered speed limits and the price and availability of fuel, will endure as cost problems.

- Compliance with state tax and regulatory requirements ranks third or fourth as an important problem area to truck drivers, and independents rank it as a greater problem than company drivers.

- Specific state requirements liked least by drivers include fuel taxes, trip permits, PUC/PSC requirements, and vehicle licensing.

C. Description of Compliance Costs and Activities (Section IV)

- First, second, and third structure taxes can exceed $2,500 per vehicle annually.

- Registration taxes average about $1,000 per vehicle and fuel taxes amount to about $1,100 depending on vehicle use.

- Fees associated with required vehicle identification permits add to direct compliance costs in proportion to the number of states travelled.

- Indirect compliance costs arise in conjunction with (1) obtaining and affixing permits, (2) record keeping, (3) filing of reports, (4) enforcement, (5) office requirements, and (6) obtaining trip permits.

D. Analysis of Compliance Costs by Trucking Industry Segment (Section V)

The following conclusions relate to compliance costs exclusive of taxes.

- Compliance cost variations are due more to differences in fleet size than carrier type, and very small carriers are burdened to a greater extent than larger carriers.

- The indirect compliance cost component is much more variable than the direct cost component.

- Private carriers (and, to a lesser extent, exempt carriers) enjoy a slight direct cost advantage over regulated carriers since fewer regulatory identification permits are required for the former.

- Annual carrier compliance costs per vehicle per state range from $15.50 to $75.00 depending on fleet size and carrier type.

- For some small carriers the indirect cost of carrier compliance per vehicle per state can equal the cost of highway-user taxes.

E. Assessment of Alternative Systems with Respect to Carriers (Section VI)

- Of the alternatives studied, nationwide reciprocity is the system which would save carriers the most in compliance costs.

- Carriers would benefit from centralized administration of requirements either through implementation of an expanded IRP-type system or federal administration. The savings would be about equal under either system.

- Increases in compliance costs would accompany the implementation of an expansion of the Uniform Proration and Reciprocity Agreement.

- An expanded IRP was the alternative most favored by the majority of 11 carriers interviewed. Federal administration was second most favorably received of the four.

F. Revenues and Cost to the States (Section VII)

- Substantial, but varying, revenues are derived from user taxes on interstate commercial trucks.

- Depending on how revenue collections are administered, collection costs can vary.

- Individual vehicle registrations are administered at an average cost to the states of about $1.00 per vehicle; total cost varies with the number of vehicles registered.

- Mileage-related taxes--prorated registrations, fuel taxes and third structure taxes--which are processed on a fleet basis have administrative costs which average $55.00 per carrier in each state; total state costs depend on how many carriers' reports are processed.

- Duplication of effort by the states exists in processing fuel tax reports and prorated registrations.

- Net revenues resulting from each state processing the allocated tax reports of very small carriers whose tax liability to any one state is small may be marginal or zero.

- Processing fuel surtax collections is believed to add no incremental cost to the processing of fuel tax collections.

- In most states regulatory commission fees do not produce net revenues.

G. Assessment of Alternative Systems with Respect to the States (Section VIII)

- Nationwide reciprocity of privileges is an unacceptable alternative owing to the inequity of second structure taxes and the disruption of third structure taxes under such a system.

- Regulatory requirements are not compatible with allocated tax administration and must be administered separtely.

- Under either state administered allocation alternative registration tax revenues in each reciprocity state would be uniquely altered either up or down, while second and third structure tax revenues would not be expected to change significantly.

- Costs of both state administered allocation alternatives would be substantially equal.

- Under federal administration of taxes, collection of revenues need not be related to specific states or tax mechanisms: This would allow for a single mileage rate replacing all other tax structures to be established for each class of vehicles.

- State officials tend to prefer the system currently in effect in their own states, but as an alternative, offer least resistance to nationwide apportionment; they voice unanimous opposition to federal administration.

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APPENDIX A

STATE TAX AND CONTROL REQUIREMENTS

TABLE A-I

VEHICLE REGISTRATION CHARACTERISTICS FOR TRACTOR-SEMITRAILER COMBINATIONS USED IN MULTI-STATE OPERATIONS

State	Registration Tax Basis	Full Plate Cost (Typical 5-Axle Combination)	Major Registration Compact Participation	Availability of Trip Permits to Vehicles of Foreign Registration
Alabama	TRC: CVW TRL: Flat fee	$346 private $800 for-hire[a/]	Multi-state reciprocity	Yes (where no reciprocity)
Arizona	TRC: Flat fee by GVW of combination TRL: Flat fee + GVW fee	$523	Western states proration	Yes (30, 60, or 90 days, 20%, 35%, or 50% of annual fee; $8 minimum)
Arkansas	TRC: GVW of combination TRL: Flat fee	$802	None	None
California	TRC: Flat fee + weight fee TRL: Flat fee + weight fee	$474	Western states proration	Yes (unloaded or occasional trip 6 days - $5; 90 days - 25% annual reg. fee)
Colorado	TRC: Empty weight fee TRL: Flat fee	$56	Western states proration	Yes ($5 flat fee; or mileage tax if greater)
Connecticut	TRC: GVW of combination TRL: Flat fee	$555	None	None
Delaware	TRC: CVW TRL: GVW	$362.40	None	None
Florida	TRC: GVW of combination TRL: Flat fee	$471.50	Multi-state reciprocity	None
Georgia	TRC: CVW TRL: Flat fee	$385 private $700 for-hire	Multi-state reciprocity	None
Idaho	TRC: GVW of combination TRL: Flat fee	$102	Western states proration	Yes (96 hr)
Illinois	TRC: Flat fee + GVW of bination TRL: No additional fee	$1,492	Western states proration	Yes (72 hr)
Indiana	TRC: GVW of combination TRL: No additional fee	$485.50	Multi-state reciprocity	None
Iowa	TRC: GVW of combination TRL: GVW of combination	$1,220	Western states proration	Yes (72 hr; $10/tractor + $10/trailer)
Kansas	TRC: GVW of combination TRL: GVW	$1,070	Western states proration	Yes (72 hr; $10)
Kentucky	TRC: GVW of combination TRL: Flat fee	$771	Multi-state reciprocity and International Registration Plan	Yes (10 days; $25)
Louisiana	TRC: CW/load-carrying axle TRL: Flat fee	$290 private $570 for-hire[a/]	Multi-state reciprocity	None
Maine	TRC: GVW of combination TRL: Flat fee	$605	None	None

TABLE A-I (Continued)

State	Registration Tax Basis	Full Plate Cost (Typical 5-Axle Combination)	Major Registration Compact Participation	Availability of Trip Permits to Vehicles ot Foreign Registration
Maryland	TRC: GVW of combination TRL: Chassis weight	$415 contract $455 all other[a/]	Multi-state reciprocity	None
Massachusetts	TRC: GVW of combination TRL: Flat fee	$390	None	None
Michigan	TRC: GVW of combination TRL: Empty weight	$590[a/]	Multi-state reciprocity	Yes (10 days; $20)
Minnesota	TRC: GVW of combination age TRL: Flat fee	$1,062.60	Western states proration	Yes (96 hr; - $10)
Mississippi	TRC: Tag fee + GVW of combination TRL: Tag fee + flat fee	$608.50 private & HHG $831.50 for-hire	Multi-state reciprocity	Yes (1-1/2 mills/1,000 lb/mile ($3 minimum))
Missouri	TRC: GVW of combination TRL: Flat fee	$1,008	Multi-state reciprocity, Western states proration, and International Reg. Plan	Yes (72 hr; $10)
Montana	TRC: Flat fee + GVW TRL: Flat fee + GVW	$771	Western states proration	Yes (72 hr)
Nebraska	TRC: GVW of combination TRL: Flat fee	$812	Western states proration	Yes ($10)
Nevada	TRC: EW TRL: EW	$132	Western states proration	Yes (48 hr)
New Hampshire	TRC: GVW of combination TRL: No additional fee	$432	None	None ($2.50/vehicle + $6 - $30 temporary license)
New Jersey	TRC: GVW of combination TRL: Flat fee	$544.10	Multi-state reciprocity	None
New Mexico	TRC: GVW of combination TRL: Flat fee	$75.50	Western states proration	Yes
New York	TRC: GVW of combination TRL: Flat fee	$519	None	None
North Carolina	TRC: GVW of combination TRL: Flat fee	$724	Multi-state reciprocity	Yes (30 days; 1/10 annual fees)
North Dakota	TRC: GVW of combination TRL: Flat fee	$971	Western states proration	Yes (72 hr; $10 + mileage tax)
Ohio	TRC: EW TRL: EW	$605.25	None	None
Oklahoma	TRC: GVW and age TRL: Flat fee	$634.30	None	Yes (90, 60, or 30 days; 3/8, 1/4, or 1/8 of annual fees)

TABLE A-I (Concluded)

State	Registration Tax Basis	Full Plate Cost (Typical 5-Axle Combination)	Major Registration Compact Participation	Availability of Trip Permits to Vehicles ot Foreign Registration
Oregon	TRC: CVW TRL: GVW	$185	Western states proration	Yes (5 or 10 days; $5 or $10)
Pennsylvania	TRC: GVW of combination TRL: Flat fee	$560	None	None
Rhode Island	TRC: GVW of combination TRL: Flat fee	$410	None	None
South Carolina	TRC: Load capacity TRL: Flat fee	$514	Multi-state reciprocity	None
South Dakota	TRC: Chassis wt and age TRL: EW and age	$707	Western states proration	Yes (single trip; 2 mills /ton mile)
Tennessee	TRC: GVW of combination TRL: Flat fee	$878	Multi-state reciprocity and International Registration Plan	Yes (7 days; $20)
Texas	TRC: GVW of combination TRL: Flat fee	$735.60	International Regis-tration Plsn	Yes (72 hr; $10)
Utah	TRC: CVW TRL: Flat fee	$465	None	Yes (96 hr; $5/single unit; $10/multiple unit)
Vermont	TRC: GVW of combination TRL: Flat fee	$1,659.30	None	Yes ($20 + $10/round trip)
Virginia	TRC: Flat fee + CVW TRL: Flat fee	$662	Multi-state reciprocity	None
Washington	TRC: Flat fee + GVW TRL: Flat fee	$742	Western states proration	Yes (fees according to trailer weight)
West Virginia	TRC: GVW of combination TRL: Flat fee	$590	Multi-state reciprocity	None
Wisconsin	TRC: GVW of combination TRL: Flat fee	$962	None	Yes (72 hr; $10)
Wyoming	TRC: EW TRL: EW	$60	None	Yes (96 hr; $5/single unit; $10/multiple unit)

a/ Lower registration tax for household goods movers.

Abbreviations: EW - Empty Weight
GVW - Gross Vehicle Weight
HHC - Household goods Movers
NS - Not stated
TRC - Tractor
TRL - Trailer

TABLE A-II

MOTOR CARRIER FUEL TAX PARAMETERS BY STATE

State	Tax Applicability	Annual Permit Fee[a/]	Diesel Fuel Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline	Availability of Trip Permit
Alabama	All tractors and all trucks with > 2 axles	$12/vehicle	8¢/gal (2.11¢/ℓ)	$1,000	Quarterly	Last day of April, July, October, January for preceding quarter	Yes (7 days; $12)
Arizona	All diesel vehicles	$10/fleet (one-time)	7¢/gal (1.85¢/ℓ)	$500	Monthly	20th Day of month for preceding month	Yes (96 hr)
Arkansas	All vehicles entering with more than 30 gal fuel in tank	$1/vehicle	9-1/2¢/gal (2.51¢/ℓ)	$500	Monthly	25th Day of month for preceding month	Vehicles entering for first time may operate under "Entry Slip"
California	All vehicles	No charge	7¢/gal (1.85¢/ℓ)	Yes (amount unspecified)	Monthly	Lsst day of month for preceding month	None
Colorado	All vehicles entering with more than 20 gal fuel in tank	$1/vehicle	7¢/gal (1.85¢/ℓ)	$100/vehicle	Monthly	25th Day of month for preceding month	Yes (15 days/$1 + fuel tax)
Connecticut	All trsctors and all trucks with > 2 axles	$3/vehicle	10¢/gal (2.64¢/ℓ)	$1,000	Quarterly	Last day of January, April, July, October for preceding quarter	10-day emergency permit only
Delaware	All tractors and all trucks with > 2 axles	$1/vehicle	8¢/gal (2.11¢/ℓ)	$1,000	Quarterly	Last day of April, July, October, January for preceding quarter	Yes ($5/vehicle)
Florida	All carriers entering with more than 50 gal fuel in tank	None required	8¢/gal (2.11¢/ℓ) at pump	None required	None required	N/A	Unknown
Georgia	All tractors and all trucks with > 2 axles	$1/vehicle	7-1/2¢/gal (1.98¢/ℓ)	None required	Quarterly	Last day of April, July, October, January for preceding quarter	Yes (30 days; $1)
Idaho	All vehicles entering with more than 20 gal fuel in tank	No charge	8-1/2¢/gal (2.25¢/ℓ)	$500	Quarterly	Reported with mileage tax	Yes (96 hr)
Illinois	All vehicles entering with more than 20 gal fuel in tank	No charge	7-1/2¢/gal (1.98¢/ℓ) at pump	Bulk users only	Bulk users only	N/A	None

TABLE A-II (Continued)

State	Tax Applicability	Annual Permit Fee[a/]	Diesel Fuel Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline	Availability of Trip Permit
Indiana	All tractors and all trucks with > 2 axles	$5/carrier	8¢/gal (2.11¢/ℓ)	$1,000	Quarterly	Last day of month following quarter	Yes (5 days; $5)
Iowa	All vehicles entering with more than 30 gal fuel in tank	$1/carrier	8¢/gal (2.11¢/ℓ)	$500	Monthly	Unknown	None
Kansas	All tractors and all trucks with > 2 axles	No charge	8¢/gal (2.11¢/ℓ)	$1,000 (may be required)	Quarterly	25th Day of January, April, July, October for preceding quarter	Yes ($3)
Kentucky	All vehicles with > 2 axles	$2/vehicle	9¢/gal (2.38¢/ℓ)	$1,000	Quarterly	Last day of month following quarter	Yes (10 days; $10)
Louisiana	All vehicles entering with > 30 gal in tank	None required	8¢/gal (2.11¢/ℓ)	$500	Monthly	20th Day of month for preceding month	Emergency only
Maine	All vehicles ≥ 2,000 lb GVW	$1/fleet	9¢/gal (2.38¢/ℓ)	None required	Quarterly	25th Day of month for preceding quarter	None
Maryland	All tractors and all trucks with > 2 axles	$1/vehicle $5/fleet	9¢/gal (2.38¢/ℓ)	None required	Quarterly or Monthly	Last day of April, July, October, January for preceding quarter	Yes (25 daya)
Massachusetts	All vehicles entering with more than 20 gal fuel in tank	$1/vehicle	7-1/2¢/gal (1.98¢/ℓ)	None required	Quarterly	Last day of month following quarter	Single or occasional trips exempt from req.
Michigan	All vehicles entering with > 25 gal capacity	$1/carrier	7¢/gal (1.85¢/ℓ)	None required	Monthly	20th Day of month for preceding month	None
Minnesota	All tractors and all trucks with > 2 axles	$10/carrier	7¢/gal (1.85¢/ℓ)	$3,000	Monthly	Last day of month for preceding month	Yes (5 days)
Mississippi	All vehicles > 2,400 lb	$12/vehicle	10¢/gal (2.64¢/ℓ)	$1,000	Quarterly	Last day of February, May, Auguat, November for preceding quarter	None (pay fuel tax at exits)
Missouri	All vehicles entering with > 30 gal in tank	$5/carrier (one-time)	7¢/gal (1.85¢/ℓ)	$500	Monthly	Last day of month for preceding month)	Yes (96 hr; $10)
Montana	All dieael vehicles	No charge	9¢/gal (2.38¢/ℓ)	$500	Monthly	25th Day of month for preceding month	Yes (72 hr; $20)
Nebraska	All vehicles entering with > 30 gal capacity	$1/carrier (one-time)	8-1/2¢/gal (2.25¢/ℓ)	$1,000	Monthly	20th Day of month for preceding month	None

TABLE A-II (Continued)

State	Tax Applicability	Annual Permit Fee[a/]	Diesel Fuel Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline	Availability of Trip Permit
Nevada	All diesel vehicles	No charge	6¢/gal (1.59¢/ℓ)	$500	Quarterly	25th Day of January, April, July, October for preceding quarter	Yes (48 hr; $10)
New Hampshire	All diesel vehicles	$1/vehicle	9¢/gal (2.38¢/ℓ)	None required	Quarterly	Last day of month following quarter	Yes (single round trip $5)
New Jersey	All vehicles > 18,000 lb	$5/vehicle	8¢/gal (2.11¢/ℓ)	None required	Quarterly	April 30, July 30, October 30, January 30 for preceding quarter	Yes (96 hr; $5)
New Mexico	All diesel vehicles	$2/vehicle	7¢/gal (1.85¢/ℓ)	$1,000	Quarterly	25th Day of April, July, October, January for preceding quarter	Yes (20 days; $5)
New York	All vehicles > 18,000 lb (except household goods carriers)	None required	10¢/gal (2.64¢/ℓ)	None required	Quarterly	20th Day of month following quarter	None
North Carolina	All tractors and all trucks with > 2 axles	$1/vehicle	9¢/gal (2.38¢/ℓ)	$200	Quarterly	20th Day of April July, October, January for preceding quarter	Emergency provisions only
North Dakota	All vehicles	$1/carrier	7¢/gal (1.85¢/ℓ)	$20,000 (maximum)	Monthly	25th Day of month for preceding month	Yes (72 hr)
Ohio	No fuel reporting law	None required	7¢/gal (1.85¢/ℓ)	None required	None required	N/A	N/A
Oklahoma	All vehicles	No charge (continuous)	6-1/2¢/gal (1.72¢/ℓ)	$500	Quarterly	End of each quarter	None
Oregon	No fuel reporting law	None	7-1/2¢/gal (1.98¢/ℓ)	None required	None required	N/A	Yes (30 days)
Pennsylvania	All tractors and all trucks with > 2 axles	$2/vehicle	9¢/gal (2.38¢/ℓ)	None required	Quarterly	Last day of April, July, October, January for preceding quarter	Yes (25 days; $5)
Rhode Island	No fuel reporting law	None required	8¢/gal (2.11¢/ℓ)	None required	None required	N/A	N/A

TABLE A-II (Concluded)

State	Tax Applicability	Annual Permit Fee[a/]	Diesel Fuel Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline	Availability of Trip Permit
South Carolina	All diesel vehicles	$1/S.C. vehicle $4/vehicle all others	8¢/gal (2.11¢/ℓ)	None required	Quarterly	20th Day of July, October, January, April for preceding quarter	Emergency only
South Dakota	All vehicles entering with more than 40 gal fuel in tank	$1/carrier	7¢/gal (1.85¢/ℓ)	Discretionary	Monthly	15th Day of month for preceding month	Yes (72 hr; $20)
Tennesse	All vehicles > 26,000 lb	No charge	8¢/gal (2.11¢/ℓ)	$500	Quarterly	25th Day of October, January, April, July for preceding month	Yes (7 days; $10)
Texas	All diesel vehicles	No charge	6-1/2¢/gal (1.72¢/ℓ)	$500	Monthly	25th Day of month for preceding month	Yes (20 days; $5)
Utah	All diesel vehicles	No charge	7¢/gal (1.85¢/ℓ)	$100	Monthly	25th Day of month for preceding month	Yes (1 trip; deposit required)
Vermont	No fuel tax	None required	N/A	N/A	N/A	N/A	N/A
Virginia	All tractors and all trucks with > 2 axles	$2/vehicle	9¢/gal (2.38¢/ℓ)	None required	Quarterly	Last Day of April, July, October, January for preceding quarter	Emergency only
Washington	All diesel vehicles	No charge	9¢/gal (2.38¢/ℓ)	$500	Monthly	25th Day of month for preceding month	Yes (20 days/$10 + $1/day)
West Virginia	All tractors and all trucks with > 2 axles	$1/vehicle	8-1/2¢/gal (2.25¢/ℓ)	None required	Quarterly	Last Day of April, July, October, January for preceding quarter	Emergency only
Wisconsin	All vehicles entering with more than 20 gal fuel in tank	None required	7¢/gal (1.85¢/ℓ) paid at pump	None required	None required	N/A	N/A
Wyoming	No fuel reporting law	None required	7¢/gal (1.85¢/ℓ) paid at pump	None required	None required	N/A	N/A

TABLE A-III

THIRD STRUCTURE MOTOR CARRIER TAX PARAMETERS BY STATE

State	Nature	Application	Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline
Alabama	None	N/A	N/A	N/A	N/A	N/A
Arizona	Gross receipts tax	For-hire carriers	2-1/2% of Arizona gross receipts	$100	Monthly	20th day of month for preceding month
Arkansas	None	N/A	N/A	N/A	N/A	N/A
California	None	N/A	N/A	N/A	N/A	N/A
Colorado	Mileage tax	All carriers	8 mills/empty ton-mile (5.48 mills/m ton km) plus 2 mills/loaded ton-mile (1.37 mills/m ton km)	1-1/2 times ton-mile tax liability	Monthly	25th day of month for preceding month
Connecticut	None	N/A	N/A	N/A	N/A	N/A
Delaware	None	N/A	N/A	N/A	N/A	N/A
Florida	None	N/A	N/A	N/A	N/A	N/A
Georgia	Retaliatory tax	All vehicles registered in: Arizona, Colorado, Idaho, New Mexico, New York, Ohio and Oregon	$10 per round trip per vehicle	None	None	N/A
Idaho	Use fee (mileage tax)	All carriers	50.30 mills/mile (31.255 mills/km)	None	None	N/A
Illinois	None	N/A	N/A	N/A	N/A	N/A
Indiana	None	N/A	N/A	N/A	N/A	N/A
Iowa	None	N/A	N/A	N/A	N/A	N/A
Kansas	None	N/A	N/A	N/A	N/A	N/A
Kentucky	None	N/A	N/A	N/A	N/A	N/A
Louisiana	None	N/A	N/A	N/A	N/A	N/A

TABLE A-III (Continued)

State	Nature	Application	Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline
Maine	None	N/A	N/A	N/A	N/A	N/A
Maryland	None	N/A	N/A	N/A	N/A	N/A
Massachusetts	None	N/A	N/A	N/A	N/A	N/A
Michigan	None	N/A	N/A	N/A	N/A	N/A
Minnesota	None	N/A	N/A	N/A	N/A	N/A
Mississippi	None	N/A	N/A	N/A	N/A	N/A
Missouri	None	N/A	N/A	N/A	N/A	N/A
Montana	Gross operational revenue tax	For-hire carriers	0.575 of 1% on Montana revenues: Annual minimum - $30/vehicle for common carriers; $15/vehicle for contract carriers	Unknown	Quarterly	Unknown
Nebraska	Retaliatory tax	For-hire carriers from states charging Nebraska carriers third structure taxes	Levy similar tax as applied against Nebraska based trucks	None	None	N/A
Nevada	Unladen weight fees	All	Up to $450.50/vehicle/yr (or may opt for mileage tax)	None	None unless mileage option selected	N/A
New Hampshire	None	N/A	N/A	N/A	N/A	N/A
New Jersey	None	N/A	N/A	N/A	N/A	N/A
New Mexico	Use fee (mileage tax)	Vehicles registered in New Mexico (foreign vehicles subject to trip tax in lieu of use fee)	20.07 mills/mile; (12.47 mills/km)	Combined with fuel tax bond	Quarterly (combined with fuel tax report)	25th day of April, July, October and January preceding quarter
New York	Ton-mile tax	All carriers except household goods movers	2 mills/ton-mile; (1.370 mills/m ton km)	None	Quarterly with fuel tax report	20th day of month following end of quarter
North Carolina	None for carriers not registered in N.C.	N/A	N/A	N/A	N/A	N/A

TABLE A-III (Concluded)

State	Nature	Application	Tax Rate	Bond Requirement	Filing Requirement	Filing Deadline
North Dakota	None for vehicles registered or prorated in N. Dakota	N/A	N/A	N/A	N/A	N/A
Ohio	Mileage tax	All	$2 vehicle permit + 2.5¢/mile (1.553¢/km)	None	Unknown	Unknown
Oklahoma	None	N/A	N/A	N/A	N/A	N/A
Oregon	Mileage tax	All carriers based on weight and fuel type	55.5 mills/mile (34.486 mills/km)	"May be required"	Unknown	Unknown
Pennsylvania	None	N/A	N/A	N/A	N/A	N/A
Rhode Island	None	N/A	N/A	N/A	N/A	N/A
South Carolina	None	N/A	N/A	N/A	N/A	N/A
South Dakota	None	N/A	N/A	N/A	N/A	N/A
Tennessee	None	N/A	N/A	N/A	N/A	N/A
Texas	None	N/A	N/A	N/A	N/A	N/A
Utah	None	N/A	N/A	N/A	N/A	N/A
Vermont	Retaliatory tax	All vehicles registered in states not granting full tax reciprocity to Vermont vehicles	$10/vehicle + $5/round trip	N/A	N/A	N/A
Virginia	None	N/A	N/A	N/A	N/A	N/A
Washington	None	N/A	N/A	N/A	N/A	N/A
West Virginia	None	N/A	N/A	N/A	N/A	N/A
Wisconsin	Retaliatory tax	Any vehicle registered in state assessing third structure tax against Wisconsin vehicles	Levy similar tax as applied against Wisconsin based trucks	Unknown	Unknown	Unknown
Wyoming	Compensatory tax	All	2.5 mills/mile (1.553 mills/km), or optionally based on unladen weight	$200/vehicle, $1,000 maximum	Monthly	25th day for preceding month

TABLE A-IV

UTILITIES COMMISSION PARAMETERS BY STATE FOR REGULATED, EXEMPT, AND PRIVATE MOTOR CARRIERS

State	Requirements Applicability by Carrier Type	One-Time Filing Fee[a/]	Annual Renewal Fee	Liability Insurance Requirement ($1000's)	Cargo Insurance Requirement ($1000's)	Resident Agent Requirement	Reciprocity
Alabama	Regulated	$10/carrier	$1/vehicle	25/100 PL; 10 PD	2	NS	None
Arizona	Regulated and Exempt	$25/carrier	$5/vehicle	25/100 PL; 10 PD	None	Yes	None
Arkansas	Regulated and Exempt	$50/carrier	$5/vehicle	25/100 PL; 10 PD	1	Yes	Yes (5 states--annual fees only)
California	Regulated and Exempt	$25/carrier	$2/vehicle	100/300 PL; 50 PD	None	Yes	Yes (annual fees only)
Colorado	Regulated and Exempt	$20/carrier	None	25/50 PL; 5 PD	2.5	Yes	None
	Private	$10/carrier	None	25/50 PL; 5 PD	2.5	Yes	None
Connecticut	Regulated and Exempt	$25 + $10 renewal	$10/vehicle	25/100 PL; 10 PD	None	Yes	None
Delaware	No economic regulation. Insurance required for regulated and exempt carriers.	None required	N/A	10/20 PL; 5PD	NS	NS	N/A
Florida	Regulated	$25/carrier	$5/vehicle	10/20 PL; 5 PD	1/2	NS	None
	Exempt	$25/carrier	$5/vehicle	None	None		
Georgia	Regulated and Exempt	$25/carrier	$5/vehicle	25/100 PL; 10 PD	2	Yes	Yes (33 states)
Idaho	Regulated and Exempt	$25/carrier/yr[a/]	None	No requirement	No requirement	NS	None
Illinois	Regulated and Exempt	$25/carrier	$10/carrier	20/40 PL; 5 PD	1 (reg. only)	Yes	Yes (annual fees only)
Indiana	Regulated	$25/carrier	$24/tractor	25/100 PL; 10 PD	2.5	NS	Yes (7 atates)
Iowa	Regulated and Exempt	$25/carrier	$1/vehicle	25/50 PL; 10 PD	2 (reg. only)	Yes	Yes (agreement with some states)
Kansas	Regulated, Exempt, and Private	$10/carrier	$10/vehicle	File evidence of insurance	NS	Yes	None
Kentucky	Regulated and Exempt	$25/carrier/yr[a/]	$2/vehicle	10/30 PL; 5 PD	5/10	NS	None
Louisiana	Regulated and Exempt	$25 + $10 renewal	$10/vehicle	25/10 PL; 10 PD	2.5/5	Yes	None

TABLE A-IV (Continued)

State	Requirements Applicability by Carrier Type	One-Time Filing Fee[a/]	Annual Renewal Fee	Liability Insurance Requirement ($1000's)	Cargo Insurance Requirement ($1000's)	Resident Agent Requirement	Reciprocity
Maine	Regulated and Exempt	$25/carrier/yr[a/]	$10/tractor	20/40 PL; 10 PD	5	Yes	None
Maryland	No requirements for any carrier						Minor reciprocity. Receives right to impose re-aliatory fee
Massachusetts	Regulated and Exempt	$10/carrier	$5/vehicle	No requirement	No requirement	Yes	Yes (24 states)
Michigan	Regulated	$20/carrier	$10/carrier and $50/tractor privilege fee	100/300 PL; 50 PD	Amount un-specified	NS	None
Minnesota	Regulated and Exempt	$25/carrier	$5/vehicle	50/200 PL; 15 PD	5	Yes	Yes (16 states)
Mississippi	Regulated	$25/carrier	$1/vehicle plus $12/vehicle inspection fee	100/300 PL; 25 PD	10	NS	None
Missouri	Regulated and Exempt	$25/vehicle	None	50/100 PL; 10 PD	Discretionary	NS	Yes (26 states)
Montana	Regulated	$15/vehicle	$2/vehicle plus $5/vehicle highway con-sumption fee	25/100 PL; 10 PD	1	NS	None
Nebraska	Regulated, Exempt, and Private	$10/carrier	25¢-$10/tractor depending on base state	File evidence of insurance	NS	Yes	Yes (14 states)
Nevada	Regulated and Private	NS	None	25/100 PL; 10 PD (Reg. only)	1 (Reg. only)	Yes	None
New Hampshire	Regulated	$10/carrier	$5/vehicle	15/30 PL; 5 PD	1-5	NS	Discretionary
New Jersey	No requirement for any carrier	N/A	N/A	N/A	N/A	N/A	N/A
New Mexico	Regulated and Exempt	$25/carrier	None	10/20 PL; 5 PD	1/vehicle	Yes	None

TABLE A-IV (Continued)

State	Requirements Applicability by Carrier Type	One-Time Filing Fee[a/]	Annual Renewal Fee	Liability Insurance Requirement ($1000's)	Cargo Insurance Requirement ($1000's)	Resident Agent Requirement	Reciprocity
New York	No economic regulation. Insurance required for regulated carriers	None	None	25/100 PL; 10 PD	1	NS	N/A
North Carolina	Regulated and Exempt	$25/carrier	$1/vehicle	25/100 PL; 10 PD	2.5/5 (Reg. only)	NS	Yes (23 states on I.D. fees only)
North Dakota	Regulated	$25/carrier	$2.50/tractor	20 PL; 5 PD	1	Yes	NS
Ohio	Regulated	$30/tractor	None	25/100 PL; 10 PD	2	NS	Must register, but fees waived for 28 states
Oklahoma	Regulated and Exempt	$25/carrier	$5/tractor	10/25 PL; 5 PD	No requirement	Yes	None
Oregon	Regulated, Exempt and Private	None	$5/biannually/ vehicle	10/20 PL; 10 PD	1/2 (Reg. only)	NS	None
Pennsylvania	No requirements for any carrier	N/A	N/A	N/A	N/A	N/A	N/A
Rhode Island	Regulated and Exempt	$20/carrier	$7/unit	25/100 PL; 10 PD	2	NS	Mirror reciprocity for 21 states
South Carolina	Regulated and Exempt	$25/carrier	$1/vehicle	10/20 PL; 5 PD (Reg. only)	1/vehicle	Yes	Yes (for hire carriers operating on a regular basis may prorate fees)
South Dakota	Regulated and Exempt	$25/carrier	$2/vehicle	No requirements	No requirements	Yes	Yes (2 states)
Tennessee	Regulated and Exempt	$25/carrier	$5/vehicle	10/20 PL; 5 PD	2/5 (Reg. only)	NS	Yes (2 states)
Texas	Regulated and Exempt	$25/carrier	$11/vehicle	25/100 PL; 10 PD	1	Yes	None
Utah	Regulated and Exempt	$25/carrier	None	25/100 PL; 10 PD	2.5/5	Yes	None
Vermont	No requirements for any carrier	N/A	N/A	N/A	N/A	N/A	N/A

TABLE A-IV (Concluded)

State	Requirements Applicability by Carrier Type	One-Time Filing Fee[a/]	Annual Renewal Fee	Liability Insurance Requirement ($1000's)	Cargo Insurance Requirement ($1000's)	Resident Agent Requirement	Reciprocity
Virginia	Regulated and Exempt	None	$3/tractor	20/40 PL; 5 PD	5-1	NS	None
	Private	None	None	No requirement for private carriers	No requirement for private carriers	N/A	N/A
Washington	Regulated and Exempt	$25/carrier	$3/vehicle plus $48 gross wt. fees	25/100 PL; 10 PD	NS	NS	None
West Virginia	Regulated and Exempt	None	$3/unit	10/20 PL; 5 PD	2/4	Yes	None
Wisconsin	Regulated and Exempt	$40/carrier	$20/vehicle	15/30 PL; 10 PD	No requirement	NS	Occassional reciprocity on annual fees
Wyoming	Regulated and Exempt	$10/carrier	$10/tractor	25/50 PL; 5 PD	2	Yes	None

a/ One-time fee except where indicated.

Abbreviations: PD - Property Damage
PL - Personal Liability
NS - Not Stated As Required--Uncertain

APPENDIX B

SURVEY INSTRUMENT

DOT-FH-11-7989 (MOD. 3)
OMB NO. 04-S74030
EXP. 12-31-74

Questionnaire No. _____ 1 2 3 4

Location _____ 5

Time _____ 7

Day of Week _____ 9

TRUCKING INDUSTRY SURVEY

Part I

1. How many total years of over the road experience do you have? _____ 11

2. How many years in your present position? _____ 13

3. During the past year (or No. 2 response, if less than 1 year), have you usually worked for a; 15

_____ (1) private

_____ (2) contract

_____ (3) or common carrier?

4. Are you an; 16

_____ (1) independent or

_____ (2) company driver?

5. How many trucks operate in your fleet from your base? 17

_____ (1) 1;

_____ (2) 2-5;

_____ (3) 6-19;

_____ (4) 20 or more

6. Compared with previous years, would you say that during the past year interstate trucking has; __ 18

_____ (1) become much easier

_____ (2) become somewhat easier

_____ (3) remained about the same

_____ (4) become somewhat more difficult

_____ (5) become much more difficult

(IF RESPONDENT ANSWERS BY MARKING 1, 2, 4, or 5, ASK:) "WHY DO YOU FEEL THAT WAY?" _____ __ __ 19 20

_____

_____

7a. Here is a list of seven types of regulations which interstate truckers have to comply with. In the list please tell me which items you consider to be major problems for interstate truckers at the present time:

_____ (1) ICC regulations (e.g., routes, rates, etc.) __ 21

_____ (2) DOT regulations (e.g., equipment, safety, hours, etc.) __ 22

_____ (3) State size and weight limits __ 23

_____ (4) State licensing, permits and tax requirements __ 24

_____ (5) Speed limits __ 25

_____ (6) Fuel prices and availability __ 26

_____ (7) Deadheading __ 27

7b. Are there any other matters not mentioned in this list which you feel should be included as major problems of interstate trucking? If so, what are they? __ __ 28 29

_____ __ __ 30 31

_____ __ __ 32 33

7c. Of all these problems, which do you regard as the most serious? Which would you say is second most serious?

_____

_____

8. Who handles the paperwork for your truck registrations, taxes, and fees? 34

_____ (1) self

_____ (2) company

_____ (3) split

9. Who pays the taxes and fees? 35

_____ (1) self

_____ (2) company

_____ (3) split

_____ (4) company pays then bills me

(IF ANSWER TO QUESTIONS 8 OR 9 IS "SELF" OR "SPLIT," INTERVIEWER SHOULD PROCEED TO PART II. OTHERWISE,: "THANK YOU VERY MUCH FOR YOUR COOPERATION." GO ON TO THE NEXT INTERVIEW.

Part II

1. What class of commodities do you usually haul? _____ 36

2. How many trucks do you legalize (license, etc.)? _____ 38

3. Are you able to plan in advance where your next trip will take you? 40

_____ (1) always

_____ (2) usually

_____ (3) seldom

_____ (4) never

4. What percent of your trips during the past 12 months have started and ended within the state where your vehicle is base-plated? 41

(Interstate trips) _____

5. In what state is your vehicle base-plated? _____ 43

6. In how many different states have you driven during the past year? 45

_____

7. Have you found any particular states where you have particular difficulty in legalizing your truck operations? If so, which ones? 47

_____ 49

_____ 51

53

8a. The following is a list of state requirements for truckers. As I read each item please indicate whether you have had experience with the requirement within the past year. (INTERVIEWER WILL NOTE THOSE ITEMS WITH WHICH THE TRUCKER HAS NOT HAD PERSONAL EXPERIENCE IN THE PAST YEAR BY PLACING N/A IN THE "ITEM RANK" COLUMN NEXT TO THE ITEM.) (NEW CARD)

Item Rank	Item	
___ 6	Certificate of Insurance _____	8 9 10
___ 11	Gross Receipts Taxes _____	13 14 15
___ 16	Motor Fuel Taxes _____	18 19 20
___ 21	Oversize/Overweight Permits _____	23 24 25
___ 26	Property Tax _____	28 29 30
___ 31	PUC/PSC Registration Requirements _____	33 34 35
___ 36	Required Incidental Fees _____	38 39 40
___ 41	Ton-Mile Taxes _____	43 44 45
___ 46	Trip Permits _____	48 49 50
___ 51	Truck Licensing _____	52 53 54
___ 55	Other (specify) _____	57 58 59

8b. "During the past year, then you've had experience with the following state requirements:" (INTERVIEWER WILL READ THOSE ITEMS NOT MARKED "N/A".) "Would you please rank any of those requirements which cause you trouble starting with the item which is most troublesome." (INTERVIEWER WILL INDICATE RANK ORDER IN "ITEM RANK" COLUMN IN 8a.)

8c. You've just indicated that some state requirements cause a bother or trouble to you. We would like to know why these items are troublesome. Some reasons might include: (READ THE LIST.)

(1) It's hard to keep up to date with each state's requirements

(2) Filing is required too often

(3) The forms take too much time

(4) There are too many different forms

(5) Too much record keeping is required

(6) Fees are too high

(7) The requirement brings about en-route delay

From your own experience please indicate one by one why the items you ranked earlier are troublesome. (INTERVIEWER WILL READ ITEMS RANKED IN THE 8a RESPONSE ONE-BY-ONE STARTING WITH THE MOST BOTHERSOME. RECORD THE CAUSE OF THE PROBLEM TO THE RIGHT OF THE PROBLEM ITEM IN 8a.)

9. Did you expect or hear about this survey before today? 60

_____ (1) yes

_____ (2) no

_____ (3) refused/don't know

10. Are you currently en-route with a load? (IF ANSWER IS "YES," THE INTERVIEWER SHOULD PROCEED TO PART III.) OTHERWISE SAY "THANK YOU VERY MUCH FOR YOUR COOPERATION," AND GO ON TO THE NEXT INTERVIEW. 61

_____ (1) yes

_____ (2) no

Part III

1. How many miles will your present trip take you one way? 62

_____ (1) less than 200 miles

_____ (2) between 200 and 500 miles

_____ (3) between 500 and 1,000 miles

_____ (4) more than 1,000 miles

_____ (5) don't know

2. What portion of your trip have you completed? 63

_____ (1) less than 1/4th

_____ (2) between 1/4th and 1/2

_____ (3) between 1/2 and 3/4ths

_____ (4) more than 3/4ths

_____ (5) don't know

3. If you have experienced any unexpected delays since the beginning of the trip, describe the kind of delays and the approximate length of each.

Kind of Delay	Length (In Hours)	
_____	_____	64 — 66 —
_____	_____	68 — 70 —
_____	_____	72 — 74 —

4. What business related expenses have you had to pay out of your pocket during this trip which were unexpected? (NEW CARD)

	Nature of Expense	Approximate Amount	
_____	(1) Road and bridge tolls	_____	— — — — 6 7 8 9
_____	(2) Diesel fuel or gasoline	_____	— — — — 10 11 12 13
_____	(3) Station maintenance	_____	— — — — 14 15 16 17
_____	(4) On-road maintenance	_____	— — — — 18 19 20 21
_____	(5) State registration or permit fees	_____	— — — — 22 23 24 25
_____	(6) State inspection fees	_____	— — — — 26 27 28 29
_____	(7) Other (list) _____	_____	
	_____		— — — — 30 31 32 33
	_____		

"THANK YOU VERY MUCH FOR YOUR COOPERATION."

APPENDIX C

DRIVER RESPONSES--PROBLEM AREAS AND STATE REQUIREMENTS

TABLE C-I

QUESTION 7 RESPONSES BY DRIVERS WHO HANDLE OWN PAPERWORK

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	29	26	18	22	28	10	5
Second	28	38	11	23	10	13	10
Other	53	55	52	54	34	37	53

TABLE C-II

QUESTION 7 RESPONSES BY DRIVERS WHO DO NOT DO OWN PAPERWORK

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	236	116	79	55	53	37	16
Second	144	149	72	74	28	51	29
Other	135	163	175	165	94	116	128

TABLE C-III

QUESTION 7 RESPONSES BY DRIVERS CLASSIFIED AS PRIVATE

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	190	121	77	65	65	40	20
Second	135	146	67	78	27	54	36
Other	155	173	188	182	110	125	162

TABLE C-IV

QUESTION 7 RESPONSES BY DRIVERS CLASSIFIED AS FOR-HIRE

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	75	21	20	11	15	7	1
Second	37	40	15	19	11	10	3
Other	32	45	38	36	18	28	18

TABLE C-V

QUESTION 7 RESPONSES BY COMPANY DRIVERS

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	179	52	43	29	34	20	6
Second	88	96	43	35	18	32	14
Other	68	96	102	89	47	62	62

TABLE C-VI

QUESTION 7 RESPONSES BY INDEPENDENT DRIVERS

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead heading
First	82	90	53	48	45	26	15
Second	82	89	39	61	20	31	25
Other	119	118	125	128	79	90	118

TABLE C-VII

QUESTION 7 RESPONSES BY COMPANY DRIVERS OF LESS THAN 5 YEARS

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	101	38	28	18	24	13	3
Second	65	58	27	21	9	21	10
Other	43	67	65	60	34	43	45

TABLE C-VIII

QUESTION 7 RESPONSES BY COMPANY DRIVERS OF 5 OR MORE YEARS

Seriousness Ranking	Problem: Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	78	14	15	11	10	7	3
Second	23	38	16	14	9	11	4
Other	25	29	37	29	13	19	17

TABLE C-IX

QUESTION 7 RESPONSES BY INDEPENDENT DRIVERS
OF LESS THAN 5 YEARS

Seriousness Ranking	Problem						
	Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	46	43	31	25	17	11	11
Second	39	54	22	27	10	16	13
Other	64	55	57	69	41	41	56

TABLE C-X

QUESTION 7 RESPONSES BY INDEPENDENT DRIVERS
OF 5 OR MORE YEARS

Seriousness Ranking	Problem						
	Speed Limit	Fuel	Size/ Weight	State Requirements	ICC Requirements	DOT Requirements	Dead-heading
First	36	47	22	23	28	15	4
Second	43	35	17	34	10	15	12
Other	55	63	68	59	38	49	62

TABLE C-XI

QUESTION 8 RESPONSES BY DRIVERS WHO HANDLE OWN PAPERWORK

Requirement	Rank Order of Troublesomeness							
	1	2	3	4	5	6	7-11	Unranked
Motor Fuel Taxes	21	18	14	5	5	2	2	28
Trip Permits	15	17	12	9	3	2	1	31
PUC/PSC	31	7	9	4	2	3	0	23
Truck Licensing	3	6	6	8	6	2	12	36
Ton-Mile Taxes	7	5	3	2	8	4	2	21
Gross Receipts Taxes	0	12	11	10	5	2	2	25
Oversize/Weight Permits	10	8	1	2	3	2	2	22
Certificate of Insurance	8	5	4	7	3	7	5	43
Incidental Fees	1	5	2	4	5	3	1	34
Property Taxes	2	4	4	0	4	1	3	36
Other	1	1	0	0	0	0	1	2

TABLE C-XII

QUESTION 8 RESPONSES BY DRIVERS WHO DO NOT DO OWN PAPERWORK

Requirement	Rank Order of Troublesomeness							
	1	2	3	4	5	6	7-11	Unranked
Motor Fuel Taxes	17	13	6	10	3	1	0	29
Trip Permits	12	13	13	4	0	1	2	21
PUC/PSC	20	7	4	1	2	2	0	29
Truck Licensing	10	5	5	9	8	0	2	37
Ton-Mile Taxes	8	11	10	3	1	0	2	20
Gross Receipts Taxes	2	1	1	4	2	2	0	24
Oversize/Weight Permits	19	10	4	1	0	0	1	20
Certificate of Insurance	1	3	2	1	1	2	0	40
Incidental Fees	1	6	4	2	3	2	0	31
Property Taxes	2	2	1	1	2	2	0	34
Other	2	0	0	0	0	0	0	2

TABLE C-XIII

QUESTION 8 RESPONSES BY INDEPENDENT DRIVERS OF LESS THAN 5 YEARS

Requirement	Rank Order of Troublesomeness							
	1	2	3	4	5	6	7-11	Unranked
Motor Fuel Taxes	15	10	5	8	2	0	2	29
Trip Permits	11	11	12	4	0	0	1	22
PUC/PSC	14	5	7	3	2	0	0	27
Truck Licensing	7	8	2	4	4	0	4	37
Ton-Mile Taxes	7	7	5	2	3	1	1	19
Gross Receipts Taxes	1	1	1	3	2	2	2	20
Oversize/Weight Permits	14	7	3	0	1	2	2	16
Certificate of Insurance	5	5	2	1	1	3	2	38
Incidental Fees	2	5	2	3	3	3	0	23
Property Taxes	1	4	5	0	2	1	0	23
Other	2	0	0	0	0	0	1	2

TABLE C-XIV

QUESTION 8 RESPONSES BY INDEPENDENT DRIVERS OF 5 OR MORE YEARS

Requirement	Rank Order of Troublesomeness							
	1	2	3	4	5	6	7-11	Unranked
Motor Fuel Taxes	23	21	14	8	6	3	0	21
Trip Permits	13	19	13	8	3	3	3	26
PUC/PSC	35	8	6	2	2	5	0	21
Truck Licensing	6	3	8	13	10	2	9	34
Ton-Mile Taxes	8	9	8	2	6	3	2	18
Gross Receipts Taxes	1	12	11	11	5	2	0	24
Oversize/Weight Permits	14	8	2	3	2	0	1	24
Certificate of Insurance	4	3	4	6	3	6	3	41
Incidental Fees	0	5	4	3	5	2	1	40
Property Taxes	3	2	0	1	4	2	3	42
Other	1	1	0	0	0	0	0	2

APPENDIX D

STATISTICAL ANALYSIS OF DRIVER SURVEY DATA

The data base analyzed here consists of the answers to two questions (7a,c of Part I and 8a,b of Part II) of the survey. The respondents can be variously classified into groups, and part of the analysis consists of group comparisons. The two sets of results will be discussed separately. In both cases, however, the analyses will address three broad questions:

1. Do significant differences exist among the frequencies with which the listed items are selected and, if so, what is the correct ordering of the items?

2. How much agreement is there among the respondents in this "priority scale?"

3. Are there significant group differences with respect to the above two questions?

I. Question 7, Part I - Regulations

By responding to Questions 7a and 7c of Part I, the subjects produced a partial ranking in the sense of: (1) a most serious problem; (2) a second most serious problem; (3) assignment to the remaining five items the label "problem" or "no problem" (call these, respectively, X and 0). In other words, the seven items were partially ranked in the form "1st," "2nd," "tied for 3rd," "tied for last" (no problem). If the items had been completely ranked, standard statistical methods would address the three broad questions. Ignoring the difference between the 1st and 2nd choices and considering only "problem - no problem" designations, i.e., considering a 1st or 2nd choice as merely a "check," would also allow a straightforward data analysis.

Statistical methods do not exist, however, for directly handling such "partial rankings."* It is obviously not desirable to ignore the 1st and 2nd choice designation and equally wasteful to ignore the X's and 0's. So there are two kinds of approaches possible to statistically analyze the data: (1) analyze the "step-wise" fractions (proportions per item ranked 1st, ranked 1st or 2nd, ranked 1st or 2nd or X) and then composite the results heuristically if desired; or (2) construct a scale for the responses 1, 2, X, etc. The second method is easier to handle

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* Corrections for tied rankings exist, but the proportions of ties must be fairly small, and such corrections would not be applicable here.

mathematically and creates a single answer, but is, of course, more artificial. The question also might be raised as to how consistent the orders ought to be; e.g., if an item had a high fraction as the No. 1 problem but a lower response overall such a result in itself may be meaningful.

As a result of these considerations, all the above mentioned responses were constructed and analyzed. Responses used were therefore: R1, proportion of the time an item was chosen 1st; R2, proportion of 1st + 2nd's; R3, proportion of 1st + 2nd + X's; and R4, Response = observation from a scale where 1st choice = 1, 2nd choice = 1/2, X = 1/4, the letter O = 1/8. The last response is a scale arbitrarily constructed so that an X is twice as much a problem as an O, and 2nd choice is twice as much a problem as an X, and a 1st choice is twice as much a problem as a 2nd choice.

These four responses were all cast in analysis of variance frameworks and analyzed accordingly (see Table D-I). In addition to the variable I (Item) with seven levels, there is a variable G (Group) with two levels. There are five groupings of interest.* These are the following:

1. "Self" versus "not-self," where the distinction is based on the answer to Question 8 of Part I. Drivers who said they handle all paperwork for truck registration, taxes and fees were placed in the category, "Self."

2. "Private" versus "for-hire," based on answers to Questions 3 and 4 of Part I. Drivers were placed in the "private" category if they said they worked for a private carrier and that they were a company driver. All others were classed as "for-hire."

3. "Company" versus "independent," based on the answer to Question 4 of Part I. Drivers classified themselves directly as independent or company drivers.

4. Experience as a company driver, based on the answers of company drivers to Question 2 of Part I. Drivers with less than 5 years in their present position were placed in one category, those with 5 or more years in the other.

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* These comparisons are drawn separately, rather than constructing a variable "Group" with 10 levels, because the groups are not mutually exclusive, e.g., "Company ≥ 5 years experience" is included in "Company," etc.

TABLE D-I

ANALYSES OF VARIANCE; QUESTION 7, PART I

A. Not Self Versus Self

Response	Source	df	ss	ms	F
R1 =	G	1	1.3067	.3067	1.31
Fraction of 1st's	I	6	216.7785	36.1298	36.13*
	GI	6	41.4400	6.9067	6.91*
	e	4,074	4,074	1.00	
R2 =	G	1	2.4682	2.4682	2.47
Fraction of 1st +	I	6	440.8406	73.4734	73.47*
2nd	GI	6	56.4638	9.4106	9.41*
	e	4,074	4,074	1.00	
R3 =	G	1	81.3477	81.3477	81.35*
Fraction of 1st +	I	6	542.0146	90.3358	90.34*
2nd + X's	GI	6	47.5354	7.9226	7.92*
	e	4,074	4,074	1.00	
R4 = Scaled Results	G	1	150.8801	150.8801	< 1.00
	I	6	10602.1630	1767.0272	5.67*
	e	6	1870.1249	311.6875	

* Statistically significant ($\alpha < 0.05$).

TABLE D-I (Continued)

B. Private Versus For Hire

Response	Source	df	ss	ms	F
R1 =	G	1	3.30127	3.30127	3.30
Fraction of 1st's	I	6	423.7126	70.6188	70.62*
	GI	6	24.7293	4.1217	4.12*
	e	4,340	4,340	1.00	
R2 =	G	1	6.6832	6.6832	6.68*
Fraction of 1st +	I	6	754.8938	125.8156	125.82*
2nd	GI	6	31.8118	5.3020	5.30*
	e	4,340	4,340	1.00	
R3 =	G	1	44.4151	44.4151	44.42*
Fraction of 1st +	I	6	833.81624	138.9694	138.97*
2nd + X's	GI	6	43.7468	7.2911	7.29*
	e	4,340	4,340	1.00	
R4 = Scaled Results	G	1	141.3193	141.3193	< 1.00
	I	6	20,786.7701	3464.4617	19.53*
	e	6	1064.4683	177.4114	

* Statistically significant ($\alpha < 0.05$).

TABLE D-I (Continued)

C. Independent Versus Company

Response	Source	df	ss	ms	F
R1 =	G	1	3.3359	3.3359	3.34
Fraction of 1st's	I	6	388.3644	64.7274	64.73*
	GI	6	72.9241	12.1540	12.15*
	e	5,180	5,180	1.00	
R2 =	G	1	5.6122	5.6122	5.61*
Fraction of 1st +	I	6	735.4111	122.5685	122.57*
2nd	GI	6	81.3452	13.5575	13.56*
	e	5,180	5,180	1.00	
R3 =	G	1	97.5371	97.5371	97.54*
Fraction of 1st +	I	6	825.2541	137.5424	137.54*
2nd + X's	GI	6	80.334	13.3890	13.39*
	e	5,180	5,180	1.00	
R4 = Scaled Results	G	1	304.4845	304.4845	< 1.00
	I	6	23956.5838	3992.7639	5.73*
	e	6	4182.1439	697.0240	

* Statistically significant ($\alpha < 0.05$).

TABLE D-I (Continued)

D. Company Experience, More or Less Than 5 Years

Response	Source	df	ss	ms	F
R1 = Fraction of 1st's	G	1	0.0297	0.0297	0.03
	I	6	372.5780	62.0963	62.10*
	GI	6	9.5696	1.5949	1.59
	e	2,576	2,576	1.00	
R2 = Fraction of 1st + 2nd	G	1	0.4897	0.4897	0.49
	I	6	566.5112	94.4185	94.42*
	GI	6	0.8261	0.1377	0.14
	e	2,576	2,576	1.00	
R3 = Fraction of 1st + 2nd + X's	G	1	11.3628	11.3628	11.36*
	I	6	599.8833	99.9805	99.98*
	GI	6	3.2034	0.5339	0.53
	e	2,576	2,576	1.00	
R4 = Scaled Results	G	1	14.4841	14.4841	< 1.00
	I	6	10586.5001	1764.4167	90.20
	e	6	117.3725	19.5621	

* Statistically significant ($\alpha < 0.05$).

TABLE D-I (Concluded)

E. Independent Experience, More or Less Than 5 Years

Response	Source	df	ss	ms	F
R1 =	G	1	0.0001	0.0001	< 1.00
Fraction of 1st's	I	6	116.1707	19.3618	19.36*
	GI	6	11.9957	1.9993	2.00
	e	2,506	2,506	1.00	
R2 =	G	1	0.0025	0.0025	< 1.00
Fraction of 1st +	I	6	245.8136	40.9689	40.97*
2nd	GI	6	9.7828	1.6305	1.63
	e	2,506	2,506	1.00	
R3 =	G	1	1.4052	1.4052	1.41
Fraction of 1st +	I	6	304.3399	40.7233	50.72*
2nd + X's	GI	6	3.1304	0.5217	0.52
	e	2,506	2,506	1.00	
R4 = Sealed Results	G	1	1.3578	1.3578	< 1.00
	I	6	3523.7425	585.2904	30.08*
	e	6	117.1482	19.5247	

* Statistically significant ($\alpha < 0.05$).

5. Experience as an independent driver, defined similarly to the previous group.

Therefore, there were five sets of two-way analyses of variance performed, each set of analyses of variance having variables "Group" (two levels) and "Item" (seven levels), and the four responses described previously. The data used in the analyses are given in Appendix C.

The meaning of the findings from Table D-I will now be presented and discussed. The interpretation of the analyses of variance depends upon the response. For responses R1 and R2, the F-ratio for "G" (usually not significant) is not too meaningful, since the respondents were asked to label exactly one item 1st and one item 2nd (unless, presumably, they listed less than two problems of any degree). In other words, since nearly everyone did have a 1st and 2nd priority, the average difference in R1 and R2 per group (the "G effect") is by definition nonexistent. It is the GI interaction that physically discriminates between groups, i.e., that reflects the differences in how the groups ordered the items.

The respondents could, of course, check any number of the seven items, so for responses R3 (and R4) the G F-ratio as well as the GI F-ratio, is meaningful.

Note that in all cases for all responses there was an Item effect, i.e., all groups separated the items creating, in effect, a priority listing of items no matter how the responses were constructed. It is therefore superfluous to address the question of item differences individually, and in the following discussion the priority lists will be presented without further reference to the fact that these lists are statistically significant.

A. Self Versus Not-Self

For all responses, here and later, the item means were separated by Duncan's multiple range test, i.e., a priority list of the items was constructed. Besides comparing these lists between self and not-self groups, the average response over all items is meaningful to compare for responses R3 and R4. For example, the average number of problems mentioned by the drivers in the not-self group was 3.43, while for the self group it was 4.41. Similarly, the average scaled score obtained for R4 was 0.321 per item for the not-self group and 0.344 for the self group. In other words, regardless of how the two groups ranked the items, the self group listed a greater number of problems than the not-self group.

The ordering of the items is shown in Table D-II. The lists are in order of decreasing concern; i.e., the item with Rank 1 is the most frequently named problem, etc.

Two kinds of calculations were made from Table D-II: (1) how consistent (per group) are the four responses,* and (2) how do the groups differ in ordering the items? A measure of agreement between the responses is Kendall's concordance, W, which is a coefficient between 0 (no agreement) and 100% (perfect agreement). The measure of group differences is the Spearman correlation, r_{sp}, which is also between 0 and 100%. (Of course, we already know that significant group differences of some kind exist from the analysis of variance.)

Both groups have very high W's (W_{self} = 90%, $W_{not\text{-}self}$ = 99%), i.e., for all practical purposes we may disregard the individual R columns in Table C-II and regard the average column as the ranking of the items.

The correlation between self and not-self is also high (r_{sp} = 0.83), but there are differences between the groups. Specifically, the self group identified fuel prices and availability as the most serious problem and speed limits as the next most serious problem, but the not-self group ordered them the other way around. Both groups agreed that deadheading is the least important problem. The separation between the other item is not so clear, but in general the two state-related items are seen as presenting more problems than the two federal items (ICC and DOT regulations).

B. Private Versus For-Hire

Both R3 and R4 indicate that the private group is in general significantly more concerned about problems than the for-hire group.

The priority list for each group are shown in Table D-III.

All responses are highly consistent (per group), i.e., the average rank order is all we need pay attention to. There are no differences between the private and for-hire groups in the way they order the items, e.g., both agree that speed limits are the most serious problem, fuel prices and availability the second most serious problem, etc. There are sizable

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* It is, of course, not necessary that the responses be consistent, i.e., it does not damage the credibility of the survey results if R1 through R4 are not consistent.

TABLE D-II

PRIORITY RANKINGS OF PROBLEMS; SELF VERSUS NOT SELF

A. "Self" Group

Problem	Response R1	R2	R3	R4	Average
ICC Regulations	2	4	5	4	4
DOT Regulations	6	6	7	6	6
State Size and Weight Limits	5	5	4	5	5
State Licensing, Permits and Tax Requirements	4	3	3	3	3
Speed Limits	1	2	2	2	2
Fuel Prices and Availability	3	1	1	1	1
Deadheading	7	7	6	7	7

B. "Not-Self" Group

Problem	Response R1	R2	R3	R4	Average
ICC Regulations	5	6	6	5	5-6
DOT Regulations	6	5	5	6	5-6
State Size and Weight Limits	3	3	3	3	3
State Licensing, Permits and Tax Requirements	4	4	4	4	4
Speed Limits	1	1	1	1	1
Fuel Prices and Availability	2	2	2	2	2
Deadheading	7	7	7	7	7

TABLE D-III

PRIORITY RANKINGS OF PROBLEMS; PRIVATE VERSUS FOR-HIRE

A. Private Group

Problem	Response R1	R2	R3	R4	Average
ICC Regulations	4-5	5	7	5	5
DOT Regulations	6	6	5	6	6
State Size and Weight Limits	3	3	3	3	3
State Licensing, Permits and Tax Requirements	4-5	4	4	4	4
Speed Limits	1	1	1	1	1
Fuel Prices and Availability	2	2	2	2	2
Deadheading	7	7	6	7	7

B. For-Hire Group

Problem	Response R1	R2	R3	R4	Average
ICC Regulations	4	5	5-6	5	5
DOT Regulations	6	6	5-6	6	6
State Size and Weight Limits	3	3	3	3	3
State Licensing, Permits and Tax Requirements	5	4	4	4	4
Speed Limits	1	1	1	1	1
Fuel Prices and Availability	2	2	2	2	2
Deadheading	7	7	7	7	7

$W_{private}$ = 93%

$W_{for\text{-}hire}$ = 98%

r_{sp} = 100%

quantitative differences, though, in the two scales. For example, using R1, the private group's first two priority items were named by 32% and 21%, respectively, of the drivers, while the for-hire group named the same items 46% and 13%, respectively. In other words, although both groups agreed in the order, the private group thought both to be fairly serious but the for-hire group picked "speed limit" four times as frequently as "fuel prices and availability."

C. Company Versus Independent

Both R3 and R4 indicate that the indpendent group is in general significantly more concerned about problems than the company group.

The priority lists per group are shown in Table D-IV.

All responses are highly consistent (per group), i.e., the average rank order, again, is all we need pay attention to. Although the general agreement is good between groups, the independent group identified fuel prices and availability as the most serious problem and speed limits as the second most serious problem, but the company group ranked these items in the reverse order. Both groups agreed that deadheading is the least important problem. It is fair to say that both groups saw the two state-related items as more serious problems than the two federally controlled items.

Note that these results are the same as the results for the self/not-self classification, i.e., the terms independent-self and company-not-self are synonyms, at least with respect to responses to Question 7.

D. Experience

Tables D-ID and D-IE show that experience, as dictated by the length of time the driver was in his present position, has no significant influence on the rank ordering. That is, the GI interaction is not significant, so the rankings of the more experienced drivers are not distinguishable from the rankings of the less experienced drivers.

TABLE D-IV

PRIORITY RANKINGS OF PROBLEMS; COMPANY VERSUS INDEPENDENT

A. Independent Group

Problem	Response R1	R2	R3	R4	Average
ICC Regulations	5	5	7	5	5
DOT Regulations	6	6	6	6	6
State Size and Weight Limits	3	4	4	4	4
State Licensing, Permits and Tax Requirements	4	3	3	3	3
Speed Limits	2	2	2	2	2
Fuel Prices and Availability	1	1	1	1	1
Deadheading	7	7	5	7	7

B. Company Group

Problem	Response R1	R2	R3	R4	Average
ICC Regulations	4	5-6	6	5	5
DOT Regulations	6	5-6	5	6	6
State Size and Weight Limits	3	3	3	3	3
State Licensing, Permits and Tax Requirements	5	4	4	4	4
Speed Limits	1	1	1	1	1
Fuel Prices and Availability	2	2	2	2	2
Deadheading	7	7	7	7	7

$W_{independent} = 0.93$

$W_{company} = 0.96$

$r_{sp} = 0.93$

II. State Requirements

Recall that drivers who, on Part I of the questionnaire, indicate that they do some or all of the paperwork, or pay some or all of the taxes and fees, are asked the questions in Part II. Question 8 of Part II deals with 11 types of state requirements for truckers.

The combination of the answers to Question 8a and Question 8b of Part II resulted in a ranking of the 11 items in order of decreasing "troublesomeness." Individual respondents, though, ranked only those items with which they had personal experience within the past year. In practice, most respondents ranked six or fewer of the items (not 11), i.e., about half the items were not ranked. This was sometimes but not always consistent with the answer to Question 8a, i.e., the omission of a rank order was not always due to stated "no experience" with the item. Many times items were checked as problems but not given a rank order.

The incidence of "ties" in the ranks was too great to allow ordinary nonparametric analysis, e.g., Krushal-Wallis rank analysis of variance, etc. Instead, a scale was constructed for the responses, namely:

Response	Scale
Rank order 1 - 6	1 - 6, respectively,
Rank order 7 - 11	"9" (rare),
Checked but not ranked	12
"Blank," not checked	15

In other words, a "blank" is as far from a "check" as a check is from a rank, and the ranks are equispaced. Even if this scale may not be the most powerful or realistic possible scale, note that the correct order is preserved, i.e., the creation of priority lists is valid, but the separation between items would change with every new scale. Note that an item checked but not ranked could mean either of two (indistinguishable) things. Either the item is not troublesome at all, or the item is troublesome but not enough so as to be considered (by the driver) worthy of ranking.

After the responses were scaled, the data were analyzed as two-way analyses of variance, and the results separated by Duncan's multiple range test (see Table D-V). Because of the selection procedure used for Part II, only two of the five groupings were suitable for analysis--self versus not-self and experience of independents.

TABLE D-V

ANALYSES OF VARIANCE; QUESTION 8, PART II

A. Not-Self Versus Self

Source	df	ss	ms	F
G	1	8,920	8,920	< 1.00
I	10	997,226	99,722	7.74*
e	10	128,789	12,879	

B. Independent Experience, More or Less Than 5 Years

Source	df	ss	ms	F
G	1	95,173	95,173	7.86*
I	10	934,825	93,482	7.72*
e	10	121,016	12,102	

* Statistically significant ($\alpha \leq 0.05$).

From Table D-V we see that there is no significant self versus - not-self effect on Question 8, i.e., the self and not-self groups do not differ in their average weighted score. However, there is a significant item effect, i.e., both groups do separate the items significantly (see Table D-VI).

It can be seen from Table D-VI that motor fuel taxes are definitely regarded as the most troublesome item, with trip permits and PUC/PSC registration requirements "tied" for second. Truck licensing is the next most troublesome, and ranks higher with drivers in the not-self group than in the self group. The least troublesome overall are property taxes and required incidental fees.

For the independent group, the experience level (less than 5 years or 5 or more years) does influence the response. On the average, the respondents with more experience either regarded more items as troublesome or had experience with more items than the trucker with less experience.

TABLE D-VI

RANKINGS OF TROUBLESOME STATE REQUIREMENTS, SELF VERSUS NOT SELF

Rank	Self	Not Self	Average[a/]
1	Motor Fuel Taxes	Motor Fuel Taxes	Motor Fuel Taxes
2	Trip Permits	Trip Permits	Trip Permits
3	PUC/PSC Registration Requirements	Truck Licensing	PUC/PSC Registration Requirements
4	Certificate of Insurance	PUC/PSC Registration Requirements	Truck Licensing
5	Gross Receipts Taxes	Oversize/Overweight Permits	Oversize/Overweight Permits
6	Truck Licensing	Ton-Mile Taxes	Ton-Mile Taxes
7	Ton-Mile Taxes	Required Incidental Fees	Certificate of Insurance
8	Oversize/Overweight Permits	Certificate of Insurance	Gross Receipts Taxes
9	Required Incidental Fees	Property Tax	Required Incidental Fees
10	Property Tax	Gross Receipts Taxes	Property Tax
11	Other	Other	Other

a/ Brackets indicate items whose ranks are statistically indistinguishable.

The two priority scales are shown in Table D-VII. Although both groups agreed on the first four items, there are significant differences further down the scale. In particular, the more experienced group ranked gross receipts taxes as moderately troublesome, but the other group regarded them as the least troublesome of all, except "miscellaneous."

TABLE D-VII

EXPERIENCE

Rank	Under 5 Years	Five or More Years	Average
1	Motor Fuel Taxes	Motor Fuel Taxes	Motor Fuel Taxes
2	Trip Permits	Trip Permits	Trip Permits
3	PUC/PSC Registration Requirements	PUC/PSC Registration Requirements	PUC/PSC Registration Requirements
4	Truck Licensing	Truck Licensing	Truck Licensing
5	Certificate of Insurance	Gross Receipts Taxes	Oversize/Overweight Permits
6	Oversize/Overweight Permits	Ton-Mile Taxes	Ton-Mile Taxes
7	Ton-Mile Taxes	Oversize/Overweight Permits	Certificate of Insurance
8	Required Incidental Fees	Certificate of Insurance	Gross Receipts Taxes
9	Property Tax	Required Incidental Fees	Required Incidental Fees
10	Gross Receipts Taxes	Property Tax	Property Tax
11	Other	Other	Other

APPENDIX E

CHARACTERISTICS OF DRIVERS LEGALIZING OWN TRUCKS

Category	Number	Percent
Number of Trucks You Legalize		
1	191	72.90
2-5	65	24.81
6-10	3	1.15
Over 10	3	1.15
Can You Plan Trips in Advance		
Always	18	6.79
Usually	53	20.00
Seldom	63	23.77
Never	131	49.43
Percentage of Intrastate Trips		
0-10%	42	29.58
11-20%	7	4.93
21-30%	15	10.56
31-50%	31	21.83
Over 50%	47	33.10
Number of States Traveled in Last Year		
1-2	4	1.52
3-5	18	6.82
6-8	21	7.95
9-11	28	10.61
12-14	14	5.30
15-17	25	9.47
18-20	25	9.47
21-23	5	1.89
24-26	15	5.68
27-29	4	1.52
30-32	18	6.82
33-35	6	2.27
36-38	11	4.17
39-41	6	2.27
42-44	6	2.27
45-47	9	3.41
48-50	49	18.56
Commodities Hauled		
Exempt	113	42.48
Steel	46	17.29
Special	27	10.15
Household Goods	29	10.90
Autos, Mobile Homes	0	0.00
General Freight	47	17.67
Liquid Bulk	4	1.50

State	Trucks Base-Plated	Particular Problems in Legalization
Alabama	14	0
Alaska	0	1
Arizona	2	19
Arkansas	13	10
California	12	17
Colorado	1	8
Connecticut	2	0
Delaware	3	0
District of Columbia	0	0
Florida	23	1
Georgia	21	0
Idaho	0	1
Illinois	2	28
Indiana	26	8
Iowa	8	30
Kansas	7	10
Kentucky	3	5
Louisiana	0	0
Maine	0	1
Maryland	1	0
Massachusetts	2	2
Michigan	6	1
Minnesota	10	1
Mississippi	2	5
Missouri	9	27
Montana	0	0
Nebraska	4	4
Nevada	0	4
New Hampshire	0	1
New Jersey	7	1
New Mexico	1	14
New York	2	7
North Carolina	5	1
North Dakota	0	1
Ohio	20	66
Oklahoma	13	2
Oregon	2	2
Pennsylvania	7	5
Rhode Island	1	1
South Carolina	6	2
South Dakota	1	1
Tennessee	3	18
Texas	16	8
Utah	1	4
Vermont	0	0
Virginia	3	13
Washington	2	2
West Virginia	1	1
Wisconsin	3	10
Wyoming	0	0

APPENDIX F

DELAYS

Site	Kind of Delay	Length (in hours unless stated otherwise)
Kansas City, Kansas	Loading and unloading	5 days
	Bill of lading confusion	3
	Can't unload	24
	Breakdown	24
	Shipper wasn't informed of charges--company fault	4 days
	Kansas port of entry--lease requirement	4
	No load/freight	7
Carlisle, Pennsylvania	Loading	6
	Waiting for permit (overweight)	3
	2 permit (overweight)	7
	2 flat tires	3
	Overwidth permit	5
	Mechanical	4
	Mechanical	20
	Tire	10 min
	Loading	2
	Mechanical	1
Atlanta, Georgia	For the lack of freight going South	24
	Waiting for permits	2

Site	Kind of Delay	Length (in hours unless stated otherwise)
	Waiting for permits	2
	Had a breakdown	2
Doswell, Virginia	Accident--(2)	6
	Clutch	8
	Loading	12
	Lack of speed	2
	Not allowed to operate with an oversize load between 4:00 p.m. and 6:00 p.m. in Virginia	2
	Truck repair	4
Whittier, California	3 flat tires	14
	Broke a spring in Wyoming	4
	Replaced head bolt on engine	1/2
	2 flat tires	2
	1 flat tire	1/2
	Joint in Perry water filter snapped off	15
	Breakdown (grease seal went out wheel)	4
	2 flat tires	5
	Blew a tire	2
	Tore out wires on trailer	4
	Smoke blowing off truck--got a ticket Cost $26 to get a piece of paper saying I had no smoke	1/2
	Stopped in Iowa for no fuel stamp $56	3

Site	Kind of Delay	Length (in hours unless stated otherwise)
	Diaphragm on a brake diaphragm went out	1
	Engine problems	3
	Flat tire	2
	Dispatch (didn't know where he was going--load and unload)	72
	California permit	4-6
	Tire trouble	36
	Tires and battery. Alternator. Generator	24
	Long delay in getting load	8
	Flat tire--mud flap blew off and tire blew out	3
Serville, Ohio	Obtaining permit for Ohio	54
	Blew trailer tire	12
	Loading	3-3/4
	Speeding	1/2
	Fuel-stop	1
	Locating loading site because of trip-lease, and given wrong point of origin	3
	Waiting for log time to come in	10
	Loading (slow warehouse men)	9
	Rain	1

Site	Kind of Delay	Length (in hours unless stated otherwise)
	PUC checks (3) 1/2 hr each	1-1/2
	DOT (4-stops) 30-45 min each	3-1/2
Paulsboro, New Jersey	None	
East Gary, Indiana	Permits	7
	No load	100
Pharr, Texas	Lack of produce (waiting for load)	96
Cannon Falls, Minnesota	Had to install an alternator belt	3
	Find a load back	36
	Furnishing my reciprocity permits	2

APPENDIX G

DESCRIPTION OF CASE STUDIES

Interviews with 11 trucking entities were conducted to determine the costs of trucker compliance with state requirements. The 11 cases vary in size and in the nature of their operations. An effort was made to interview a variety of carriers, to determine what differences between trucking industry segments might exist, and to illustrate magnitude of those differences. Potential interview candidates possessed the following characteristics:

- Commercial trucker
- Engaged in multistate activities
- Operated big rigs (which are subject to all taxes and controls under investigation)
- Administered own compliance activities

Selection of candidates was based primarily on fleet size and type of operation. Geographic distribution of bases of operations was a secondary consideration. Our choice of cases was guided by the desire to interview a disproportionate number of small independent carriers.* Our intent was to study their experience and compare the experience of other segments with that of the group of small independents. The guidelines displayed in Table G-I were established.

TABLE G-I

PLAN FOR CASE STUDY INTERVIEWS

	Carrier Type		
Fleet Size	Private	Exempt	Regulated
Small	-0-	4 cases	-0-
Medium	2 cases	2 cases	-0-
Large	-0-	-0-	2 cases

* The authors estimate 90% of small independents who administer their own taxes and permits haul exempt commodities. Thus, the emphasis on exempt haulers.

With one exception the case study sample was selected and interviews were conducted in accordance with our plan. An eleventh hour occurrence made it impossible to interview a second private carrier of medium size and a small private carrier was substituted. The distribution of cases by fleet size and carrier type is summarized in Table G-II.

TABLE G-II

CASE STUDY NUMBERS INTERVIEWED

	Carrier Type		
Fleet Size	Private	Exempt	Regulated
Small	4	1,2,3,5	N/A
Medium	8	6,7,9	N/A
Large	N/A	N/A	10,11

Thus, interviews were conducted with private carriers, exempt commodity haulers, and regulated carriers. The individual cases varied in size from one unit to 475 units, and in extent of operations from 12 states to 48 states.

While the interviews themselves were unstructured, identical subject areas were covered in each of the 11 case study interviews. The interviews each commenced with a discussion of the carrier's operations. Fleet size and the geographic extent of the operations were discussed along with the type of commodities hauled and the nature of the operation--private or for-hire.

Next, direct costs were discussed. The carrier was asked to list the state in which clearances for legal operations were obtained and maintained. The extent to which the carrier made use of trip permits was also determined. In about half the cases, the carrier was able to supply an exact listing of permits which were obtained for each state in which he operates. In the remaining cases, the carrier was not able to supply this information, and the information was constructed based on a review of the requirements in each state where the carrier had indicated he operated. Annual fees associated with the various permits were discussed in a similar manner. Regarding miscellaneous costs, most carriers were aware that they were paying (usually through their insurance

companies) a small incidental fee for the posting of the name of a resident agent in various states. Some of those interviewed were aware of the amount of the resident agent expense but were unaware of how many states within their scope of operations required the name of a resident agent. Where gaps existed, this information was constructed by reviewing the requirements of the various states. With respect to bond expenses most of the truckers interviewed employed a bonding agent--generally the insurer of the fleet. Again, we often relied on the listing of state requirements to estimate the amount of bond expense liability in each case. Those discussions coupled with a review of state requirements supplied the necessary information to estimate the annual out-of-pocket fleet permit costs.

The interviews next focused on indirect costs of compliance. When applicable, six subject areas were discussed. They included: (1) application, receipt, and affixing of permits, (2) record keeping, (3) report filing, (4) enforcement, (5) office items, and (6) trip permits. The discussion of the permits included two types of permits, tax identification permits (usually fuel tax permits) and utilities regulatory commission permits. Record keeping discussions centered on trip records, kept daily by drivers, and on the tabulation of those records which takes place in the office. In several cases, where a high incidence of driver turn-over exists, an equipment list was also discussed. Regarding report filing, mileage (or proration reports) fuel tax reports, and third structure tax reports were all discussed separately. Enforcement discussions included coverage both of on-the-road inspections and of record audits which take place in the office. Office items discussed included office working space and storage space, equipment, check writing charges and postage. With respect to each of these items, only that portion of the total expense which was related to permits, licenses and taxes, was included in our discussions. Finally, with respect to trip permits, both the method of obtaining those permits and the costs associated with that method was discussed. Coverage of these six subject areas provided necessary inputs for determining indirect permit, license, and tax costs.

In none of the cases did drivers themselves carry out the function of obtaining and maintaining clearances for legal operations in the various states. In each case there was at least one person, and sometimes an entire staff, which fulfilled this function. It was generally noted that the person or persons who carried out the permit, license, and tax function, were significantly more knowledgeable than the drivers regarding the permits required in each state. In several cases the admission was made that not all required permits had been obtained. However, in at least one case the person who obtained and maintained permits for a small fleet suggested that she may be obtaining a greater number of permits than

actually required. The person cited insufficient knowledge regarding reciprocal agreements as the reason why more permits than necessary might have been obtained.

The tabulated format of both direct and indirect costs of compliance with state permits, licensing, and tax requirements in Appendix H follows closely the subject outline described above. Cost information for each case is presented in two tables, the number (Roman) of which corresponds to the case number. Tables identified with an "a" suffix present direct cost information. Those with "b" suffix present indirect cost information. The tabulations are relatively uniform for each case. However, some differences do exist. These differences do not affect the cost results of the interviews, but simply reflect either the non-applicability of a subject area (for example, the trip permits), a difference in the method of complying, (for example, the use of automated data processing equipment to tabulate trip records), or finally, differences in the way the interviewees thought about and presented their ideas in the various subject areas.

Below, the case study information is arranged in sequence according to the size and extent of operations of each trucking entity. For example, Case 1 represents a trucker operating a single unit in 35 states, while a trucking concern operating 475 trucks in 40 states is represented as Case 11. A brief discussion of the operations of each case study follows below.

Case 1: A single owner-operator drives one unit through 35 states hauling exempt commodities. The trucker is based in a south-central state which does not participate in any major registration compact agreement. As is typical with many one-man operations, the driver's wife assists in obtaining required permits and in tabulating the driver's trip record information relating to miles traveled in each state. The wife completes her work from time to time, as necessary, in a portion of their home. The driver, traveling in such an extensive area, completes about 40 trips per year, each lasting about a week or perhaps longer. As shown in Table H-Ia the greatest direct cost facing the driver is the bond expense. Record keeping requirements and on-the-road inspections, both affecting the driver, constitute the two greatest items of indirect expense followed by report filing requirements as shown in Table H-Ib.

Case 2: Again, one owner-operator drives one unit through 39 states hauling exempt commodities. Unlike the driver in Case 1, however, the driver in Case 2 is affilitated with a small fleet of trucks based in a central state which is a participant in the Uniform Proration and Reciprocity Agreement. Therefore, the driver prorates his vehicle registration and shares some fleet costs with his associates. For purposes of analysis, however, we have treated his case as if he operated a one-man business and were liable for the entire amount of fleet and unit costs incurred. The driver is responsible for his own permits and for filing his own reports despite his affiliation with the fleet. The driver's wife assists with these responsibilities, using a portion of their home as her office. The driver completes approximately 60 trips per year. His greatest direct expense, assuming he were operating alone, is bond expense which is nearly three times as great as permit fees, as shown in Table H-IIa. His greatest indirect expense is the combined effort of he and his wife with regard to record keeping, followed by on-the-road inspections, as shown in Table H-IIb.

Case 3: In this case, one man owns and operates three trucks, leasing two of them to other drivers. All three trucks are used to haul potatoes, an exempt commodity, in 12 states. This small fleet is based in a central state which is a participant in the Uniform Proration and Reciprocity Agreement, and the fleet is subject to vehicle registration prorationing. The wife of the truck owner obtains the required permits for all three trucks and files the necessary reports as required. She works in a portion of her home and hires a housekeeper part-time three months of the year to enable her to devote more of her time to necessary tabulating and reporting requirements. The entire fleet logs approximately 300 trips annually, or about 100 trips per unit. Bond expenses is the greatest item of direct cost, as shown in Table H-IIIa, while record keeping is the most significant indirect cost appearing in Table H-IIIb.

Case 4: Three units operating as a private fleet hauling manufactured commodities in 26 states constitute Case 4. The base state is a central state which is a participant in the Uniform Proration and Reciprocity Agreement. An employee of the manufacturing firm carries out the permit and tax functions for the fleet as part of her overall duties. Office and storage facilities are provided by the firm. The fleet averages 600 trips per year, or 200 trips per vehicle. As shown in Table H-IVa, bond expense is the greatest direct cost item while on-the-road inspections is the greatest indirect cost item as shown in Table H-IVb. The firm leases all three vehicles from a truck leasing company. Included as part of the lease arrangement, is the preparation and filing of mileage (or proration)

reports with the various states participating in the Uniform Proration and Reciprocity Agreement. For this service, the firm pays $6 per week per vehicle.

Case 5: A five-unit fleet operating in 24 states hauling exempt commodities makes up Case 5. One man, a driver, owns the five vehicles and leases four of them to other drivers. The fleet base is a northeastern state which is not a participant in a major registration agreement, but which has established bilateral registration reciprocity agreements with most of the contiguous 48 states. The wife of the fleet owner works part-time in the fleet terninal office administering licensing, permits and taxes for the five-unit fleet. As shown in Table H-Va, the greatest direct cost is the unit fee associated with permits. This marks a break with previous cases, which had a greater bond expense than permit fee expense. Table H-Vb shows that the greatest indirect cost item by far is the record-keeping function.

Case 6: Eight units constitute the fleet studied in Case 6. The trucks are owned by one man who leases all of them to other drivers so that the owner may concentrate his efforts on a brokerage business which he also operates. The units are operated in a 16 state area hauling exempt commodities from the Rio Grande Valley in Texas. Texas is the base state of the fleet, and Texas is a participant in the International Registration Plan. The fleet owner employs a staff which secures the necessary permits for the entire fleet and also files required reports. Each of the trucks averages 40 trips per year, or 320 trips for the entire fleet. Annual permit fees constitute the greatest direct cost. This is typical of mid-size and larger fleets, whereas bond expense, a fleet cost, typically is the greatest cost item for smaller fleets. The fleet owner in this case reports that on-the-road inspections are his greatest indirect cost. This is followed by record keeping and, in particular, the cost of driver time in keeping records.

Case 7: As in Case 6, one man owns the eight vehicles which make up the fleet. All eight vehicles are leased to other drivers in order to allow the fleet owner to pursue a sideline truck salvage business. From time to time the vehicles in this fleet operate in all 48 states. Clearances are obtained and maintained in 42 states, while in 6 states temporary permits are obtained for the occassional trips. Nine months of the year the vehicles are operated from Florida where they haul exempt commodities to the Midwestern states. Three months of the year the vehicles travel in an east-west direction from coast to coast. Florida is the base state of the fleet, and Florida is a participant in the Multi-State Reciprocal

Agreement. Proration reports are filed in the States of Arizona and Utah, which do not honor the Florida base plate in their jurisdiction. Until recently the fleet owner handled the obtaining and maintaining of permits and the filing of reports himself, but recently has taken on an assistant to carry out these functions. The operation is run from a small office which serves both the truck line operations and the truck parts business. Three hundred and twenty trips per year are logged by the entire fleet, or about 40 trips per unit. Permit fees for this fleet are the greatest direct cost item, while the fleet owner estimates that record keeping constitutes his greatest indirect cost. Unlike all other cases studied, mileage records for all vehicles in the fleet are reconstructed in the office at the completion of trips. Drivers must still maintain fuel purchase records. The practice does not seem to have an impact on the cost of keeping records or filing reports.

Case 8: A private fleet comprised of nine over-the-road trucks was studied in Case 8. The vehicles cover 40 states, hauling in three formal registration compact agreements, including the International Registration Plan, the Uniform Proration and Reciprocity Agreement, and the Multi-State Reciprocal Agreement. An assistant to the company's transportation director obtains and maintains permits and files all necessary reports. Both the director of transportation and his assistant work together in an office on the company premises. Because of the wide geographic coverage of the fleet and the absence of utilities commission requirements in many states, bond expense slightly exceeds the annual cost of permit fees. Despite some freedom from utilities commission requirements in many states for private carriers, company personnel estimate that on-the-road inspections constitute the greatest indirect cost item.

Case 9: Twelve units owned by one individual make up the fleet studied in Case 9. All 12 units are leased to other drivers. The fleet covers an area consisting of 42 states and hauls exempt commodities. The base state of the fleet is a central state which participates in the Uniform Proration and Reciprocity Agreement. The fleet owner employs two persons who help coordinate fleet operations and also obtain and maintain required permits and file necessary reports. A small office is maintained for these purposes. The fleet logs some 600 trips per year or about 50 trips per vehicle. Direct cost items associated with licenses, permits, and fees are led by the annual permit fee expense. Indirect cost items are headed by on-the-road inspection expense and followed by record keeping costs.

Case 10: A regulated common carrier of special commodities consisting of 365 units was the subject of examination in Case 10. The carrier maintains an irregular route operation, hauling primarily meat products in refrigerated vans. The company employs independent owner-operators and drivers to carry on this operation. The carrier is based in a north-central state in close proximity to major meat production in the United States. The state in which the carrier is based participates in the Uniform Proration and Reciprocity Agreement. This carrier maintained what was certainly the most elaborate and sophisticated organization for the administration of licenses and permits that we viewed. It consisted not only of a licensing staff which obtained the necessary permits but also an accounting staff which filed the necessary reports in conjunction with the payment of taxes, and an extensive computer system which provided much of the tabulation required to fulfill the duties of both the licensing and accounting staffs. The carrier's headquarters office was new and very efficient. Carrier personnel estimated that the fleet averages 1000 trips per month and that 15,000 entries per month are recorded. As might be expected the cost of annual permit fees was, by far, the largest direct cost. The indirect cost of recording trip information far exceeded any other indirect cost item for this carrier.

Unlike smaller carriers reviewed in preceding case studies, this carrier and others like it experienced a high rate of driver turn-over. This necessitates the submission to many states of supplemental applications on a periodic basis. In addition, temporary permits must be applied for and received to allow the legal operation of new units in the fleet pending the receipt of permanent permits. Table H-Xb shows that approximately five times as much office effort is expended in operations relating to supplemental and temporary applications as is expended for annual permit applications.

Interestingly, Case 10, because of its operations, clears about 2/3 of its vehicles to operate in one direction to the east coast and about 1/3 of its vehicles to operate to the other coast. Vehicle registration costs are the reason. Operating in the western states under proration, the fleet is liable for 100% of registration taxes. To the east, because of some reciprocity, vehicles can be registered at about 1/2 the cost.

Case 11: The largest fleet operation studied is operated by an irregular route common carrier of special commodities. Some 475 trucks are operated throughout all 48 states. Clearances are obtained in 40 states. Fleet units are based in several south-central states in accordance with basing point requirements of the Multi-State Reciprocal Agreement. As with Case 10, this carrier employs independent drivers and owner-operators.

Typically, turn-over is high. Offices for the specialized staff which deals with licensing and tax matters are part of the base terminal. The fleet logs 5,000 trips per month and makes approximately 15,000 trip record entries per month. The highest direct cost item is annual permit fees, and record keeping is by far the largest indirect cost item for this carrier. As can be seen in the same table, data processing operations assist in the tabulation of trip records and in maintaining a timely equipment list.

Summary information for all of the 11 cases is recorded in Tables XIII and XIV. Table XIII provides a per vehicle indirect cost summary for the 11 case studies. Individual indirect cost items are listed by carrier both in dollars and as a percent of total per vehicle indirect cost. Averages indicate that record keeping is the greatest indirect cost expense, accounting for about 42.1% of the total. Following record keeping is enforcement activity, accounting for over one-third--33.8%--of the carriers' indirect cost. Report filing, office items, obtaining and affixing permits and trip permits, in that order, account for the remaining indirect costs and amount to only 24.1%.

APPENDIX H

CASE STUDY COMPLIANCE COST EXPERIENCE

TABLE H-Ia

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 1

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 1)	Resident Agent Expense	Bond Expense
Alabama	Fuel		12		40
Arizona	Fuel	N/A	N/A		20
Arizona	ACC		5	3	
Arkansas	Fuel		1		20
Arkansas	ATC		15	3	
California	BE		N/C		
California	PUC		2	3	
Colorado	Fuel		1		4
Colorado	PUC		N/C	3	
Colorado	GTM		N/C		
Connecticut	Fuel		3		40
Connecticut	PUC		10	3	
Delaware	Fuel		1		40
Florida	PUC		5		
Georgia	Fuel		1		
Georgia	PSC		5	3	
Illinois	ICC		10	3	
Illinois	Recipro.		3		
Indiana	Fuel	5	N/C		40
Iowa	Fuel	1	N/C		20
Iowa	ICC		1	3	
Iowa	Recipro.		2		
Kansas	Fuel		N/C		
Kansas	KCC		10	3	
Kentucky	Fuel		2		40
Kentucky	DMT		2		
Kentucky	Recipro		2		

TABLE H-Ia (Continued)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 1)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Louisiana	Fuel	N/A	N/A		
Louisiana	PSC		10	3	
Maryland	Fuel	5	1		
Massachusetts	Fuel		1		
Massachusetts	DPU		5	3	
Mississippi	Fuel		12		40
Mississippi	PSC		11		
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
Nebraska	Fuel		N/C		
Nebraska	RRC		10	3	
Nevada	Fuel		N/C		20
New Jersey	Fuel		5		
New Mexico	Fuel		2		40
New Mexico	MTD		N/C	3	
New York	TMT		3.33		
No. Carolina	Fuel		1		8
No. Carolina	NCU		1		
Ohio	HUT		2		
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		5	3	
Pennsylvania	Fuel		2		
So. Carolina	Fuel		4		
So. Carolina	PSC		1	3	
Tennessee	Fuel		N/C		20
Tennessee	PSC		5		

TABLE H-Ia (Concluded)

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 1)	Resident Agent Expense	Bond Expense
Texas	Fuel		N/C		20
Texas	RRC		11	3	
Utah	Fuel		N/C		4
Utah	PSC		N/C	3	
Virginia	Fuel		2		
West Virginia	Fuel		1		
West Virginia	PSC	—	3	3	—
Subtotal		11	191.33	54	456
Total			$712.33		

COST PER VEHICLE PER STATE = $20.35

TABLE H-Ib

ANNUAL INDIRECT FLEET PERMIT, LICENSE AND TAX COSTS--CASE 1

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix							
Application	Office	57 permits	22 min each	2-5/8 day	25/day	65.31	65.31
Affix permits	Driver	57 permits	5 min each	4-3/4 hr	10/hr	47.50	47.50
Record keeping							
Trip records	Driver	40 trips/yr	2 hr/trip	80 hr	10/hr	800	800
Tabulation	Office	40 trips/yr	1/2 min/trip	2-1/2 days	25/day	62.50	62.50
Report Filing							
Miles (proration)	Office	N/A	N/A	N/A	N/A	N/A	N/A
Fuel	Office	188 reports	20 min each	7-5/6 days	25/day	195.83	195.83
Third structure	Office	24 reports	30 min each	1-1/2 days	25/day	37.50	37.50
Enforcement							
Road inspections	Driver	360 stops/yr	9 min each	54 hr	10/hr	540	540
Audits	Office	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal						1,748.64	1,748.64
Item (prorated)							
Office space and storage						120	120
Equipment						30	30
Postage						27	27
Check writing charges						24	24
Subtotal						201	201
Total						1,949.64	1,949.64

COST PER VEHICLE PER STATE = $55.70

TABLE H-IIa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 2
(in dollars)

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 1)	Resident Agent Expense	Bond Expense
Alabama	Fuel		12		40
Arizona (one time)	Fuel	N/A	N/A		20
Arizona	ACC		5	2	
Arkansas	Fuel		1		20
Arkansas	ATC		15	2	
California	BE		N/C		
California	PUC		2	2	
Colorado	Fuel		1		4
Colorado	PUC		N/C	2	
Colorado	GMT		N/C		
Connecticut	Fuel		3		40
Connecticut	PUC		10	2	
Florida	PUC		5		
Idaho	Fuel		N/C		20
Idaho	PUC		N/C		
Idaho (no permit)	Mileage				20
Illinois	ICC		10	2	
Indiana	Fuel	5	N/C		40
Iowa	Fuel	1	N/C		20
Iowa	ICC		1	2	
Kansas	Fuel		N/C		
Kansas	KCC		10	2	
Kentucky	Fuel		2		40
Kentucky	DMT		2		
Maine	Fuel	1	N/C		
Maine	PUC		10	2	

TABLE H-IIa (Continued)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 1)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Maryland	Fuel		1		
Massachusetts	Fuel		1		
Minnesota	Fuel		N/C		120
Minnesota	DPS		5	2	
Mississippi	Fuel		12		40
Mississippi	PSC		11		
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
Nebraska	Fuel	N/A	N/A		
Nebraska	RRC		10.25	2	
Nevada	Fuel		N/C		20
New Jersey	Fuel		5		
New Mexico	Fuel		2		40
New Mexico	MTD		N/C	2	
No. Carolina	Fuel		1		8
No. Carolina	NCU		1		
No. Dakota	Fuel	1	N/C		20 est.
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		5	2	
Oregon	PUC		2.50		
Pennsylvania	Fuel		2		
So. Carolina	Fuel		4		
So. Carolina	PSC		1	2	
So. Dakota	Fuel		N/C		
So. Dakota	PUC		2	2	

TABLE H-IIa (Concluded)

State	Permit	Annual Permit Fees: Fleet	Annual Permit Fees: Unit (x 1)	Miscellaneous Costs: Resident Agent Expense	Miscellaneous Costs: Bond Expense
Texas	Fuel		N/C		20
Texas	RRC		11	2	
Utah	Fuel		N/C		4
Utah	PSC		N/C	2	
Virginia	Fuel/SCC		2		
Washington	Fuel		N/C		20
Washington	UTC		3		
West Virginia	Fuel		1		
West Virginia	PSC		3	2	
Wisconsin	PSC		30		
Wyoming	PSC	-	10	2	-
Subtotal		8[a]	214.75	38[a]	596[a]
Total			$856.75		

COST PER VEHICLE PER STATE = $21.97

[a] Superscript indicates fleet costs which are shared with other operators.

TABLE H-IIb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 2

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix							
Application	Wife	58 permits	15 min each	14-1/2 hr	3.125/hr	45.31	45.31
Affix permits	Driver	58 permits	4 min each	3-9/10 hr	10/hr	39	39
Record keeping							
Trip Records	Driver	60 trips	45 min each	45 hr	10/hr	450	450
Tabulation	Wife	N/A	8 hrs/mo	12 days	25/day	300	300
Report filing							
Miles (proration)	Wife	18 reports	30 min each	9 hr	3.125/hr	28.13	28.13
Fuel	Wife	220 reports	15 min each	55 hr	3.125/hr	171.88	171.88
Third structure	Wife	16 reports	30 min each	8 hr	25/day	25	25
Enforcement							
Road inspections	Driver	540 stops	6 min each	54 hr	10/hr	540	540
Audits	Wife	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal						1,599.32	1,599.32
Item (prorated)							
Office space and storage						100	100
Equipment						40	40
Postage						30	30
Check writing charges						28	28
Subtotal						198	198
Total						1,797.32	1,797.32

COST PER VEHICLE PER STATE = $46.09

TABLE H-IIIa

ANNUAL OUT-OF-POCKET PERMIT COSTS--CASE 3

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 3)	Resident Agent Expense	Bond Expense
Arizona	Fuel	N/A	N/A		20
Arizona	ACC		15	3	4
Colorado	Fuel		3		
Colorado	PUC		N/C	3	
Colorado	GTM		N/C		20 est.
Iowa	Fuel	1	N/C		20
Iowa	ICC		3	3	
Kansas	Fuel		N/C		40
Kansas	KCC		30	3	
Minnesota	Fuel	10	N/C		120
Minnesota	DPS		15	3	
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
Nebraska	Fuel	N/A	N/A		40
New Mexico	Fuel		6		40
New Mexico	MTD		N/C	3	
No. Dakota	Fuel	1			40 est.
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		15	3	
So. Dakota	Fuel	1	N/C		
So. Dakota	PUC		6	3	
Texas	Fuel		N/C		20
Texas	RRC	—	33	3	—
Subtotal		13	126	27	404
Total				$570	

COST PER VEHICLE PER STATE = $15.83

TABLE H-IIIb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 3

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix							
Application	Wife	19 permits	30 min each	1-1/5 day	25/day	30	10
Affix permits	Driver	3 trucks	2 hrs each	6 hr	10/hr	60	20
Record Keeping							
Trip records	Driver	1500 entries	5 min each	125 hr	10/hr	1,250	416.67
Tabulation	Wife	N/A	2 days/mo	24 days	25/day	600	200
Report Filing							
Miles (proration)	Wife	11 states	6 days/yr	6 days	25/day	150	50
Fuel	Wife	12 states	6 days/yr	24 days	25/day	600	200
Third structure	Wife	3 states	3.5 days/qtr	14 days	25/day	350	116.67
Enforcement							
Road inspections	Driver	3/wk	15 min each	39 hr	10/hr	390	130
Audits	Wife	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal						3,430	1,143.33
Item (prorated)						Annual Amount	
Office space and storage						60	20
Equipment						30	10
Postage						10	3.33
Check writing charges						9	3
Subtotal						109.00	36.33
Total						3,539.00	1,179.66

COST PER VEHICLE PER STATE = $98.31

TABLE H-IVa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 4

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 3)	Resident Agent Expense	Bond Expense
Alabama	Fuel		36		40
Arkansas	Fuel		3		20
Colorado	Fuel		3		12
Colorado	GMT		N/C		20 est
Delaware	Fuel		3		40
Georgia	Fuel		3		
Indiana	Fuel	5	N/C		40
Iowa	Fuel	1	N/C		20
Kansas	Fuel		N/C		40
Kansas	KCC		30		
Kentucky	Fuel		6		40
Maryland	Fuel	5	3		
Minnesota	Fuel	10			120
Mississippi	Fuel		36		40
Missouri	Fuel	N/A	N/A		20
Nebraska	Fuel	N/A	N/A		40
No. Carolina	Fuel		3		8
Ohio	HUT		6		
Oklahoma	Fuel		N/C		20
Pennsylvania	Fuel		6		

TABLE H-IVa (Concluded)

State	Permit	Annual Permit Fees: Fleet	Annual Permit Fees: Unit (x 3)	Miscellaneous Costs: Resident Agent Expense	Miscellaneous Costs: Bond Expense
So. Carolina	Fuel		12		
Tennessee	Fuel		N/C		20
Texas	Fuel		N/C		20
Virginia	SCC/Fuel		6		
West Virginia	Fuel	____	3	____	___
Subtotal		21	159	-0-	560
Total			$740		

COST PER VEHICLE PER STATE = $9.49

TABLE H-IVb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 4

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix							
Application	Office	23 permits	1/2 hr each	1-2/5 days	25/day	35	11.67
Affix permits	Driver	3 trucks	30 min each	1-1/2 hr	10/hr	15	5
Record keeping							
Trip records	Driver	600 trips	5 min each	50 hr	10/hr	500	166.67
Tabulation	Office	N/A	1/2 day/mo	6 days	25/day	150	50
Report filing							
Miles (proration)[a/]	Lessor	3 trucks	N/A	N/A	312/truck	936	312
Fuel	Office	All fuel reports	2-3/10 days/mo	27-3/5 days	25/day	690	230
Third structure	Office	All reports	2/10 day/mo	2-2/5 days	25/day	60	20
Enforcement							
Road inspections	Driver	2,400/yr	5 min each	200 hr	10/hr	2,000	666.66
Audits	Lessor and office	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal						4,386.00	1,462.00
Item (prorated)						Annual Amount	
Office space and storage						175	58.33
Equipment						20	6.67
Postage						25	8.33
Check writing charges						20	6.67
Subtotal						240.00	80.00
Total						4,626.00	1,542.00

COST PER VEHICLE PER STATE = $59.35

a/ The carrier pays the leasing company $6/wk/combination for licensing services. The leasing company maintains records which are subject to audit by the states, at the leasing company's offices.

TABLE H-Va

ANNUAL OUT OF POCKET FLEET PERMIT COSTS--CASE 5

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 5)	Resident Agent Expense	Bond Expense
Alabama	Fuel		60		20
Connecticut	Fuel		15		40
Connecticut	PUC		50	3.50	
Florida	PUC		25		
Georgia	Fuel		5		
Georgia	PSC		25	3.50	
Illinois	Recipro.		15		
Illinois	ICC	10	N/C	3.50	
Indiana	Fuel	5	N/C		40
Iowa	Fuel		10		20
Iowa	ICC		25	3.50	
Kentucky	Fuel		10		40
Maine	PUC	25	50	3.50	
Maryland	Fuel		5		
Massachusetts	Fuel		5		
Massachusetts	DPU		25	3.50	
New Hampshire	Fuel		5		
New Jersey	Fuel		15		
New York	Mileage		10		
No. Carolina	Fuel		5		8
No. Carolina	NCU		N/C	3.50	
Ohio	Mileage		10		
Pennsylvania	Fuel		N/C		

TABLE H-Va (Concluded)

State	Permit	Annual Permit Fees: Fleet	Annual Permit Fees: Unit (x 5)	Miscellaneous Costs: Resident Agent Expense	Miscellaneous Costs: Bond Expense
South Carolina	Fuel		20		
South Carolina	PSC		5	3.50	
Tennessee	Fuel		25		20
Texas	Fuel		N/C		20
Texas	RRC		N/C	3.50	
Virginia	Fuel		15		
West Virginia	Fuel		5		
West Virginia	PSC		15		
Wisconsin	Recipro	___	N/C	_____	___
Subtotal		40	455	35.00	228
Total			$758		

COST PER VEHICLE PER STATE = $6.32

TABLE H-Vb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 5

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix							
Application	Office	32 applications	15 min each	1 day	25/day	25	5
Affix permits	Combination	32 permits	30 min each	2 days	25/day	50	10
Record keeping							
Trip records	Driver	5 drivers	1 hr/wk each	250 hr	10/hr	2,500	500
Tabulation	Office	1 person	1 hr/wk	6-1/2 days	25/day	168.50	37.50
Report filing							
Miles (proration)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fuel	Office	All fuel reports	1-1/2 days/qtr	6 days	25/day	150	30
Third structure	Office	All reports	1/2 day/qtr	2 days	25/day	50	10
Enforcement							
Road inspections	Driver	100/yr	1/4 hr each	25 hr	10/hr	250	50
Audits	Office	1 in 4 yr	2 days each	1/2 day	25/day	12.50	2.50
Subtotal						3,200.00	640.00
Item (prorated)						Annual Amount	
Office space and storage						85	17
Equipment						50	10
Postage						20	4
Check writing charges						15	3
Subtotal						170.00	34.00
Total						3,370.00	674.00

COST PER VEHICLE PER STATE = $28.08

TABLE H-VIa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 6

State	Permit	Annual Permit Fees		Mscellaneous Costs	
		Fleet	Unit (x 8)	Resident Agent Expense	Bond Expense
Alabama	Fuel		96		40
Georgia	Fuel		8		
Georgia	PSC		40	3	
Illinois	ICC		80	3	
Indiana	Fuel	5	N/C		40
Louisiana	Fuel	N/A	N/A		20
Louisiana	PSC		80	3	
Maryland	Fuel	5	8		
Mississippi	Fuel		96		40
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
New Jersey	Fuel		40		
No. Carolina	Fuel		8		8
No. Carolina	NCU		8		
Ohio	HUT		16		
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		N/C		
So. Carolina	Fuel		32		
So. Carolina	PSC		8	3	
Tennessee	Fuel		N/C		20
Tennessee	PSC		40		
Texas	Fuel		N/C		20
Texas	RRC	—	88	3	—
Subtotal		10	648	15	228
Total			$901.00		

COST PER VEHICLE PER STATE = $7.04

TABLE H-VIb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 6

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per vehicle (dollars)
Obtain permits and affix							
Applications	Office	All permits	24 hr	3 days	25/day	75	9.38
Affix permits	Driver	8 trucks	1 hr each	8 hr	10/hr	80	10
Record keeping							
Trip records	Driver	320 trips	1/2 hr each	160 hr	10/hr	1,600	200
Tabulation	Office	320 trips	1/2 hr each	20 days	25/day	500	62.50
Report filing							
Miles (proration)	Office	4 states	1 hr each	1/2 day	25/day	12.50	1.56
Fuel	Office	96 reports	1/2 hr each	6 days	25/day	150	18.75
Third structure	Office	1 report qtr	1/2 hr each	1/4 day	25/day	6.25	0.78
Enforcement							
Road inspections	Driver	2240 stops	6.6 min each	246.4 hr	10/hr	2,464	308
Audits	Office	N/A	N/A	N/A	N/A	N/A	N/A
Subtotal						4,887.75	610.97
Item (prorated)							
Office space and storage						180	22.50
Equipment						20	2.50
Postage						14	1.75
Check writing charges						12	1.50
Subtotal						226	28.25
Total						5,123.75	639.22

COST PER VEHICLE PER STATE = $39.95

TABLE H-VIIa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 7

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 8)	Resident Agent Expense	Bond Expense
Alabama	Fuel		96		40
Arizona	Fuel	N/A	N/A		20
Arizona	ACC		40	3	
Arkansas	Fuel		8		20
Arkansas	ATC		40	3	
California	BE		N/C		
California	PUC		16	3	
Colorado	Fuel		8		12
Colorado	GTM		N/C		20
Connecticut	Fuel		24		40
Connecticut	PUC	10	80	3	
Florida	PUC		40		
Georgia	Fuel		8		
Georgia	PSC		40	3	
Illinois	ICC		80	3	
Illinois	Recipro.		24		
Indiana	Fuel	5	N/C		40
Iowa	Fuel	1	N/C		20
Iowa	ICC		8	3	
Iowa	Recipro.		16		
Kansas	Fuel		N/C		40
Kentucky	Fuel		16		40
Kentucky	DMT	25	16		
Louisiana	Fuel	N/A	N/A		20
Louisiana	PSC	10	80	3	

TABLE H-VIIa (Continued)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 8)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Maryland	Fuel	5	8		
Michigan	Fuel	1	N/C		
Minnesota	Fuel		40	3	120
Minnesota	DPS				
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
Nebraska	Fuel	N/A	N/A		40
Nebraska	RRC		48	3	
Nevada	Fuel		N/C		40
New Jersey	Fuel		40		
New Mexico	Fuel		16		
New Mexico	MTD		N/C	3	40
New York	TMT		26.67		
No. Carolina	Fuel		8		8
No. Carolina	NCU		8		
Ohio	HUT		16		
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		40	3	
So. Carolina	Fuel		32		
So. Carolina	PSC		8	3	
Tennessee	Fuel		N/C		20
Tennessee	PSC		40		
Texas	Fuel		N/C		20
Texas	RRC		88	3	
Utah	PSC		N/C	3	

TABLE H-VIIa (Concluded)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 8)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Virginia	Fuel/SCC		24		
West Virginia	Fuel		8		
West Virginia	PSC		24	3	
Wisconsin	PSC		160		
Wisconsin	Recipro.		N/C		
Wyoming	Mileage		N/C		40
Wyoming	PSC		80	3	
Subtotal		57	1,354.67	51	664

2,126.67

Trip permits 50 at $5.00 250.00

Total $2,376.67

COST PER VEHICLE PER STATE = $6.19

TABLE H-VIIb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 7

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix							
Application	Office	53 permits	30 min each	3 3/10 days	25/day	82.50	10.31
Affix permits	Office	8 trucks	10 hr/truck	10 days	25/day	200	25
Record keeping							
Trip records	Driver	320 trips/yr	30 min/trip	160 hr	10/hr	1,600	200
Tabulation[a/]	Office	320 trips/yr	1 hr/trip	40 days	25/day	1,000	125
Report filing							
Miles (proration)	Office	2 reports	1/2 hr each	1/8 day	25/day	3.13	0.39
Fuel	Office	296 reports	1/2 hr each	18 1/2 days	25/day	462.50	57.81
Third structure	Office	12 reports	2/3 hr each	1 day	25/day	25	3.13
Enforcement							
Road inspections	Driver	2560	10 min each	427 hr	10/hr	4,270	533.75
Audits	N/A	None to date	N/A	N/A	N/A	N/A	N/A
Subtotal						7,643.13	955.39
Item (prorated)						Annual Amount	
Office space and storage						150	18.75
Equipment						50	6.25
Postage						40	5
Check writing charges						30	3.75
Subtotal						270.00	33.75
Trip permits	Combination	50 yr	N/A	N/A	25 at 2.50ea 25 at 15.00ea	437.50	54.69
Total						8,350.63	1,043.83

COST PER VEHICLE PER STATE = $21.75

a/ Office calculates miles by state for each trip using a mileage guide.

TABLE H-VIIIa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 8

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 9)	Resident Agent Expense	Bond Expense
Alabama	Fuel		108		40
Arkansas	Fuel		9		20
California	Fuel		N/C		
Colorado	Fuel		9		36
Colorado	GTM		N/C		20
Colorado	PUC	10	N/C	5	
Connecticut	Fuel		27		40
Georgia	Fuel		9		
Indiana	Fuel	5	N/C		40
Iowa	Fuel	1	N/C		20
Kansas	Fuel		N/C		40
Kansas	KCC	10	90	5	
Kentucky	Fuel		18		40
Louisiana	Fuel	N/A	N/A		20
Maryland	Fuel	5	9		
Massachusetts	Fuel		9		
Minnesota	Fuel	10	N/C		120
Mississippi	Fuel		108		40
Missouri	Fuel	N/A	N/A		20
Nebraska	Fuel	N/A	N/A		40
Nebraska	RRC		N/C	5	
New Jersey	Fuel		45		

TABLE H-VIIIa (Concluded)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 9)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
New York	TMT		30		
No. Carolina	Fuel		9		8
Ohio	HUT		18		
Oklahoma	Fuel		N/C		20
Oregon	PUC		22.50		
So. Carolina	Fuel		36		
So. Dakota	Fuel	1	N/C		
Tennessee	Fuel		N/C		20
Texas	Fuel		N/C		20
Virginia	Fuel		18		
West Virginia	Fuel	—	9	—	—
Subtotal		42	583.50	15	604
Total			$1,244.50		

COST PER VEHICLE PER STATE = $3.46

TABLE H-VIIIb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 8

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Extention (dollars)	Computer Expense (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix									
Application	Office	30 Applications	16 min each	1 day	25/day	25		25	2.78
Affix permits	Driver	9 trucks	1 hr unit	9 hr	10/hr	90		90	10
Record keeping									
Trip records	Driver	9 drivers	2/3 hr/wk	312 hr	10/hr	3,120		3,120	346.67
Tabulation	Office	N/A	1-1/2 day/mo	18 days	25/day	450		450	50
Report filing									
Miles (proration)	Office	30 reports	1 hr each	3-4/5 days	25/day	95	450[a/]	545	60.56
Fuel	Office	188 reports	1/2 hr each	11-4/5 days	25/day	295		295	32.78
Third structure	Office	20 reports	2/3 hr each	1-7/10 days	25/day	42.50		42.50	4.72
Enforcement									
Road inspections	Driver	1800/yr	15 min each	450/hr	10/hr	4,500		4,500	500
Audits	Office	1/yr	1 day	1 day	25/day	25		25	2.78
Subtotal								9,092.50	1,010.29
Item (prorated)									
Office space and storage								180	20
Equipment								100	11.11
Postage								48	5.33
Check writing charges								30	3.33
Subtotal								358	39.77
Total								9,450.50	1,050.06

COST PER VEHICLE PER STATE = $26.25

a/ Computerized monthly mileage report also serves to derive fuel tax liability and third structure liability.

TABLE H-IXa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 9

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 12)	Resident Agent Expense	Bond Expense
Alabama	Fuel		144		40
Arizona	Fuel	N/A	N/A		20
Arizona	ACC		60	3	
Arkansas	Fuel		12		20
Arkansas	ATC		60	3	
California	BE		N/C		
California	PUC		24	3	
Colorado	Fuel		12		48
Colorado	PUC		N/C	3	
Colorado	GTM		N/C		20 est.
Delaware	Fuel		12		40
Florida	PUC		60		
Idaho	Fuel		N/C		20
Idaho	Mileage	N/A	N/A		20
Illinois	ICC	10	N/C	3	
Indiana	Fuel	5	N/C		40
Iowa	Fuel	1	N/C		20
Iowa	ICC		12	3	
Kansas	Fuel		N/C		
Kansas	KCC		120	3	
Kentucky	Fuel		24		40
Kentucky	DMT		24		
Louisiana	Fuel	N/A	N/A		20
Louisiana	PSC	10	120	3	
Maryland	Fuel	5	12		

TABLE H-IXa (Continued)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 12)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Massachusetts	Fuel		12		
Massachusetts	DPU		60		
Michigan	Fuel	1	N/C		
Minnesota	Fuel	10	N/C		120
Minnesota	DPS		60	3	
Mississippi	Fuel		144		40
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
Nebraska	Fuel	N/A	N/A		40
Nebraska	RRC		120	3	
Nevada	Fuel		N/C		20
New Jersey	Fuel		60		
New Mexico	Fuel		24		40
New Mexico	MTD		N/C	3	
New York	TMT		40		
No. Carolina	Fuel		12		8
No. Carolina	NCU		12		
No. Dakota	Fuel	1	N/C		40 est.
Ohio	HUT		24		
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		60	3	
Oregon	PUC		6		
Pennsylvania	Fuel		24		
So. Carolina	Fuel		48		
So. Carolina	PSC		12	3	

TABLE H-IXa (Concluded)

State	Permit	Annual Permit Fees		Miscellaneous Costs	
		Fleet	Unit (x 12)	Resident Agent Expense	Bond Expense
So. Dakota	Fuel	1	N/C		
So. Dakota	PUC		12	3	
Tennessee	Fuel		N/C		20
Tennessee	PSC		60		
Texas	Fuel		N/C		20
Texas	RRC		132	3	
Utah	Fuel		N/C		4
Utah	PSC		N/C	3	
Virginia	Fuel		24		
Washington	Fuel		N/C		20
Washington	UTC		612		
West Virginia	Fuel		12		
West Virginia	PSC		N/C	3	
Wisconsin	PSC		240		
Wyoming	Mileage	N/A	N/A		40
Wyoming	PSC		120	3	
Subtotal		44	2,626	57	800
Total				$3,527	

COST PER VEHICLE PER STATE = $7.00

TABLE H-IXb

ANNUAL INDIRECT FLEET PERMIT, LICENSE AND TAX COSTS--CASE 9

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars
Obtain permits and affix							
Application	Office	59 permits	1-3/10 hr each	9 3/5 days	25/day	240	20
Affix permits	Driver	All permits	7-8 min each	91 hr	10/day	910	75.83
Record keeping							
Trip records	Driver	600 trips	1/2 hr each	300 hr	10/hr	3,000	250
Tabulation	Office	N/A	9 days/mo	108 days	25/day	2,700	225
Report filing							
Miles (proration)	Office	28 reports	1 hr each	3 1/2 days	25/day	87.50	7.29
Fuel	Office	224 reports	1/2 hr each	14 days	25/day	350	29.17
Third structure	Office	32 reports	1 hr each	4 days	25/day	100	8.33
Enforcement							
Road inspections	Driver	5760 stops	10 min each	960 hr	10/hr	9,600	800
Audits	Office	1 ea 2 yr	2 days	1 day	25/day	25	2.08
Subtotal						17,012.50	1,417.70
Item (prorated)						Annual Amount	
Office space storage						200	16.67
Equipment						120	10
Postage						35	2.92
Check writing charges						30	2.50
Subtotal						385	32.09
Total						17,397.50	1,449.79

COST PER VEHICLE PER STATE = $34.52

TABLE H-Xa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 10

State	Permit	No. of Units	Annual Permit Fees Fleet	Annual Permit Fees Unit Total	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Arizona	Fuel	235	N/A	N/A		20
Arizona	ACC	235		1,175	5	
California	Fuél	235		N/C		40 est.
California	PUC	235		470	5	
Colorado	Fuel	365		365		200 est.
Colorado	PUC	365		N/C	5	
Colorado	GTM	365		N/C		20 est.
Connecticut	Fuel	130		390		40
Connecticut	PUC	130	10	1,300	5	
Delaware	Fuel	130		130		40
Illinois	ICC	365		1,300	5	
Indiana	Fuel	365	5	N/C		40
Iowa	Fuel	365	1	N/C		20
Iowa	ICC	365		365	5	
Kansas	Fuel	365		N/C		40
Kansas	KCC	365		3,650	5	
Maine	Fuel	130	1	N/C		
Maine	PUC	130	25	1,300	5	
Maryland	Fuel	365	5	365		
Massachusetts	Fuel	130		130		
Massachusetts	DPU	365		182.50	5	
Minnesota	Fuel	365	10	N/C		120
Minnesota	DPS	365		164.25	5	
Missouri	Fuel	365	N/A	N/A		20
Missouri	PSC	365		N/C		

TABLE H-Xa (Continued)

State	Permit	No. of Units	Annual Permit Fees		Miscellaneous Costs	
			Fleet	Unit Total	Resident Agent Expense	Bond Expense
Montana	Fuel	235	N/A	N/A		20
Montana	BRRC	235		1,645		
Nebraska	Fuel	365	N/A	N/A		40
Nebraska	RRC	365		91.25	5	
New Hampshire	Fuel	130		130		
New Hampshire	PSC	130		650		
New Jersey	Fuel	365		1,825		
New York	TMT	365		1,216.66		
No. Dakota	Fuel	365	1	N/C		40 est.
No. Dakota	PSC	365		912.50	5	
Ohio	HUT	365		730		
Ohio	PUC	365		N/C		
Oklahoma	Fuel	235	N/A	N/A		20
Oklahoma	OCC	235		1,175	5	
Oregon	PUC	235		587.50		
Pennsylvania	Fuel	365		730		
Rhode Island	PUC	130		910		
So. Dakota	Fuel	365	1	N/C		
So. Dakota	PUC	365		730	5	
Tennessee	Fuel	130		N/C		20
Tennessee	PSC	130		650		
Texas	Fuel	235		N/C		20
Texas	RRC	235		2,585	5	
Utah	Fuel	365		N/C		4
Utah	PSC	365		N/C	5	

TABLE H-Xa (Concluded)

State	Permit	No. of Units	Annual Permit Fees		Miscellaneous Costs	
			Fleet	Unit Total	Resident Agent Expense	Bond Expense
Virginia	Fuel	130		390		
Washington	Fuel	235		N/C		20
West Virginia	Fuel	130		130		
West Virginia	PSC	130		390	5	
Wisconsin	Recipro.	365		N/C		
Wyoming	PSC	365	—	3,650	5	—
Subtotal			59	30,414.66	90	784
				31,347.66		
Trip permits 360 at $5.00 =				1,800.00		
Total				$33,147.66		

COST PER VEHICLE PER STATE[a] = $3.53

[a] The division for this computation was established on the basis of 235 units cleared to operate in 25 states and 130 units cleared to operate in 27 states.

TABLE H-Xb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 10

Function or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Extention (dollars)	Computer Expense (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix									
Annual applications	Office	52 permits	4 hr each	26 days	25/day	650	a/	650	1.78
Supplemental applications	Office	50 weeks	2-1/2 days each	125 days	25/day	3,125	a/	3,125	8.56
Temporary applications	Office	100 trucks	2 hr each	25 days	25/day	625		625	1.71
Affix permits	Driver	465 trucks	5 hr each	2325 hr	10/hr	23,250		23,250	63.70
Record keeping									
Trip records	Driver	1,000 trips/mo	1 hr each	12,000 hr	10/hr	120,000		120,000	328.77
Tabulation	Office	15,000 trip rec/mo	N/A	3 persons	6,600/yr	19,800	4050	23,850	65.34
Equipment list (monthly)	Office	1 report/mo	1/2 hr each	6 hrs	25/day	150	50	200	0.55
Report filing									
Miles (proration)	Office	18 reports	2 days each	36 days	25/day	900	b/	900	2.47
Fuel	Office	all reports	11 day/qtr	44 days	25/day	1,100	b/	1,100	3.01
Third structure	Office	all reports	4.5 day/qtr c/	18 days	25/day	450	b/	450	1.23
Enforcement									
Road inspections	Driver	1,560 stops/mo	10 min each	3120 hrs	10/hr	31,200		31,200	85.48
Audits	Office	3.5 per year	16 days all	16 day	25/day	400		400	1.10
Subtotal						201,650		205,750	563.70
Item (prorated)									
Office space and storage								1,000	2.74
Equipment								1,000	2.74
Postage								200	0.55
Check writing charges								175	0.48
Subtotal								2,375	6.51
Trip Permits	Combination	360/yr	N/A	N/A	9.50 each	3,420		3,420	9.37
Total								211,545	579.58

COST PER VEHICLE PER STATE = $14.86

a/ See Equipment list under Record Keeping for related computer expense.
b/ See Tabulations under Record Keeping for related computer expense.
c/ Include hand tabulation for Colorado TMT report.

TABLE H-XIa

ANNUAL OUT-OF-POCKET FLEET PERMIT COSTS--CASE 11

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 475)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Alabama	Fuel		5,700		40
Alabama	PSC		475	5	
Arizona	Fuel	N/A	N/A		20
Arizona	ACC		2,375	5	4
Arkansas	Fuel		475		20
Arkansas	ATC		2,375	5	
California	Fuel		N/C		40 est.
California	PUC		950	5	
Colorado	Fuel		475		200 est.
Colorado	PSC		N/C	5	
Colorado	GTM		N/C		20 est.
Connecticut	Fuel		1,425		40
Delaware	Fuel		475		40
Florida	PSC		2,375		
Georgia	Fuel		475		
Georgia	PSC		2,375	5	
Illinois	ICC	10	N/C	5	
Illinois	Recipro.		1,425		
Iowa	Fuel	1	N/C		20
Iowa	ICC		475	5	
Iowa	Recipro.		950		
Kansas	Fuel		N/C		40
Kansas	KCC		4,750	5	
Kentucky	Recipro.		950		
Louisiana	Fuel	N/A	N/A		20
Louisiana	PSC	10	2,375	5	

TABLE H-XIa (Continued)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 475)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Maine	Fuel	1	N/C		
Maine	PUC	25	4,750	5	
Maryland	Fuel	5	475		
Minnesota	Fuel	10	N/C	5	120
Minnesota	PSC		2,375		
Mississippi	Fuel		5,700		40
Mississippi	PSC		6,175		
Missouri	Fuel	N/A	N/A		20
Missouri	PSC		N/C		
Montana	Fuel	N/A	N/A		20
Montana	PSC		3,225		
Nebraska	Fuel	N/A	N/A		40
Nebraska	RRC		237.50	5	
New Hampshire	PSC		2,375		
New Jersey	Fuel		2,375		
New Mexico	Fuel		950		40
New Mexico	SCC		N/C	5	
New York	TMT		4,750		
New York	PSC	N/A	N/A		
No. Carolina	Fuel		475		8
No. Carolina	PSC		475		
No. Dakota	Fuel	1	N/C		40 est.
No. Dakota	PSC		1,187.50	5	
Ohio	HUT		950		
Ohio	PSC		N/C		
Oklahoma	Fuel	N/A	N/A		20
Oklahoma	OCC		2,375	5	

TABLE H-XIa (Concluded)

State	Permit	Annual Permit Fees Fleet	Annual Permit Fees Unit (x 475)	Miscellaneous Costs Resident Agent Expense	Miscellaneous Costs Bond Expense
Pennsylvania	Fuel		950		
So. Carolina	Fuel		1,900		
So. Carolina	PSC		475	5	
So. Dakota	Fuel	1	N/C		
So. Dakota	PSC		950	5	
Tennessee	Fuel		N/C		20
Tennessee	PSC		2,375		
Texas	Fuel		N/C		20
Texas	RRC		5,225	5	
Utah	Fuel		N/C		4
Utah	PSC		N/C	5	
Virginia	SCC		1,425		
Washington	Fuel		N/C		20
Washington	PSC		24,225		
West Virginia	Fuel		475		
West Virginia	PSC		1,425	5	
Wyoming	Mileage	N/A	N/A		
Wyoming	PSC		4,750	5	
Subtotal		64	113,900	110	916

114,990

Trip permits 480 at $5.00 = 2,400

Total $117,390

COST PER VEHICLE PER STATE = $6.18

TABLE H-XIb

ANNUAL INDIRECT FLEET PERMIT, LICENSE, AND TAX COSTS--CASE 11

Funciton or Item	Performed by	Number	Time Required	Annual Time	Rate (dollars)	Extention (dollars)	Computer Expense (dollars)	Fleet Cost (dollars)	Cost per Vehicle (dollars)
Obtain permits and affix									
Application	Office	63 permits	N/A	1 person	6,600/yr	6,600	a/	6,600	13.89
Affix permits	Driver	63 permits	32 hr each	2016 hr	10/hr	2,016		20,160	42.44
Record keeping									
Trip records (5000 trips/mo)	Driver	5,000/mo	15 min/trip	15,000 hr	10/hr	150,000		150,000	315.79
Tabulation (15,000 records/mo)	Office	15,000/mo	N/A	2-1/4 persons	6600/yr	14,850	16,800	31,650	66.63
Equipment list (weekly)	Office	1 report/wk	40 min each	4-3/10 days	25/day	108	1,300	1,408	2.96
Report filing									
Miles (proration)	Office	20 reports/yr	N/A	7-1/5 day	25/day	108	b/	180	0.38
Fuel	Office	280 reports/yr	12/day/qtr (all)	48 days	25/day	1,200	b/	1,200	2.53
Third structure	Office	48 reports/yr	4/day/mo (all)c/	48 days	25/day	1,200	b/	1,200	2.53
Enforcement									
Road inspections	Driver	15,000 stops	7 min/stop	1,750	10/hr	17,500		17,500	36.84
Audits	Office	3/yr	2 man day each	6 days	25/day	300		300	0.63
Subtotal								230,198	484.62
Item (prorated)									
Office space and storage								1,700	3.58
Equipment								1,200	2.53
Postage								250	0.53
Check writing charges								225	0.47
Subtotal								3,375	7.11
Trip Permits	Combination	480 yr	N/A	N/A	16.82	8,073.60		8,073.60	17.00
Total								241,646.60	508.73

COST PER VEHICLE PER STATE = $12.72

a/ See Equipment list under Record Keeping for related computer expense.
b/ See Tabulation under Record Keeping for related computer expense.
c/ Tabulation of Arizona revenue, Arizona empty and loaded miles, and Arizona, New York, and Ohio points of entry and exit included.

APPENDIX I

GLOSSARY

GLOSSARY*

Allocation	-- Generic term for payment of taxes to states based on highway use in each state.
Apportionment	-- Allocation under the International Registration Plan (IRP) or a system based on the IRP.
Axle-mile tax	-- Third structure tax assessed on the basis of the number of axles and distance traveled.
Base state	-- State from or in which a vehicle is most frequently dispatched, garaged, serviced, maintained, operated or otherwise controlled.
Base plate	-- License plate issued by the base state.
Basing point theory	-- The principle that a vehicle should be registered in the state in which it is based.
Bond	-- Cash or surety required by state tax agencies of truckers to ensure payment of taxes to those agencies.
Call card	-- Cards which identify a vehicle usually for fuel tax agencies and utilities commissions.
Carrier	-- Entity which transports goods either on a private or for-hire basis.
Combination	-- A vehicle consisting of a power unit in association with a trailer or semitrailer.
Commercial vehicle	-- A vehicle operated for the transportation of goods in furtherance of any commercial or industrial enterprise.
Commodity	-- Any article of commerce.

* Some of the terms included in the glossary do not have standard definitions throughout the trucking industry; thus, the definitions presented indicate the meaning of terms as used in this report.

Common carrier -- A transportation entity which holds itself open to serve the general public. Interstate common carriers must hold authority issued by the I.C.C.

Company driver -- A driver who is an employee entitled to employee benefits of a transportation, commercial, or industrial business.

Contract carrier -- A for-hire motor carrier under contract to a particular person or business.

Deadhead -- To operate a commercial vehicle between points without a cargo.

Exempt commodity -- Goods that may be transported in interstate commerce without operating authority or published rates.

First structure tax -- Registration tax.

Fleet -- Commercial vehicles utilized by an owner or operator to conduct his operations.

Fleet miles -- The number of miles operated by vehicles of a single fleet.

For-hire carrier -- A carrier which transports goods for compensation.

Fuel surtax -- A third structure tax on fuel in addition to normal fuel tax.

Fuel tax -- Second structure tax, the basis of which is gallons of fuel consumed in highway operations.

Gross receipts tax -- A third structure tax based on compensation for transportation services.

Gross vehicle weight -- The weight of a truck together with its contents.

I.C.C. -- Abbreviation for the Interstate Commerce Commission.

Independent driver -- A for-hire driver whose compensation is on a per-trip basis and who usually pays his own expenses.

Interstate operations -- Vehicle movement between or through two or more states.

Intrastate operations -- Vehicle movement between two points within the same state.

IRP -- Abbreviation for International Registration Plan.

Legalize -- The activities and processes involved in obtaining required truck registrations and clearances.

Mileage tax -- A third structure tax based on a weight-distance or axle-distance formula.

Owner-operator -- An independent driver who both owns and drives his own vehicle.

Operating authority -- Franchise granted by the I.C.C. to carriers to operate for hire in interstate commerce. (Also granted by individual states' regulatory commissions for intrastate commerce.)

Permit -- Identification (and/or receipt for fees paid) usually issued by fuel tax agencies, utilities commissions, and vehicle registration departments in reciprocity states.

Private carrier -- A company which maintains its own trucks to transport its own freight.

Prorate -- To pay registration fees to two or more states based on the percentage of miles operated in each.

Reciprocity -- The granting of privileges or exemptions by one state to vehicles properly registered in another state granting similar privileges or exemptions.

Regulated carrier -- A carrier subject to I.C.C. regulation.

Regulatory agency -- A state agency (usually a utilities or service commission) which controls motor carrier operations.

Second structure tax -- Fuel tax.

Special fuel -- Fuel, other than gasoline, used for propulsion of vehicles on highways.

Third structure tax -- Highway-user tax other than first or second structure taxes.

Ton-mile tax -- Third structure tax based on a weight-distance formula.

Trip permit -- Temporary or emergency clearance for vehicle to operate into or through a state.


FHWA
R&D