

**Presentation**

**to the**

**National Transportation Committee**

**Hon. Calvin Coolidge, Chairman**

**on behalf of the**

**National Automobile Chamber of Commerce**

A discussion of the services provided by highway transport, the revenue it produces through taxation, the effect of highway transport on rail revenues and how the two facilities can best be coordinated.

**New York, December 7, 1932**

## Foreword

The National Transportation Committee, of which The Honorable Calvin Coolidge is Chairman, was organized at the instance of insurance companies and savings banks to study railroad conditions and report to the sponsors of the committee its findings and recommendations.

The other members of the committee are Bernard M. Baruch, banker and formerly chairman, War Industries Board; Clark Howell, publisher of the Atlanta Constitution and a director of The Associated Press; Alexander Legge, president of the International Harvester Company; Alfred E. Smith, former Governor of New York.

Responding to an invitation of the committee, the National Automobile Chamber of Commerce submitted a memorandum of facts and appeared to discuss with the committee the services provided by highway transport, the revenue it produces through taxation, the effect of highway transport on rail revenues and how the two facilities can best be coordinated.

NATIONAL AUTOMOBILE CHAMBER OF COMMERCE

366 Madison Avenue  
New York, N. Y.

## Fundamentals

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### Effect of Highway Transport on Rail Freight

1. Sub-normal shipping by industry, mining and agriculture is the principal cause of low freight revenues of railroads.
2. The most stringent restrictions likely to be suggested for motor services whose business and rates might be adjudged subject to public regulation would bring no marked increase in rail net freight revenues.
3. It will require a study of net railroad earnings, rather than tonnage, and at a time when agriculture, mines and industry are producing in normal volume, to get a true picture of railroad conditions as affected by the so-called motor competition.
4. No material approach to the real difficulties of the railroad industry can be found in "losses" to motor services since the major part of those services is for short distances that would produce small line haul earnings and disproportionate terminal expenses.

### Should Motor Vehicles be "Regulated"

5. No increase in public expenditures for regulatory bureaus should be considered unless supported by the most urgent public necessity and convincing evidence of tangible result.
6. The motor vehicle is a major and necessary addition to the transportation service of the United States. It is not a competitor of the railroads in the sense of furnishing identical services.
7. Generally its field of service is distinct from the rail-head to rail-head service of the railroads; it is individual and flexible in character, operating at any time from door to door.
8. The public is primarily interested in police regulation of motor vehicles such as registration, sizes, weights, speeds and conditions of operation; these features are within the control of each state, are being cared for according to local conditions and are being constantly perfected.

9. The uniform standards for dimensional control of motor vehicle operation set forth by the United States Bureau of Public Roads and the American Association of State Highway Officials should be approved by all state Legislatures in the interest of efficient transportation.
10. Any undue restrictions on contract or common carrier trucks would create an advantage to competing business served by its own trucks.
11. Regulation of railroads was founded on monopoly and was not at once adopted in its present form; any regulatory suggestion for motor transport should be approached slowly and carefully lest public interest suffer.
12. Any restrictions on motor transport founded only on an attempt to make motor services equal in cost the dissimilar rail-head to rail-head services would be unsound and ultimately futile; it would repress full development of motor transportation and only operate to the eventual disadvantage of the shipping public, the consumers, and the railroads as well.
13. Motor vehicle owners today are paying their fair share of road costs through special taxes volunteered for highway building. In many cases such taxes have been raised to excessive amounts. These taxes generally are fairly divided as between different types of vehicles.
14. The public is entitled to, and will insist on, the fullest possible use of its highways, having met the requirements of fair taxation and reasonable operation.

#### **Coordination**

15. Coordination of rail and motor services can make sound progress only on an economic basis.
16. The use of rails has been retired permanently from certain short-haul services heretofore termed unremunerative by railroad authorities; and therefore to the net ultimate advantage of railroads.
17. If motor trucks have ventured into services of seemingly too long distance, the practice cannot continue if economically unsound and subject to highway costs equal to other highway users and providing also that railway management is fully alert and not unduly restricted.

18. Time and experience only will determine the extent to which some of these longer services may be re-directed to railroads. In fact, the tonnage which the motor vehicle has produced, and the field it covers, indicate the possibility of large compensations for the older carriers both in revenue and out-of-pocket loss from unprofitable operations.
19. Transportation policies of the future will require a recognition by the railroads and the public that motor vehicles should be used in many places and in many operations in place of existing railroad services.

### **Railway Regulation**

20. It is probable that railroad regulatory laws, founded on monopoly, should now be reviewed in the light of current conditions to determine the possibility of lessening their requirements and the costs to the public and the railroads of their administration.
21. Such a study of railroad regulation is a prerequisite of any consideration towards applying the present laws to new and non-monopolistic services on the public highways.
22. The public is interested in the most efficient transportation of all kinds. It will be better maintained by removal of unsound railroad regulation than by the addition of burdens upon motor transportation.

(NOTE: Related fundamentals also will be found in the sections devoted to Taxation and Physical and Business Regulations.)

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**Mr. A. J. Brosseau, Vice President of the National Automobile Chamber of Commerce and Chairman of its Motor Truck Committee, acting as spokesman for the Chamber, made the following opening statement when presenting this accompanying data:**

**MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:**

I appear as the representative of the National Automobile Chamber of Commerce in response to your invitation of November 10th.

We have at your request filed a Brief which outlines the policy of our industry.

We believe many factors contribute to the so-called "plight of the railroads."

During the last five years there has been a great amount of controversy about the motor vehicle and its place in the transportation field. This controversy cannot be productive of good results unless and until the problem is reduced to its fundamentals.

In the old days persons and merchandise moved by horse and wagon and dirt roads, or by rail. Today they move by motor vehicle and improved roads, or by rail.

In the old days highway transport was confined to very short distances—say ten or fifteen miles. Today the motor vehicle travelling over improved highways has extended the highway transport area.

As the highway area is enlarged, the rail monopoly shrinks, and it follows that—

*Within the highway area (100 miles or more) the individual can secure transportation for a large part if not all his needs, without using the rails.*

### **Shippers Can Adjust Truck to Needs**

This highway service is available in a variety of forms.

The shipper may operate his own truck.

He may employ a contract or "for hire" operator.

He may do business with the so-called common carrier.



Truck service, in each instance, is adjusted to his requirements—whether any-time any-where movement, pick-up and delivery, elimination of boxing and crating, etc.

And if the shipper employs a “for hire” operator, he deals directly with the owner of a single vehicle, or the manager of a small fleet, rather than with an impersonal, inflexible, rule-ridden organization.

Economists, with whom I have discussed this matter, agree with me that before classifying highway transport (particularly the truck) as a competitor of the railroad, we must recognize the fact that the railroad monopoly of land transportation no longer exists.

I believe that to the extent the individual can *serve himself*, by transporting his person or his goods in his own vehicle over the public highway, he is not necessarily the customer of the railways.

And I believe that no law, which does not disregard the public interest, can compel him to abandon the use of the public right of way in order to promote the interest of the privately owned railway.

### **Bus Has Advantages Over Railroads**

It is now in order to ascertain the extent to which highway transport has depleted railroad income.

I will consider first the 22 million privately owned passenger cars, which everybody (including railroad officials) admits are responsible for a substantial part of the reduction in passenger revenue.

I believe that this revenue cannot be legislated back to the railroads, and therefore, it is permanently lost.

Such information as I have been able to secure indicates that the passenger traffic of the railroads was not very profitable before the automobile era.

I am confident that large savings would accrue to the railroads, if proper and necessary charges and readjustments were made in the passenger department.

I will next consider the bus which has been called the poor man’s automobile.

The bus, because of its relatively small size and low unit cost, and because it is not tied to a fixed track, possesses many advantages over the railroad.

Because of its size and low operating costs it can operate profitably in thin traffic territory.

And because of its flexibility, it can handle dense traffic by more frequent movements without increasing unit costs per mile or per passenger.

As a matter of fact, the more frequent the operation (justified by traffic) the lower the cost.

Furthermore, the bus is not burdened with high capital charges for terminal facilities, not now (if ever) needed, and is free of the limitations and regulations which contribute to high labor and other elements of the cost of railroad operation.

The bus is furnishing safe and satisfactory transportation to a large number of our people at a cost substantially below present standard railroad rates.

And, at rates fairly comparable to the rail rates charged fifteen or twenty years ago.

The bus has been adopted by the railroads to some extent but more extensive use is justified.

#### **Motor Truck Not Comparable to Rail**

As stated in our Brief the motor truck is not comparable to the rail.

It possesses two distinct, dissimilar characteristics—

- (a) *Small, low cost units make possible individual transportation service; whereas, the railroad functions as a transportation system.*
- (b) Truck service is flexible, any-time, any-where.

Legally, motor truck operations can be classified into three main divisions: the common carrier, the contract carrier, and the private carrier.

The privately owned vehicle, not operated for hire, is not clothed with public interest and cannot therefore be subject to business regulation.

As to the common and/or contract carrier—

Whatever regulation is imposed should, in the public interest, promote the sound development of highway transport and not repress or strangulate it.

Nearly all states have attempted to regulate the common and contract carriers, but the laws have been difficult, if not impos-

sible, to administer and the results have been far from satisfactory.

### **Cites Large Public Expenditures Involved**

Another reason for making haste slowly is that no increase in public expenditures for regulatory bureaus should be considered at this time, unless justified by the most urgent needs. And then only after convincing evidence demonstrates the regulation will be effective and in the public interest.

As to dimensions, weight and speed control, we stand squarely on the recommendations of the American Association of State Highway Officials. I ask your careful consideration of the opening statement of its report, dated November 17th, 1932; and particularly to item "B"—"to promote efficiency in the interstate operation of the motor vehicle"—which, if adopted, will promote complete freedom of movement for all motor vehicles between the several states.

I will close with the question—would the railroads, if overnight they were given all the freight carried by trucks, be prosperous?

The volume of truck traffic is not definitely known, but estimates made by those best qualified to do so, do not vary much and a fair average is six per cent of all traffic—generally less.

The traffic carried by the privately owned truck—85 per cent of all trucks—cannot be legislated back to the railroads. We have left the common and contract carrier—15 per cent of all trucks. Fifteen per cent of 6 per cent is less than 1 per cent.

I agree with Mr. Loree, who said in an address at Bluff Point, New York, September 6th, 7th and 8th, 1932, at the Annual Meeting of the Ticket Agents' Association—

"Somewhat less than 6 per cent are common carriers and this number is so insignificant as to make any effort toward their control by rate legislation scarcely worthwhile".

I have the highest respect for Mr. Loree's understanding of the transportation problem. He is not in accord with all other railroad officials, but I believe that his ideas, as outlined in the address from which I have quoted, if carried out, would result in clarifying the transportation problem, and improve the financial condition of the railroads.

Answering the question of Governor Alfred E. Smith with respect to the bills introduced in the last New York Legislature that would practically prohibit the use of trucks, it is worth noting

that interpretation of some of those bills would call for as much as \$12,000 per year fees on some motor trucks.

There is some comment about the reason for so many Bills in State Legislatures.

### **Public Has Not Demanded Truck Regulation**

We hear no great cry for such legislation by shippers or the general public.

I call your attention to the fact that many of the state laws, recently passed, regulating motor vehicles were sponsored by those who would hamper, restrict and in some cases eliminate bus and truck operation.

In addition to the laws that were passed many were introduced, but not passed, but from responsible sources comes the information that they will be re-introduced and efforts will be redoubled to pass them at the sessions of the forty-four State Legislatures that will meet this winter.

It is no secret that much of the support of plans to increase highway traffic costs comes from railroad sources. It must be costly. The funds for it must come from somewhere. I cannot but wonder from where.

More and more railroad employees are apparently devoting their time to this drive instead of running trains.

Unfortunately, truck operators have neither the facilities nor the funds to check this drive, which I believe will fail of real support because it is not in the public interest.

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*(Mr. Coolidge handed to Mr. Brosseau the following written questions.)*

**Question No. 1:** Would you favor the establishment of transportation systems under which a few important companies would control not only the railroads but the common carrier truck business?

**MR. BROSSÉAU:** That is rather a hazy question and goes far afield.

**MR. SMITH:** One word left out—it should read “in which a few important *Railroad* companies would——” We are interested in whether you approve of compulsory consolidation of the highways, waterways and air?

**MR. BROSSEAU:** I do not think it would suit your purpose if I answered "Yes" or "No", but we do not favor transportation systems where railroad companies would have a monopoly of the highways for common carrier services.

In order to answer the question properly it would be necessary to repeat much of the argument included in the Brief we have filed. I wonder if your procedure permits of extending our remarks for the record as is done in Congress.

**MR. COOLIDGE:** We will be glad to receive anything you may want to submit. We did not know but what you had thought the thing over and could give us off-hand some suggestions.

**MR. BROSSEAU:** As I understand your question it is limited to common carrier trucks, which do not exceed 6% (some estimate it to be not more than 4%) of all trucks. If your question considers only the trucks engaged in inter-state common carrier operations the number is reduced to 1½% of all the trucks.

Several states have made an effort to regulate common carrier trucks in intra-state operations, but such efforts have invariably been unsatisfactory. The greatest difficulty is that it has been impossible for the common carrier to compete with the contract carrier unless both are regulated alike.

**MR. SMITH:** Would you approve of compulsory consolidation of all forms of transport into what is referred to as a transportation system? Would your Chamber of Commerce have any objection to that if it could be brought about?

**MR. BROSSEAU:** We do not approve of compulsory consolidation, because we believe it would be difficult, if not impossible, to enforce—as difficult as the 18th Amendment.

**MR. SMITH:** Would you object to it?

**MR. BROSSEAU:** Yes, we would object, because of the resulting disturbance, and because it would benefit no one. Discussion in Congress has made it very plain that Congress will not pass a law giving the railroads a monopoly of highway transport. It would not be in the interest of the public to prohibit the free use of the highways. If such a

law were passed, unless very severe control was imposed on contract carriers, it would not benefit the railroads to give them a monopoly as common carriers on the highways. One can never stop the individual from transporting his goods with his own vehicle. The cost of the operation can be increased, but it cannot be prevented. Some say that the individual (not owning a vehicle) who wants to transport his person or his goods over the highways, has a perfect right to hire his neighbor to do it for him. I do not see how the railroads, or the public, can benefit by giving the railroads a monopoly of highway common carrier business.

**MR. SMITH:** No monopoly — only the right to absorb such common carriers as were already using the highways.

**MR. BROSSEAU:** If they did that and the law prohibited the operation of other common carriers, it would amount to a monopoly. That objection was made in the Senate hearings, where several members stated that such a law could not be passed, because it was their duty, in the public interest, to protect the use of the highways and not to turn them over to the railroads.

**Question No. 2:** Have you made any studies which indicate whether or not the trucks contribute, in gasoline and other taxes, to the support of the highways in proportion to the burden which they impose on the highways?

**MR. BROSSEAU:** A very comprehensive study as outlined in our Brief. We believe that the tax assessed against motor vehicles (amounting to more than \$1,000,000,000 a year) more than pays for the use they make of the highways. I am authorized to say for the National Automobile Chamber of Commerce that we believe the cost of highways — of general motor use — should be paid for by the highway users in proportion to the use they make of the highways.

It has been determined by competent authorities that roads that have been built and will be built for automobile traffic will, without difficulty, carry a three ton truck and without any undue strain carry a four ton truck. Beyond that the pavement must be made thicker than is necessary for a passenger automobile. Just how much can be deter-

mined. We think trucks should be regulated as to size and weight to conform to the capacity of the roads. There are fewer big trucks than there are medium-sized trucks, but all trucks—whether one ton, three ton, five ton, or larger—should contribute their fair proportion of the cost of the highway.

A survey made in Pennsylvania indicates that the present taxes imposed on motor vehicles, plus gasoline tax, are almost exactly correct for each class. If the tax is not sufficient, we are perfectly willing to accept a competent engineer's determination of how much more tax we should pay.

**Question No. 3:** Would you be willing to see gasoline and other vehicle taxes high enough to cover not only the cost and maintenance of the highways but also to help support other state services?

MR. BROSSEAU: Yes, we believe that in addition to the *special taxes* for the support of highways of general motor use (none of which should be diverted to other purposes) those who own or operate motor vehicles should make their proportionate contribution to the general cost of the Government. We have given facts and figures in our Brief to support our belief that they are doing this.

**Question No. 4:** Do you think it possible to work out effective coordination between rail and highways for either terminal or line haul traffic? What suggestions would you make for working out coordination between rail and highway traffic?

MR. BROSSEAU: You can lead a horse to water but you cannot make him drink. Such coordination can be brought about when the railroads adopt the policy of *selling transportation*—and not until then. I do not believe so-called coordination of the highways with the railroads can be worked out until the railroads decide to use the highway facilities instead of or in addition to their rail equipment.

Mr. J. F. Deasy, Vice President of the Pennsylvania Railroad, says—"The process of coordination is essentially an economic one and not a regulatory or legislative one". The use of the highways, insofar as I know, is

available to the railroads. There is no need for legislation or compulsion—it is up to the railroads to use the highways if they want to. Perhaps the fraction of the public, that is not now compelled to use the railroads, might be glad to give them part of their traffic, if both highway and rail transport were offered.

**Question No. 5:** Do you think it possible to develop effective regulation of motor vehicles by means of uniform state legislation? Or is Federal regulation a necessity?

MR. BROSSEAU: What do you mean by “regulation”?

DR. MOULTON: Regulation as suggested in your own report.

MR. BROSSEAU: There is nothing that is more needed today than uniform regulation as to size, weight, speed, etc., and I hope you will believe me when I say it. Such uniform regulation is needed, not so much in the interest of the vehicle owner, as that of the public, which is served by the vehicles. I submit a chart showing the different standards in the different states. This chart shows that under the present laws it is often impossible to go from one state to the other. The present laws prevent free movement of vehicles from one state to the other. It is not only the people who operate highway vehicles, but those who are being served by trucks, who will be benefited if uniform regulations as to size, weight and speed are adopted by all the states. It may be necessary to pass a Federal law to compel such regulation. I doubt if the states will do it unless compelled by Federal legislation.

**Question No. 6:** Do you think that truck companies should be required to conform to uniform accounting practices and to make annual reports similar to those made by the railroads?

MR. BROSSEAU: I know something about railroad accounting. I do not think the 2,200,000 individuals, owning a single truck each, are qualified to keep their accounts as the railroads do. If you refer to the larger concerns—contract or common carriers—in a recent survey (made by the Department of Commerce) it was found that only one out of twenty-seven concerns own more than a hundred trucks.



Such accounting is unquestionably, physically impossible. The trouble with this highway transportation problem is that so few people realize that the truck and railroad are dissimilar. The truck is not a transportation system. It is a plant facility used for individual transport, and only a very small fraction of it performs services comparable to the railroads. If that is ever understood, everything will be happier.

You can determine the railroads' cost for operations from station to station. The truck does not transport from station to station. Ninety-nine times out of a hundred the truck goes to a market, a warehouse or a farm, loads up and goes to its destination the shortest way. If delivery is made in New York, it is perhaps to a loft three or four stories high. Such services cannot be paid for by a flat rate. It is difficult—it is impossible to set up a standard rate when you are not dealing with a station-to-station service. And if you confine the truck to station-to-station service, you lose nearly all of the advantage of truck operation. Railroads and trucks may both be common carriers, physically speaking, but their services are entirely different.

**DR. MOULTON:** Suppose a railroad runs "store-to-door" service as part of its regular service. Wouldn't the railroads have to submit an accounting?

**MR. BROSSEAU:** Perfectly all right in that case, but again the yardstick of comparable service comes in. The man who is performing the truck service is not faced with the necessity of picking up at the warehouse and unloading on a railroad platform and then into a freight car, then unloading again on the railroad platform, and loading on a truck to complete the job. If the railroads want to do this, all right, but the service performed by the truck and the railroad is not comparable.

**DR. MOULTON:** It would be very confusing—the cost would have to be used in determining each separate rate.

**MR. BROSSEAU:** Yes. And we all know that the cost of the service does not determine the rail rate. Even the Interstate Commerce Commission admits that.

**MR. HOWELL:** What about the taxation on the railroads? Half the counties in our state support their public school system with the taxes they receive from the railroads. The county and state taxes there are heavy. What about taxation applying to other systems of transportation which are making it impossible for the railroads to meet their tax burdens?

**MR. BROSSEAU:** I have a statement here covering taxes in your own state, Mr. Howell (attached). According to this statement the entire state revenue in Georgia for 1931 was \$31,558,300. Total revenue from motor licenses, gasoline taxes, etc., \$17,592,947. Railroads paid only \$615,413 state taxes.

**MR. HOWELL:** That is true, but of that \$17,592,947 I would say at least three-quarters was paid by the private passenger automobile.

**MR. BROSSEAU:** I am trying to answer your question. Georgia's tin-tag tax and gasoline tax paid by trucks, trailers and tractors in 1931 amounted to \$4,162,000 as compared with total railroad taxation of \$615,000 to the state. Total railroad taxation to state, counties, municipalities and school districts was \$3,874,000. Last year \$2,225,133 was diverted from gasoline tax to the counties for school purposes, and \$2,225,133 for county roads, making a total of \$4,449,384 diverted for local purposes from the gasoline tax. If you consider the income from the trucks alone, the truck pays more than the railroads. I do not think the truck should pay so much, because even in Georgia, the automobile has hurt the railroad much more than the truck has. The President of the Central of Georgia Railroad said so himself.

That answers all of the questions you have given me. Are there any more?

**MR. COOLIDGE:** Do any of the other members of your Committee wish to be heard?

**MR. BROSSEAU:** If you have any more questions, we shall be glad to answer them.

We are very much concerned with the apparent concerted drive being made to harass and embarrass and in-

crease the cost of operating vehicles on the highways. Much of it comes from railroad sources. It must be very costly. I know that many of the railroad employees are devoting their time to this kind of work, instead of running railroad trains. Within the last few months it has been much worse than ever before. How much farther is it going to go—and how soon will it get to the point where it is harmful to the public interest?

**MR. SMITH:** What was the amount of taxation suggested by the Bill introduced last winter at Albany?

**MR. BROSSEAU:** Governor Smith, it ran up as high as \$12,000 a truck. The statement was made when the Bill was introduced that the proposed law was so bad that it would defeat itself and that is exactly what happened to it. The amount of taxation proposed and the arguments used to pass the Bill made it so obvious that the real purpose was to eliminate the truck that public sentiment would not stand for it.

**MR. HOWELL:** The use of trucks has increased greatly in the past five years. We do not deliver anything by train now. By using trucks, we can deliver papers out in the state at the same time they are delivered in Atlanta.

**MR. BROSSEAU:** Why do you use trucks?

**MR. HOWELL:** Because we can start them out at two o'clock in the morning and deliver the papers at the same time they are delivered in Atlanta, and we cannot do this by train.

**MR. BROSSEAU:** And because you can secure service not available by rail. That happens to be the state of mind of many people. I have been unable to find anyone who wants regulation, except a few operators of large fleets. It might be beneficial to them. They would not then have so much competition with "wild cats." In other words, control of rates would be to their advantage. No one else wants truck regulation—except the railroads.

## Social and Economic Phases of Motor Transportation

**“The automobile has been perhaps the greatest single new productive force in the economic and social development of the United States in the past twenty-five years. Practically unknown when the twentieth century began, individual transportation has since added billions of dollars of wealth to the nation’s resources.”<sup>(1)</sup>**

In 1900 there were but eight thousand automobiles in the United States and their use was regarded as a luxury limited to the few.

Today there are approximately 24,000,000<sup>(2)</sup> motor cars, trucks, and buses in the United States, performing an essential transportation function.

They operate over 3,055,000<sup>(2)</sup> miles of highways of which 868,000 are surfaced, 170,000 with high type paving.

Two-thirds of the people who own the passenger vehicles have incomes of \$3,000 or less per year.

The total *special* taxes all motor users pay in addition to general levies, amounted to about one billion dollars in 1931.<sup>(2)</sup>

The whole social and economic structure of this country is dependent upon the availability of highway transportation represented by these roads and motor vehicles.

Any legislation designed to restrict the use of these vehicles or to add unduly to their costs of operation should be carefully evaluated in the light of this public interest.

### Relation to Earning Power

In their production and use more than 4,000,000<sup>(1)</sup> people directly or indirectly obtain their livelihood, or one out of every eleven gainful workers.

The raw materials from which the vehicles are manufactured are drawn from every state in the Union and from most of the countries of the world.<sup>(3)</sup>

The industry is today the largest purchaser of several different types of iron and steel, of plate glass, nickel, lead, mohair,

(1) Highway Transport Committee report, International Chamber of Commerce (1927).

(2) U. S. Bureau of Public Roads.

(3) National Automobile Chamber of Commerce.

and upholstery leather, while 85 per cent of all of the gasoline produced, and 83 per cent of the rubber is consumed in the use of the vehicle.<sup>(1)</sup>

### **Large Users of Railroads**

In 1931 the automotive freight carried by railroads amounted to 3,106,000 carloads, or 12.6 per cent of the total railroad movement.<sup>(1)</sup>

In 1929 the motor vehicle industry ranked first among the manufacturing industries of the country with a production value of \$3,722,000,000, according to the Census of Manufactures. In the same year the payroll of motor vehicle and parts factories amounted to \$870,600,000.

### **Trucks Trebled in Decade**

Eighty-five per cent of all trucks manufactured have been produced since 1921.<sup>(1)</sup>

Trucks in use more than trebled in the same period.<sup>(1)</sup>

Buses in operation increased from 40,000 in 1923 to 99,000 in 1931.<sup>(1)</sup>

During this time Class I rail mileage remained practically static.<sup>(2)</sup>

### **Symbols of New Age**

The Honorable Roy D. Chapin, Secretary of Commerce, said recently in the course of an address:

“The older transport agencies tended to concentrate industry and population. The highway, like electricity and chemistry, is a symbol of a new age which gives the individual greater freedom.

“New standards have been introduced into the home, the school, the church, and in industry and government.

“With highway improvement has come a constant increase in the volume and variety of road use. Mass railroad transportation has found its complement in individual highway movement.

“This development taken in conjunction with the giant strides of science and research in many other fields is forcing readjustments in many directions.

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(1) National Automobile Chamber of Commerce.  
(2) Interstate Commerce Commission.

“There is a marked trend toward decentralization. Once urgent reasons for life in congested areas have lost their force. The man who works in a city can now have the advantages of country life. Milk, fresh fruits, vegetables, come to our homes daily the year round. Farmer and consumer alike benefit.

“Industries are moving their factories closer to the source of raw materials. Retailers are buying on a day-to-day basis.

“All of these changes and many more forecast still further adjustments in our ways of living as time goes by”.

### **Effects Not Quickly Realized**

Supplementing this viewpoint, the Interstate Commerce Commission in 1929 in a report on the trend of traffic on steam railroads said:

“It is not the purpose here to discuss the probable future effect of various forces affecting the volume of railway traffic. It is left to others to speculate on the future effect on railways of motor vehicles, improved waterways, airplanes, transmission of electrical energy as supplanting the hauling of coal, centralization, or dispersion of industries, further supplanting of lumber by cement, exhaustion of petroleum supplies, relative decline of agriculture and growth of manufactures, etc. It is not safe to predict the future solely by the past because new forces come into action. The development of the motor vehicle was such a force, the effect of which on railroad traffic was not fully appreciated in 1915”.

So that it can be conservatively said that the motor vehicle is today and has been during the last decade one of the largest factors in the economic life of the country.

### **Large Factor in Country Life**

Perhaps the largest single influence exerted by the development of highway transportation has been the effect upon country life. The automobile is the modern farmer's horse and buggy. The motor truck is his horse and wagon.<sup>(1)</sup>

“The development of motor transportation has revolutionized the life of the farm. It has brought

(1) American Farm Bureau Federation.

the town and country into closer touch. It has in a considerable degree destroyed the historic isolation of the farm and the farmer. It has permitted a notable extension in educational facilities available for rural populations. The centrally located school reachable by motor transport from a large surrounding area has largely contributed to the solution of the problem of adequate equipment and adequate instruction for the rural children.

### **Effective Aid to Health**

“The automobile has proved an effective aid in the field of medical relief for scattered populations. It has enabled the farmer to receive prompt and better medical treatment and made hospitalization available for large numbers of the population who hitherto had been without any possible recourse to such treatment. The traveling library, the centrally located community church, the development of community life and community spirit are some of the many significant social and cultural changes wrought by the development of motor transport in rural sections.”<sup>(1)</sup>

The U. S. Bureau of the Census places the number of motor vehicles on the 6,288,000 farms in the United States at 5,035,000<sup>(2)</sup> of which 900,000 are trucks, or 26 per cent of all the trucks in use in the United States.

### **Suburban Development Aided**

Motor transportation has had a pronounced effect upon life in the cities, enabling the rapid development of suburban areas.

Through road improvement the area of city influence has been gradually extended and today there are few if any communities in the United States which do not have all of the advantages of rapid individual transportation.

While no exact figures have ever been obtained, sample studies indicate that some 60 per cent of all use of passenger cars is for business purposes.<sup>(3)</sup>

Salesmen, physicians, nurses, teachers, farmers, business and professional men generally use the car in a daily routine.

Beyond this are the myriad light deliveries made by passenger cars with special bodies which still do not class the vehicle as a commercial unit in the official registrations.

(1) Report Highway Transport Committee, International Chamber of Commerce, (1927).

(2) 1930 Census.

(3) U. S. Bureau of Public Roads.

## **Government Efficiency Increased**

The introduction of motorized units into sanitary, police, fire and military operations has increased many times the efficiency of these agencies and has had a marked effect in the fight for the prevention and control of disease.

Many authorities attribute the spreading of population out of congested areas almost entirely to the improvement of roads and the advent of the motor vehicle.

## **Individual Transport A Result**

The result of this development has been to provide the individual with the personal unit of transportation which enables him to travel safely and comfortably, starting almost wherever and whenever he wishes to any objective which he may desire to reach within the United States and Canada. Equally the truck is his personal unit for the movement of his goods.

In its early development the use of the vehicle was confined largely to recreational purposes. With improvement in the design and the increase in improved highways, came a rapid development of the utilitarian use. Trucks were developed to handle a retail freight movement and buses appeared as supplementary agencies to the railroad and electric lines.

## **Flexibility and Cost are Major Truck Assets**

The motor truck has been a factor in national transportation only within the past few years.

Its development has been due largely to two factors,—the flexibility of its operation and the low initial cost.

The truck performs its best service when it is used to pick up a commodity at the door of the shipper and to transport it to the door of the consumer. The element of time-saving in handling freight and the readiness to serve at all times have made the unit desirable in the ordinary conduct of industrial and business operations.

Government surveys indicate that by far the largest use made of the vehicle is in the distribution of commodities to their final destination within an area of from 30 to 60 miles.<sup>(1)</sup>

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(1) U. S. Bureau of Public Roads.



## Haul Decreases With Miles

As the length of haul grows, the number of vehicles used rapidly diminishes, and the commodities hauled become highly specialized.

Furniture movement and the shipment of goods of high cost are the only regular operations carried on over the highways for long distances.

There is, however, another class of carrier which has developed recently in the merchant trucker who buys goods at one point and sells at another sometimes several hundreds of miles distant. This movement is sporadic, however, and is not a considerable factor in the total freight tonnage.

## Trucks Usually Owned by Individuals

Because of the low unit cost of the vehicle its operation, unlike that of the railroads, is in the hands of a great many people.

It is estimated that out of 3,466,000 trucks, some 2,500,000 are owned by as many individuals.<sup>(1)</sup>

Perhaps the best illustration of the use made of the motor vehicle is furnished by government surveys,<sup>(2)</sup> which show that 86% of all movements is in the hands of private businesses or individuals, the remaining 14% being divided between common and contract carriers, or companies which hold themselves out for hire either indiscriminately or to a few people.

## Large Fleets Business Tools

Large fleet movements are a part of the business of individuals or companies in public utility service, oil and gasoline distribution, milk handling and in bakery, meat, ice, and beverage deliveries.<sup>(3)</sup>

Thus, the American Telephone and Telegraph Company maintains 15,500 trucks—the largest single fleet.

Next in order follow thirty-two other fleets used by large companies in their business—not *for hire*.

Only one common carrier operation out of 217 surveyed recently by the government had more than *one hundred* trucks!

Perhaps in no other respect than this widespread decentraliza-

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(1) Chilton Automotive Multi-Guide.

(2) U. S. Bureau of Public Roads.

(3) National Automobile Chamber of Commerce.

tion of ownership is the marked dissimilarity between truck and railroad operations better illustrated.

### Competition With Rails

Much has been said about the competition of motor vehicles with the railroads.

First perhaps it should be pointed out that some 45,000 communities in the United States are off rail lines and require roads to connect them. Second, the production and servicing of motor transport requires a large use of rail facilities. Third, the motor vehicle generally is a factor in short-haul rather than long-haul movements.

In the case of the passenger car movement it is undoubtedly true, however, that the existence of 22,000,000 vehicles on the highways has had a marked influence on the passenger revenues of the rail carriers.

The actual effect of bus operations is not so great since there are only around 99,000 buses in the country, of which 52,000 are engaged in school, hotel and sightseeing operations. A part of the remainder (about 30%) are exclusively intra-city operations.

Had all the inter-city bus passengers been carried by rail in 1931, the total rail passenger traffic would still have been nearly 24% under 1920.<sup>(1)</sup>

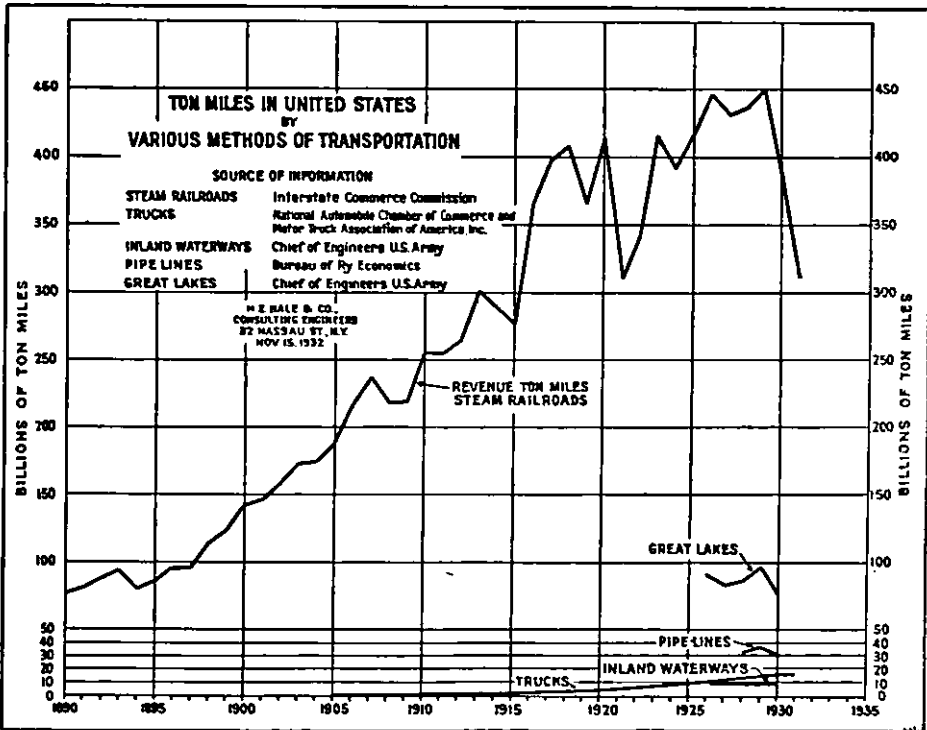
### Trucks Handle 6% Rail Traffic

In the freight field, the best estimates made by the Interstate Commerce Commission<sup>(2)</sup> indicate that inter-city trucks handled about 6% as much freight traffic in 1929 as moved by rail. In terms of revenue this amounted to 8%. Necessarily not all of this movement was a competitive one and where it was competitive the bulk was carried by private trucks. It follows then, that forced restoration of the competitive traffic could not materially alter the rail position.

Whether there has been any increase in motor truck competition during the depression is not known. Such an authority as Daniel Willard, President of the Baltimore & Ohio Railroad, estimates that of the loss of 51% in railroad freight revenues compared with average earnings over the past decade, *but 10% is due to the motor truck.*

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(1) Report of American Section, International Chamber of Commerce, in reply to questionnaire for International Conference for the Coordination of the Various Means of Transport.  
(2) Docket 23,400.



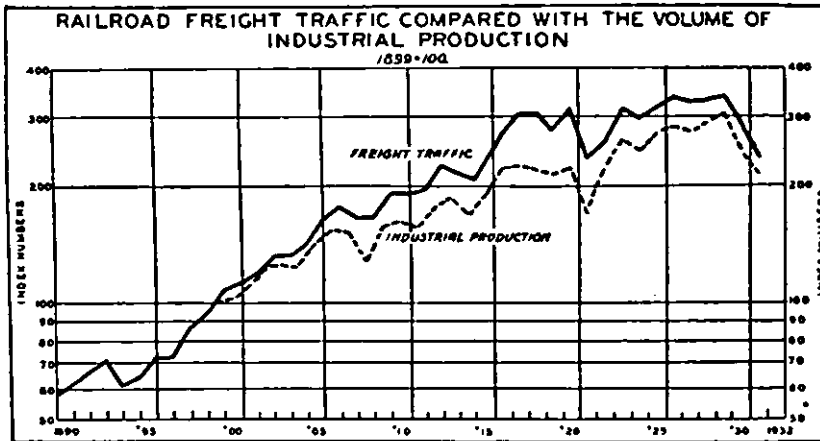
The curve of railroad tonnage handled coincides closely with the trend of production generally.

**Depression Chief Factor in Rail Losses**

Many students of the transportation problem take this view. One authority<sup>(1)</sup> recently said:

“ . . . It is consequently believed that if motor trucks were taxed sufficiently the railroad problem would be well under way to a solution, because the motor trucks would not be able to take freight away from the railroads by quoting lower rates. The railroads, however, have little justification for placing so much blame on the motor trucks. The solution of the railroad problem is not a matter of motor truck regulation. If motor truck transportation were entirely eliminated and the railroads were able to add all the motor truck freight to the present volume of railway freight, the railroads would not benefit materially . . . ”

(1) October 1, 1932, issue "Business Conditions Weekly," Alexander Hamilton Institute



That the present difficulties of railroads are not due to the competition of highway carriers but to current business conditions is clearly demonstrated in the above chart reproduced from THE ANNALIST, showing how closely railroad freight operations parallel the nation's industrial operations.

Almost a year ago, Commissioner Joseph B. Eastman, speaking before the American Economic Association, analyzed the competitive situation:

“ . . . The present competition in the transportation industry differs from that of the past in at least one respect. Heretofore competition has chiefly been among the railroads themselves. With the exception of some competition from water carriers. There has now been added the direct competition of highway motor vehicles, pipe lines, and airplanes, and the indirect competition of electric central power stations and transmission lines. A further new feature is that to a very important extent, in the case of motor vehicles, this competition is not offered by common carriers but by vehicles owned or hired by the users. The privately owned automobile has had a more serious effect than the common carrier bus upon railroad passenger traffic, and trucks owned or hired by shippers have likewise had a more serious effect than common carrier truck lines upon railroad freight traffic . . . ”

These changes are disturbing to the old order of transportation. Stability cannot be achieved by any previously tried method. New plans must be adopted.

Coordination has been advanced as offering the greatest possibilities. But coordination cannot be achieved by restrictive legislation.

Many railroads are adapting the motor vehicle to their own use. Last year 80 of them were operating 5,000 motor buses, while 85 roads—directly or through subsidiaries, and exclusive of the Railway Express Agency, were using 10,000 motor trucks.<sup>(1)</sup>

#### **Four Operating Methods**

There are at least four ways in which rail carriers can engage, or participate, in motor vehicle operations:

- (1) Directly, as part of all operations;
- (2) To subsidize companies organized for the purpose; or acquired by purchase of existing operations;
- (3) Through acquiring a stock interest in independent companies, and
- (4) By means of contracts with independent operators.

#### **Variety of Services Now Functioning**

Present rail-motor service includes substitutions of highway for train service on unprofitable branch lines, extension of feeder services to areas not reached by rail, substitution for local freight-train service in congested areas; substitution for less than car-load interchange between railroads; operation of container cars and "ferry car" services; and store-door delivery.

#### **Unproductive Rail Investments**

L. F. Loree, President of the Delaware and Hudson Railroad Corporation, recently said:

"Less than 2% of the ton mileage moved is carried on 73,311 miles of line, being about 30% of the total mileage. Not only is this movement insignificant, but it is made at an out-of-pocket loss and keeps in service as an economic waste a large amount of line. Of this mileage 57,742 miles are distributed upon 2,094 branch lines and parts of lines of Class 1 railroads. 15,569 miles are distributed upon 483 Class 2 and Class 3 railroads. For the year ended December 31, 1928, 459 of these latter lines reported a corporate deficit of \$63,282,963. Each separate element in this group should be carefully examined and as rapidly as possible those sections that cannot be justified should be abandoned and their salvage value recovered.

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(1) "Railway Age".

“The lines in the intermediate group, 161,000 miles, should be carefully gone over, everything promoting waste removed, and all possibilities looking to expansion of traffic or reduced cost of operation thoroughly worked out.”

The truck, too, offers the possibility of re-location of freight terminals on less expensive land.

### **Rails Must Initiate Coordination**

One fact stands out clearly in any discussion of rail-highway coordination. *The initiative in such a movement must come from the railroads.* Shippers are already using the rail service and the highway service separately. The railroads are the only ones who can combine the two and offer that combined service to shippers.

This position was taken by J. F. Deasy, Vice-President of the Pennsylvania Railroad, in his appearance before the Interstate Commerce Commission in Docket 23,400, when he said:

“ . . . It is essential that the railroads make available a system of coordinated transportation which will enable the public to utilize the kind of transportation it wants—rail, highway, waterway and airway—in the field in which each can best perform. All forms of transportation should be maintained with a proper return to the operation . . . The initiative and enterprise in developing a system of coordinated transportation on a sound basis rests primarily with the railroads in cooperation with other forms of transportation . . . The process is essentially an economic one and not a regulatory or legislative one . . . ”

### **Legislative Relief Must be in Public Interest**

Some legislative help can undoubtedly be given by relaxing such railroad regulation as may be no longer desirable; by permitting direct rail operation of motor vehicles; by the establishment of joint rates and through bills of lading; and by any regulatory adjustments as between railroads and motor vehicles which are *justified by the facts and the public interest.*

### **Taxation and Highway Development**

Under-taxation of the motor vehicle and over-taxation of the railroads has been advanced by some as one of the ills of the transportation industry.

It is not proposed to discuss here either the basic relationship between the highway and the vehicle, or the tax policies growing

out of them. These require a fuller discussion which is undertaken in later sections of this report.

The immediate comment goes only to the relation between highway development and railroad taxation for that purpose.

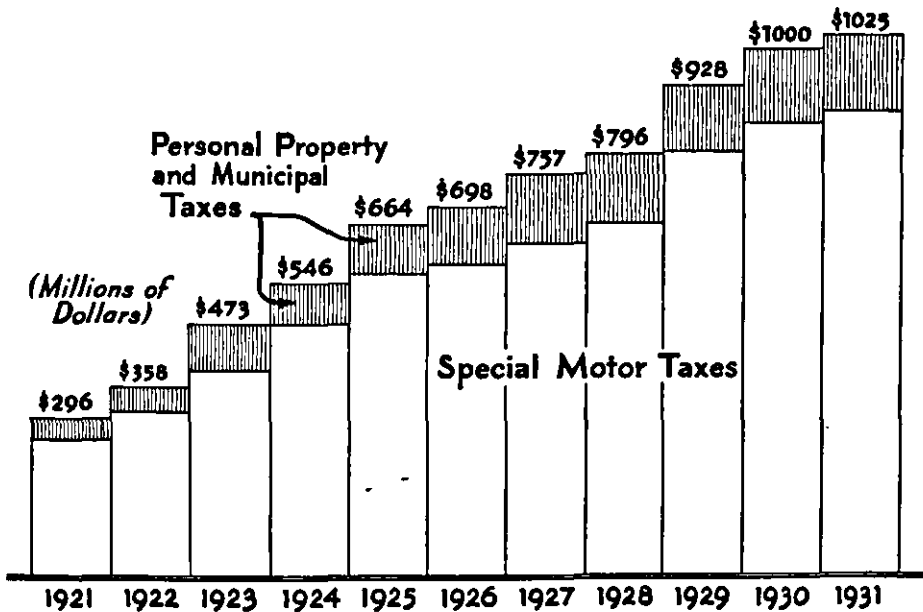
Once it is established that the railroads are not paying for roads used by their competitors, then the problem is one of adjustment between the users of the road.

This involves (a) economic road building and maintenance; (b) sound cost accounting; and (c) equitable tax adjustment between the different classes of vehicles.

**Special Taxes \$881,000,000**

In 1931, motor vehicle owners paid \$1,025,000,000 in state and municipal taxes on their vehicles, in addition to paying the same general taxes as those paid by other citizens. Of this \$881,000,000 was in *special taxes*, including registration fees and gasoline taxes.

**Special Motor Taxes—1921-1931**



Taxes collected from motor vehicle owners of the United States increased from \$296,000,000 in 1921 to more than \$1,025,000,000 in 1931. White portions of the bars indicate the special motor taxes collected by state governments.

The Federal Revenue Act of 1932 added \$258,000,000 to this burden in the form of automotive, fuel and rubber excise taxes.

This brings the maximum gas tax in one state to twelve cents. The law of diminishing returns has begun to operate as a result.

These special taxes provided 92% of the current state highway income from state sources <sup>(1)</sup> in 1931.<sup>(2)</sup> It is these roads which carry from 65% to 70% of all motor traffic,<sup>(3)</sup> and virtually all of whatever competitive traffic may exist.

At the same time there was diverted from these special levies \$170,000,000 for county and local roads; \$23,500,000 for payments on county bonds, and \$50,000,000 for miscellaneous purposes.

Expenditures on the *main* roads included \$731,000,000 for capital additions in the form of new construction, and right-of-way.

Thus, special motor vehicle taxes are being called upon to support not only maintenance charges, but an abnormally large *capital investment program on a current basis*.

### No Property Tax for Main Roads in Thirty-four States

In thirty-four states there was no property levy for the state road system, and in twenty-two states there was neither a property levy, nor any general appropriation for this purpose. Obviously neither railroads nor other landholders paid anything towards main roads in these states.

Seventy-seven per cent of all state highway bonds issued from 1921 to 1930 are charges against motor vehicle taxes, 6% are charges against tolls from bridges and tunnels, while property or other state taxes are liable for only 17% of the total. All recent state highway bonds are a charge against motor taxes.

Further, for the year 1930<sup>(4)</sup> special motor taxes accounted for 56% of all current rural highway income.

During the past ten years 126,000 miles of the more important local roads have been added to the state system.

### Motorists Assuming More Local Road Costs

Thus the steady increase of motor taxes for road purposes has resulted in a material shifting of the burden of *local* road improvement from the land to the vehicle.

(1) Excludes Federal Aid receipts, which included emergency advances.

(2) Based on U. S. Bureau of Public Roads data.

(3) Cooperative studies, U. S. Bureau of Public Roads and State Highway Departments.

(4) Latest total figures available from the U. S. Bureau of Public Roads.



The use of rail taxes for state highways is thus an inconsequential factor. The Interstate Commerce Commission in Docket 23,400 said:

“ . . . The foregoing analysis indicates that the contention of the railroads that they are called upon to contribute to the provision of highways for their competitors to use rests on an increasingly smaller basis as the well-defined tendency to relieve the general taxpayer of levies for State highway purposes continues . . . ”

With respect to “feeder” road development, the railroads require these and benefit from them. Any relief for them means a heavier burden for the farmer and other land owners.

#### **Truck Taxes 25% of Total**

It has been charged that motor trucks are subsidized in their competition with railroads.

Motor trucks are 13.4% of all vehicles, yet they pay 25% of the special taxes, which as pointed out, largely meet main road costs on a current basis.

These taxes amounted to \$221,500,000 in state license fees and gasoline taxes alone in 1931. Common carrier buses paid \$31,775,000. The total payments by these commercial vehicles, including personal property and municipal levies, is estimated at \$293,305,000 for 1931.

#### **Common Carriers Pay Extra Fees**

In addition to the license fees and gasoline taxes paid by all buses and trucks, 46 states charge extra fees for passenger carriers and 36 for property carriers engaged in public business.

For common carrier trucks these taxes may include franchise or privilege tax, ton-mile, gross receipts, mileage, and occupational levies.

Common carrier buses pay franchise or privilege tax, seating capacity, gross receipts, mileage tax, and occupational tax.

Both groups pay Federal and state income taxes on the operating company.

Many counties and cities levy common carrier taxes in addition to the state imposts.

Translated into terms of *averages per motor vehicle*, the *special* taxes paid in 1931 amounted to \$34.10 for the average vehicle. The privately owned 3-ton truck paid \$332. Common carrier trucks were charged \$521, and the common carrier bus paid \$700.

### **Heavy Vehicles Paying Way**

The Chief of the U. S . Bureau of Public Roads says that generally these heavier vehicles are paying adequately for their just share of the cost of the roads they use, including the additional strength required of such roads.

Consequently, it does not appear that trucks generally are subsidized in their competitive operations.

### **Uniform Physical Regulation Essential**

The subject of physical dimensions is also discussed in detail in succeeding pages.

Here it is only necessary to observe that highway transportation like that on railroads recognizes no political boundaries within the United States.

Because of the numerous independent jurisdictions, however, there has grown up a mass of conflicting regulations which operate to increase the cost of the movement to the shipping public.

There exists a deep need for a rational uniform code of standards which will expedite the efficient flow of commerce over the highways.

### **Business Regulation of Trucks Must Meet Public Interest**

Business regulation of the motor truck (whether inter-state or intra-state) can only be arrived at in the general public interest when not only the physical relations existing between the road and the vehicle, but the legal relations between different types of carriers, are understood.

These subjects are treated at some length in succeeding chapters.

Here, it is only necessary to emphasize one or two important facts.

Eighty-five per cent of all motor trucks are privately owned and operated. Since the legal classification has no bearing upon the size, weight and other dimensions, roads would be built for private carriers if there were no common or contract movements.

Further, the low unit cost of the vehicle makes the private carrier always a potential competitor of the truck operated for hire.

### **Too Strict Regulation Would Penalize Small Shipper**

Consequently rigid regulation or excessive taxation of the trucks operated for-hire would only operate to deprive the shipper of a service and the operator of equal competitive opportunity.

The traffic would not go back to the railroads unless all trucks were subjected to laws which would strangle the whole movement. Even then the railroads could get but that small part of the whole which is competitive. It is the shipping public which would suffer.

Since it is the small shipper who does not operate his own fleet, it would be the small shipper whose interests would be most affected.

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## **Physical Relations Between Road and Vehicle**

Before any rational plan for the taxation and regulation of motor transportation can be laid down there must be an understanding of the physical relations which exist between the road and the vehicle which moves over it.

This important subject has been under intensive research study and observation for the last ten years, during which time the United States Bureau of Public Roads and the State Highway Departments have joined in many fundamental projects.

The key facts brought out in this work may be stated as follows :

### **Factors of Durability**

Soil, sub-base and climatic conditions very largely determine the life of a highway. The sole effect of a heavy movement of traffic is to require a conversion in the type of surface or to add to its depth. Where conversion takes place higher capital costs are offset by lower maintenance charges. Where added depth is necessary the cost is mainly that of the added material and labor, since rights of way, gradients, drainage and similar elements are common to both roads.

In actual practice, highway engineers were building macadam roads as thick as at present before there were motor vehicles.

### **Impact Effects**

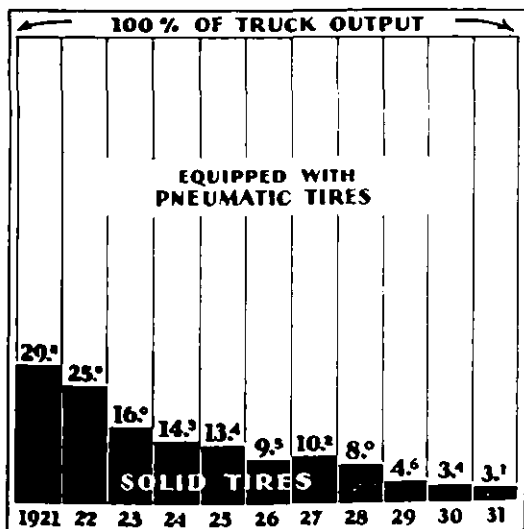
The effect of the impact exerted by a vehicle is determined largely by the area of contact between wheel and road surface and the character of the tire.

The narrow, steel-tired farm wagons carrying one-ton loads twenty years ago exerted more destructive effect than does the modern motor truck equipped with wide, pneumatic tires carrying loads several times greater.

During the war and in the period immediately following, heavy motor trucks traveling on solid tires frequently did undue damage to the highways.

Conversion of vehicle equipment, and research into soil, sub-base and climatic factors have radically changed these conditions.

It is the judgment of competent engineering authority that destructive effect of truck travel would never have been an issue had trucks been equipped from the beginning as they are today with pneumatic tires and regulated as to wheel load.



How pneumatic and balloon tires are replacing solid or cushion tires on modern motor trucks is shown in the accompanying chart. In 1921, 29 percent of all trucks produced were equipped with solid tires, whereas, in 1931, only 3.1 percent of the trucks produced had such equipment.

### Factors in Road Wear

Concrete slabs tested by as many as 300,000 trips of pneumatic tires running over the same point show no appreciable wear.

The only real possibility of damage is an impact which will rupture the slab.

Continued impact tests have demonstrated that a large element in rupture is fatigue.

In other words: Engineers know definitely what thickness of slab is necessary to sustain a given weight.

When a load exceeding that weight passes over a slab there is a temporary deformation extending over a limited period during which the slab slowly comes back to about its original position. If it is not given time to do this gradually, permanent deformation sets in followed by rupture.

It follows from this that *frequency* of impact is a controlling factor in effect upon rigid types of roads.

Consequently, *occasional* movements of vehicles heavier than those for which the road is designed have no material effect.

By illustration, if a road were built for a two-ton vehicle:

If 500 vehicles traveled over that road each day with a normal distribution of traffic as between passenger cars and trucks and buses of varying weights, it would take twenty years to accumulate enough five-ton vehicles to break the slab.

If 1,000 vehicles of similar distribution used the road it would take ten years, if 2,000 five years to effect a rupture.

In practice, however, because of soil, sub-base and climatic conditions, the design of any rigid type road which would meet these conditions would be adequate for a three-ton load.

### Specifications

Because of the varying conditions of frost or moisture or soil in the several states, no absolute specifications are followed. In the Northern states usually 9-7-9 concrete roads are built. In the South, 8-6-8 slabs are used. In each case these figures mean inches of depth of the slab at the sides and in the center.

### Non-Rigid Types

Roads of non-rigid types such as gravel, macadam, and clay have much less strength in themselves. Their ability to carry *any* load largely depends upon soil, sub-base and climatic conditions.

Consequently, any type of vehicle will break through their surface under adverse weather conditions but equally the cost of bringing them back is simply a re-assembly of the surface—not the construction of a new slab.

Under favorable weather conditions such roads will carry truck loads as well as they will passenger car traffic.

### Classification of Traffic

These are the basic, engineering facts as determined by a long period of research in the field and in the laboratory which have led highway engineers to the basic conclusions that:

Given authority to control movement under adverse climatic conditions, there is no further need for requiring any vehicle to remain constantly on a road of a given type.

Further, the present status of highway development and use is such in the United States that minimum standards for the dimensional control of traffic can be safely set down, and

Finally, such standards are definitely needed in the furtherance of highway development.

To these conclusions may be added another, that it is not gross weight but wheel weight which determines the effective impact, consequently no restrictions on gross weight are needed from an engineering point of view. The limitation is one which protects the road at the point of impact with the wheel. The more wheels a vehicle has, the more load it can carry.

### **Bridge Specifications**

The one condition where gross weight restrictions are required is for the protection of bridges.

Here the condition is one of a floor carried on beams which must transfer the load to supporting abutments. Between the abutments the floor has no sub-base support. Consequently, no number of wheels will distribute the load. Gross weight is the chief measure of stress.

It should be noted, however, the first limiting factor in bridge design is one of providing a floor and abutments which will be heavy enough to bear their own weight.

## **Proposed Uniform Standards for Physical Regulation of Motor Vehicles**

Basing their action upon the facts set forth in the preceding chapter on the Physical Relations Between the Road and the Vehicle, the American Association of State Highway Officials, sitting at Washington, November 17, 1932, adopted a program for the uniform dimensional control of motor vehicles operating on main rural and inter-city roads.

The report of the Association says:

“It is the opinion of the Association that the adoption of a uniform standard to govern gross weight, dimensions and speeds for motor vehicles operating on the highways is a fundamental necessity for the following reasons:

- (a) To establish one of the fundamental prerequisites of highway design.
- (b) To promote efficiency in the interstate operation of the motor vehicle.
- (c) To secure safety in highway operation.
- (d) To remove from the highways undesirable equipment and operations.
- (e) To stabilize on a definite basis the many relationships between the highway and the motor vehicle.

“These conclusions have been reached after many years of consideration on the part of the Highway Transport Committee of the Association supplemented by painstaking research by a number of the State Highway Departments and the Bureau of Public Roads.

“The Association therefore makes the following recommendations to the proper State authorities having control of traffic on the highways:

### **(1) Width**

“No vehicle shall exceed a total outside width, including any load thereon, of eight feet except vehicles now in operation which, by reason of the substitution of pneumatic tires for other types of tires, exceed the above limit.

### **(2) Height**

“No vehicle unladen or with load shall exceed a height of twelve feet, six inches.



### **(3) Length**

- (a) "No vehicle shall exceed a length of thirty-five feet extreme over-all dimension, inclusive of front and rear bumpers.
- (b) "Combinations of vehicles shall consist of not more than two units and, when so combined, shall not exceed a total length of forty-five feet.
- (c) "The truck tractor and semi-trailer shall be construed to be one vehicle for the purpose of determining lengths.
- (d) "For occasional movements of materials or objects of dimensions which exceed the limits herein provided, a special permit shall be required.

### **(4) Speed**

- (a) "MINIMUM SPEED. No motor vehicle shall be unnecessarily driven at such a slow speed as to impede or block the normal and reasonable movement of traffic except when reduced speed is necessary for safe operation or when a vehicle or a combination of vehicles is necessarily or in compliance with law proceeding at reduced speed.
- (b) "MAXIMUM SPEED. No bus or truck shall be operated at a speed greater than forty-five miles per hour. Passenger automobiles may be operated at such speeds as shall be consistent at all times with safety and the proper use of the roads.
- (c) "Vehicles equipped with solid rubber or cushion tires shall be operated at a speed not in excess of 10 miles per hour.

### **(5) Axle Load**

- (a) "The wheels of all vehicles, including trailers, except those operated at 10 miles per hour or less, shall be equipped with pneumatic tires.
- (b) "No wheel equipped with high pressure, pneumatic, solid rubber or cushion tires, shall carry a load in excess of 8,000 pounds, or any axle load in excess of 16,000 pounds.  
"Research indicates that low pressure pneumatic tires can carry 9,000 pounds per wheel without increasing pavement slab stresses.  
"An axle load shall be defined as the total load on all wheels whose centers may be included between two parallel transverse vertical planes forty inches apart.

- (c) "These limitations are recommended for all main rural and intercity roads, but should not be construed as inhibiting heavier axle loads in metropolitan areas if any State desires.
- (d) "These weight specifications for wheel and axle loads may be restricted by the State Highway Department for a reasonable period where road subgrades are materially weakened from thawing after deep frost or from a continued saturated condition of the soil.

**(6) Gross Weights**

"Subject to the limitation imposed by the recommended axle loads no vehicle shall be operated whose total gross weight, with load, exceeds that given by the formula  $W - c(L + 40)$  where

$W$  = total gross weight, with load, in pounds

$c$  = a coefficient to be determined by the individual States

$L$  = the distance between the first and last axles of a vehicle or combination of vehicles in feet

"A value of 700 is recommended for 'c' as the lowest which should be imposed but this should not be construed as inhibiting greater values.

(Note): "This gross weight recommendation is particularly applicable to bridges since axle loads and length limitations are determinative in their practical application."

**Discussion of Report**

While the effect of these standards will be to give a quality of uniformity to vehicle design, which should expedite the movement between states, these standards do not always reflect maximum conditions.

For example, milk distributors hold that on three and four lane highways the passage of longer vehicles carrying milk to urban centers is economically desirable. Movements of this character probably will be authorized by special permits.

**Recommendation**

The National Automobile Chamber of Commerce joins the American Association of State Highway Officials in recommending adoption of these standards, with the understanding that a reasonable time be allowed for existing equipment to wear out.

## **Principles of Motor Vehicle Taxation**

The use of highways requires a continuing fund for their maintenance and development. Consequently, it is of the utmost importance that there shall be an annual budget.

All groups which benefit from highway development shall contribute to the highway budget which should be drawn with due regard for other public requirements. The budget must take into account commitments already made for roads built but not paid for, as well as other charges.

The limitation in the development of the highway program is the ability to pay. All principle aside, the motorists today could not pay the entire costs of all road development in the United States.

The law of diminishing returns has already set in with respect to taxes and the road budget must be adjusted to meet this condition.

### **Who Should Pay?**

Highway costs should be borne by those who benefit from them. Principal interests include—

- (a). The general national and state interest in the maintenance of facilities for the national defense, the postal service, interstate and intrastate commerce, education, police protection and other matters of general welfare.
- (b). The special interest of the motoring public in the maintenance of facilities for movement.
- (c). The special interest of the individual in getting from his door to an improved road.

Taken in more general terms, the interest of the two special groups presents a broad social as well as an economic reason for highway development.

### **Division of Costs Today**

The national participation is being covered by Federal highway appropriations, varying between 5 and 8 per cent of the total annual highway costs.

The remaining costs have been divided between the two other classes, but on a basis of expediency rather than one of scientific determination.

In practice in some states, counties and localities have been called upon for large sums for the development of roads of general importance. At the same time other states have extended motor funds to counties and localities which have sometimes been used for land service roads. Some states have followed both methods.

### Suggested Division of Costs

While these practices make standard budgeting difficult of attainment, it is generally agreed that—

Motor vehicle users should support the costs of the roads of general use while the task of providing land service roads should be left to localities and individuals.

Broadly speaking, a road of general use is any highway contained in the main state, farm-to-market or secondary systems which is used by the motoring public generally.

A land service road is that stretch not generally used by the motoring public which leads from the home to a farm-to-market or other highway of general use.

An analysis of the facts contained in the recently completed statewide survey of actual traffic conditions in Michigan provides a concrete and fairly typical example.

This survey shows:

	Main System	County System	Local System
Miles of road .....	7,691	17,175	60,214
Average vehicles per day per mile .....	1,144	190	22
Percentage of total road mileage .....	9%	20%	71%
Percentage of vehicle miles .....	65.7%	24.4%	9.9%

The conclusions which may be drawn from this study are:

There is a land service value in the main roads even as there may be a certain general motoring value in the land service roads.

For the purpose of efficiency in administration, however, as well as a practical distribution of the costs in a fair proportion, it will be better if the highway users' funds are retained for those roads of general use so releasing local funds for local road uses.

In the determination of what roads are for general motoring

use, the measure should be the service rather than the present legal classification of the road.

Thus, looking at the Michigan study, while the first class are obviously roads of general use and the third class equally roads of local use, the second class unquestionably presents a marginal area wherein there are roads of both types.

It follows that as rapidly as possible such roads should be reclassified in the two general groups and financed accordingly.

As a matter of definition it might be noted that the principle of land versus motoring use extends throughout the range of highway development, including cities as well as rural areas, local streets corresponding to local roads, while through streets correspond to main highways.

It should also be noted that the general public has a vital interest in the maintenance of land service roads. Without them, the farmer could not well get to a farm-to-market road, or to rail or water connections and so both commerce and transportation would be vitally affected. If land taxes were withdrawn from the development of these roads, their improvement would be materially retarded.

It clearly follows that the more rapidly local funds can be released from any use in improvement of roads of general use, the more rapidly will the community interest in the land service roads be served.

### **Use of Special Taxes**

As a fundamental principle of taxation, it should be set down that wherever taxes are collected for a special benefit, they should be devoted to that purpose and no diversion should be permitted. This statement applies directly to all special automotive taxes such as registration, gasoline fees, permits and similar levies.

Equally, highway users as a class have an obligation to pay their shares of the general costs of government. This they are doing through taxes on land, income, personal property (including the tax on the vehicle) garages and other facilities, and other general taxes paid by them as by all other citizens in proportion to the value of their holdings and the amount of their income.

## *Part Two*

### **Division of Motor Taxes Among Different Types of Vehicles**

The amount of special road tax paid by each owner should be strictly limited to his fair share of the cost of the road which he uses.

This charge should be based upon (1) the highway requirements of the vehicle and (2) the use which is made of the road.

Users' taxes should be:

- (a) Registration fees, and
- (b) A graduated weight tax to reflect the proper share of the cost.
- (c) A gasoline tax to provide a measure of the use.
- (d) The final determination of the fair share that should be assessed against each type of vehicle involves questions of fact as to highway costs and should be left to the highway authorities to allocate.
- (e) No distinction should be made as between common, contract, and private passenger or freight carriers since the basis of the tax is simply that of cost and use.

The tax should be based on a division between capital and current cost. Motor vehicle users should not be expected to pay the entire capital costs in any one year.

### **Interstate Taxes**

In theory foreign vehicles should pay a tax for the use of the highways in the states through which they operate in proportion to their use.

In practice, however, because interstate traffic very largely, if not entirely, balances itself between the states there is no need for imposing special taxes on the vehicles registered in another state. Another reason for not imposing such a tax is that the Federal gasoline and excise taxes yield more than enough to offset Federal highway appropriations.

Any rational plan of taxing such vehicles in proportion to road use will have to depend upon an assembly of facts of operation which are not now determinable.

In the case of fixed bus and common carrier truck operations between definite termini and on definite schedules, this situation can be met by a mileage tax.

Meanwhile there is a distinct compensating factor in the fact that travel largely is a movement between states, which tends to balance the mileage of travel as between the vehicles of two states.

### **Reciprocity**

Once any motor vehicle owner has complied with the police laws he should be permitted complete freedom of movement between the several states.

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## **Regulation of Motor Vehicles as Instruments of Interstate Commerce**

Consideration of the regulation of the motor vehicle in interstate commerce requires an understanding of the facts of its operation.

Aside from hotel, sight-seeing and school operations, the bus performs a common carrier service comparable to that of the rail.

The motor truck possesses two distinct characteristics:

1. Small unit cost makes possible an *individual transportation service* where the railroad functions as a *transportation system*.
2. The truck alone furnishes flexibility of service, which permits operation at any time, anywhere.

The test of this statement is the fact that while 85 per cent of the railroad mileage is controlled by 15 systems, there are 2,500,000 individual motor truck operators owning one vehicle each.

The relatively few large fleets of motor vehicles operating over the highway, are owned by individuals or companies transporting their own commodities.

Truck operations generally are found in the field where they can serve best — that is, as the modern horse and wagon of the private industrial, agricultural or business user.

## Classification of Vehicles

Legally, motor truck and bus operation can be classified into three main divisions:

- The common carrier,
- The contract carrier, and
- The private carrier.

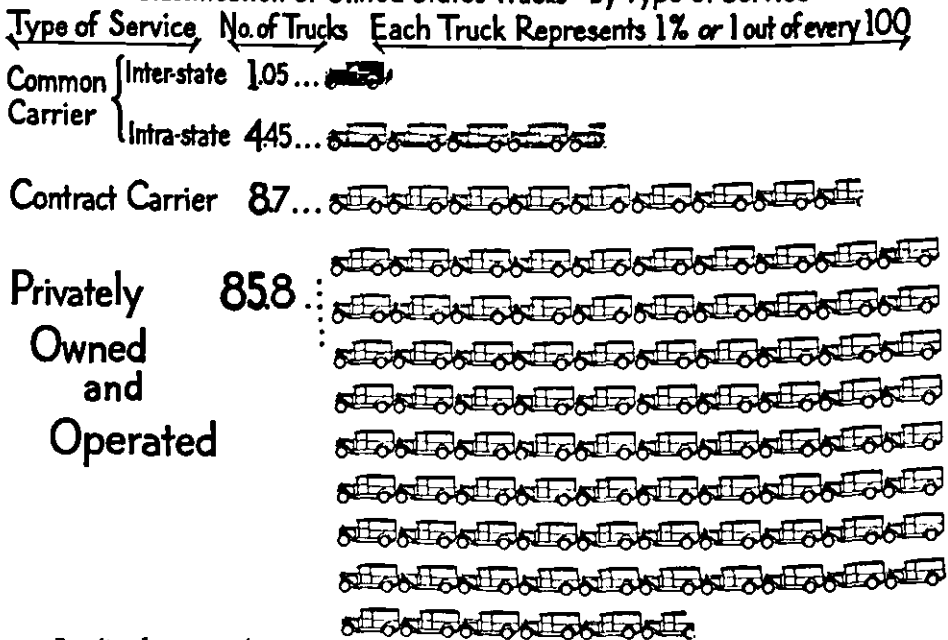
### Definitions

The first two classes may be defined as follows:

The term "common carrier by motor vehicle" (about 5.5% of all trucks) includes any common carrier of persons and any common carrier of property operating motor vehicles *for compensation* in interstate or foreign commerce *over fixed routes or between fixed termini*.

The term "contract carrier by motor vehicle" (about 8.7% of all trucks) means any carrier by motor vehicle regularly engaged in the business of transporting passengers or property for compensation in interstate or foreign commerce under a contract, agreement, or arrangement, and which does not undertake or offer to transport passengers or property for the general public.

Classification of United States Trucks By Type of Service



Results of a comprehensive survey made by the United States Bureau of Public Roads in eleven western states are depicted graphically in the above chart. The survey disclosed that only 1.05 trucks out of every hundred in the area were engaged in interstate common carrier service while nearly 86 out of every hundred trucks were privately owned and operated.



The third class—the private carrier—which constitutes 85.8 per cent of the total fleet of 3,400,000 vehicles is made up of all those vehicles which do not come under the first two classes.

The question of where a particular operation falls within the first two classes has been held by the courts to be always one of a determination of the facts of the operation.

### **Motor Bus Regulation**

Common carrier motor bus operations are now conducted on definite schedules between fixed termini much as rail operations are.

*The regulation of the bus as a common carrier is recommended.* Since this view has met general approval the remainder of this discussion applies to the question of truck regulation.

### **Motor Truck Regulation**

The privately owned vehicle is not operated for hire, is not clothed with public interest, and it cannot be subjected to business regulation.

Suggestions are made for business regulation of the common and contract motor truck carriers, but the determination of *how* regulation should be accomplished has been a moot point.

The Interstate Commerce Commission (Docket 23,400, page 384) says that it is as yet uncertain how far regulation may lawfully be extended to contract carriers which do not operate as common carriers.

From the standpoint of the shipping public certain fundamental principles seem clear.

Whatever regulation is imposed should be in the public interest to promote the sound development of highway transport facilities rather than for the purpose of repression or strangulation.

The vehicle operates over a public right-of-way and always both the common and contract carriers are subject to the actual or potential competition of the privately owned vehicle.

Any repressive regulation which would drive the common and contract carrier truck from the road would not restore the traffic to the rails but would turn the business over to the private operator and increase the number of vehicles on the highway.

Nor would the tonnage capacities be affected. The legal classification of a truck whether common, contract or private has no bearing on its size.

Since the first two classes are used largely by the small shipper whose business would not normally justify investment in vehicle equipment, the burden would fall most heavily upon those least able to afford it.

### **Administration**

Because of the number of vehicles involved, the wide distribution of ownership, and the great mileage of highways over which they operate, the problem of administering any elaborate system of regulation is a serious and, many believe, an impossible one.

While virtually all states now regulate the common and contract carrier truck in some form, the administration has not been a simple matter nor has it been uniformly successful.

Further, it is clear that such regulation has not returned traffic to the rails.

For these reasons, it does not appear that any detailed regulation of the common and contract carriers such as the railroads propose is now practical or desirable.

### **History**

Railroad regulation did not spring into existence full-fledged. The development of the present system of control has been spread over a period of 40 years and the successive steps were taken only as added control seemed essential to the public interest.

If that control, imposed in a period of monopoly which has now passed, has outlived its usefulness, then it is a question whether the attack on the problem should not be one of relaxing rail regulation rather than the imposition of further burdens on an already harassed shipping public.

There are, however, those who feel that some control of the business, apart from the physical aspects of vehicular movement, should be undertaken.

To meet this and yet to safeguard the large investment and *public* interest in highway transport facilities it has been suggested that Congress should be asked to pass legislation along the lines recommended by the Interstate Commerce Commission which would—

(a) Require all common and contract carriers to take out permits to be issued on request by the government authority when the operator had given satisfactory evidence of financial responsibility.

(b) Require all common and contract carriers to keep records of operation and to make such reports as may be reasonably required.

The stated purpose is that unknown facts concerning the extent and character of these operations would be quickly brought to light and the authorities would then be in a position to make recommendations for further legislation *as and when needed* in the public interest.

While regulation of the bus as a common carrier is recommended (p. 49) we have not favored regulation for trucks.

In conclusion it should be noted that this discussion is limited solely to the question of business regulation.

It is accepted as a matter of principle that these vehicles will be subject to such taxation and physical regulation as may be necessary.

- (a) to the payment of a fair share of the cost of the highways used, and
- (b) for the protection of life, limb and property on the highway.

The detail of these questions has been considered in other chapters.

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## Appendix

### I

#### Vehicle Production

- a. Production (1931)
- |                                      |           |
|--------------------------------------|-----------|
| Passenger cars (United States) ..... | 1,973,090 |
| Trucks (United States) .....         | 416,648   |
- b. Sixty-two per cent of all cars bought by persons with yearly incomes of less than \$3,000.
- c. Automotive freight in 1931 totalled 3,106,645 carloads.
- d. Raw materials bought from every state and many foreign nations. Industry uses:
- |                          |       |
|--------------------------|-------|
| Gasoline .....           | 85. % |
| Rubber .....             | 81.6% |
| Plate glass .....        | 60. % |
| Nickel .....             | 32. % |
| Lead .....               | 35.8% |
| Mohair .....             | 28. % |
| Upholstery leather ..... | 51. % |
- e. More than 4,000,000 persons employed, directly and indirectly, in manufacture, servicing and use of the vehicle.
- f. Industry ranked first in 1929 Census of Manufactures.

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## Appendix

### II

#### Registration and Ownership

##### Registrations

1. There are 3,466,303 trucks *in use*, 13.4% of all vehicles.
2. *Trailer* registrations totalled 350,000 in 1931, including passenger car camp trailers.
3. Farms rank first in use of the truck with 900,385 in 1930, which was 26% of all trucks in use.  
Next in order of importance as users are:

    Grocery and food products;  
    General contractors;  
    Automobile accessories and supplies;

General trucking;  
 Oil and gasoline;  
 Lumber, logging and mill work;  
 General merchandise;  
 Meats and packing house products.

**Ownership**

4. There are nearly 37,000 fleets of five or more trucks. Of the 3,466,303 trucks registered, virtually two and a half million are owned and operated by as many individuals.

5. The largest *fleets* are privately owned and operated—(except Railway Express). The first ten are:

American Tel. & Tel. Company .....	15,500
Standard Oil (N. J.) .....	12,500
Borden Company .....	10,000
Railway Express Agency .....	9,247
Standard Oil Company (Ind.) .....	7,465
National Dairy Products Co. ....	6,000
Mid-West Utilities Company .....	3,881
Continental Baking Company .....	3,500
Standard Brands, Inc. ....	3,275
Standard Oil Company (Calif.) .....	2,677

6. The *Federal Government* owns approximately 23,083 trucks, 5,875 passenger cars. In addition to this, the Post Office Department used 69,130 vehicles through contract, rural carriers, star routes and similar service.

7. *Characteristic distribution* of truck traffic is indicated by surveys conducted by the U. S. Bureau of Public Roads:<sup>(1)</sup>

All truck traffic 100 per cent	{ a. Privately owned and operated— 85.8 per cent }	{ c. Intrastate 83.2 per cent } { d. Interstate 2.6 per cent }	{ e. Contract- carriers 8.7 per cent } { f. Common- carriers 5.5 per cent }	{ g. Intrastate 5.4 per cent } { h. Interstate 3.3 per cent } { i. Intrastate 4.4 per cent } { j. Interstate 1.1 per cent }

(1) Based on observation of traffic in the following states: Connecticut (1922-1923), Maine (1924), Pennsylvania (1924), Ohio (1925), Vermont (1926), New Hampshire (1926), Eleven Western States—Arizona, California, Colorado, Idaho, Nebraska, New Mexico, Nevada, Oregon, Utah, Washington and Wyoming—(1930-1931), and a survey of motor truck freight transportation in 41 states and the District of Columbia (1931).

## Appendix

### III

#### Highways (1930 Figures)

**a. Mileage**

	State	Local	Total
Surfaced . . . . .	250,000	480,000	730,000
Unsurfaced . . . . .	74,500	2,204,500	2,279,000
	324,500	2,684,500	3,009,000

**b. Income**

Source	State	County and Local	Total	%
Tax for highways . . .	\$ 11,181,693	\$398,437,988	\$ 409,619,681	26.5
Appropriations . . . .	32,136,298	96,195,337	128,331,635	8.3
Registration fees . . .	289,801,738	54,911,122	344,712,860	22.3
Gasoline tax . . . . .	411,109,446	107,110,709	518,220,155	33.6
Miscellaneous . . . . .	17,083,821	33,338,076	50,421,897	3.3
Federal aid . . . . .	92,462,836	.....	92,462,836	6.0
Total . . . . .	\$853,775,832	\$689,993,232	\$1,543,769,064	....
Bonds . . . . .	\$222,288,308	\$ 94,684,481	\$316,972,789	....

**c. Expenditures**

	State	County and Local	Total	%
Construction . . . . .	\$713,117,045	\$296,594,546	\$1,009,711,591	60.1
Maintenance . . . . .	191,683,477	284,228,960	475,912,437	28.3
Miscellaneous . . . . .	2,227,459	37,066,817	39,294,276	2.3
Equipment and machinery . . . . .	22,301,725	.....	22,301,725	1.3
Interest . . . . .	50,668,141	82,604,925	133,273,066	8.0
Total . . . . .	\$979,997,847	\$700,495,248	\$1,680,493,095	....
<b>Other Disbursements</b>				
Principal payments on bonds . . . . .	\$ 69,504,631	\$112,576,447		
Transfer to counties . . . . .	\$ 66,897,782	\$ 38,614,930		
Other obligations . . . . .	\$ 23,276,341	.....		

**d. Traffic by Road Systems**

**Highways, Michigan**

	Main System	County System	Local System
Miles of road .....	7,691	17,175	60,214
Average vehicles per day per mile .....	1,144	190	22
Percentage of total road mileage .....	9%	20%	71%
Percentage of vehicle miles .....	65.7%	24.4%	9.9%

**Highways, Wisconsin (1930-31)**

	Vehicle Miles
State trunk roads .....	52.7%
County trunk roads .....	13.6%
Town roads .....	7.9%
City and village streets .....	25.8%

**e. Truck Traffic Volume**

- (a) Truck traffic did not exceed 16% and common carrier trucks did not exceed 1½% of total traffic on highways in Western States Traffic Survey (1930).
- (b) Truck traffic 14% of total on main state system of Illinois (1931).
- (c) Common carrier truck operation four times as intensive as other trucks.

**Additional References**

U. S. Bureau of Public Roads Library reference notes on highway finance.

Interstate Commerce Commission, Docket 23,400, Appendix G.

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## *Appendix*

### IV

## General Field of Truck Operations

### a. Length of haul

The average daily mileage of all trucks observed in the Western States Traffic Survey was approximately 100 miles.

In California 58.1%; Ohio 71.6%; Connecticut 67.1%; Cook County, Illinois 75.8%; and in Pennsylvania 80.6% of the net tonnage transported by motor truck was hauled less than 30 miles in a local distribution of commodities.

Of long haul tonnage by truck "in Ohio 10.6%; in Pennsylvania 6.9% and in Cook County, Illinois, 5.4% of the tonnage is hauled over 60 miles."

In 1930 average haul of 11 out of 25 common carriers interviewed in the state of Washington was 55 miles compared with 71 miles average route.

The average length of route of "for hire" carriers reported in "Motor Truck Freight Transportation" was 88 miles, with a median length of route of 70 miles.

### b. Commodities carried

Tonnage hauled by truck estimated as equivalent to 5.8% of rail traffic, 1929. (Ton miles)

LIVESTOCK—Receipts at 17 markets by truck were one-third of the total in 1931.

FRUITS AND VEGETABLES, MILK, POULTRY, COTTON and other farm commodities move in large amounts by truck.

AUTOMOBILES—1,051,000 vehicles were delivered overland as truck-aways or driveaways in 1931.

COAL—Within the last two or three years coal trucking for distances as great as 60 miles or more from the mines has occurred. For 1930 truck movement in the anthracite area was estimated at 500,000 tons and distances were said to have increased from about 50 miles in 1929 to 75 or 100 miles. (1932)

### c. Tire equipment

SOLID TIRE TRUCKS were but 3.1% of 1931 truck production.



**d. Capacity**

Ninety-three per cent of all trucks built in 1931 were two-ton capacity or less.

**e. Safety**

While the number of fatal accidents involving private passenger cars has increased 50% from 1927 to 1931, fatalities involving trucks have decreased 7% and those involving buses have decreased 12% during the period.

**f. Competition**

See (1) Docket 23,400, Interstate Commerce Commission.

(2) A study of the highway situation as related to motor truck competition with rail carriers in Eastern United States, by Railroad Security Owners Association, 1932.

**g. Coordination**

See (1) Docket 23,400, Interstate Commerce Commission.

(2) Conclusions, Sixth International Road Congress (1930).

(3) Report of American Committee to questionnaire on International Conference for Coordination of Various Forms of Transport.

(4) Railroad Security Owners Association survey.

**Additional References**

U. S. Bureau of Public Roads Highway Transport Surveys:

Western States, 1929-1930

New Hampshire, 1926

Ohio, 1925

Cook County, Illinois

Maine

Pennsylvania

Connecticut, 1923

} 1924

National Motor Truck Analysis, 1932, General Motors Corporation.

# Appendix

## V

### Taxation

#### Motor Vehicle Taxes in 1931

Registration fees .....	\$344,337,654
Gasoline tax .....	536,397,458
Personal property and municipal taxes .....	145,000,000
	<u>\$1,025,735,112</u>

a. TRUCKS—13.4 per cent of all vehicles registered pay 25 per cent of motor taxes. The total of *special* truck taxes amounted to \$221,530,000 in 1931. All commercial vehicles were estimated to have paid \$293,000,000 out of the \$1,025,000,000 tax total.

b. BUSES—Common carrier buses paid \$31,775,000 in *special* taxes, and \$5,050,000 in all general taxes in 1931. Per revenue bus, these amounted to \$811.

c. The average truck pays twice as much tax as the average passenger car. The privately operated 3-ton, 6 1/3 times; the common carrier truck, 18 times, and the common carrier bus, 22 1/2 times.

d. "In my judgment the heavier trucks and buses by the higher tax which they are paying and particularly through the collection of gasoline taxes are fully meeting all excess costs of construction, due to the increased thickness that is made necessary for these heavier loads." . . . Thomas H. MacDonald, Testimony, Docket 23,400.

e. In an analysis of the state road costs in Pennsylvania the Bureau of Public Roads found that heavy vehicles were paying slightly less than their share and the lighter vehicles slightly more.

f. (1)

"Increase in railroad state and local taxation is a point of vital importance to the railroad problem, though railroads are not contributing to the highways to the extent generally believed."

. . . Railroad Security Owners Survey.

(2)

“... The foregoing analysis indicates that the contention of the railroads that they are called upon to contribute to the provision of highways for their competitors to use rests on an increasingly smaller basis as the well-defined tendency to relieve the general taxpayer of levies for State highway purposes continues. Specific figures are lacking, but such payments by the railroads are probably of minor proportions today, though doubtless of importance to some railroads, particularly at a time such as the present. However, the county and local roads of all States receive the major part of their support from the general taxpayer, including the railroads.”

. . . Appendix G, Docket 23,400

#### **Additional References**

National Industrial Traffic League.

U. S. Bureau of Public Roads.

## Appendix

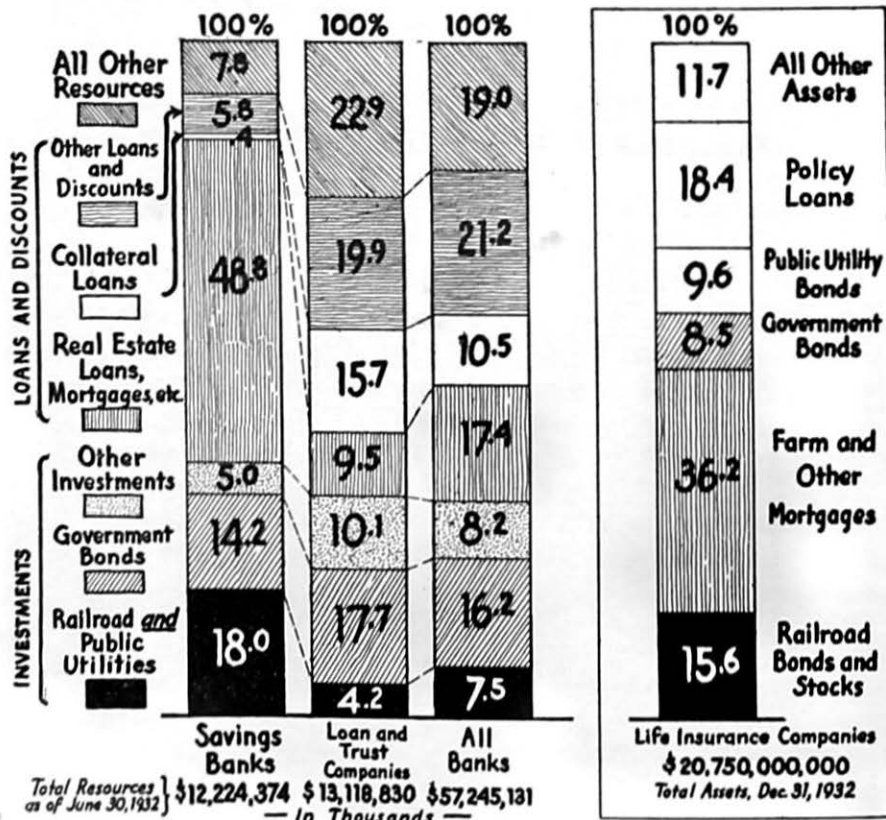
### VI

## Resources of Banks and Life Insurance Companies

*(It has been shown that motor trucking is not the cause of low net rail earnings.)*

It should be noted that the black portions of the diagram for banks represent investments in both railroad *and* public service corporation bonds. Although actual investments in each of these two types of securities cannot be segregated, it is estimated that the 18 per cent of Savings Bank investments would divide 11.7 per cent railroad and 6.3 per cent public utilities.

The diagram is based on figures obtained from the text of the Annual Report of the Comptroller of the Currency, December 5, 1932 covering banks, and from the Proceedings of the Annual Meeting of the Association of Life Insurance Presidents.



## Life Insurance Company Investments

As of December 31, 1932

(Source: Proceedings Annual Meeting of Association  
of Life Insurance Presidents)

		Percent
Farm and other mortgages . . . . .	\$6,893,000,000	36.2
Total governments . . . . .	1,607,000,000	8.5
<b>R. R. bonds and stocks . . . . .</b>	<b>2,960,000,000</b>	<b>15.6</b>
Public utility bonds and stocks . . . . .	1,817,000,000	9.6
Policy loans . . . . .	3,500,000,000	18.4
All other assets . . . . .	2,223,000,000	11.7
Total 52 Reporting Companies . . .	\$19,000,000,000	100
All Companies . . . . .	\$20,750,000,000	

## Resources of Banks as of June 30, 1932

(Source: Text of Annual Report of the Comptroller  
of the Currency, December 5, 1932)

	Savings Banks	Per- cent	Loan & Trust Companies	Per- cent	All Banks	Per- cent
<b>INVESTMENT</b>						
<b>1. Railroad and other Public Service Bonds.</b>	<b>\$ 2,200,865,000</b>	<b>18.0</b>	<b>\$ 552,492,000</b>	<b>4.2</b>	<b>\$ 4,276,059,000</b>	<b>7.5</b>
2. Federal, State and Municipal Bonds . . . . .	1,733,062,000	14.2	2,324,381,000	17.7	9,257,333,000	16.2
3. All other Investments.	611,218,000	5.0	1,325,139,000	10.1	4,689,849,000	8.2
<b>LOANS AND DISCOUNTS</b>						
4. Real Estate Loans, Mortgages, etc. . . . .	5,962,753,000	48.8	1,240,267,000	9.5	9,941,644,000	17.4
5. Loans secured by U. S. Bonds and other securi- ties . . . . .	54,987,000	.4	2,055,856,000	15.7	6,011,057,000	10.5
6. Other loans and dis- counts . . . . .	714,909,000	5.8	2,611,011,000	19.9	12,121,939,000	21.2
All Other Resources . . . . .	946,580,000	7.8	3,009,684,000	22.9	10,947,250,000	19.0
<b>Total Resources . . . . .</b>	<b>\$12,224,374,000</b>	<b>100</b>	<b>\$13,118,830,000</b>	<b>100</b>	<b>\$57,245,131,000</b>	<b>100</b>

## Reference to Sources

### *Appendix I*

#### Vehicle Production

a. Production by years .....	Page 4, Facts & Figures
b. Income classes of purchasers ....	" 24, " " "
c. Rail freight .....	" 32, " " "
d. Raw materials .....	" 48, 52, 54 " "
e. Employment .....	" 53, Facts & Figures
f. Rank in manufactures .....	" 55 " " "

### *Appendix II*

#### Vehicle Ownership and Registration

a. State registration of passenger cars, trucks, trailers .....	U. S. Bureau of Pub. Roads
b. Total registrations trucks, trailers	U. S. Bureau of Pub. Roads
c. Farm registrations .....	Bureau of Census
d. Rank of users in order of group importance .....	Chilton Automotive Multi-Guide
e. Fleet ownership .....	Page 36, Facts & Figures
f. Federal ownership of vehicles ...	Page 36, Facts & Figures
g. Typical distribution of truck ownership .....	U. S. Bureau of Pub. Roads

### *Appendix III*

#### Highways

a. Mileage .....	Page 44, Facts & Figures
b. Income	
1. State (1931) .....	U. S. Bureau of Pub. Roads
(1930) .....	Pages 84, 85, Facts & Figures
2. Local (1930) .....	Pages 86, 87, Facts & Figures
c. Expenditures	
1. State (1931) .....	U. S. Bureau of Pub. Roads
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d. Traffic	
1. By highway systems .....	" " " " "
2. Truck traffic volume .....	" " " " "

## *Appendix IV*

### **Vehicle Operations**

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- b. Commodities carried ..... I.C.C. Docket 23,400  
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- b. Bus taxes ..... Page 3 Bus Facts for 1932.
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