AN ANALYSIS OF THE REGULATED MOTOR CARRIER INDUSTRY IN NORTH DAKOTA

By

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UGPTI Publication No. 40

September 1981

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SEPTEMBER 1981

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INTRODUCTION

The regulated motor carrier industry is an integral part of the complex transportation system our society relies on. The transportation system in North Dakota is no exception. Regulated motor carriers provide a service important to consumers, other modes of transportation, industrial and commercial concerns, as well as to the state's economy.

As consumers our lives are touched every day by regulated motor carriers because they supply the transportation of goods essential for satisfying our wants and needs. Almost every material item we come in contact with in our daily lives relies directly or indirectly on regulated motor carrier transportation at one time or another. These carriers offer speed and flexibility as well as providing a complete service, i.e. service from origin to destination. This last factor is important not only to the shipper but also to other modes of transportation. These other modes (railroads, water carriers, etc.) often depend on motor carriers to "tie in" or supplement their particular transportation service. This factor is becoming more important in light of the movement toward rail-line abandonments.

Motor carriers are also important to industrial and commercial concerns. The North Dakota Motor Carriers Association reports that 66.7 percent of new industrial plants in North Dakota listed "proximity to highways" as one of the five most important

criteria in choosing an industrial site.[1] In these new industrial plants, 91.7 percent of inbound freight and 71.7 percent of outbound freight was carried by motor carrier.[2]

In many cases commercial establishments such as hardware stores, drug stores, etc. rely exclusively on regulated motor carriers for their transportation needs. Their transportation alternatives may be limited because of the sizes of their shipments, their proximity to rail-lines, the cost of the other modes, or other factors, leaving no alternatives except for regulated motor carriers.

Motor carriers are also very important to the North Dakota economy outside of the transportation service they provide. In 1978, there were 183 regulated motor carriers operating in North Dakota with revenues of almost $47 million and expenses of almost $45 million (see Table 1).

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[1] "Facts about Trucking in North Dakota", North Dakota Motor Carriers Association, Bismarck, North Dakota.

[2] Ibid.

TABLE 1.--REVENUES AND EXPENSES OF NORTH DAKOTA REGULATED MOTOR CARRIERS BY CERTIFICATE.

Type of Carrier[a]	Number of Carriers	Revenues	Expenses
Class A	27	$21,177,823	$20,510,558
Special	126	11,654,672	10,855,790
Contract	26	4,590,419	4,187,870
Special Petroleum	4	9,145,551	8,855,760
Totals	183	46,568,465	44,409,978

Source: 88th and 89th Annual Report of the North Dakota Public Service Commission to the Governor and Department of Accounts and Purchases.

[a]There are only three types of certificates issued in North Dakota (class A, Special, and Contract). Special Petroleum Carriers are carriers operating under special certificate but are significant enough to warrant separate reporting. Class A Common Motor Carriers are those operating between fixed termini, over fixed routes, and on scheduled time. Special Common Motor Carriers are those operating over irregular routes, not on scheduled time, and at the will and command of the shipper. Contract Motor Carriers are those engaged in the transportation of property by motor vehicle for hire and not otherwise classified as a Common Carrier as defined above. This carrier must not be used by more than three consignors.

In addition to the dollars spent in North Dakota, motor carriers also provide over 46 percent of transportation employment in North Dakota (railroads, the second largest provide 38.2 percent).[3] In 1978, transportation and public utility employees earned an average income of $19,325.[4] Translating into a yearly payroll for motor carriers of approximately $76 million.

[3]Job Service North Dakota, "Prairie Employees Review", June, 1980.

[4]Idem. "Employment by Type and Board Industrial Services, 1973-1978 BEA" and "Personal Income by Major Sources, 1973-1978 BEA".

In 1978, motor carriers, railroads, and the other transportation modes contributed approximately $739.1 million to the current Gross State Product. Adjusted for inflation the contribution to the Gross State Product was $207.4 million.[5]

Objectives of Study

Only a limited amount of research has been done on the regulated motor carrier industry operating in North Dakota. The importance of this industry coupled with the recent passage of the Motor Carrier Act of 1980 (which redefines the regulation of interstate motor carriers) make research in this area imperative. The objectives of this study are to define the regulatory environment of interstate and intrastate motor carriers, to compare the North Dakota intrastate motor carrier industry's financial characteristics to a nationwide industry-norm, and to analyze trends of the North Dakota intrastate motor carrier industry over a 20-year period. These topics can provide an insight into the appropriateness of motor carrier regulation as it has developed and also the financial condition of North Dakota regulated motor carriers. This may lead into research regarding North Dakota alternatives in light of the partial deregulation of interstate motor carriers, the impact of inflation on regulated motor carriers, the implications of deregulation with respect to regulated motor carrier service provided to small communities, and the reasonableness of rates granted to motor carriers operating in North Dakota.

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[5]Robert J. Korbach and Theodore P. Wolters, "North Dakota Gross State Product, 1963-1978", Bureau of Business and Economic Research, University of North Dakota, 1980. Pg. 3 and 8.

The first section will describe the objectives of regulation, how it developed, and current provisions of regulation. The second section will analyze revenue, expense, and income trends over the 19 year period from 1960 through 1978.

Regulation

Objectives of Regulation

Economic regulation, safety regulation, and regulation concerning highway protection are the three major components of motor carrier regulation. Economic regulation of an industry centers around considerations of rates, service, and competition. The emphasis of each varies with the particular regulated industry. For example, the emphasis of railroad regulation is on rates to protect the public from monopoly practices. In contrast, the emphasis of motor carrier regulation is on competition to protect the public from ruinious competition and to promote a financially responsible and stable industry. Dr. Donald V. Harper, Professor of Transportation and Logistics at the University of Minnesota, summed up the purpose of motor carrier regulation as providing the public with adequate motor carrier service at reasonable prices by stabilizing rates and fares and ensuring that the carriers are financially responsible and stable".[6] Dr. Harper maintains the "cornerstone" of highway transportation is control over entry into the industry. The

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[6]Donald V. Harper, Transportation in America: Users, Carriers, Government, Englewood Cliffs, N.J.: Prentice-Hall Inc., 1978, p. 428.

regulatory agency then has control over both the quality and the number of carriers in the industry.[7] The North Dakota Legislature has carried the purpose of motor carrier regulation a step further to include coordination of intermodal transportation,[8] i.e. considering regulation of motor carriers as well as regulation of the railroad, water carrier, and air freight industries.

The Interstate Commerce Commission (ICC) and various state regulatory agencies such as the North Dakota Public Service Commission (NDPSC) are responsible for the economic regulation of motor carriers. The ICC has jurisdiction over interstate freight movements while the state regulatory agency has jurisdiction over intrastate movements.[9] The Department of Transportation (DOT) is a third agency with a role in economic regulation. They influence economic regulation of motor carriers indirectly through policy review, critique, and recommendation. They also influence economic regulatory policy through intervention in ICC cases. However, they do not have a direct regulatory role in economic aspects of regulation.

The objectives of regulating safety in the motor carrier industry obvisouly focus on protecting the public and motor carrier employees. The North Dakota Legislature has set forth

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[7] Ibid.

[8] North Dakota Century Code 49-18-06.3 "Carefully to preserve, foster, and regulate transportation and to permit coordination of transportation facilities".

[9] Interstate freight movements originate in one state with an ultimate destination in another state. Intrastate movements originate and terminate within the borders of one state.

the following objective for regulating intrastate motor carriage: "To protect the safety and the welfare of the traveling and shipping public in their use of the highways".[10] Origially, the Interstate Commerce Commission had authority over interstate safety aspects. That responsibility was transferred to the Department of Transportation when it was established in 1967. Regulation concerning safety is presently one of the primary functions of the DOT and includes such safety considerations as: the qualifications of motor carrier employees; the maximum number of hours an employee may serve in a day; the transportation of hazardous materials; and the "standards" of the equipment used in the operation.[11] Since the DOT was created, there has been a movement toward establishing state level departments of transportation to perform a similar function to the federal DOT. This has not yet taken place in North Dakota where the authority to issue rules and regulations over safety rests with the Public Service Commission, and the enforcement of those rules and regulations rests with the North Dakota State Highway Department.[12] The Public Service Commission may either issue its own rules and regulations regarding safety or it may adopt some or all of the rules and regulations adopted by the Inter-

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[10] North Dakota Century Code 49-18-06.2.

[11] D. Phillip Locklin, Economics of Transportation, (Homewood, Ill: Richard D. Irwin, Inc., 1972), p. 680.

[12] Telephone conversation with Daniel Kuntz, Assistant Commerce Counsel, North Dakota Public Service Commission, June 12, 1980.

state Commerce Commission (now the rules and regulations of the Department of Transportation).[13]

Regulation designed to protect the highway system is of unquestionned importance. The objectives of this type of regulation are to provide for adequate transportation surfaces for our national defense system, for commerce, and for public use. One of the reasons the North Dakota Legislature put forth for regulation of intrastate motor carriage was "to relieve the existing and future burdens upon the highways arising by reason of the use of such highways by motor vehicles for hire."[14]

Regulation designed to protect our highway system is under the authority of several agencies. The Federal Highway Administration branch of the Department of Transportation has the authority to set maximum size and weight limitations on the Interstate System. The various states have the authority to set their own standards for all roads within their boundaries.[15]

Different size and weight restrictions from state to state are a major source of controversy in highway regulation today. Long-haul interstate truckers would obviously favor uniform weight restrictions throughout the states in which he or she travels. Senator Jonn Melcher stated he withheld his support from the Motor Carrier Act of 1980 because it did not contain

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[13]North Dakota Century Code 49-18-46.

[14]North Dakota Century Code 49-18-06.1.

[15]In North Dakota, the North Dakota Highway Department set the standards for all state and U.S. highways, and the various county road departments set the standards on the county roads.

provisions dealing with this very significant problem of different size and weight restrictions among the states.[16] The disparities among state restrictions are caused by such items as the materials used in the construction of the highways different soil structures, temperature extremes, and so forth.[17] Currently the movement toward uniformity is growing stronger, although no legislative bill has been passed by Congress as of yet.

Development of Regulation

Prior to 1935 in the "pre-interstate regulatory period" the motor carrier industry was characterized by ruinious competition. During this period unemployment reached almost 25 percent,[18] and the relative ease of entering the motor carrier industry gave those unemployed a temporary source of income.[19] However, these new entrants to the industry provided additional service to an industry already suffering from an overcapacity because of declines in traffic due to the depressed state of the economy.[20] Many of the new entrants had poor financial management skills

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[16]"Transportation Week," Traffic World, June 30, 1980, p. 16.

[17]Personal interview with Tom Magin, Director of Truck Regulatory, North Dakota Highway Department, June 12, 1980.

[18]Milton H. Spencer, Contemporary Economics, 2nd ed. (Worth Publishers, 1974).

[19]Donald V. Harper, Transportation in America: Users, Carriers, Government (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p. 427.

[20]Ibid.

and low financial reserves, and users of motor carrier services shopped around to find the lowest rate forcing motor carriers to offer a rate lower than they would normally offer.[21] Many motor carriers failed during this period due to this ruinious competition. One explanation for the failures is that new entrants to the industry would offer a rate below their fully allocated cost, as portrayed in Figure 1. In some cases, the rate quoted would be below the average variable cost, lying somewhere between the average variable cost and the out of the pocket cost.

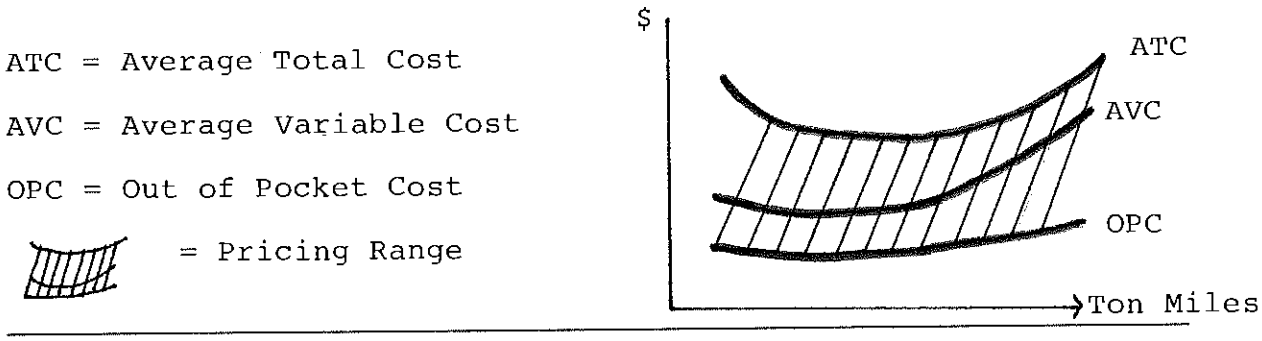

Figure 1.--Pricing of Motor Carriers Prior to Interstate Regulation.

The drive for interstate regulation of motor carriers was spurred in response to the conditions of the pre-interstate regulatory period. There was no general public outcry for the regulation of motor carriers as there was for the regulation of the railroads. The drive for regulation was spearheaded by specific interest groups. Users of motor carrier service were split

[21] Ibid.

on the issue of regulation. Some shippers favored regulation for want of better service.[22] Other shippers opposed regulation because it gave them a stronger bargaining position in dealing with carriers.[23] Three of the most influential interest groups in the drive for regulation were the railroads, the large established motor carriers, and the state regulatory commissions.

Although many motor carriers opposed interstate regulation, some of the large, established motor carriers supported the movement toward interstate regulation of motor carriers.[24] They were the motor carriers who had made a long-run commitment to the motor carrier industry and favored regulation to protect the industry from ruinious intramodal competition.[25] Joseph B. Eastman, an Interstate Commerce Commissioner in the 1930's set forth the importance of motor carrier participation in the drive for interstate regulation of motor carriers remarking, "Take the Motor Carrier Act of 1935...and I doubt it would have

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[22] Ibid.

[23] James C. Nelson, "Transportation and National Policy: The Role of Regulation Reexamined, New Concepts in Transportation Regulation" (United States Government Printing Office, Washington, D.C.: National Resources Planning Board, May, 1942), p. 202.

[24] Ibid.

[25] Donald V. Harper, Transportation in America: Users, Carriers, Government (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978) p. 427.

passed, if it had not in the end received large support from the motor carriers themselves".[26]

The railroads were a major force in the drive for interstate regulation of motor carriers. They suffered from a decline of traffic due to the depression which was aggrevated by the ruinious competition in the motor carrier industry.[27] The railroads agreed that all common carriers for hire should be regulated.[28] They claimed that motor carriers must be regulated to protect the railroad industry as well as to protect the highway system which was built and maintained, in a large part, by general taxes of which the railroads were a significant contributor.[29]

State regulation of motor carriers antedated federal regulation. By 1932, 39 states were regulating motor carriers of property.[30] The state regulatory agencies began their drive toward interstate regulation of motor carriers in 1925 when two supreme court cases effectively stopped the state agencies

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[26]James C. Nelson, "Transportation and National Policy: The Role of Regulation reexamined, New Concepts in Transportation Regulation" (United States Government Printing Office, Washington, D.C.: National Resources Planning Board, May, 1942), p. 202.

[27]Dudley F. Pegru, Transportation: Economics and Public Policy, rev. ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1968), p. 339.

[28]Ibid., p. 335.

[29]Donald V. Haper, Transportation in America: Users, Carriers; Government (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p. 428.

[30]Larry T. Dobesh, "Profit Standards for Regulated Motor Carriers," North Dakota Quarterly, Autumn, 1977, p. 53.

from regulating interstate carriers.[31] Those decisions limited the scope of state regulatory authority to the regulation of intrastate operating motor carriers only. Thus, any motor carrier could escape regulation merely by crossing state lines with a particular load. The state agencies, seeking to close this regulatory gap, were another significant force in the drive for interstate regulation of motor carriers.

ECONOMIC STRUCTURE OF THE MOTOR CARRIER INDUSTRY

Regulation of motor carriers depended heavily upon the existing railroad regulation even though the characteristics of the two industries differed greatly. As Dr. Dudley F. Pegrum, Professor Economics, Emeritus, at the University of California at Los Angeles stated,"if there had been no railroads, and if motor transport had developed without them, the pattern of regulation would have been totally different."[32]

Starting in 1925, 34 separate bills designed to regulate interstate motor carriage were introduced into Congress. This continued until August 9, 1935 when the Motor Carrier Act of 1935 was passed.[33] This Act provided for regulation that closely resembled the existing regulation of the railroad industry even though the two industries had distinctly different economic char-

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[31]Bush vs. Kykendull, 267 vs. 307 (1925) and Buck vs. Maloy, 267 vs. 317 (1925).

[32]Dudley F. Pegru, Transportation: Economics and Public Policy, rev. ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1968), pp. 358-359.

[33]James C. Nelson, "The Motor Carrier Act of 1935", The Journal of Political Economy, 44 (August, 1936): p. 464-465.

acteristics such as the number and sizes of the firms in each industry, the relative degree of concentration in the two industries, the amount of investment in each industry, and the cost structures of the two industries.

The motor carrier industry has about 16,000 firms regulated by the ICC and an estimated 150,000 to 200,000 other for-hire motor carriers. The railroad industry consists of approximately 330 firms.[34] In 1976, there were 214 regulated motor carriers with annual gross revenues in excess of $10 million, averaging $55.3 million per carrier.[35] The railroad industry, on the other hand, had only 52 firms with annual gross revenues in excess of $10 million with an average of $357 million[36] almost six and one-half times the average of the motor carrier industry. The four largest motor carriers account for 17 percent of the total industry's gross revenues and the largest eight contribute 23 percent. The railroad industry is relatively more concentrated with the largest four firms contributing 38.62 percent of the industry's total gross revenues and the largest eight firms contributing 63.26 percent (see Table 2).

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[34]Donald V. Harper, Transportation in America: Users; Carriers; Government (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1978), pp. 203, 227.

[35]G. Barry Kohler, "1978 Financial Analysis of the Motor Carrier Industry" (Bank of America, 1979), p. 37.

[36]Donald V. Harper, Transportation in America: Users; Carriers; Government (Englewood Cliffs, NJ: Prentice-Hall Inc., 1978), p. 215.

TABLE 2.--DEGREES OF CONCENTRATION IN THE MOTOR CARRIER AND THE RAILROAD INDUSTRIES.

Industry	Four Largest Firms (% of total industry revenues)	Eight Largest Firms (% of total industry revenues)
Motor Carrier	17	23
Railroad	38.62	63.26

Source: Luther S. Miller, "Inside", Railway Age: (June 30, 1980) and John W. Snow, Regulation of Entry and Pricing in Truck Transportation (Washington, D.C.: American Institute for Public Policy Research, 1977), p. 20.

The railroad industry is a more capital-intensive industry. The average investment for each of the 52 Class I railroads[37] was $529 million[38] in 1976. In 1973, the investment for each dollar of revenue was $2.17.[39] The relatively less capital-intensive motor carrier industry has an average investment of $5.4 million for the 1000 Class I and Class II regulated interstate motor carriers,[40] one-tenth the investment of the average Class I railroad. The investment for each dollar of revenue was only 22 cents, about one-tenth that of the railroads.[41] Finally, the railroad industry's ratio of revenue to investment is about 67 percent, meaning the capital investment "turns over" about once every three years.[42] Motor carriers turned over their capital about 4.6 times in 1974,[43] 14 times faster than the railroads.

The motor carrier and the railroad industries have very different cost structures. The Interstate Commerce Commission has found that over a 12-month period, 90 percent of total motor carrier costs are variable, leaving only about 10 percent of

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[37] A Class I railroad is one that has revenues in excess of $10 million.

[38] Donald V. Harper, Transportation in America: Users; Carriers; Government (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1978), p. 209.

[39] Ibid.

[40] Ibid, p. 234.

[41] Ibid.

[42] Ibid, p. 209.

[43] Ibid, p. 235.

total costs fixed.[44] The cost studies relating to railroads are conflicting, but they have shown that a substantial portion of railroad costs could be fixed, ranging from 20 percent to almost 70 percent.[45]

Railroads are the prime users of differential pricing, i.e. a system of pricing whereby the carrier charges different prices to different segments of freight traffic for essentially the same service but the variable prices cannot be explained by differences in the cost of service.[46] Differential pricing is impelled by two main characteristics which are, a large portion of fixed costs and excess or unused capacity.[47] The railroads have both of these characteristics; motor carriers have neither. However, differential pricing developed in the motor carrier industry when motor carriers first came under regulation, they were required to file rate tariffs with the ICC. They had no organized rate structures at this time. As a matter of convenience, they adopted the tariffs of the railroads. Another reason for adopting the railroad's rate tariffs was to "gear" motor carrier pricing toward the pricing of railroads, the principle competitor of motor carriers.[48] After this motor carriers be-

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[44] Ibid. p. 230

[45] D. Phillip Locklin, Economics of Transportation, 7 d ed. (Homewood, Ill: Richard D. Irwin, Inc., 1972), p. 168.

[46] Donald V. Harper, Transportation in America: Users, Carriers, Government Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p. 159, 206.

[47] Ibid, p. 161

[48] Ibid. p. 232-233.

gan to use differential pricing even though their industry was "not suited" to this form of pricing.

In 1974 Class I motor carriers received an average of 9 cents per tonmile in revenue while the comparable figure for Class I railroads was only 1.85 cents, about one-fifth that of the motor carrier industry.[49] Three explanations for this difference of 7.15 cents could be the composition of traffic handled by each mode, the different length of hauls, and the different cost structures of each mode.

Motor carriers tend to transport relativley high-rated products[50] in comparison to the railroads. Over 85 percent of Class I motor carrier freight consists of relatively high-rated manufactured products, while the majority of railroad freight consists of relatively low-rated products of mines, forests, and agriculture.[51] The relatively high-rated motor carrier traffic would carry a higher rate per ton-mile than would the relatively lower-rated traffic of the railroads which provides a partial explanation for the 7.15 cent difference in revenue per ton-mile between the two modes.

Another explanation could be the difference in the length-of-haul between the two modes. In 1974, the average length-of-haul

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[49] Rober C. Lieb, Transportation: The Domestic System (Reston, Va: Reston Publishing Co., Inc., 1978), p. 44.

[50] The freight rates charged for transportation services normally have a direct relationship to the "rating" of the particular commodity carried, i.e. as the rating increases so does the applicable rate charged. A commodity is rated according to such considerations as value, weight, carrier liability, value of service, etc. Ibid, p. 188.

[51] Ibid. p. 44.

for the railroad industry was 533 miles; the motor carrier average was 280 miles.[52] As shown in Figure 2, motor carriers have a lesser rate per 100 pounds over the short-haul, and railroads have a lesser rate per 100 pounds over the long-haul. The reason for this is that as ton-miles increase, railroads may spread their large portion of fixed costs over more units. The unit costs of motor carriers also "taper", but the fixed cost element is much less than the railroad's fixed cost element. Therefore, the unit cost decreases at a slower pace and provides another explanation for the disparity between the two mode's average revenue per ton-mile.

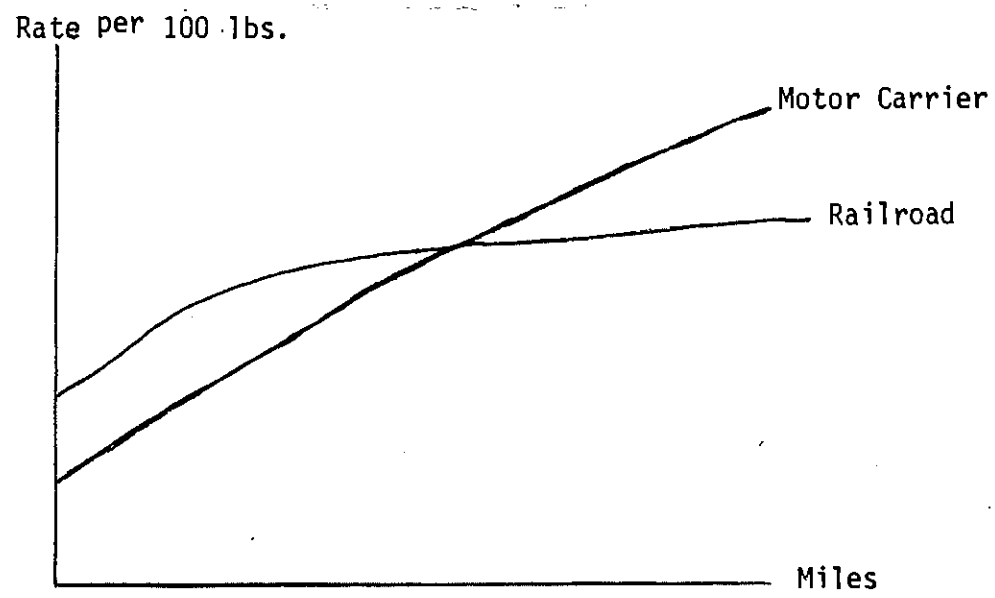

Figure 2.--Rate Relationships of the Motor Carrier and Railroad Industries.

[52] Ibid. p. 44.

Current Regulation

Current regulation of interstate motor carriers is provided for by two primary legislative acts: the Motor Carrier Act of 1935 and the Motor Carrier Act of 1980. The Motor Carrier Act of 1935 provided for extensive regulation of interstate motor carriers which was very similar to the already existing regulation of railroads.[53] Congress declared this legislation was passed "to recognize and preserve the inherent advantages of, and foster sound economic conditions in motor transportation and among motor carriers."[54]

On July 1, 1980, the Motor Carrier Act of 1980 was signed into law by President Carter which substantially changed some of the provisions in the 1935 Act and its various amendments. President Carter maintains this new legislative action will cut consumer costs by an estimated $8 billion annually and some hundreds of millions of gallons of gasoline annually.[55] The purpose of this Act as set forth by Congress is to "reduce unnecessary regulation by the Federal Government".[56] The National Transportation Policy was amended "to promote competitive and efficient transportation services in order to:

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[53]Dudley F. Pegru, Transportation: Economics and Public Policy, reve. ed., edited by Lloyd G. Reynolds (Homewood, Ill.: Richard D. Irwin, Inc., 1968), p. 340.

[54]Robert C. Lieb, Transportation: The Domestic System (Reston, Va.: Reston Publishing Co., Inc.), pp. 230-231.

[55]Robert M. Butler, "Motor Carrier Act of 1980 signed by President Carter at the White House", Traffic World (July 7, 1980), p. 66.

[56]Public Law 96-296.

A. meet the needs of shippers, receivers, and consumers;

B. allow a variety of quality and price options to meet changing market demands and the diverse requirements of the shipping public;

C. allow the most productive use of equipment and energy resources;

D. enable efficient and well-managed carriers to earn adequate profits, attract capital, and maintain fair wages and working conditions;

E. provide and maintain service to small communities and small shippers;

F. improve and maintain a sound, safe, and competitive privately-owned motor carrier system;

G. promote greater participation by minorities in the motor carrier system;

H. promote intermodal transportation.[57]

The remainder of this section will set forth the current regulation of common motor carriers of general freight relating to entry, rates, reporting, insurance, security issuances, and consolidations, acquisitions and mergers.

The Motor Carrier Act of 1935 provided for the Interstate Commerce Commission to control entry into the motor carrier industry subject to the provisions of the Act. Before commencing operations as a common carrier, an operator has to obtain a certificate of public convenience and necessity.[58] To obtain a certificate under the 1935 Act, an operator had to be fit, willing, and able to perform the proposed service and had to prove that

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[57] Ibid.

[58] 49 USC Sec. 306.

the proposed service was necessary for the present or future public convenience and necessity.[59]

The Motor Carrier Act of 1980 significantly changed these provisions. The operator must still be fit, willing, and able, but now, the operator must only show evidence demonstrating that the proposed service will serve a useful public purpose, responsive to a public demand or need.[60] Any protestor objecting to the proposed service must now prove to the satisfaction of the Interstate Commerce Commission that the proposed service is inconsistant with the public convenience and necessity.[61] This shifts the burden of proof from the applicant to the protestor. The Interstate Commerce Commission must also consider the National Transportation Policy as set forth by the Act as well as the effect of the proposed service on the existing carriers although the Commission may not find the diversion of revenue and traffic from an existing carrier to be in and of itself inconsistent with the public convenience and necessity.[62]

The 1980 Act further states that the test of fit, willing, and able is the only test when the application for authority relates to:

1) transportation to any community not regularly served by a common carrier of property;

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[59] 49 U.SC Sec. 307

[60] Public Law 96-296

[61] Ibid.

[62] Ibid.

2) transportation services which will be a direct substitute for abandoned rail services if such abandonment results in a community not having any rail service and if the application for authority is made within 120 days after the abandonment has been approved by the Commission;

3) transportation for the United States Government of property other than used household goods, hazardous or secret materials, and sensitive weapons and munitions;

4) transportation of shipments weighing 100 pounds or less if transported in a motor vehicle in which no one package exceeds 100 pounds;

5) transportation by motor vehicle of food and other edible products (excluding alcoholic beverages and drugs) intended for human consumption, agricultural limestone and other soil conditioners, and agricultural fertilizers provided that the transportation is provided with the owner of the motor vehicle in the vehicle (except in emergency) and provided that the total tonnage of these movements does not exceed the total tonnage of this owner-operator operating under the agricultural exemptions of this Act.[63]

Under the entry provisions, a common carrier's right to protest an application for operating authority is limited to:

1) common carriers possessing authority to handle the traffic for which authority is applied and which:

   a) are willing and able to provide service that meets the reasonable needs of the shippers involved; and

   b) have performed or solicited service within the scope of the application during the previous 12-month period;

2) common carriers that have pending before the Interstate Commerce Commission an application filed prior in time for substantially the same service;

3) the Commission grants leave to intervene upon showing interests that are not contrary to the National Transportation Policy.[64]

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[63] Ibid. For the agricultural exemptions see page 30.

[64] Ibid.

Contract carriers may not protest an application to provide service. However, if a carrier holds both common and contract authority, that carrier may protest to the extent of its common carrier authority.

The Motor Carrier Act of 1980 also provided for Interstate Commerce Commission control over motor carrier rates. Under the 1935 Act, the duty to establish, observe, and enforce reasonable rates rests with the common carrier of property. These rates can change by filing the proposed rate 30 days prior to its effective date. The Interstate Commerce Commission could act, either upon its own initiative or upon complaint by an interested party, to suspend and investigate the proposed rate for a period of up to seven months. If the Interstate Commerce Commission found any rate to be unjust, unreasonable, or discriminatory they had the authority to set the minimum, the maximum or the actual rate.

The 1980 Act provides for greater pricing flexibility in the industry. The Commission may no longer suspend, investigate, revise, or revoke any rate proposed on the grounds that the rate is unreasonably too high or too low if:

1) the carrier notifies the commission that it wishes to have the proposed rate given consideration pursuant to this subsection of the Act; and

2) the aggregate of increases and decreases in any such rate is not more than 10 percent above the rate in effect one year prior to the effective date of the proposed rate, nor more than 10 percent below the lessor of the rate in effect one year prior to the effective date of the proposed rate or the rate in effect July 1, 1980.[65]

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[65] Ibid.

The Commission has the power to change the 10 percent zone of rate freedom if it finds there is sufficient actual and potential competition to regulate rates and there are benefits to the carriers, shippers, and the public from further rate flexibility. However, the Commission may not increase the percentages by more than five percent in any one year period.[66]

When determining whether or not a rate proposed within 730 days of enactment fails within the zone of rate freedom, general rate increases obtained in the one-year period prior to the effective date of the proposed rate are not included in the calculation except for any portions in excess of 5 percent.[67] When a proposed rate is to take effect after 730 days of enactment, the ten percent of Interstate Commerce Commission percentage relating to the upper limit on the zone of rate freedom will be increased or decreased by the percentage change in the Producers Price Index that occurs during the one-year period prior to the effective date of proposed rate.[68] The rates that are implemented under these procedures will be subject to anti-trust laws except for the docketing and publishing of such rates.[69]

The 1980 Act also provides for further rate-flexibility by allowing carriers to reduce rates in return for limited liability on the freight transported. The liability of the carrier must be established by written declaration by the shippers or

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[66] Ibid.

[67] Ibid.

[68] Ibid.

[69] Ibid.

be a written agreement between the carrier and the shipper. However, the Interstate Commerce Commission may require the carrier to have in effect, and keep in effect during the period of agreement surrounding the limited liability rate, another rate for the same service that does not limit the liability of the carrier.[70]

The 1935 Act provided for Interstate Commerce Commission jurisdiction over consolidations, acquisitions, and mergers of motor carriers. Senator Burton K. Wheeler explained the reason for this provision, declaring:

> "At present most truck operations are small enterprises. However, there are many rumors of plans for the merging of existing operations into sizeable systems. In view of past experience with railroad and public-utility unifications, it is regarded as necessary that the Commission have control over such developments."[71]

The Interstate Commerce Commission will allow motor carriers to consolidate or merge their operations if the proposed action is found to be "in the public's interest."[72] The Interstate Commerce Commission must consider the effect of the proposed action upon transportation service for the public, the total fixed costs of the unified company and the interest of all the involved employees in the transaction. The Commission may not authorize such a transaction if total fixed charges are in excess of the combined fixed charges of the firms involved before the transaction.[73]

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[70] Ibid.

[71] James C. Johnson, Trucking Mergers (Lexington, Mass: D.C. Health and Company), p. 52.

[72] Ibid. p. 53.

[73] Ibid.

Originally an exemption was allowed if the combining carriers had a total number of less than 20 vehicles. However, due to administrative difficulties encountered by the Interstate Commerce Commission, the less than 20 rule was replaced by a gross revenue stipulation. Now the exemption from Interstate Commerce Commission jurisdiction exists if the combining firms have total gross revenues of less than $300,000 for the 12-month period prior to unification. The 1980 Act does not change any of the provisions of the above paragraph. However, it does change the procedural aspects relating to the Interstate Commerce Commission's processing of applications which is beyond the scope of this paper.

The Interstate Commerce Commission is authorized by the 1935 Act to require annual, periodical, or special reports from motor carriers. The 1980 Act had no affect on this provision. The purpose for motor carrier reporting is undoubtedly to provide the Interstate Commerce Commission with a meaningful data source from which it may base decisions concerning policies and rate-making.

Currently, the report required by the Interstate Commerce Commission consists of financial schedules, operating expense schedules, and operating statistics. The financial schedules are used to compute the carrier's financial condition and the average investment in carrier operating property.[74] The ope-

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[74]Dr. Edward J. Marien and Glen L. Fast, "The Nature of Motor Carrier Costs and ICC Highway Farm B Costing Methodology" presented at the Motor Carrier Costing and Analysis Seminar at Management Institute, University of Wisconsin - Extension, April 9-10, 1979.

rating expense schedule consists of expenses that are very important to determine costs of traffic movements.[75] The last section of the annual report, operating statistics, provides information necessary to distribute expenses to particular services and also to develop unit costs for each service.[76]

To afford the public some protection from irresponsible motor carriers, the Motor Carrier Act of 1935 provided for the Interstate Commerce Commission to establish rules and regulations regarding insurance and surety bonds as a condition for motor carriers to receive operating authority. The insurance and surety bond requirements cover bodily injury or death resulting from the negligent operation, maintenance, or use of motor vehicles as well as for loss and damage to property of others. The 1935 Act also provides for self-insurance by motor carriers subject to the rules and regulations adopted by the Interstate Commerce Commission.

The 1980 Act places the duty to establish regulation to require minimal insurance or surety bond requirements with the Secretary of Transportation. The Secretary of Transportation may reduce these minimum insurance requirements below $750,000 provided he/she finds that reduction below $750,000 will not adversely affect public safety and will prevent a serious disruption in transportation service. However, in no event may the Secretary reduce the insurance requirements below $500,000

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[75] Ibid.

[76] Ibid.

over the next two-year period. In the case of hazardous materials, the insurance requirements may not be less than $5 million unless the Secretary of Transportation finds that a reduction will not adversely affect public safety and will prevent a serious disruption in transportation service. In that event the Secretary of Transportation may reduce insurance requirements to not less than $1 million.

Security issuances of motor carriers are subject to regulations by the Interstate Commerce Commission under the 1935 Act. The purpose is to ensure that the carriers are using the proceeds from such issuances for legitimate purposes.[77] For example, proposed security issuances have been denied because the purpose of such an issuance was to get rid of competitors or to give special salaries or bonuses to employees.[78] An exemption from Interstate Commerce Commission regulation over security issuances exists for smaller concerns where the value of the capital stock and the principle value of other securities along with any proposed issuances do not exceed $1 million. Also exempt from Interstate Commerce Commission authority are any issuances of notes that are less than $200,000 and mature within two years. Any other proposed issuances of such notes must have Interstate Commerce Commission approval.

Common Versus Contract Carrier Regulation

Many of the provisions in the 1935 Act and its various amend-

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[77]James C. Johnson, Trucking Mergers (Lexington, Mass.: D.C. Heath and Co., 1973), p. 39.

[78]Ibid.

ments apply to contract carriers as well as to common carriers. Provisions, such as those relating to reporting, mergers, consolidations, acquisitions for control, and security issuances, apply similarily to both common and contract carriers. However, regulation involving entry, rates and insurance requirements, according to the 1935 Act and its amendments, apply differently to these two carrier classes.

Contract carriers had to obtain a permit to operate before commencing operations. To obtain such a permit, a contract carrier had to be fit, willing, and able to perform the service, and the proposed service had to be "consistent with the public interest and the national transportation policy". Under the 1980 Act the Interstate Commerce Commission must appraise the following items when considering a contract motor carriers operating authority application:

a) the nature of the transportation proposed to be provided;

b) the effect that granting the permit would have on the protesting carriers if such a grant would endanger or impair their operations to an extent contrary to the public interest;

c) the effect that denying the permit would have on the person applying for the permit; its shippers, or both; and

d) the changing character of the requirements of those shippers.

In the past, the requirement of contract carriers to show that the proposed service was consistent with the public interest was presumably a less exacting requirement than was the require-

ment of common carriers "to prove" public convenience and necessity.[79] However, the Motor Carrier Act of 1980 has substantially lessened entry requirements for common carriers while leaving entry requirements for contract carriers "virtually" the same. Currently, a common carrier must show evidence demonstrating that the proposed service will serve a public purpose responsive to a public demand or need. Contract carriers, on the other hand, must still demonstrate that the proposed service is consistent with the public interest and the national transportation policy.

The second major difference between common and contract carrier regulation is in regards to rates. Under the 1935 Act, contract carriers only had to file their minimum rates. However, in 1957, Congress amended the act to require contract carriers to publish their actual rates and adhere to them.[80] Contract carrier rates are the result of negotiations between the carrier and the shipper. For this reason, the negotiated rate is generally taken except in extreme cases when discriminatory or unreasonable pricing exists in which case the rate may be suspended and investigated. Following investigation, the Interstate Commerce Commission may prescribe the minimum rate, not the actual or maximum rate, relying on competition to provide effective maximum rate control.[81]

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[79] D. Phillip Locklin, Economics of Transportation (Homewood, Ill.: Richard D. Irwin, Inc., 1972), p. 680.

[80] Robert C. Lieb, Transportation: The Domestic System (Reston, Va.: Reston Publishing Co., Inc., 1978). p. 233

[81] Ibid.

The 1980 Act provided for a zone of rate-freedom; however, this provision does not apply to contract carriers.

Insurance requirements are the last major difference between common and contract motor carrier regulation. Contract carriers, unlike common carriers, do not have to carry insurance or surety bond to cover claims on the cargo they haul. Nevertheless, they must carry personal liability and property damage insurance.

Exemptions to Regulation

The Motor Carrier Act of 1935 and its various amendments provide for numerous exemptions which were further expanded by the 1980 Act.

First, exemptions from Interstate Commerce Commission regulation provided for agricultural groups including motor vehicles owned and operated by a farmer and used in the transportation of his/her agricultural commodities and products thereof as well as the transportation of his/her supplies to the farm. Second, exemptions for motor vehicles controlled by an agricultural cooperation, including backhaul movements up to 25 percent of the carriers total annual tonnage. The third exemption was for motor vehicles used in carrying ordinary livestock, fish (including shellfish, unmanufactured agricultural commodities) and horticultural products. These exemptions do not include motor vehicles used in carrying any other property or passengers for compensation. The 1980 Act expanded these agricultural exemp-

tions to include livestock and poultry feed, and agricultural seeds and plants (those not already exempted) if such products are transported to a site of agricultural production or to a business enterprise engaged in the sale to agricultural producers of goods used in agricultural production. The rationale for agricultural exemptions is to aid the farmer and/or fisherman/woman to get his or her product to the market. Due to the seasonality and perishability of these products, "a transportation system that can swell up to gigantic portions at harvest time and then slide back to nothing at other times was needed.[82]

Other exemptions provided by the 1935 and 1980 Acts include:

1) transportation local in nations;

2) transportation under the control of the Secretary of the Interior (such as transportation of persons around national parks and monuments);

3) private motor carriers;

4) transportation incidental to railroads, water carriers, freight forwarders, and air freight;

5) transportation solely of newspapers;

6) transportation of pallots and empty shipping containers (other than those used in the transportation of motor vehicles or parts of motor carriers;

7) transportation of material, crushed, vesicular rock to be used for decorative purposes;

8) transportation of wood chips; and

9) transportation by motor carriage in lieu of aircraft because of weather conditions.

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[82]James C. Johnson, Trucking Mergers (Lexington, Mass.: D.C. Heath and Company, 1973), p. 44.

As can be seen in the list above, the exemptions are quite narrow but cover a broad range of interests. James C. Johnson, of the University of Tulsa, maintains these exemptions exist for any or all of the following reasons: 1) the services involved were not considered to be of national transportation importance; 2) if they were regulated, the administrative burden would be greater than the benefits received; and 3) the exemptions were the result of special interest groups that did not want to be federally regulated.[83] Nevertheless, the importance of this sector cannot be understated. It must be remembered that the total number of carriers involved may be as many as 200,000 which is 12½ times greater than the number of Interstate Commerce Commission regulated motor carriers.[84]

North Dakota Intrastate Regulation

In 1914 the first state started regulating motor carriers and by 1932, 39 states were regulating motor carriers of property.[85] North Dakota state regulation of motor carriers commenced in 1923 when the North Dakota Board of Railroad Commissioners (name later changed to the North Dakota Public Service Commission) was given the authority to regulate motor carriers of persons and property operating in the state of North Dakota.

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[83] Ibid.

[84] Donald V. Harper, Transportation In America; Users, Carriers, Government (Englewood, N.J.: Prentice-Hall, Inc., 1978), p. 227.

[85] James C. Johnson, Trucking Mergers (Lexington, Mass.: D.C. Heath and Co., 1973), p. 23 and Larry J. Dobesh, "Profit Standards for Regulated Motor Carriers", The North Dakota Quarterly (Autumn, 1977), p. 53.

The regulation that has developed in North Dakota is very similar to the federal regulation that existed prior to the passage of the Motor Carrier Act of 1980.

First, similar to the degree of Interstate Commerce Commission authority prior to the passage of the Motor Carrier Act of 1980, the North Dakota Public Service Commission (NDPSC) has the authority to prescribe the minimum, actual, or maximum rates of an intrastate common motor carrier.[86] The NDPSC will utilize this power if it finds the rate to be unjust, unreasonable, discriminatory, prejudicial, or preferential.[87] It also has the authority to prescribe the minimum rates of interstate contract carriers. However, the resultant rate may not be lower than the rates charged by common carriers providing "substantially the same service."[88] Therefore, shippers would make the decision of what "type" of carrier to use on the basis of service without respect to rates.

Second, quite similar to the degree of ICC authority prior to the 1980 Act, the North Dakota Public Service Commission also has the authority to regulate entry into the interstate motor carrier industry.[89] Every common carrier must obtain a Certificate of Public Convenience and Necessity before commencing intrastate operations in the state of North Dakota. The NDPSC will consider existing travel upon the proposed route of the

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[86] ND Century Code 49-18-08.

[87] ND Century Code 49-18-08.

[88] ND Century Code 49-18-19.

[89] ND Century Code 49-18-07.

carrier, the increased cost of highway maintenance and the effect of the proposed service on the other existing transportation facilities already providing the service. Any contract carrier must obtain a permit before commencing operations as an intrastate contract carrier in North Dakota.[90] The applicant for intrastate contract carrier authority must prove to the NDPSC that the public safety will not be endangered, the public use of the highways will not be impaired, the condition of the highways will not be directly or indirectly impaired, and the proposed service will not impair the efficient public service of any authorized common carrier serving the same territory.[91] The NDPSC can issue a temporary authority if shown an "immediate and urgent" need. However, the issuance of a temporary authority does not create a presumption that a permanent authority will be granted.[92] This temporary authority has a maximum effective time period of 180 days after which the temporary authority will expire.[93]

Third, the NDPSC will not issue any operating authority before all required insurance policies are filed and approved.[94] Unlike the Interstate Commerce Commission, the NDPSC treats common and contract carriers virtually the same with respect

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[90] ND Century Code 49-18-23.

[91] Ibid.

[92] ND Century Code 49-18-12.

[93] Ibid.

[94] ND Century Code 49-18-33.

to insurance requirements. The NDPSC has the authority to prescribe minimum or actual insurance requirements.[95] The NDPSC requires contract carriers to carry cargo liability insurance unless the shipper-carrier contract provides for the carrier having no liability in the event of a loss.[96]

Fourth, like the Intrastate Commerce Commission, the NDPSC has the authority to prescribe a uniform system of accounts.[97] A copy of the carrier's annual report must be filed with the NDPSC on or before the 15th day of the fourth month following the close of the accounting period whether based on a fiscal or a calendar year. The current annual report of the NDPSC consists of six schedules which convey operating statistics, general descriptions of the carriers, segregations of North Dakota operations from out-of-state operations, a description of the equipment used in the operations, and revenues and tonnage divided among different freight classifications. However, carriers that must file the Interstate Commerce Commission annual report may file that report as an alternative to the NDPSC report. This serves as a reporting convenience to the carriers that must file with both regulatory agencies.

Finally, the NDPSC uses a different method than the Interstate Commerce Commission to distinguish between common and

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[95] Ibid.

[96] Telephone converstaion with Morris Arvis, Assistant Director of the Motor Carriers Division, North Dakota Public Service Commission, June 26, 1980.

[97] ND Century Code 49-18-08 and 49-18-19.

contract carriers. The NDPSC has established a rule which puts forth a criterion for differentiating between common and contract carriers. The fact that a carrier has more than one consignor or more than three consignees will be used as prime facie evidence that the carrier is in fact a common carrier.[98] Until a few years ago, the Interstate Commerce Commission used a "rule of eight" to differentiate between common and contract carriers. Under this standard a carrier that provided service to more than eight shippers was considered a common carrier. Presently, there is no criterion for differentiation. A contract carrier may have an unlimited number of shippers and will not lose status as such, provided that carrier fulfills its service obligation to the shippers.

Rates

The previous sections have dealt with the development of motor carrier regulation, the different economic structures of railroad and motor carrier industries, and the existing regulation of intrastate and interstate motor carriers. This section will provide a discussion of rates since, in many cases, rates often serve as the policy mechanism of motor carrier regulation.

Objectives of regulating motor carriers include providing the public with adequate motor carrier service . . . and to ensure that the carriers are financially responsible and stable.[99]

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[98]NDPSC Rule 69-03-01.

[99]Donald V. Harper, Transportation in America: Users, Carriers; Government (Englewood Cliffs, N.D.: Prentice-Hall, Inc., 1978), p.428.

Two implications of this objective could be that the rates must not be prohibitive to the shipper, while at the same time rate structures must provide adequate revenues that will allow the carriers to recover their costs and earn a "reasonable" rate of return. This rate of return must be high enough for the carrier to attract capital and obtain credit.

The rate structure of the motor carrier industry has evolved, from the state in the mid-thirties, to a rate structure that is more applicable to the motor carrier industry now. Nevertheless, rate determination is still a very complex procedure as it was then.

Freight classifications developed in response to the large number of rates, origins, and destinations that resulted from the many different segments of traffic and the differential pricing scheme used by the railroads. In an effort to make rate determination a simpler procedure, the railroads began to group and classify commodities by similar transportation characteristics.[100] The classification techniques of the railroads were adopted by the motor carriers in 1935 to partially fulfill regulatory requirements of the Motor Carrier Act of 1935.

Almost any article or commodity can be found in the National Motor Freight Classification and/or the Coordinated Motor Freight Classification. These classifications are alphabetical listings of articles or commodities along with their particular "ratings".

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[100]Ibid. p. 183.

A rating for a commodity or article is a number which is dependent upon several factors such as loading characteristics, value susceptibility to loss and damage, size of shipment, etc. Generally, there is a direct relationship between ratings and rates i.e., the higher the rating the higher the rate. For each article or commodity there are two possible ratings: a less than truckload rating (LTL) and a truckload rating (TL).

LTL ratings are applicable if the weight of a shipment is below the minimum rate factor which is normally expressed in thousands of pounds. TL ratings are applicable when the weight of a shipment equals or exceeds the minimum weight factor. For example, in shipment of iron elevator guides (item 34590 in Table 3), the minimum weight factor is 40,000 pounds. If the shipment weight is below 40,000 pounds, the applied rating would be 50, rather than a rating of 35 if the shipment weight was 40,000 pounds or above.

In some cases, the article or commodity may be subject to a any quantity (AQ) rating in which case only one rating is quoted. For example, greenhouses item 34800 in Table 3 would be subject to a rating of 200 without regard to shipment weight. To obtain the actual rate applicable to an article, the rating and the rate basis must be cross-referenced. "The rate-basis is a number assigned to various combinations of origins and destinations".[101] The rate-basis is located in a rate tariff

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[101]Robert C. Lieb, Transportation: The Domestic System (Reston, Va.: Reston Publishing Co., Inc., 1978 (p. 191).

TABLE 3.--A SAMPLE PAGE FROM THE NATIONAL MOTOR FREIGHT CLASSIFICATION

Item	ARTICLES	CLASSES LTL	CLASSES TL	MW
	BUILDING MATERIALS, MISCELLANEOUS, GROUP: subject to item 33570			
34440	Doors, with service cabinet compartments, with or without metal ventilators, in boxes or crates	100	55	24
34460	Doors, or Door Sections, garage or industrial building, overhead or sliding, wooden, with or without hardware applied, in packages, see Note, item 34282; also TL, loose	70	35	30
34480	Doors, cold storage room, insulated, with or without door frames, fixtures or power operated control mechanism, in boxes or crates:			
Sub 1	Metal faced or metal clad	77½	40	30
Sub 2	Plastic or plastic faced or plastic clad:			
Sub 3	With metal kickplates or toeplates	77½	40	30
Sub 4	Without metal kickplates or toeplates	125	85	14
34500	Doors, Partitions or Shutters, rolling, wooden, see Note, item 34282, in packages; also TL, loose	70	37½	36
34520	Elevator Car Platforms	85	45	24
34530	Elevator Car Sides or Tops, not attached to each other, in boxes or crates	85	45	24
34540	Elevator Cars, freight or passenger, KD	85	45	24
34550	Elevator Crossheads	50	35	40
34560	Elevator Gates, wooden:			
Sub 1	SU, in packages	85	35	30
Sub 2	KD or collapsed, in packages	70	35	30
34570	Elevator Guide Clips, iron, in packages	50	35	40
34580	Elevator Guide or Weight Posts, wooden	70	35	36
34590	Elevator Guides, iron	50	35	40
34600	Elevator Guides, wooden	70	35	36
34610	Elevator Plungers, steel, in boxes or crates or enclosed in steel casing	70	40	30
34620	Elevator Weights, iron	50	35	40
34640	Facings or Panels, building or wall, artificial stone, hollow molded or in relief, see Note, item 34642, in boxes	70	35	30
34642	NOTE—Applies on articles named or on corner pieces, molding or trim, only when containing 50 percent or more by weight of ground stone, with mineral-fibre reinforcement and plastic binder.			
34650	Fire Escapes, consisting of aluminum stepped ramp, and steel trap door with frame, see Note, item 34652, in packages	110	70	18
34652	NOTE—Applies only on fire escapes designed to be mounted into balcony floor.			
34660	Fire Escapes, steel, chute, tubular or spiral, in SU sections	150	70	15
34670	Fire Escapes, steel, NOI	70	37½	36
34720	Flashing, or Water or Vapor Barrier or Insulating Material, aluminum, copper, lead or steel, combined with asphalt, fabric, fibres, paper, asbestos felt or rubber, in boxes, crates or wrapped rolls, or in Packages 518 or 2196	70	35	36
34730	Flooring, elevated, disassembled, see Note, item 34732, in packages	60	37½	36
34732	NOTE—Applies only on flooring consisting of the following components: steel pedestals, aluminum or steel pedestal caps; extruded aluminum stringers or 16 gauge or thicker steel stringers for connecting pedestals; flooring panels constructed of extruded aluminum shapes with or without hard surface floor covering, or plywood or particle board combined with steel or aluminum, with or without hard surface floor covering; and the necessary fittings or fastenings required for installation.			
34740	Forms, concrete column construction, constructed of fibreboard cores or tubes containing fibreboard wallboard panels and wooden spacers	85	55	24
34750	Forms, concrete construction, paperboard, other than corrugated, folded flat	65	35	30
34760	Forms and Gaskets, sewer pipe joint, steel, nested, in boxes	70	40	30
34770	Forms or Molds, pipe joint construction, cotton or burlap, in bundles:			
Sub 1	Without wire or steel strapping ties	100	70	16
Sub 2	With wire or steel strapping ties	60	45	30
34780	Forms or Molds, NOI, concrete construction, iron, wood or iron and wood combined:			
Sub 1	SU, other than in panels	85	35	36
Sub 2	KD, or nested, or in panels	50	35	36
34790	Framing, wall or wall section, with installed water supply and drain lines	250	250	AQ
34800	Greenhouses, window or door type, SU, see Note, item 34801, in boxes or crates	200	200	AQ
34801	NOTE—Applies on window or door type greenhouses designed to be mounted over existing window or door openings, with or without attached shelves.			
34805	Hatches or Hatch Covers, with frames (curbs), other than boat hatches or hatch covers, in boxes or crates:			
Sub 1	Steel or copper	85	45	24
Sub 2	Aluminum or aluminum and steel	100	55	20
Sub 3	Aluminum, steel and plastic	175	125	10
34810	Ironing Boards, folding, in cabinets, NOI, in boxes or crates	85	55	24
34850	Lathing, steel and paper combined, NOI, in packages	70	37½	36
34870	Lathing, copper, expanded, in packages	77½	50	30
34880	Lathing, zinc, expanded, in packages; also TL, loose	77½	45	36
34900	Lightning Rods, Rod Fasteners or Fixtures, NOI, copper, in packages	77½	50	30
34910	Lightning Rods, Rod Fasteners or Fixtures, NOI, copper and iron or steel combined, in packages	77½	50	30
34920	Lightning Rods, Rod Fasteners or Fixtures, NOI, iron or steel, coppered, galvanized, painted or plain, in packages	70	45	30

For explanation of abbreviations and reference marks, see last page of this tariff.

TABLE 4.--A SAMPLE PAGE OF RATE BASES OF A RATE TARIFF

Tariff MWB 602-E

SECTION 2
APPLICATION OF RATE BASES

BETWEEN (See Items 100 and 110) / AND (See Items 100 and 110)	COLORADO																	
	Akron	Boulder	Cheyenne Wells	Colorado Springs	Denver	Dixon	Ft. Collins	Ft. Morgan	Galatia	Greeley	Grover	Haxtun	Holly	Julesburg	Keenesburg	Kit Carson	La Junta	Lamar
	APPLY RATES SHOWN IN SECTION 3 OPPOSITE RATE BASIS NUMBERS SHOWN BELOW																	
NEBRASKA																		
Holdrege	300	520	340	520	460	520	500	340	720	460	400	280	680	340	400	400	660	720
Imperial	280	460	500	520	400	460	440	300	720	400	400	380	780	400	340	520	660	740
Kearney	380	520	440	620	500	500	500	380	720	460	400	380	660	240	440	480	740	720
Liberty	520	740	500	680	680	700	700	560	680	660	620	500	640	440	620	520	740	680
Lincoln	500	700	520	700	680	680	680	560	700	640	580	480	660	420	620	560	780	700
Long Pine	740	740	760	825	720	680	680	620	1075	680	640	620	975	540	660	780	1000	1075
Loup City	480	640	520	680	620	620	640	500	780	580	520	440	740	360	580	560	850	780
McCook	190	400	400	460	340	400	380	240	720	340	380	320	720	340	300	440	620	680
Merriman	460	580	800	660	540	520	540	440	875	520	460	440	925	380	500	780	800	900
Mullen	380	500	680	580	460	440	460	340	780	440	380	340	825	300	400	680	720	800
Nebraska City	580	780	600	780	740	740	740	640	760	720	660	540	720	480	700	640	825	760
Norfolk	540	720	580	740	700	700	700	580	825	660	620	520	800	440	640	620	900	825
North Platte	280	380	580	460	380	340	380	260	660	320	280	240	720	100	300	580	620	680
Oakland	580	740	600	780	720	720	720	600	825	700	640	540	760	460	700	640	900	825
O'Fallons	260	340	620	440	340	340	340	220	640	300	260	210	720	65	280	540	620	660
Ogallala	190	300	540	400	300	280	300	160	620	260	190	160	660	25	240	520	540	650
Omaha	580	740	600	740	720	720	740	620	780	700	640	540	740	480	700	640	850	780
O'Neill	640	825	680	825	800	760	760	680	950	760	700	620	925	540	740	700	1025	950
Ord	500	640	520	680	620	620	640	500	780	580	520	440	740	360	580	560	850	780
Plainview	600	740	620	780	740	720	740	600	900	700	640	580	825	500	700	660	975	900
Plattsmouth	580	780	600	740	720	740	740	620	780	720	660	540	740	480	700	640	850	780
Ravenna	440	620	480	640	580	580	580	480	740	580	500	420	700	340	540	500	780	740
Rulo	600	800	600	740	740	780	800	660	720	740	680	580	660	540	720	640	780	700
Sargent	540	720	580	740	700	700	700	580	850	660	620	520	800	440	640	620	900	850
Stapleton	540	660	600	740	640	640	640	520	875	620	540	520	825	380	620	640	900	875
Stratton	210	340	460	400	300	340	340	190	620	300	300	280	660	300	260	500	540	640
Superior	380	600	380	540	540	600	600	420	580	540	540	380	560	360	520	420	680	580
Talmage	540	740	580	740	720	720	720	620	740	700	640	520	720	460	660	620	825	740
Valentine	540	660	825	740	640	620	640	520	975	620	540	520	1025	460	620	875	900	1000
Venango	160	280	520	380	280	280	280	140	580	220	160	140	640	160	210	500	520	620
Wellfleet	280	380	500	460	380	380	380	260	660	340	280	240	740	280	300	520	640	680
York	440	620	480	640	580	580	580	480	700	560	500	420	660	340	540	500	780	700
NORTH DAKOTA																		
Alamo	1575	1675	1600	1750	1625	1600	1625	1525	1800	1625	1575	1525	1750	1500	1600	1625	1875	1800
Bisbee	1375	1500	1375	1550	1450	1425	1450	1375	1600	1425	1375	1375	1550	1275	1425	1425	1625	1600
Bismarck	1175	1275	1275	1350	1250	1225	1250	1150	1475	1225	1175	1125	1450	1075	1225	1300	1475	1475
Bowman	1275	1375	1375	1450	1350	1300	1350	1250	1575	1300	1275	1250	1525	1225	1300	1400	1625	1575
Cannon Ball	1225	1300	1300	1400	1300	1275	1275	1225	1525	1275	1225	1175	1475	1150	1250	1350	1550	1525
Carson	1250	1350	1350	1400	1300	1275	1300	1225	1525	1275	1250	1225	1525	1150	1275	1375	1550	1525
Conway	1375	1475	1325	1550	1450	1400	1450	1350	1525	1400	1375	1325	1500	1275	1400	1375	1675	1525
Crosby	1575	1675	1600	1750	1625	1600	1625	1525	1800	1600	1575	1525	1750	1500	1600	1625	1875	1800
Crystal Springs	1225	1300	1250	1375	1275	1250	1275	1175	1450	1250	1225	1175	1400	1125	1250	1275	1525	1450
Davenport	1175	1300	1175	1375	1250	1225	1250	1150	1350	1225	1175	1150	1300	1075	1225	1200	1500	1350
Devils Lake	1275	1425	1375	1525	1425	1375	1375	1325	1550	1375	1325	1300	1525	1200	1375	1375	1600	1550
Dickinson	1300	1400	1400	1525	1400	1375	1375	1300	1600	1375	1300	1275	1575	1250	1350	1450	1650	1625
Drake	1300	1400	1350	1500	1400	1375	1375	1275	1525	1375	1300	1275	1500	1225	1350	1375	1625	1525
Edgeley	1100	1200	1125	1300	1200	1150	1175	1075	1325	1175	1100	1050	1300	1025	1150	1175	1450	1325
Fairmount	1075	1250	1100	1325	1225	1200	1225	1125	1300	1200	1150	1100	1250	950	1175	1150	1375	1300
Fargo	1225	1325	1175	1375	1275	1250	1275	1175	1375	1250	1225	1175	1325	1025	1250	1200	1450	1375
Finley	1375	1450	1300	1525	1425	1375	1425	1325	1500	1375	1375	1325	1475	1275	1375	1375	1650	1500
Glen Ullin	1250	1350	1350	1450	1350	1300	1300	1225	1550	1300	1250	1225	1525	1175	1275	1375	1600	1550
Grafton	1350	1450	1275	1550	1450	1400	1400	1300	1500	1400	1350	1300	1475	1175	1375	1325	1550	1500
Grand Forks	1300	1400	1250	1475	1375	1350	1375	1275	1475	1350	1300	1275	1425	1125	1350	1300	1525	1475

For explanation of reference marks, see Item 999999.

TABLE 5.--A SAMPLE PAGE OF RATES FROM A RATE TARIFF

SECTION 3
TABLE OF CLASS RATES AND CHARGES
(SEE ITEMS 100 AND 1301)

RATE BASIS NO.	MINIMUM CHARGE / MINIMUM TRUCKLOAD CHARGE	LINE	CLASSES											
			600	500	400	300	250	200	175	150	125	110	100	92.5
			RATES IN CENTS PER 100 POUNDS											
1101 TO 1125	MC 2960	LTL	11113	9008	7269	5545	4672	3810	3385	2948	2518	2256	2082	1953
		500 #	10958	8848	7115	5389	4520	3655	3223	2791	2361	2091	1921	1791
		1000 #	10338	8316	6678	5044	4226	3397	2996	2585	2175	1924	1754	1642
		2000 #	10100	8255	6617	4977	4153	3346	2926	2518	2115	1867	1698	1576
		5000 #	8375	6849	5485	4118	3437	2755	2418	2076	1736	1535	1396	1291
		10000 #	8295	6786	5433	4080	3405	2730	2396	2054	1720	1523	1383	1280
	MTC 1316	VT	6622	5513	4406	3309	2763	2210	1939	1665	1386	1225	1113	1033
1126 TO 1150	MC 2990	LTL	11246	9102	7350	5593	4726	3849	3410	2975	2535	2271	2103	1971
		500 #	11089	8942	7192	5442	4571	3697	3255	2820	2386	2117	1945	1815
		1000 #	10462	8415	6759	5103	4270	3441	3016	2613	2197	1955	1788	1658
		2000 #	10207	8355	6694	5037	4213	3376	2961	2550	2135	1878	1721	1599
		5000 #	8467	6929	5546	4167	3480	2788	2450	2098	1758	1549	1413	1313
		10000 #	8388	6864	5494	4128	3446	2762	2425	2079	1744	1534	1399	1302
	MTC 1341	VT	6682	5576	4461	3356	2794	2241	1958	1681	1402	1234	1124	1045
1151 TO 1175	MC 3040	LTL	11374	9212	7443	5664	4788	3900	3453	3012	2569	2299	2118	1981
		500 #	11217	9061	7288	5509	4630	3744	3299	2852	2410	2140	1963	1831
		1000 #	10593	8532	6847	5172	4327	3485	3067	2652	2222	1973	1803	1674
		2000 #	10331	8472	6785	5104	4268	3429	3003	2587	2160	1914	1735	1612
		5000 #	8572	7023	5626	4228	3526	2829	2474	2136	1779	1567	1430	1322
		10000 #	8493	6959	5573	4189	3494	2801	2450	2116	1762	1553	1415	1310
	MTC 1368	VT	6779	5657	4526	3399	2835	2269	1990	1705	1423	1256	1143	1053
1176 TO 1200	MC 3070	LTL	11503	9333	7533	5738	4843	3936	3496	3046	2596	2314	2140	2014
		500 #	11346	9174	7372	5582	4687	3780	3338	2885	2439	2165	1979	1851
		1000 #	10723	8641	6941	5235	4392	3526	3107	2679	2259	1989	1825	1698
		2000 #	10486	8585	6882	5177	4324	3475	3046	2618	2184	1957	1757	1637
		5000 #	8694	7115	5702	4283	3576	2867	2509	2156	1805	1569	1450	1343
		10000 #	8612	7050	5649	4242	3541	2841	2485	2137	1788	1576	1437	1329
	MTC 1399	VT	6880	5731	4585	3445	2874	2300	2013	1729	1445	1271	1161	1076
1201 TO 1225	MC 3080	LTL	11647	9445	7623	5810	4895	3987	3528	3077	2624	2356	2170	2026
		500 #	11496	9291	7466	5654	4744	3829	3371	2921	2471	2193	2014	1873
		1000 #	10869	8770	7033	5312	4447	3579	3142	2717	2279	2021	1847	1719
		2000 #	10624	8702	6966	5237	4385	3520	3087	2657	2216	1958	1790	1659
		5000 #	8816	7221	5779	4344	3616	2907	2547	2191	1825	1612	1472	1363
		10000 #	8732	7153	5724	4304	3583	2880	2522	2167	1808	1597	1458	1351
	MTC 1424	VT	6968	5804	4650	3489	2913	2331	2044	1756	1461	1288	1173	1086
1226 TO 1250	MC 3110	LTL	11761	9538	7708	5862	4945	4024	3572	3107	2650	2369	2180	2050
		500 #	11599	9383	7546	5710	4789	3867	3413	2949	2489	2214	2026	1887
		1000 #	10983	8851	7114	5365	4467	3613	3187	2742	2307	2038	1867	1735
		2000 #	10739	8796	7054	5301	4431	3553	3113	2676	2250	1978	1805	1674
		5000 #	8912	7298	5842	4387	3664	2938	2578	2211	1844	1630	1483	1374
		10000 #	8830	7231	5789	4346	3630	2911	2554	2191	1828	1614	1469	1362
	MTC 1448	VT	7039	5871	4699	3530	2942	2360	2069	1770	1481	1303	1184	1098
1251 TO 1275	MC 3150	LTL	11921	9658	7792	5936	4997	4070	3609	3142	2676	2398	2214	2074
		500 #	11766	9500	7641	5784	4843	3910	3447	2980	2520	2246	2054	1916
		1000 #	11153	8976	7201	5436	4543	3664	3217	2781	2336	2074	1888	1754
		2000 #	10862	8915	7147	5366	4486	3601	3155	2716	2270	2012	1831	1698
		5000 #	9012	7387	5921	4442	3709	2977	2613	2242	1873	1650	1502	1396
		10000 #	8928	7320	5867	4399	3676	2948	2588	2222	1856	1633	1489	1383
	MTC 1478	VT	7139	5948	4763	3575	2984	2388	2091	1791	1498	1319	1201	1113
1276 TO 1300	MC 3160	LTL	12031	9773	7891	6001	5060	4116	3648	3168	2712	2422	2228	2091
		500 #	11874	9620	7732	5843	4897	3963	3486	3014	2550	2263	2074	1937
		1000 #	11255	9092	7297	5504	4606	3708	3262	2808	2365	2091	1915	1788
		2000 #	11016	9024	7237	5438	4539	3646	3201	2751	2307	2035	1851	1721
		5000 #	9137	7487	5999	4506	3760	3012	2646	2270	1895	1674	1524	1413
		10000 #	9053	7415	5940	4465	3723	2981	2621	2249	1878	1659	1508	1399
	MTC 1505	VT	7238	6028	4823	3625	3023	2418	2120	1814	1517	1339	1217	1124

FOR EXPLANATION OF MC, MTC AND LINES LTL, 500#, 1000#, 2000#, 5000#, 10000# AND VT, SEE ITEM 5000

FOR EXPLANATION OF REFERENCE MARKS, SEE ITEM 999999.

which contains rate-basis numbers as well as the actual rate which is expressed in cents per hundred pounds. To obtain the rate-basis number, the origin and destination of the shipment are cross-referenced. For example, a shipment between Bismarck, North Dakota and Akron, Ohio is cross referenced in Table 4, and a rate basis number of 1175 is assigned to the shipment. In Table 5, the rate basis number is cross-referenced with the rating of the commodity for the rate. For a shipment of fire escapes (item 34660 in Table 3) from Bismarck, North Dakota to Akron, Ohio weighing 10,000 pounds, the applicable rate would be 2116 cents per 100 pounds or $2116 for the entire movement.

In some cases an "exception rating" may apply to a particular movement rather than the normal rating. Exception ratings are essentially amendments to a classification. These exceptions are brought on by competitive conditions that have compelled an interested party to amend the classification. Normally, exception ratings are found in a rate tariff although separate tariffs exist in some cases.[102]

A third general type of rate is a commodity rate. A commodity rate is a rate published directly rather than indirectly through the freight classification procedure. Commodity rates may be used to meet the demands of particular shippers or communities or in response to competitive conditions.[103] These

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[102] Ibid. p. 194

[103] D. Phillip Lockin, Economics of Transportation, 70 ed. (Homewood Ill.: Richard D. Irwin, Inc.: 1972), p. 178

rates are generally quoted on a point-to-point basis and are usually lower than the applicable class rate, and therefore, take precedence over class rates. A 1966 study of motor carriers has shown that 75 percent of tonnage moves under class rates while only 25 percent moves under commodity rates.[104] James C. Johnson of the University of Tulsa says the majority of freight moves under class rates because most shipments are under 2000 pounds and due to the high percentage of variable costs, most truckers cannot reduce rates to any large extent.[105]

Considerations of Transportation Pricing[106]

There are several internal and external considerations in the motor carrier industry that influence the pricing of its transportation service. Many of these considerations are related to cost and demand factors of the carrier, the user, and the commodity in question.

Some commodities are more difficult to load, more susceptible to loss or damage, and need special equipment for transportation. These commodity or article characteristics will tend to have an increasing affect on the cost of transportation and the applicable rate. Costs of transportation will decrease with incre-

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[104] James C. Johnson, Trucking Mergers Lexington, Mass.: D.C. Heath and Co., 1973), p. 19

[105] Ibid., pp. 18-19.

[106] This section draws heavily from:
a) Donald V. Harper, Transportation in America: Users; Carriers, Government (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), pp. 174-178 and
b) D. Phillip Locklin, Economics of Transportation 70 ed. (Homewood, Ill.: Richard D. Irwin, Inc., 1972), pp. 185-202).

asing volumes of traffic and/or the increasing regularity of the movements. The decreasing cost will normally result in a lessor charge to the shipper, all other considerations being equal.

There are other cost characteristics which have a decreasing affect on rates that are related to the "route" rather than to the article. Costs per unit decrease with the distance of the movement. The rate per unit generally decreases with the distance in response to this "tapering" principle. Also the cost of transportation is higher in different geographical regions in the United States. For example, in 1972 the line-haul cost adjusted for speed in the Midwest region was 49.026 cents per-vehicle-mile compared to 50.890 cents per-vehicle-mile in the Rocky Mountain region.[107] These cost differences could be due to grades, curves, rainfall, snow, etc. A last cost characteristic is the amount of traffic moving over the route. Some routes have more freight traffic, and costs will tend to decrease with more freight movement over a particular route due to a more efficient operation. Normally the rate will decrease with increasing movements of traffic over the route.

There are several pricing considerations relating to factors of demand concerning the commodity and the route traveled.

Transportation is "worth more" to shippers of high-value commodities. Therefore, the carrier has the incentive to charge

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[107]The ICC statement No. 2C15-73, "Cost of Transporting Freight, Class I and Class II Motor Common Carriers of General Commodities", 1972, pp. 42 and 77.

higher rates for high-value commodities relative to low-value commodities. Also, if economic conditions in the shipper's industry are depressed, the rate will normally decrease in response to the shipper's inability to pay higher rates. A lost commodity demand factor in transportation pricing is the rate on competing products. If there is a freight rate disparity between two commodities, the carrier has the incentive to equalize the rates in order to maximize traffic and lower the contribution to fixed overhead.

Rates are also affected by intramodal and intermodal competition over a route. Competition on a route will tend to drive down the rates because each carrier trys to "capture" as much traffic as possible. The carrier also takes into consideration the competitive factors of the shippers production-point competition and market-competition.

Figure 3 portrays an example of production-point competition. The total cost of transportation would normally be higher at production point A than at production point B because the distance is greater to production point A. Many times the carrier will try to equalize the cost of transportation from both points in an effort to maximize traffic and therefore lower the contribution to fixed overhead.

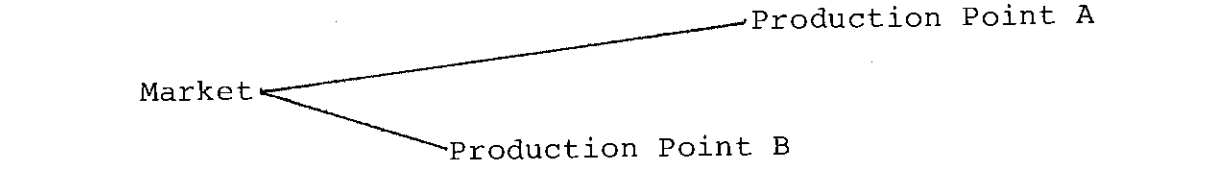

Figure 3.--Effect of Production Point Competition on Transportation Pricing.

Source: Donald V. Harper, Transportation In America: Users, Carriers, Government (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p. 178.

A similar situation exists in Figure 4, where the rate for market B would normally be higher than for market A because the distance to market B is greater than to A. The carrier, in an effort to maximize traffic and contribution to fixed overhead, will have the incentive to equalize the rates and therefore the competition between the markets. It should be noted that both of these last two examples assume homogeneous products.

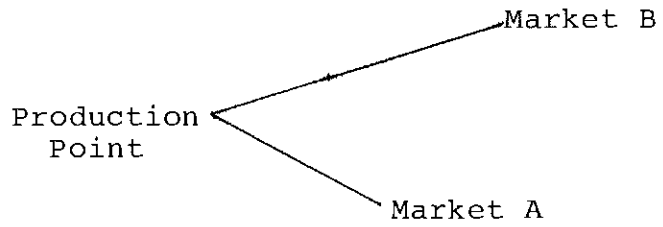

Figure 4.--Effect of Market Point Competition on Transportation Pricing.

Source: Donald V. Harper, Transportation in America: Users, Carriers; Government (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1978), p.179.

The Ratemaking Process

The Motor Carrier Act of 1980 substantially changed the ratemaking process. Major changes include the zone of rate freedom, the rule of ratemaking, and the changed role of the rate bureau. The zone of rate freedom has been discussed in a previous section. This section will discuss the new rule of ratemaking, the changed role of the rate bureau, and the common ratemaking processes between the Interstate Commerce Commission (ICC) and the North Dakota Public Service Commission (NDPSC) as well as the differences between the two processes.

Rule of Ratemaking

Under the 1935 Act and its amendments, the ICC, when exercising its power to prescribe reasonable rates, had to give due considerations to:

> "The inherent advantages of transportation by such carriers; to the effect of rates upon the movement of traffic by the carrier or carriers for which the rates are prescribed; to the need in the public interest, of adequate and efficient transportation service by such carriers at the lowest cost consistent with the furnishing of such service; and to the need of revenues sufficient to enable such carriers, under honest, economical, and efficient management, to provide such service."[108]

The 1980 Act revised this provision requiring the ICC to:

> "authorize revenue levels that are adequate under honest, economical, and efficient management to cover total operating expenses, including the operations of leased equipment and depreciation, plus a reasonable profit."[109]

The ICC must allow "the carriers to achieve revenue levels that will provide a flow of net income, plus depreciation, adequate to support prudent capital outlays, assure repayment of a reasonable level of debt, permit the raising of needed equity capital, attract and retain capital in amounts adequate to provide a sound motor carrier transportation system in the United States, and take into account reasonable estimated or foreseeable future costs."[110]

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[108] 49 USC Sec. 316 i.

[109] Public Law 96-296.

[110] Ibid.

Rate Bureau Process

Prior to the Motor Carrier Act of 1980 the normal ratemaking process began with a proposal to change a tariff item. This proposal could have been initiated by the motor carrier, shippers, regulatory agencies, or a rate bureau standing committee.[111] The proposal would then flow to the rate bureau's standing rate committee. The standing rate committee would recommend to pass the proposal as proposed, to pass as amended by the standing rate committee, or to fail the proposal.[112] If exception was taken to the decision of the standing committee, the proposal would then flow to the general rate committee which is composed of rate bureau members. This committee could also pass as proposed, pass as amended, or fail the proposal. If passed the proposal would then be filed with the appropriate regulatory agency (ICC, NDPSC, etc.). If the proposal was failed at any stage of the rate bureau process or if the party proposing the proposal would so chose, the proposal could follow the "right of independent action." Under this procedure notice is given to all involved carriers, and they have a specified period of time to join the rate proposal or to "flag out" (not participate). The proposal is then filed with the appropriate regulatory agency.

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[111]The standing rate committee is composed of rate bureau employees. It receives, investigates, considers, and recommends dispostion of proposals filed with its rate bureau following the "normal" procedure.

[112]Robert C. Lieb, Transportation: The Domestic System (Reston, Va.: Reston Publishing Co., Inc., 1978), p. 175.

The Motor Carrier Act of 1980 substantially reduced the role of the rate bureau as a mechanism in collective ratemaking. Effective January 1, 1981, only carriers with operating authority in a route affected by a rate proposal can vote on that proposal.[113] In addition, the 1980 Act disallows any bureau employee or employee committee to docket or act upon any proposal affecting a change in a tariff item published by or for the account of any of its bureau employees.[114] These two provisions do not allow the rate bureaus employees to initiate the proposal, the standing rate committee to pass judgement on a rate proposal, and only allows carriers with authority in the proposal to vote on the proposal after January 1, 1981. In addition, discussion of rate proposals on single-line rates will be limited to those carriers with the authority effective January 1, 1984.[115]

With respect to general level rate increases, the 1980 Act still allows collective rate-making provided shippers are allowed comment on such increases, and all discussions are limited to industry average costs. In addition, the 1980 Act provides for no discussions which include individual markets or particular single-line rates.

Other provisions of the 1980 Act which affect the role of the rate bureau include:

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[113] Public Law 96-296.

[114] Ibid.

[115] This date may be July 1, 1984 depending on the report of the Motor Carrier Ratemaking Study Commission.

1) further protection of the individual carriers' right for independant action;

2) preventing rate bureaus from filing a protest or complaint with the ICC against any tariff item published by or for any motor carrier of property;

3) disallowing any bureau employee or committee composed of employees to docket or act upon any proposal affecting a change in a tariff item published by or for the account of any of its member carriers;

4) requiring the bureau to divulge the names of proponents of a proposal and the way a member voted on a particular proposal; and

5) requiring a carrier which casts a representative vote for another to have specific written authority.

6) new rate bureau agreements must be filed with the ICC 120 days after passage of the Act. These new agreements must comply with all of the new provisions provided by the 1980 Act;

7) shorter time frames for disposition with respect to rules or rates docketed with it. They must dispose of those rules or rates within 120 days after it is docketed;

8) more public information is to be disclosed. Upon request, the organization must divulge the way members voted and the names of proponents of a rule or docket; and

9) that a commission be established to investigate and study the collective ratemaking process and the need for or the lack of continued antitrust immunity for rate bureaus. They must report to the President and Congress by Jan. 1, 1983.[116]

Regulatory Process

Normally, the proposal must be filed with the appropriate regulatory agency 30 days before its effective date. In North

[116]Public Law 96-296.

Dakota the agencies are the Interstate Commerce Commission (ICC) or the North Dakota Public Service Commission (NDPSC). The ICC or NDPSC, acting on protest or upon their own accord, may suspend a rate for a period not to exceed seven months. During this suspension period a hearing is held at the ICC level. Where an administrative judge presides over the hearing and issues a ruling. That ruling is appealable to a committee of three commissioners. Their decision is appealable to the full commission and finally to the federal judicial system. As an alternative to the method above, a case may be submitted using the "modified procedure" format whereby the evidence is submitted in written form instead of through oral proceedings.

The state level suspension period is somewhat different. The initial hearing is presided over by a hearing examiner although the Commission may preside. The hearing examiner's role is limited mainly to the procedural aspects of the hearing. The full Commission will review the transcripts of the hearing and will issue the final order. The final order issued by the NDPSC is subject to appeal in the state judicial system.

Financial Trends of the North Dakota Intrastate Motor Carrier Industry

This section provides descriptions of revenue, expenses, and income trends in the motor carrier industry operating in North Dakota. Statistical techniques such as bivariate and multivariate regression analyses were used to describe these trends

over a 19-year period form 1960 to 1978. Data was collected from "The Annual Report of the North Dakota Public Service Commission to the Governor and Department of Accounts and Purchases" for the biennial period ending June 30, 1962 through the biennial period ending June 30, 1979.

Two sets of analyses are presented both of which entail a description of trends over the 19-year period from 1960 through 1978. The first set of analysis was expressed in current dollars, the second set was expressed in real or inflation-adjusted dollars. Tables 6, 7, 8-12, and 14-18 provide the statistical results of regressions performed on the 19 year trends. The coefficient of determination (R^2) is used to express the degree of relationship between two variables. For example, a value of 100 percent means the two variables are perfectly correlated meaning as one variable increases the other will similarily increase or decrease. The t-value and f-value are used to measure the statistical significance of the model. As these values increase greater reliability can be placed on the prespective model.

Each of the two sets of analyses consists of six groups entailing revenue, expense and income trends for Class A Common Carriers, Special Common Carriers, Contract Carriers, Liquid Petroleum Carriers, Household Carriers, and the aggregate motor

carrier industry operating in the state of North Dakota.[118] The revenues, expense, and incomes of the aggregate motor carrier industry operating in North Dakota consist of the aggregate revenues, expenses, and incomes for the Class A Common, Special Common, Contract and Liquid Petroleum Motor Carriers. However, Household Goods and Furniture carriers are not included in the aggregate because they represent a subsector of the Class A and Special Common Carrier sectors. Further, only revenues are presented for the Household Goods and Furniture Carriers due to no expense data reported in the data source. As shown in Table 6 the number of carriers has declined over the 19 year period from 196 to 171. Carriers operating under special certificate represent the largest sector with 126 carriers in 1978. The number of carriers in this sector has declined 16 percent from 150 to 126 over the 19 year time period. However, these analyses are based on the motor carrier industry operating in North Dakota, therefore, no adjustments were made for the declining number of carriers operating in North Dakota.

The trends expressed in current dollars as well as those expressed in real dollars generally follow one of the following equations:

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[118]Class A Common Motor Carriers are those common carriers by motor operating between fixed termini and over fixed routes on scheduled time. Special Common Motor Carriers are those common carriers by motor operating over irregular routes, not on scheduled time, and at the will and command of the shipper. Contract Motor Carriers are any person or persons engaged in the transportation of property by motor vehicle for hire, and not otherwise classified as a common carrier as defined above. A contract carrier's service must not be used by more than three carriers.

$$\text{I. } y = b_o + b_1x + b_2x^2$$

$$\text{II. } y = b_o + b_1x.$$

$$\text{III. } y = -b_o + B_1x - b_2x^2$$

In some cases, a particular element of a sector (e.g. income of liquid petroleum sector) does not follow a readily identifiable trend, in which case, the particular element was analyzed through an analysis of the prespective mean.

TABLE 6.--NUMBER OF CARRIERS REPORTING TO THE NORTH DAKOTA PUBLIC SERVICE COMMISSION, 1960-1978[a]

Year	Total	Class A	Special	Contract	Liquid Petroleum
1960	196	19	150	20	7
1961	195	18	152	16	8
1962	191	17	147	18	9
1963	193	19	145	21	8
1964	193	19	145	21	8
1965	200	20	150	23	7
1966	118	19	150	23	6
1967	195	18	147	24	6
1968	218	20	166	26	6
1969	217	20	165	26	6
1970	213	21	162	24	6
1971	207	21	156	24	6
1972	202	20	154	22	6
1973	207	21	163	17	6
1974	193	18	149	20	6
1975	195	17	150	22	6
1976	194	16	145	28	5
1977	191	16	143	27	5
1978	171	15	126	26	4

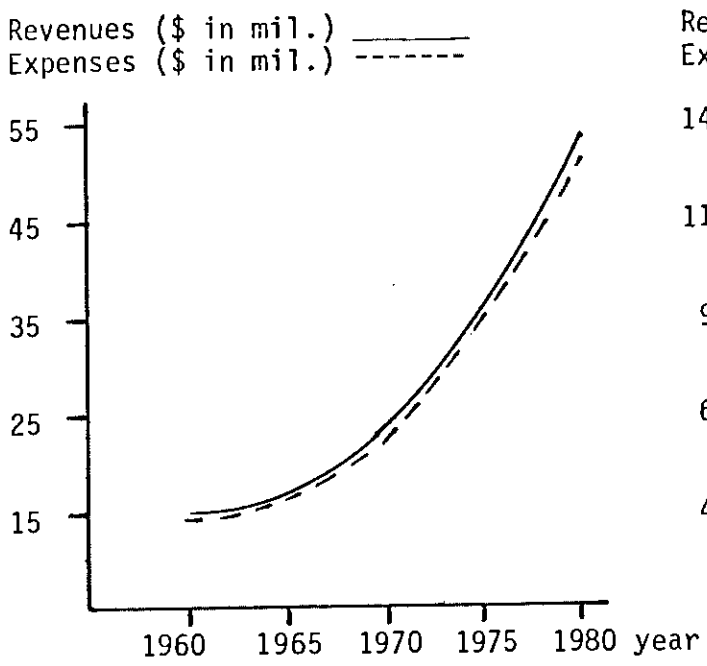
Source: Annual Reports of the North Dakota Public Service Commission to the Governor and Department of Accounts and Purchases for the biennial period ending June 30, 1962 through the biennial period ending June 30, 9179.

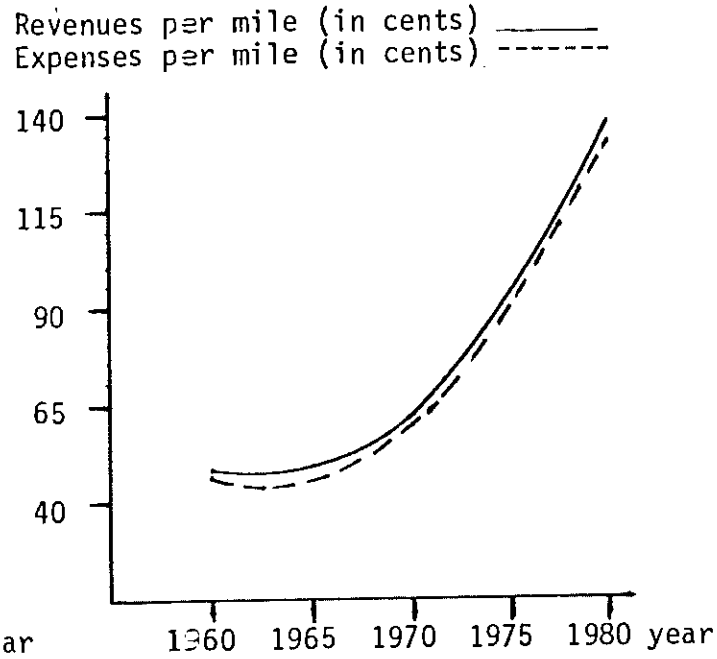
[a]Household goods carriers are included in the Class A and special certificate totals.

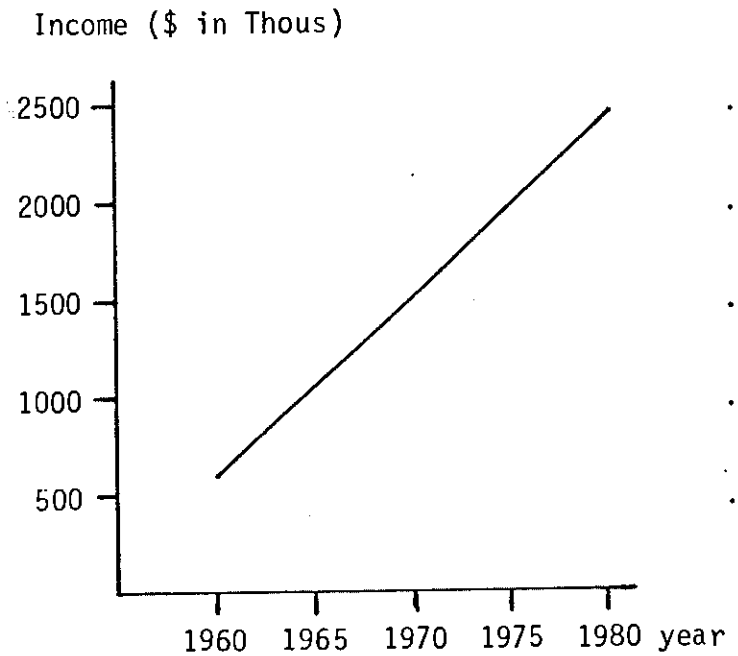
Trends of the Motor Carrier Industry Expressed in Current Dollars

Over the 19 year period, revenues and expenses of the aggregate motor carrier industry operating in North Dakota have increased following a parabolic curve (see Figure 5). These trends on both an absolute basis and a per-mile basis follow model 1. In 1960, revenues and expenses were about $15½ million and 14½ million, respectively. These figures have increased 2½ times to about $43 million in revenues and about $41 million in expenses in 1978. Most of this growth came in the period from 1968-1978 (see Table 7) revenues increasing an average of 8.09 percent per year, and expenses increasing an average of 8.23 percent per year. In contrast, over the time period from 1960 to 1967 revenues increased an average of only 2.79 percent per year, and expenses only about 2.53 percent (see Table 7). Revenues and expenses per mile have also increased about 2½ times over the 19 year time period. In 1960 revenues and expenses per mile were about 47 cents and 44 cents, respectively. They have increased to about 116 cents in revenues to about 111 cents expenses in 1978.

Income of the aggregate industry has followed a linear trend model as shown in Figure 5. Each year income is projected to increase about $92,000 which is the regression coefficient of the estimating equation (shown in Table 8).







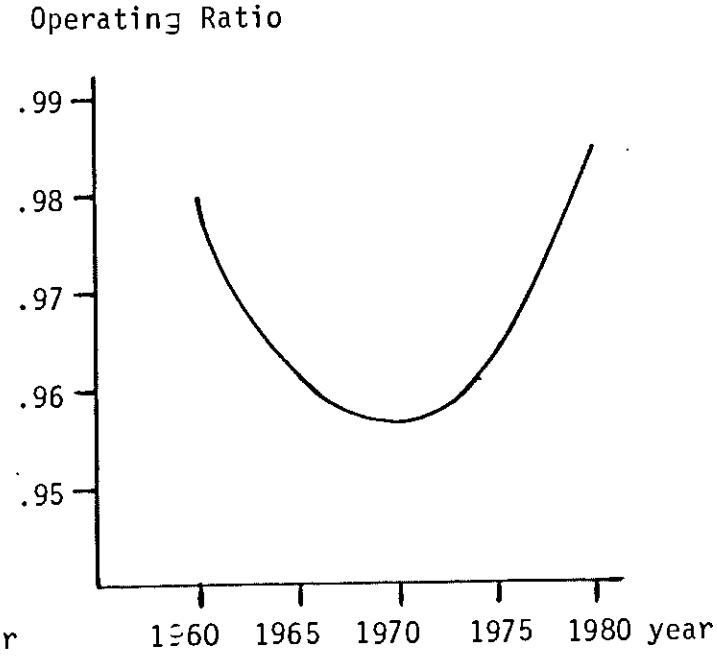


Figure 5.--Revenue, Expense, Income and Operating Ratio Trends of the Aggregate Motor Carrier Industry Operating in North Dakota.

TABLE 7.--ANNUAL GROWTH RATES OF REVENUES AND EXPENSES IN THE AGGREGATE MOTOR CARRIER INDUSTRY OPERATING IN NORTH DAKOTA: 1960-1978.

Year	Revenues	% Change	Expenses	% Change
1978	$43,225,069	.16%	$41,219,821	.35%
1977	43,154,547	2.47	41,077,029	2.71
1976	42,113,196	11.79	39,994,155	12.42
1975	37,671,152	7.58	35,577,077	7.69
1974	35,015,894	15.43	33,037,334	16.55
1973	30,334,277	9.28	26,012,219	8.69
1971	25,403,322	9.33	22,681,388	9.3
1969	22,110,283	8.45	20,750,741	7.64
1968	20,387,953	10.15	19,277,449	10.65
Average Annual % Change 1968 - 1978		8.09%		8.23%
1967	$18,509,394	.8%	$17,422,271	.64%
1966	18,363,376	4.04	17,310,886	4.46
1965	17,649,561	2.13	16,572,475	3.85
1964	17,281,312	4.47	15,957,395	1.83
1963	16,541,343	4.07	15,670,984	2.26
1962	15,894,856	8.74	15,324,769	9.14
1961	14,616,924	(4.71)	14,041,562	(4.49)
1960	15,339,384	--	14,701,834	--
Average Annual % Change 1960 - 1968		2.79%		2.53%

Source: Annual Reports of the North Dakota Public Service Commission to the Governor and Department of Accounts and Purchases for the Biennial Period Ending June 30, 1962 through the Biennial Period Ending June 30, 1979.

TABLE 8.--COEFFICIENT ESTIMATES FOR THE ESTIMATING EQUATIONS OF THE AGGREGATE NORTH DAKOTA MOTOR CARRIER INDUSTRY EXPRESSED IN CURRENT DOLLARS[a]

Dependent Variable	b_0	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Aggregate Revenues	390,840,409,144 (9.51)*	-398,681,044.315 (-9.55)*	101,673.72637 (9.59)*	99	593.02*	1094.01*	92.04*
Aggregate Expenses	393,052,234,596 (10.18)*	-400,836,750.184 (-10.22)*	102,197.67846 (10.26)*	99	607.13*	1108.92*	105.33*
Aggregate Income	-180,499,350 (-13.96)*	92,382.5 (14.07)*	N.A.	92	197.84*	197.84*	N.A.
Aggregate Operating Ratio	990.72 (4.21)*	-1.005064 (-4.21)*	.00025515 (4.20)*	54	9.36*	1.05	17.68*
Aggregate Revenues per-mile	1,144,413.214 (14.54)*	-1166.22182 (-14.59)*	.2971237 (14.64)*	99	863.5*	1512.71*	214.29*
Aggregate Expenses per-mile	1,129,783.959 (13.44)*	-1151.20874 (-13.48)*	.2932714 (13.52)*	99	701.05*	1219.21*	182.89*

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

Also shown in Figure 5 is the trend curve of the aggregate industry's operating ratio.[119] The operating ratio trend similar to the revenue and expense trends generally follows model I. 93.83 percent represents the lowest operating ratio and therefore the highest level of return on revenues. This occurred in 1970 and since then has increased to 95.36 in 1978. It should be noted the R^2 shown in Table 8 is 54 percent which is a considerably lower R^2 of the industry indicating a greater degree of uncertainty in estimates resulting from this equation. Revenue and expense trends of Class A Common Motor Carriers of Property, Contract Motor Carriers of Property, and Liquid Petroleum Motor Carriers as well as the revenue trends of Furniture and Household Goods Motor Carriers have followed the polynomial function, Model I (see Figure 6).

Revenues of Class A Common Motor Carriers of Property have increased $2.5 million from about $15½ million in 1960 to almost $18 million in 1978. Expenses have similarily increased from $5,383,625 in 1960 to $17,320,401 in 1978.

Revenues and expenses per mile have increased exponentially in this sector, following model I. In 1978, revenues per mile were over 192 cents per mile in revenues and 187 cents per mile in expenses.

Although revenues and expenses have followed a log-linear function (model I) over the 19 year period, income for Class A Common Carriers of Property has generally followed a linear

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[119] The operating ratio is the percentage of operating expenses in relation to operating revenue.

function of the model II (see Figure 7). Income has increased from less than $100,000 in 1960 to over $500,000 in 1978, an increase of over 400 percent. Income is projected to increase about $27,000 per year.[120] Figure 7 graphically portrays the decreasing profitability of this sector. The 19 year trends of operating ratios generally follow model I. However, the R^2 of this factor was only 34 percent indicating that only 34 percent of the variability from the mean (average value) over the 19 years was explained by the regression model. The operating ratio was 98 percent in 1960 and decreased steadily to less than 95 percent in 1975, since then the operating ratio of this sector has increased to over 97 percent in 1978.

Contract Motor Carriers of Property have expanded much faster than any of the other sectors, in terms of revenue and expense volume. Revenue and expense trends have closely followed model I (see Figure 6). Revenues were about 8½ times larger in 1978 than they were in 1960. Expenses on the other hand have increased faster, almost 10 times over the 19 year period. Revenue and expenses per mile have increased slower over the 19 year period, revenues per mile in 1978 about 2½ times larger than revenues per mile in 1960, and expenses per mile in 1978 about 3 times larger than expenses per mile in 1960. This indicates the Contract Carrier sector has gained a substantial amount of traffic.

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[120] $27,000 is the regression coefficient (b_1) of model II and is found in Table 9.

TABLE 9.--COEFFICIENT ESTIMATES FOR ESTIMATING EQUATIONS OF CLASS A COMMON MOTOR CARRIERS OPERATING IN NORTH DAKOTA ESPRESSED IN CURRENT DOLLARS[a]

Dependent Variable	b_o	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Class A Revenues	199,900,774,094 (15.38)*	-203,679,677.08 (-15.43)*	51,883.8828 (15.48)*	99	883.02*	1526.55*	239.49*
Class A Expenses	197,459,247,213 (15.12)*	-201,172,907.05 (-15.16)*	51,240.4328 (15.21)*	99	808.49*	1385.72*	231.26*
Class A Income	53,084,457 (-8.21)*	27,136.1561 (8.27)*	N.A.	80	68.35*	68.35*	N.A.
Class A Operating Ratio	558.445 (2.33)*	-.565772 (-2.32)*	.00014354 (2.32)*	34	4.02*	2.66	5.38*
Class A Revenues per-mile	1,773,154.647 (28.34)*	-1807.498471 (-28.44)*	.46064573 (28.54)*	99	3840.73*	6866.78*	814.67*
Class A Expenses per-mile	1,766,220.698 (27.07)*	-1800.17053 (-27.16)*	.45871148 (27.26*)	99	3255.45*	5767.94*	742.96*

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

TABLE 10.--COEFFICIENT ESTIMATES OF THE ESTIMATING EQUATIONS OF THE CONTRACT CARRIER SECTOR EXPRESSED IN CURRENT DOLLARS[a]

Dependent Variable	b_0	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Contract Revenues	51,005,993,845 (3.58)*	-52,042,364.925 (-3.59)*	13,275.14566 (3.61)*	92	92.41*	179.79*	13.03*
Contract Expenses	48,501,067,162 (3.62)*	-49,476,501.993 (-3.64)*	12,618.06273 (3.65*)	92	86.82*	160.3*	13.33*
Contract Income	-42,538,492 (-10.77)*	21,729.64 (10.83)*	N.A.	87	117.34*	117.34*	N.A.
Contract Operating Ratio	-4.3904 (-2.08)**	.0026756 (2.50)*	N.A.	27	6.24*	6.24*	N.A.
Contract Revenues per-mile	872,101.61 (4.37)*	-888.5687 (-4.38)*	.2263453 (4.4)*	90	70.85*	122.38*	19.32*
Contract Expenses per-mile	798,736.34 (4.14)*	-813.8645 (-4.15)*	.2073271 (4.17)*	89	65.59*	113.82*	17.36*

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

Similar to the Class A sector, income follows the linear model II (Figure 7), while revenues and expense follow the polynomial model (see Figure 6). Although, revenues and expenses have increased 10 times and 8½ times respectively over the 19 year period, income has increased only 3½ times, from $115,510 in 1960 to $402,549 in 1978.

Although contract carriers have been the most profitable of the study sector, they have experienced steadily descreasing profitability over the 19 year period, as reflected in the steadily increasing trend of operating ratios in Figure 7 which follows the linear model II. In 1960 the operating ratio was about 79 percent, increasing to 91 percent in 1978. However, the R^2 of this element is only 27 percent indicating significant variation from the linear trend line. However, an increasing trend line, even though not a strong relationship, does indicate this sector has experienced decreasing profitability over the 19 year period.

Revenues and expenses of Liquid Petroleum motor carriers have increased 92.5 percent and 89 percent, respectively, following model I over the 19 year period (see Figure 6). Revenues and expenses also following model I have increased similarily from 45.6 cents in revenues per mile and 44.9 cents in expenses per mile in 1960, to 103.1 cents and 99.9 cents respectively, in 1978.

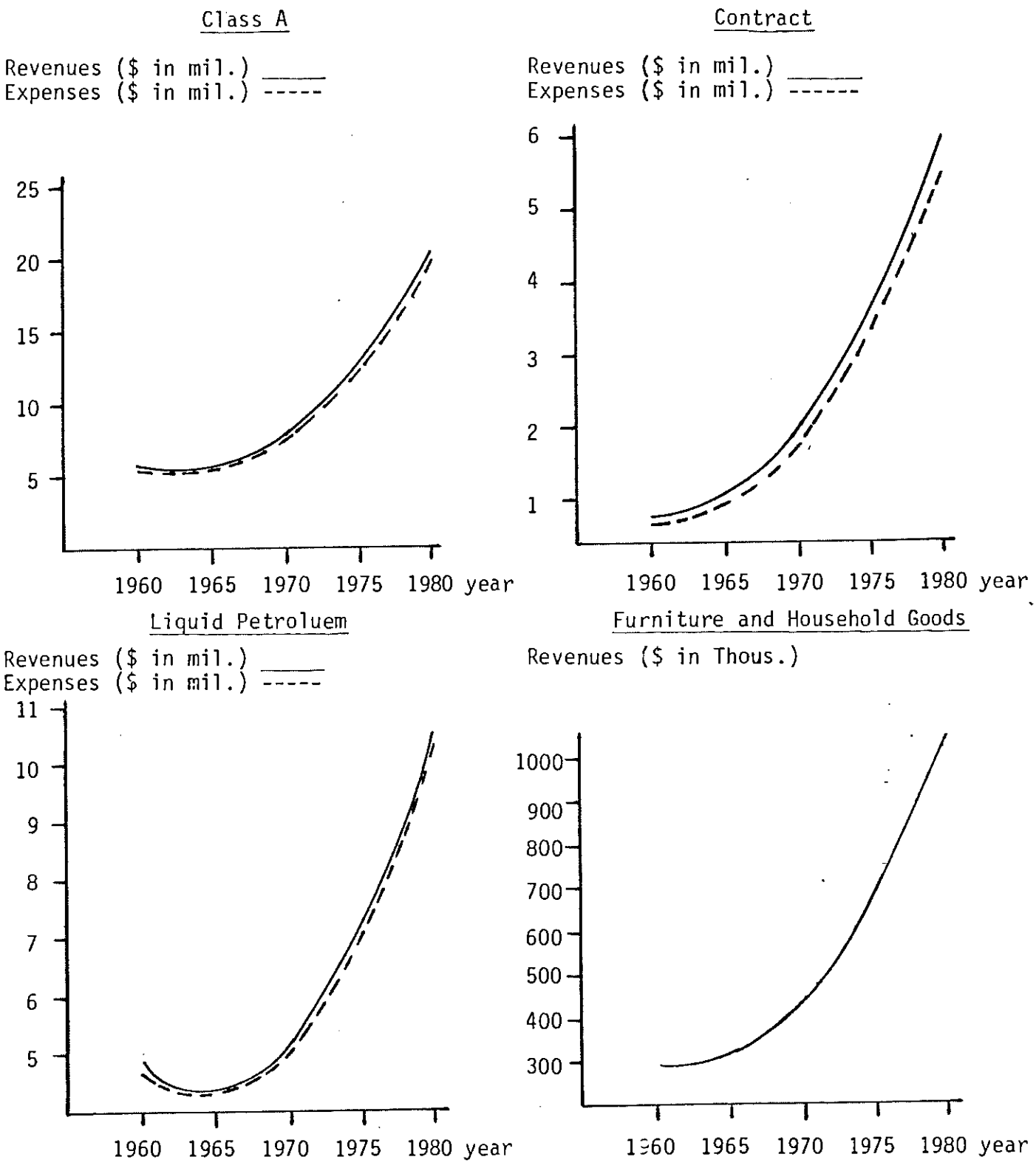


Figure 6.--Revenue and Expense Trends of Class A Common Motor Carriers, Contract Motor Carriers, and Liquid Petroleum Carriers, as well as Revenue Trends for Furniture and Household Goods of Motor Carriers.

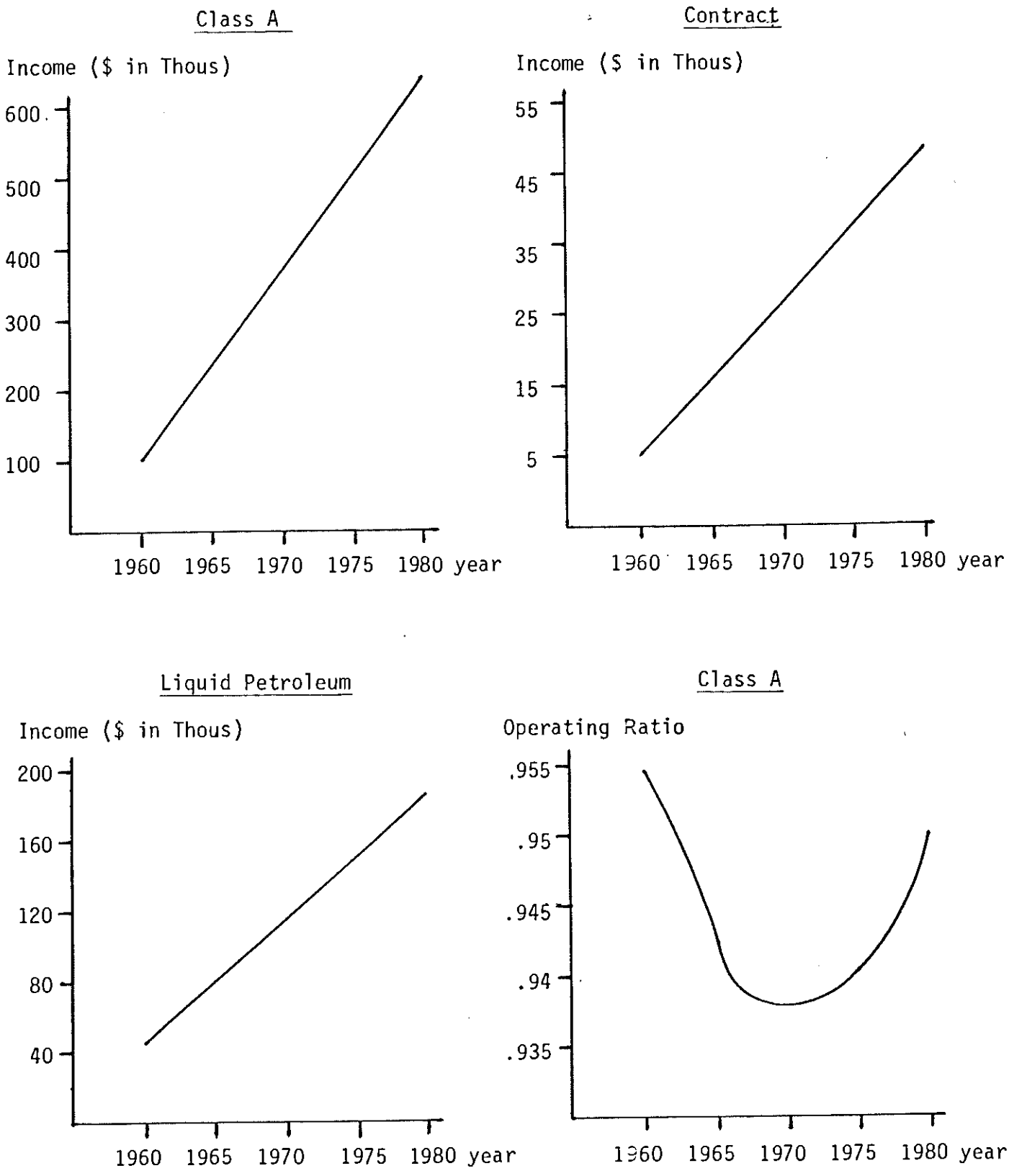
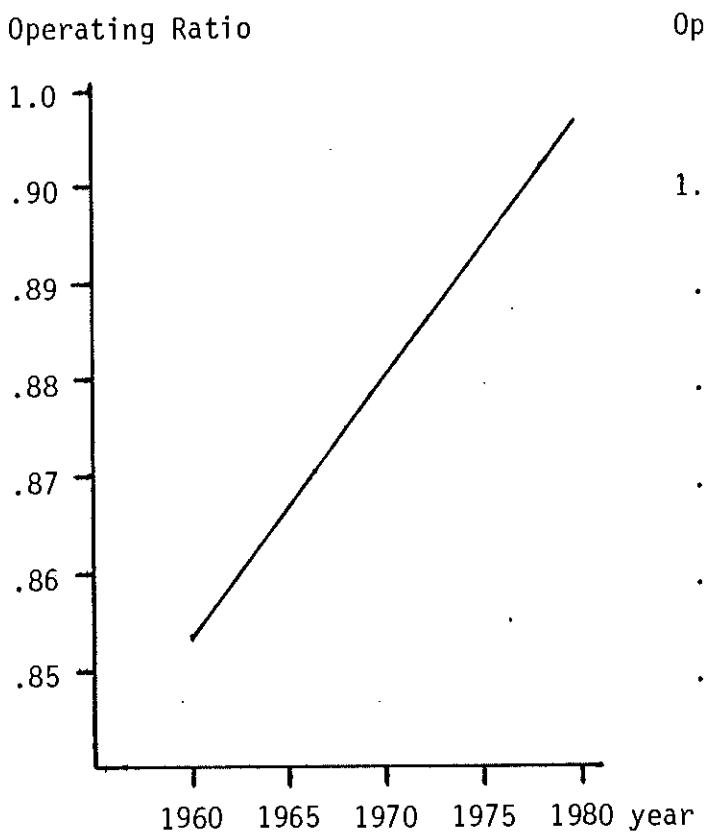


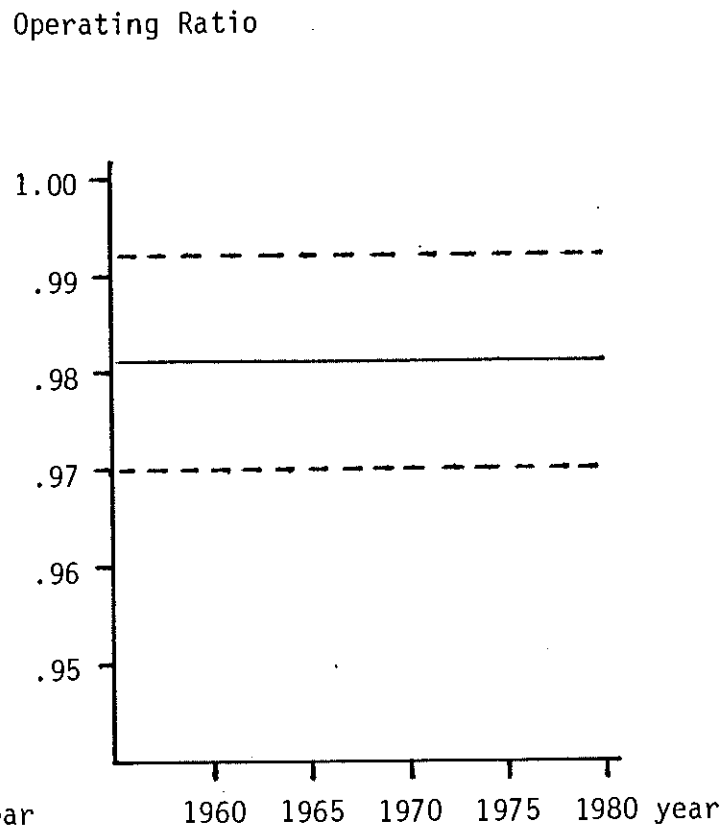
Figure 7.--Income and Operating Ratio Trends of Class A Common Motor Carriers, Contract Motor Carriers and Liquid Petroleum Carriers.

Figure 7.--Continued.

Contract



Liquid Petroleum



Liquid Petroleum Operating Ratio

Mean = 0.98117
Standard Deviation = 0.01127
Minimum Value = 0.965402
Maximum Value = 0.9997
Number of Observations = 19
"T" value = 379.50

TABLE 11.--COEFFICIENT ESTIMATES OF THE ESTIMATING EQUATIONS OF THE LIQUID PETROLEUM SECTOR AND HOUSEHOLD GOODS CARRIERS SECTOR EXPRESSED IN CURRENT DOLLARS[a]

Dependent Variable	b_0	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Liquid Petroleum Revenues	95,095,059,956 (9.80)*	-96,827,251.1668 (-9.82)*	24,648.88081 (9.85)*	97	241.76*	386.52*	97.00*
Liquid Petroleum Expenses	94,598,019,247 (9.94)*	-96,315,390.6732 (-9.97)*	24,517.0982 (9.99)*	97	239.18*	378.55*	99.80*
Liquid Petroleum Income	-13,872,837.79 (-2.50)*	7100.9088 (2.52)*	N.A.	27	6.36*	6.36*	N.A.
Liquid Petroleum Revenues per-mile	1,119,810.287 (28.14)*	-1140.59815 (-28.22)*	.290451 (28.30)*	99	2454.75*	4108.84*	800.65*
Liquid Petroleum Expenses per-mile	1,108,604.925 (24.45)*	-1129.13114 (-24.51)*	.28752 (24.58)*	99	1800.37*	2996.52*	604.22*
Household Goods Carriers Revenues	8,321,890,638 (2.77)*	-8,485,682.91 (2.79)*	2163.250479 (2.8)*	84	42.60*	77.38*	7.82*

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

Similar to the prior sectors, liquid petroleum incomes have followed the linear model II (see Figure 7). Incomes have quadrupled from about $73,500 in 1960 to almost $290,000 in 1978. Each year income is projected to increase about $7,100.

The operating ratios of the liquid petroleum sector have not followed a readily identifiable trend over the 19 year time frame. These ratios have fluctuated from 99.97 in 1963 to 96.54 in 1971 with an average value of 98.117 (see Figure 7).

Furniture and household goods motor carriers are subsectors of the Class A Common Motor Carrier sector and of the Special Common Motor Carrier sector. Due to this fact expense data was not segregated in the data source. However, revenue data was segregated over the 19 year period, and these revenues have followed model I similar to the previously discussed sectors. (see Figure 6). Revenues have increased about 250 percent, from $275,616 in 1960 to $983,117 in 1978.

Revenues and expenses of the Special Common Motor Carrier sector have not followed model I as the other sectors and the aggregate industry have followed over the 19 year time period. Revenues and expenses of this sector have generally followed a linear trend (model II), as shown in Figure 8. Revenues have increased 155 percent from about $4½ million in 1960 to $11,654,672 in 1978, increasing $595,837 per year. Expenses have increased from $4,215,013 in 1960 to $10,855,790 in 1978 increasing about $559,421 per year. Income of this sector has

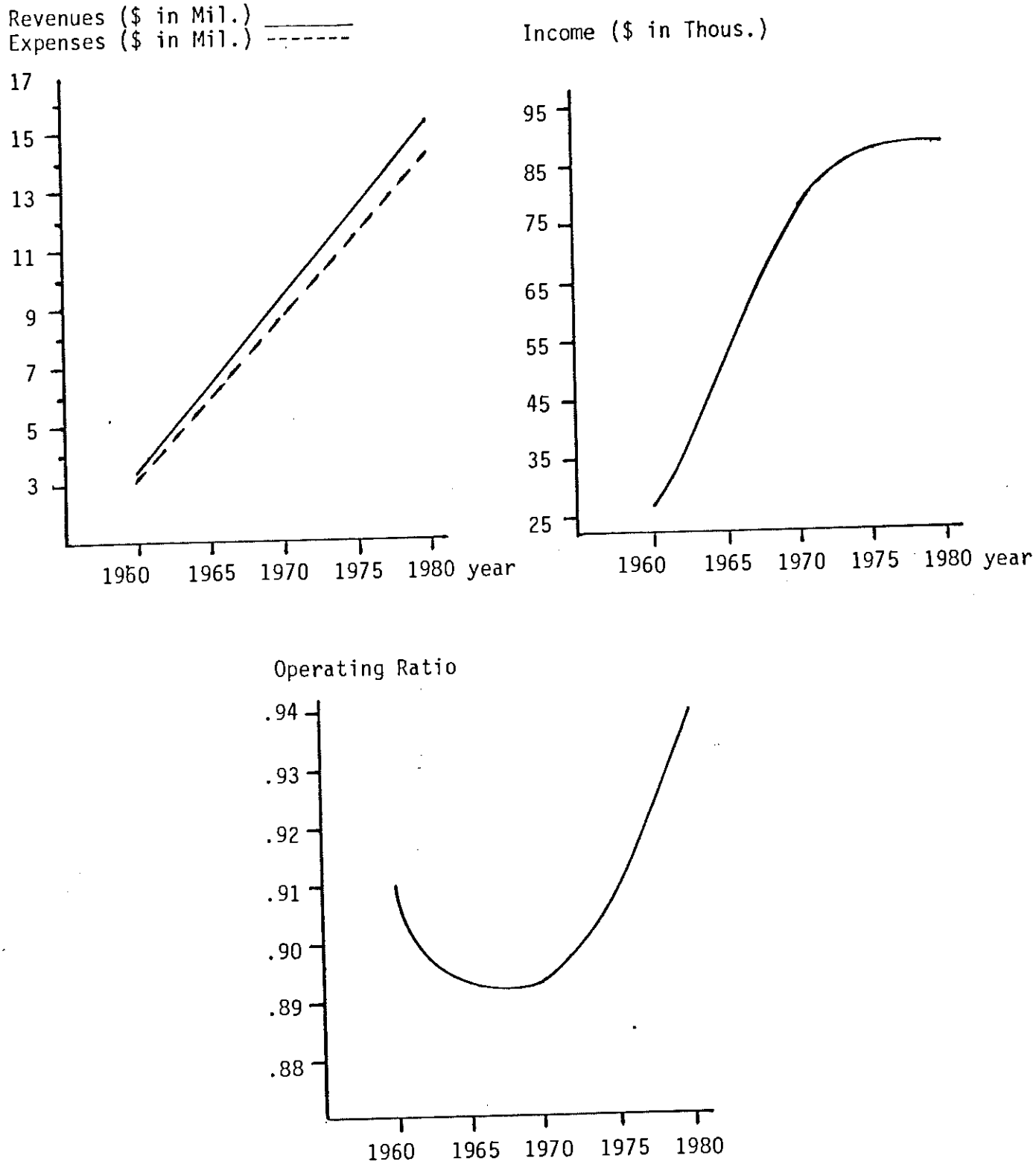


Figure 8.--Revenue, Expense, Income and Operating Ratio Trends of Special Common Motor Carriers of Property Sector.

TABLE 12.--COEFFICIENT ESTIMATES OF THE ESTIMATING EQUATIONS FOR SPECIAL CERTIFICATE SECTOR EXPRESSED IN CURRENT DOLLARS

Dependent Variable	b_o	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Special Revenues	-1,164,372,949 (-12.25)*	595,836.64 (12.34)*	N.A.	90	152.37*	152.37*	N.A.
Special Expenses	-1,093,369,386 (-11.62)*	559,420.81 (11.70)*	N.A.	89	136.99*	136.99*	N.A.
Special Income	-7,655,319,705 (-2.26)*	7,740,199.31 (2.25)*	-1956.268 (-2.24)*	83	39.06*	73.09*	5.02*
Special Operating Ratio	1225.3561 (2.34)*	-1.244587 (-2.34)*	.00031626 (2.34)*	31	3.60*	1.71	5.48*
Special Revenues per-mile	812,586.31 (5.23)*	-828.221898 (-5.24)*	.21104968 (5.26)*	94	123.02*	218.36*	27.68*
Special Expenses per-mile	845,573.87 (4.6)*	-861.66883 (-4.61)*	.21952676 (4.63)*	91	85.33*	149.35*	21.41*

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

followed model III over the 19 year period (see Figure 8). Income has increased 128 percent from $350,875 in 1960 to $798,882 in 1978.

The operating ratio also shows the decreasing profitability of this sector over the past several years (see Figure 8). It has followed the model I over these 19 years and reached a peak of profitability in 1964 when the operating ratio was 86.32 percent. In 1978 the operating ratio was 93.15 percent.

Revenues and expenses of motor carriers operating in North Dakota almost tripled from 1960 to 1978, with over 80 percent of these increases occurring from 1968 to 1978 (see Table 7). During this same 19 year period, inflation increased dramatically especially during the last 11 years of the period. In order to account for rising prices and an unstable dollar, the Consumer Price Index was applied to the 19 years of data with all values expressed in 1967 constant dollars.

Revenues and expenses of the aggregate motor carrier industry operating in North Dakota had an average annual growth rate of about eight percent from 1968 to 1978 (Table 7). When those figures are expressed in constant dollars, the average annual growth rate was only about two percent (Table 13). Revenues and expenses are expressed in constant dollars and tend to follow the linear trend (model II with coefficients shown in Table 14), graphically portrayed in Figure 9 rather than the increasing polynomial function (model I) shown in Figure 5 when expressed

TABLE 13.--ANNUAL GROWTH RATE OF REVENUES AND EXPENSES OF THE AGGREGATE MOTOR CARRIER INDUSTRY OPERATING IN THE STATE OF NORTH DAKOTA: 1960-1978 ADJUSTED TO REAL DOLLARS (1967 = 100%)

Year	Revenues	% Change	Expenses	% Change
1978	$22,132,652	(6.91)	$21,105,899	(6.74)
1977	23,776,610	(3.74)	22,632,082	(3.52)
1976	24,699,822	5.69	23,456,982	6.28
1975	23,369,201	(1.43)	22,070,147	(1.33)
1974	23,707,443	4.02	22,367,863	5.03
1973	22,790,591	2.87	21,297,046	2.59
1972	22,154,137	5.79	20,759,951	5.22
1971	20,942,557	.76	19,730,082	1.17
1970	20,785,049	3.22	19,502,483	7.39
1969	20,136,870	2.92	18,898,671	2.15
1968	19,566,174	5.7	18,500,431	6.19
Average Annual % Change 1968-1978		1.72	2.22	
1967	18,509,384	(2.03)	17,422,271	(2.17)
1966	18,892,362	1.15	17,809,553	1.55
1965	18,676,784	.40	17,537,011	2.1
1964	18,602,058	3.12	17,176,959	.51
1963	18,038,542	2.82	17,089,405	1.03
1962	17,543,991	7.54	16,914,756	7.93
1961	16,313,531	(5.67)	15,671,386	(5.36)
1960	17,293,556	--	16,574,785	--
Average Annual % Change 1960-1967		1.05	.80	

Source: Annual Reports of North Dakota Public Service Commission to the Governor and Departments of Accounts and Purchases for the Biennial Period Ending June 30, 1962 through the Biennial Period Ending June 30, 1979.

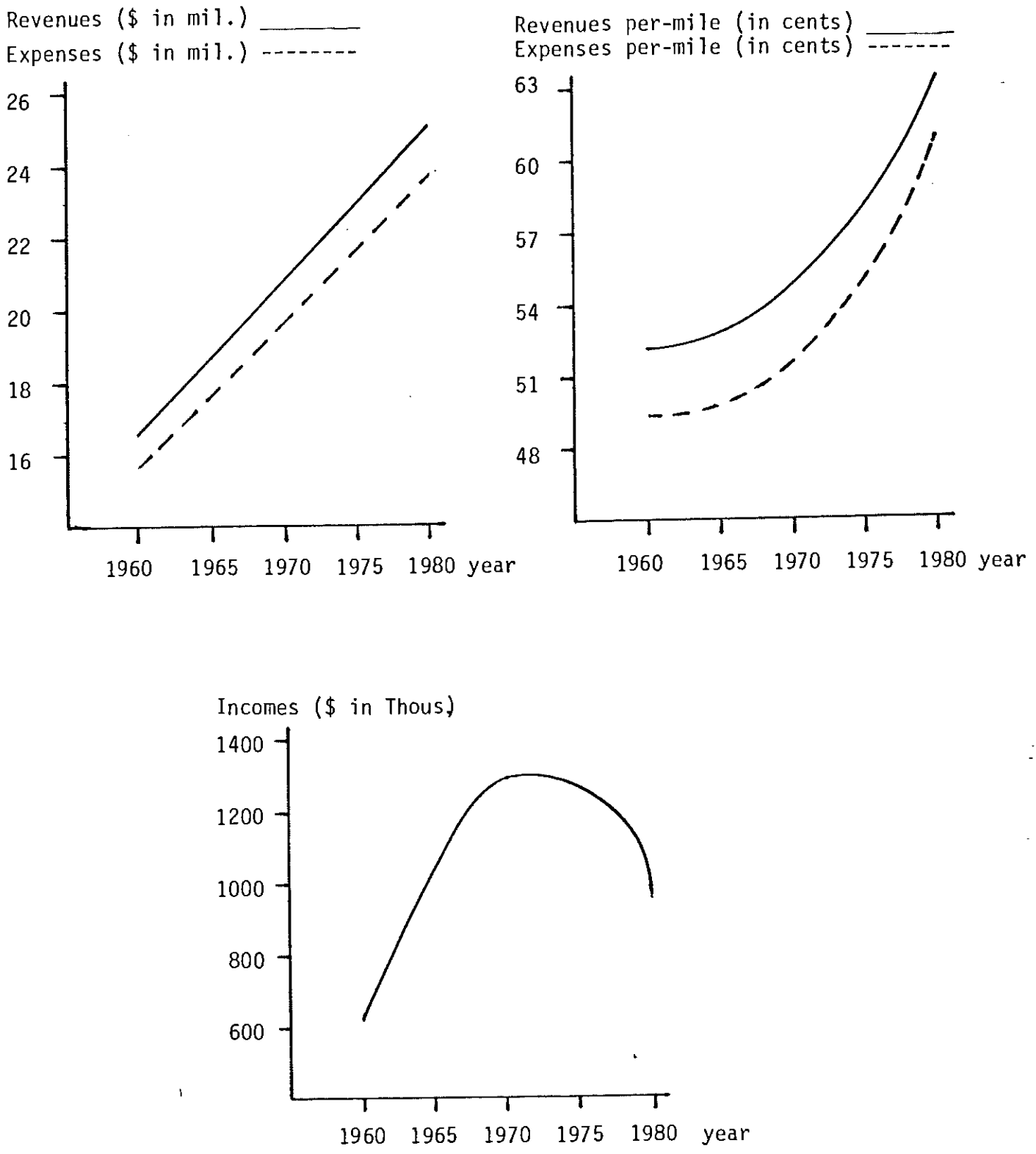


Figure 9.--Revenue, Expense and Income Trends of the Aggregate Motor Carrier Industry Operating in the State of North Dakota Expressed in Real Dollars (1967 = 100%).

in current dollars. Revenues and expenses per mile expressed in constant dollars have also increased curvilinearily (Figure 9) rather than by a polynomial model I as they do when expressed in current dollars (Table 14). Constant dollar incomes have followed a parabolic trend over the 19-year period (Figure 9) rather then the linear trend of current dollar incomes (Figure 5). An analysis of the parabolic trend indicated the curve reached a peak in 1971 and the industry has experienced decreasing constant dollar incomes ever since.[121]

Current dollar revenue and expense trends of Motor Carriers operating under a Class A certificate in the state of North Dakota have increased from 1960 to 1978 following the polynomial model I (Figure 6). When adjusted to real dollars, these trends continued to follow the polynomial function model I with coefficients shown in Table 15 (Figure 10). In addition, the current dollar linear model II that incomes have followed, is maintained when expressed in real dollars (see Figure 10).

With revenues and expenses of the aggregate industry following a linear function over the 29 year period while revenues and expenses of motor carriers operating under Class A authority increased exponentially, we may infer this sector of the North Dakota Motor Carrier industry is expanding its share of traffic in N.D. However, it should be pointed out this sector could

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[121] 1971 is the result of solving the first derivative of the regression equation shown in Table 6 for zero. The result indicates the maximum value reached based on the regression model over the 19 year period.

TABLE 14.--COEFFICIENT ESTIMATES OF THE ESTIMATING EQUATIONS OF THE AGGREGATE MOTOR CARRIER INDUSTRY OPERATING IN NORTH DAKOTA EXPRESSED IN REAL DOLLARS (1967 = 100%)[a]

Dependent Variable	b_0	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Aggregate Revenues	-819,633,834 (-12.34)*	426,638.533 (12.65)*	N.A.	90	160.04*	160.04*	N.A.
Aggregate Expenses	-766,959,498 (-12.43)*	399,314.325 (12.74)*	N.A.	91	162.31*	162.31*	N.A.
Aggregate Income	-19,747,633,468 (4.01)*	20,032,516.217 (4.01)*	-5080.0386 (-4.00)*	69	17.73*	17.46*	16.01*
Aggregate Operating Ratio	990.72097 (4.21)*	-1.005064 (-4.21)*	-00025515 (4.20)*	54	9.36*	1.05	17.68*
Aggregate Revenues per-mile	109,731.83 (1.99)**	-111.909569 (-1.99)**	.02854624 (2.00)**	78	28.44*	52.87*	4.01**
Aggregate Expenses per-mile	136,363.497 (2.54)*	-138.971 (-2.54)*	.03542 (2.55)*	80	31.95*	57.38*	6.52*

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

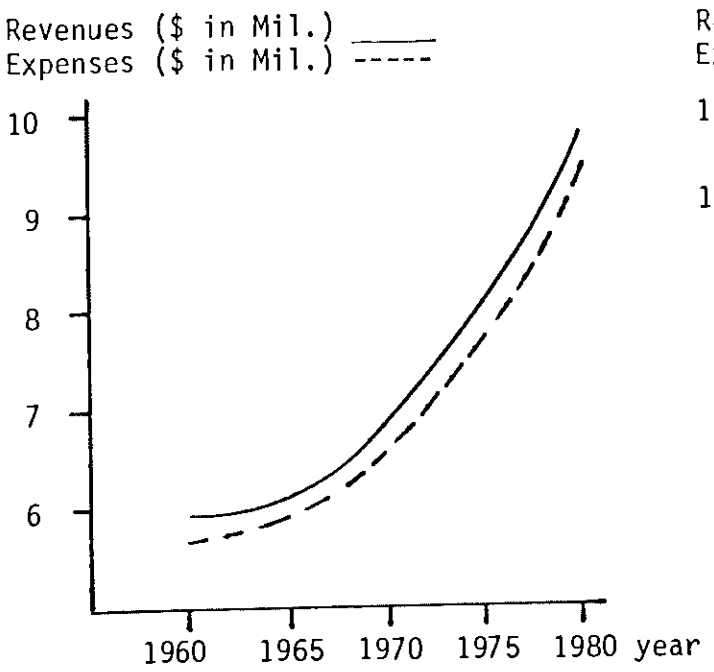
TABLE 15.--COEFFICIENT ESTIMATES OF THE ESTIMATING EQUATIONS FOR CLASS A COMMON MOTOR CARRIERS OPERATING IN NORTH DAKOTA EXPRESSED IN REAL DOLLARS (1967 = 100%)[a]

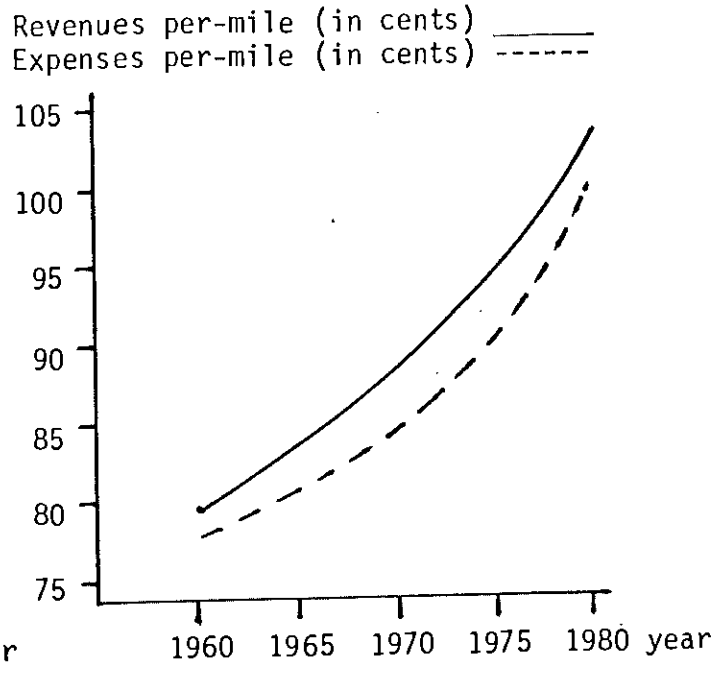
Dependent Variable	b_0	b_1	b_2	R^2[b]	F-Values		
					Equation	b_1	b_2
Class A Revenues	38,672,368,091 (4.05)*	-39,448,033.679 (-4.07)*	10,061.3614 (4.08)*	93	112.65*	208.62*	16.68*
Class A Expenses	41,169,854,192 (4.59)*	-41,975,429.229 (-4.61)*	10,700.693 (4.63)*	94	116.26*	211.10*	21.42*
Class A Income	-18,841,562 (-3.93)*	9707.668 (3.99)*	N.A.	48	15.92*	15.92*	N.A.
Class A Operating Ratio	558.4446 (2.33)*	-.56577 (-2.32)*	.00014354 (2.32)*	33	4.02*	2.66	5.38*
Class A Revenues per-mile	-2134.5644 (-10.95)*	1.12898 (11.4)*	N.A.	88	130.03*	130.03*	N.A.
Class A Expenses per-mile	151,531.97 (1.99)**	-154.87582 (-2.01)**	.03959346 (2.02)**	88	61.47*	118.86*	4.07**

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.





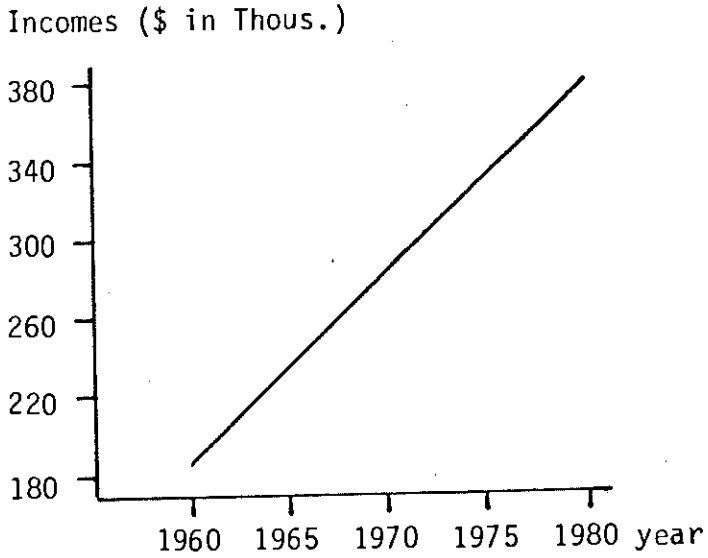
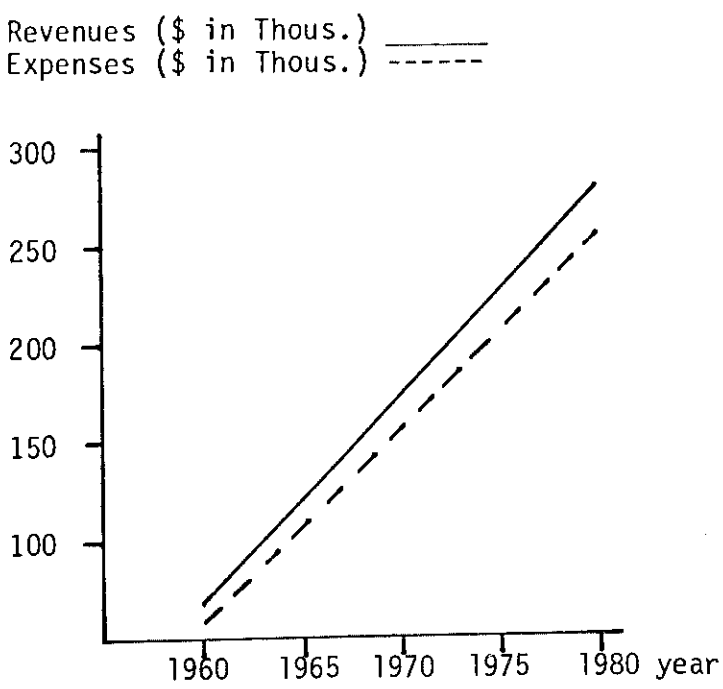


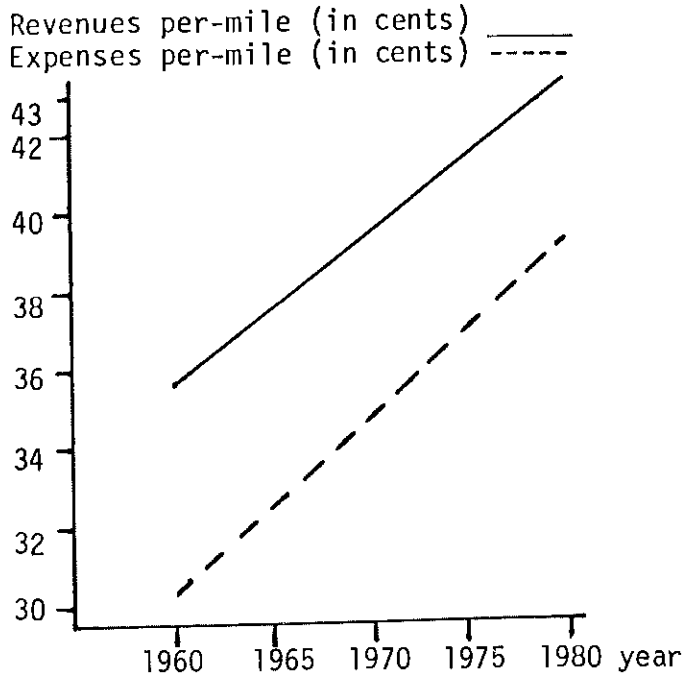
Figure 10.--Revenue, Expense, and Income Trends of Motor Carriers Operating under Class A Authority in the State of North Dakota Expressed in Real Dollars (1967 = 100%).

experience financial problems in the future as expenses per-mile increased following a polynomial function while revenues per-mile have followed a linear trend.

Contract carriers have experienced relatively stable growth in revenues, expenses, and incomes. When adjusted to real dollars, the current dollar polynomial trends (Figure 6) of this sector are restated into linear trends i.e., follows model II (Figure 11). Income remains a linear trend whether expressed in current or real dollars over the 19 year period (Figures 6 and 11). Each year revenues and expenses are projected to increase $106,580 and $97,751 respectively, (Table 16) a difference of $8829 which is exactly the same as the regression coefficient of the income estimating equation. The coefficients for these equations are found in Table 16.

In current dollars, the revenues and expenses of Liquid Petroleum Carriers have followed an increasing exponential trend curve (Figure 6). However, when adjusted to real dollars, revenues and expenses of Liquid Petroleum Carriers have followed a parabolic trend (Figure 12). Real dollar revenues in this sector decreased from 1960 to 1970 and have increased since 1970. However, as of 1978 real dollar revenues have not yet reached 1960 levels. In 1978, real dollar revenues were 13 percent below the 1960 level of $5,355,899. Real dollar incomes have fluctuated significantly over the 19 year period to an extent that no trend is readily identified. Therefore,





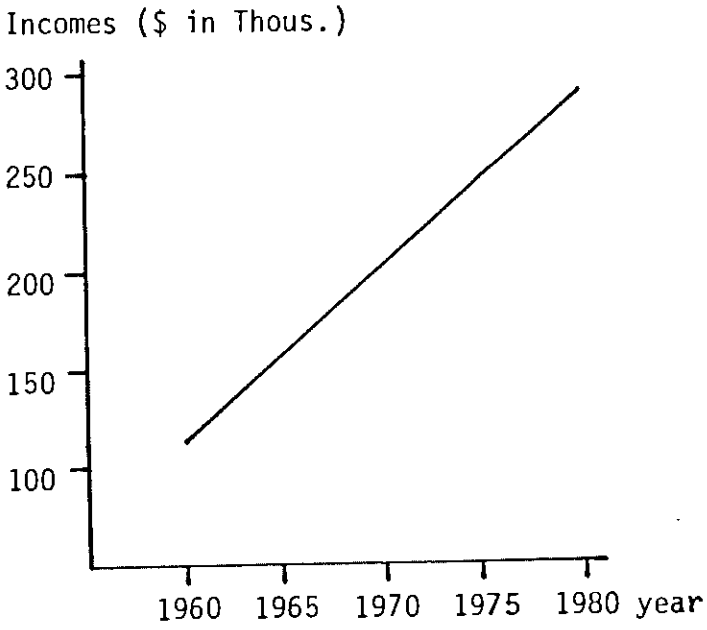


Figure 11.--Revenue, Expense, and Income Trends of Motor Carriers Operating under Contract Carrier Authority in the State of North Dakota Expressed in Real Dollars (1967 = 100%).

TABLE 16.--COEFFICIENT ESTIMATES FOR THE ESTIMATING EQUATIONS OF THE CONTRACT CARRIER SECTOR OF THE NORTH DAKOTA MOTOR CARRIER INDUSTRY EXPRESSED IN REAL DOLLARS[a]

Dependent Variable	b_0	b_1	b_2	R^{2b}	F-Values		
					Equation	b_1	b_2
Contract Revenues	-208,202,995 (-9.99)*	106,580,944 (10.07)*	N.A.	86	101.31*	101.31*	N.A.
Contract Expenses	-191,009,723 (-9.73)*	97,751.504 (9.81)*	N.A.	85	96.19*	96.19*	N.A.
Contract Income	-17,193,272 (-5.84)*	8829.44 (5.91)*	N.A.	67	34.92*	34.92*	N.A.
Contract Operating Ratio	-4.3904 (-2.08)**	.0026756 (2.50)*	N.A.	27	6.24*	6.24*	N.A.
Contract Revenues per-mile	-719.964 (-1.76)**	.38553 (1.85)**	N.A.	17	3.43**	3.43**	N.A.
Contract Expenses per-mile	-841.708 (-2.22)*	.444958 (2.31)*	N.A.	24	5.32*	5.32*	N.A.

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

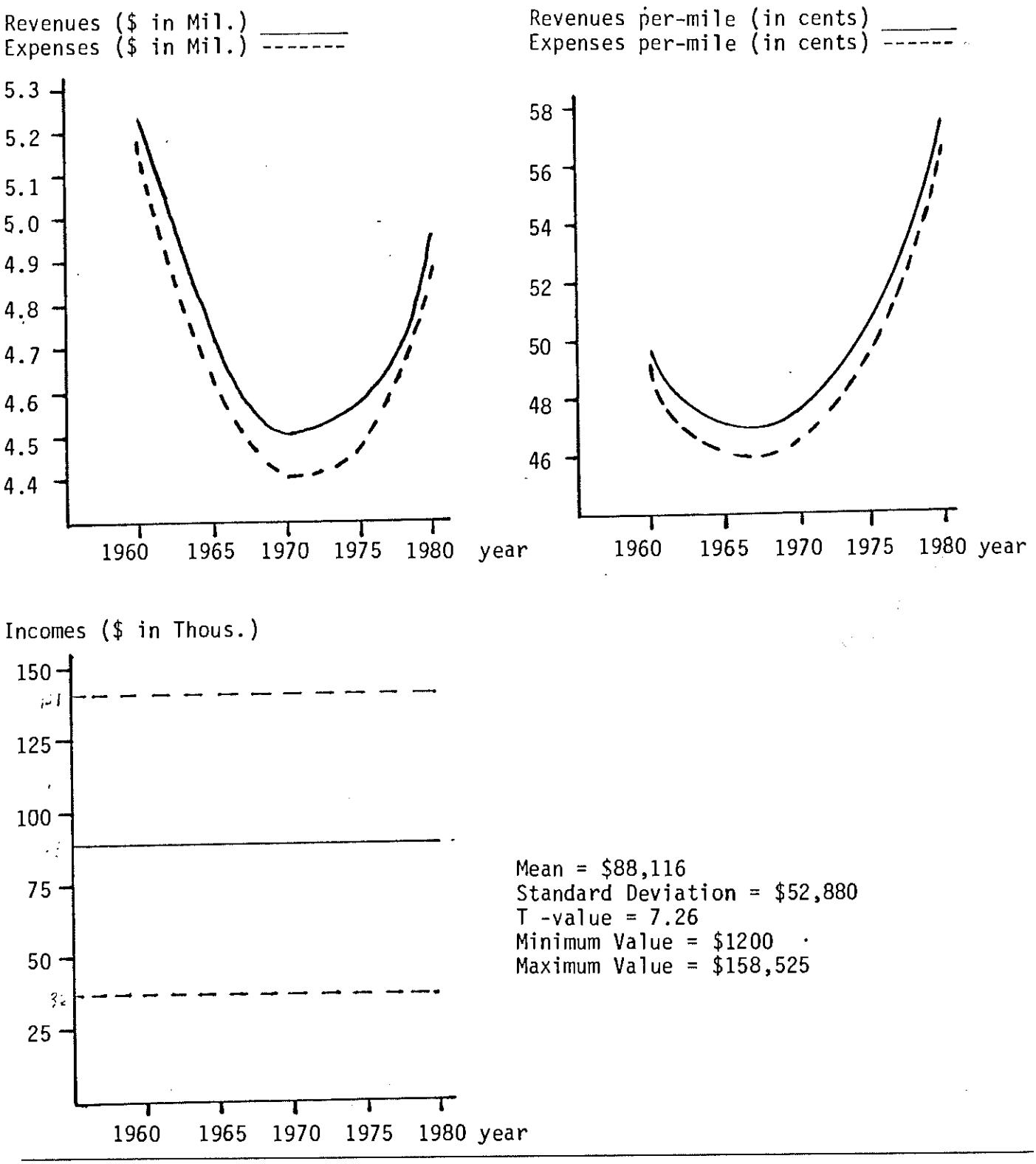


Figure 12.--Revenue, Expense, and Income Trends of Liquid Petroleum Carriers Operating under Special Certificates in the State of North Dakota Expressed in Real Dollars (1967 = 100%).

the average value over the 19 years (mean) provides the best description of 19 year trends (Figure 12).

Current dollar revenues of Furniture and Household Goods Carriers follow an increasing polynomial trend curve over the 19 year period (Figure 6). When adjusted to real dollars the revenues of this sector have followed a linear trend line (Figure 13) similar to the aggregate industry and the contract carrier sector. The coefficient estimates of the Household Goods sector expressed in real dollars are found in Table 17.

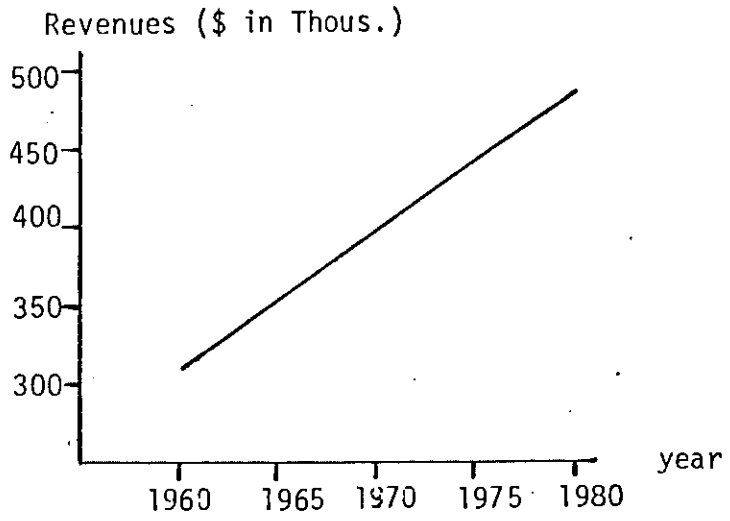


Figure 13.--Revenue Trends of Furniture and Household Goods Carriers Operating Under Class A and Special Certificate Authority in the State of North Dakota Expressed in Real Dollars (1967 = 100%)

The current dollar revenue and expense trends of Common Motor Carriers operating under Special Certificate Authority, when ad-

TABLE 17.--COEFFICIENT ESTIMATES FOR THE ESTIMATING EQUATIONS OF LIQUID PETROLEUM ABD HOUSEHOLD GOODS MOTOR CARRIERS OPERATING IN NORTH DAKOTA EXPRESSED IN REAL DOLLARS[a]

Dependent Variable	b_0	b_1	b_2	R^{2b}	F-Values		
					Equation	b_1	b_2
Liquid Petroleum Revenue	22,656,305,249 (2.35)*	-22,982,873.33 (-2.34)*	5829.6949 (2.34)*	38	4.95*	4.42**	5.48*
Liquid Petroleum Expenses	24,340,695,312 (2.61)*	-24,691,979.93 (-2.61)*	.2148 (2.60)*	43	6.12*	5.46*	6.77*
Liquid Petroleum Revenues Per-Mile	230,995.9 (6.02)*	-234.84938 (-6.03)*	.0597039 (6.03)*	81	33.23*	30.07*	36.90*
Liquid Petroleum Expenses Per-Mile	245,704.01 (6.14)*	-249.76206 (-6.15)*	.063484 (6.15)*	79	29.99*	22.12*	37.87*
Household Goods Revenues	-16,230,809 (-3.33)*	8439.2853 (3.41)*	N.A.	41	11.65*	11.65*	N.A.

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

justed to real dollars result in a parabolic curve trend over the 19 year period (Figure 14).[122] Current dollar revenue and expenses per mile increased exponentially, and when adjusted to real dollars they have followed linear trends (Figure 14). Income also follows a parabolic trend which reached a maximum in 1970 of about $700,000 and decreased through 1978. With revenues and expenses following a polynomial trend (model III) while revenues and expenses per mile have increased linearly (model II), it can be inferred that this sector has lost potential or existing traffic over the 19 year period.

Financial Analysis of the Motor Carrier Industry

Scope of Analysis

Provided in this section is a comparable financial analysis between motor carriers operating in North Dakota and nation-wide. Liquidity, activity, leverage, and profitability figures are used to compare the aggregate motor carrier industry operating in North Dakota with the nation-wide motor carrier industry. The aggregate motor carrier industry operating in North Dakota is divided into five sectors, including motor carriers operating under Class A authority, special certificate, contract carrier authority, liquid petroleum carriers, and household goods carriers. These five sectors are compared against similar carriers operating throughout the nation.

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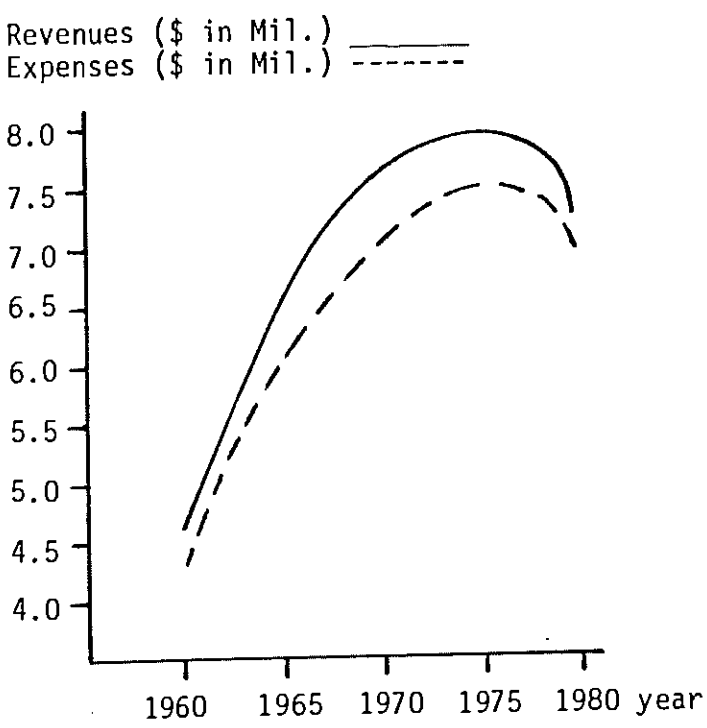
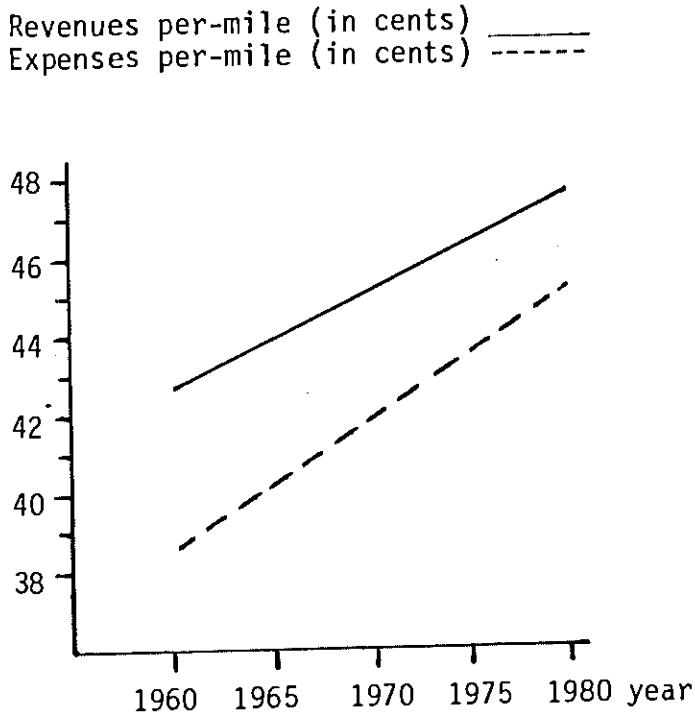
[122]The coefficient estimates for the estimating equation of this sector are found in Table 18.





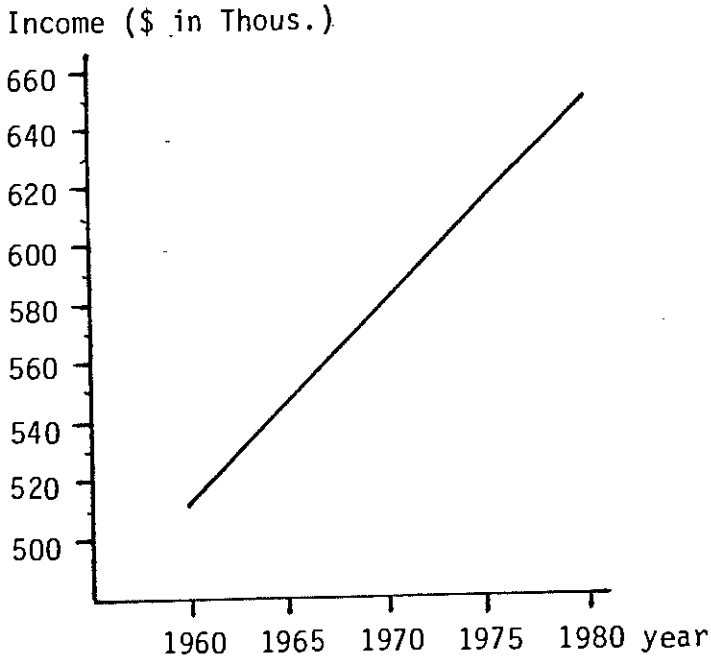


Figure 14.--Revenue, Expense, and Income Trends of Motor Carriers Operating under Special Certificate in the State of North Dakota Expressed in Real Dollars (1967 = 100%).

Data Sources

Data for motor carriers operating in the State of North Dakota was aggregated from 37 annual reports filed with the North Dakota Public Service Commission for the year 1978. Data for the "industry norms" were collected from the "1978 Motor Carrier Annual Report, Results of Operations, Class I and Class II Motor Carriers of Property Regulated by the Interstate Commerce Commission," published by the American Trucking Associations, Inc. Appendix A contains the aggregated financial statements for the motor carrier industry operating in North Dakota and throughout the nation.

Some motor carriers are required to file annual reports with both the North Dakota Public Service Commission (NDPSC) and the Interstate Commerce Commission (ICC). Such motor carriers may file the ICC adopted annual report with the NDPSC rather than the NDPSC adopted annual report as a matter of convenience for the reporting carriers. Two of the six sets of aggregated financial statements are based on the ICC adopted annual report, and the remaining four sets are based on the NDPSC adopted annual report. When a particular carrier received revenues from interstate and/or out-of-state sources, the various accounts in the financial statements were allocated to North Dakota using either a mileage traveled in North Dakota basis or an intrastate revenue basis.

The financial statements of the aggregate motor carrier industry and three of the five sectors of the industry (Special, Contract, and Household Goods) are based on the NDPSC adopted annual report. The balance sheet of this report does not contain a division of current assets and current liabilities from long-term assets and liabilities. For this reason, all assets and liabilities that were readily identifiable as current or long-term were classified as such. The questionable assets and liabilities were allocated between a short and long term classification on the basis of the nation-wide balance sheets e.g., the assets of the nationwide balance sheets not accounted for in the NDPSC report were aggregated, and the percentage of current assets to the total were then applied to the aggregate figure of unidentified North Dakota motor carrier's assets. The percentage applied is shown in parentheses next to the account in Appendix A. In addition, the income statement of the NDPSC adopted annual report contains only operating results. Therefore, any profitability analysis was based on operating profit not net income, unless otherwise indicated.

Liquidity

Liquidity ratios and/or statistics, in this case, represent the short-run solvency of motor carriers. The current ratio is a ratio of liquidity, and is calculated by dividing current assets by current liabilities. In every such ratio presented in Table 19,

motor carriers operating in North Dakota had a more favorable position as compared with the respective nation-wide ratio in 1978 (Table 19). Working capital is simply the difference between current assets and current liabilities. However, because of the comparative nature of this analysis, the difference has been expressed as a percentage of total assets. With the exception of motor carriers operating under Class "A" authority in North Dakota compared with motor carriers operating throughout the nation, motor carriers operating in the State of North Dakota had a greater percentage of working capital to total assets.

A third liquidity consideration is the number of daily cash operating expenses covered by working capital. This figure, expressed in days, is calculated by subtracting non-cash operating expenses, e.g., depreciation, from total operating expenses and dividing that figure by 365 days to obtain daily cash operating expenses. Working capital is divided by this figure to obtain the number of days a firm could remain solvent after paying off current liabiliites and paying daily cash operating expenses without any incoming revenues. Except for motor carriers operating in North Dakota under Class A certificate, motor carriers operating in North Dakota had a more favorable statistic in this area as well as with the other liquidity ratios or statistics in 1978 (see Table 19). However, motor carriers operating under Class A certificate in North Dakota had a smaller figure of working capital expressed as a percentage of total assets than

TABLE 18.--COEFFICIENT ESTIMATES FOR THE ESTIMATING EQUATIONS OF THE SPECIAL COMMON MOTOR CARRIERS OPERATING IN NORTH DAKOTA EXPRESSED IN REAL DOLLARS (1967 = 100%)

Dependent Variable	b_0	b_1	b_2	R^{2b}	F-Values		
					Equation	b_1	b_2
Special Revenues	-69,943,779,879 (-3.28)*	70,880,713.338 (3.27)*	-17,955.49224 (-3.26)*	76	25.87*	41.09*	10.66*
Special Expenses	-55,944,391,565 (-2.64)*	56,667,106,874 (2.63)*	-14,347.8933 (-2.63)*	74	22.65*	38.4*	6.9*
Special Income	-13,999,388,365 (-4.51)*	14,213,606.516 (4.51)*	-3607.59896 (-4.50)*	59	11.69*	3.10**	20.29*
Special Operating Ratio	1225.356 (2.34)*	-1.24459 (-2.34)*	.00031626 (2.34)*	31	3.60**	1.71	5.48*
Special Revenues per-mile	-433,173 (-1.80)**	.242817 (1.99)**	N.A.	19	3.96**	3.96**	N.A.
Special Expenses per-mile	-598.539 (-2.16)*	.32509 (2.31)*	N.A.	24	5.32*	5.32*	N.A.

a. The t-values are shown in parentheses below the coefficient. a* indicates significance at the five percent level. a** indicates significance at the ten percent level.

b. Figure was rounded off to the nearest percent.

c. B_2 represents the coefficient of x^2 and is therefore not applicable in a linear equation.

TABLE 19. RATIO ANALYSIS OF THE MOTOR CARRIER INDUSTRY, 1978

RATIO or STATISTIC	AGGREGATE		CLASS A, COMMON		SPECIAL		CONTRACT		LIQUID PETROLEUM		HOUSEHOLD GOODS	
	ND Oper	Nation-wide	ND Oper	Nation-wide	ND Oper	Nation-wide	ND Oper	Nation-wide	ND Oper	Nation-wide	ND Oper	Nation-wide
LIQUIDITY												
Current Ratio	1.44:1	1.21:1	1.56:1	1.23:1	1.36:1	1.23:1	1.67:1	.93	1.53:1	1.26:1	1.91:1	1.23:1
Working Capital (% of total assets)	12.2%	6.2%	4.7%	6.4%	9.8%	6.9%	23%	N.A.[a]	12.8%	6.8%	17.4%	6.5%
Days of Cash Operating Expenses in Working Capital	27 days	11 days	8 days	12 days	26 days	12 days	123 days	N.A.[a]	21 days	14 days	48 days	9 days
ACTIVITY												
Average Collection Period	51 days	36 days	27 days	31 days	59 days	36 days	207 days	33 days	31 days	32 days	58 days	71 days
Tangible Asset Turnover[b] (times)	3.5	4.6	4.0	4.5	2.8	4.7	2.0	3.9	4.5	3.7	2.5	10.9
Total Asset Turnover	1.9	2.2	2.3	2.3	1.5	2.4	.8	2.3	1.7	2.0	1.4	2.7
Capital Turnover	1.0	2.3	2.3	2.2	1.7	2.5	.8	2.4	2.7	2.1	1.4	2.8
LEVERAGE												
Total Debt to Total Assets	48.5%	51.1%	53.5%	47.9%	51.4%	55.8%	40.6%	56.8%	46.7%	54.9%	48.6%	63.7%
Total Debt to Net Worth	1.00	1.19	1.17	1.05	139	142	68.4	148	88.6	143	96.6	192
PROFITABILITY[c]												
Profit Margin on Revenue	7.1%	5.2%	5.4% (2.7)[c]	5.5% (3.2)[c]	2.7%	5.1%	11.2%	4.7%	10.5% (7.8)[c]	5.7% (3.1)[c]	1.6%	.4%
Operating Ratio (%)	92.9	94.8	94.6	94.5	97.3	94.9	88.8	95.3	89.5	94.3	98.4	99.6
Return on Tangible Property (%)	24.7	23.7	21.5	24.7	7.6	24.2	22	18.4	47	21	4.1	4.0
Return on Total Assets (%)	13.4	11.2	12.3 (6.3)[c]	11.5 (6.7)[c]	4.1	12.0	9.1	10.6	28.2 (21)[c]	11.2 (6.1)[c]	2.2	1.0
Return on Net Worth (%)	27.6	26.1	26.8 (13.7)[c]	25.2 (14.8)[c]	11.2	30.6	15.4	27.2	53.5 (39.9)[c]	29.1 (16)[c]	4.4	3.0

[a]Not applicable because current assets exceeds current liabilities. Therefore working capital is non-existent.

[b]Tangible assets is only the amount indicated on the financial statements, it does not include current assets and other assets.

[c]All profitability ratios are based on operating income unless otherwise indicated.

[d]Ratio based on Net Income.

did the comparable nation-wide figure (4.7 percent compared with 6.2 percent). In addition, this sector had only eight days of daily cash operating expenses covered by working capital as compared with the industry norm figure of 12 days in 1978 (Table 19). Contract and household goods carriers had the strongest liquidity position amongst motor carriers operating in North Dakota. Household goods motor carriers had a current ratio of 1.91 to 1 while contract carriers with operations in North Dakota had average current ratio of 1.67 to 1. However, working capital expressed as a percentage of total assets in the contract carriage sector was 23 percent compared wtih 17.4 percent in the household goods sector in 1978. In addition, the contract carriage sector had an unsurpassed 123 days of cash operating expenses covered by working capital in 1978 (Table 19).

Motor Carriers operating in North Dakota under Class A and special certificate have the weakest liquidity positions of the North Dakota sectors. Motor Carriers operating under special certificate have the lowest current ratio (1.36 to 1) and the second lowest working capital percentage of total assets as shown in Table 19. Nevertheless this sector had a more favorable liquidity position as compared with the industry norm with all three ratios and/or statistics reflecting a more favorable position. Motor Carriers operating under Class A authority had the most unfavorable working capital position of all sectors in

North Dakota and were also unfavorable with respect to the industry norms.

Activity

Activity statistics are indicative of the degree of efficiency in management i.e., how well resources are utilized. Four statistics are presented in this respect: average collection period, tangible asset turnover, total asset turnover, and net worth turnover. The average collection period is the average number of days it takes to collect a receivable outstanding. Normally, this figure is calculated by dividing credit revenues by 365 days to obtain daily credit revenues. The balance of receivables is divided by daily credit sales to obtain the average number of receivables which are outstanding. However, for these purposes gross revenues were used instead of credit sales. As a whole, the motor carrier industry operating in North Dakota was slower in collection of receivables than was the nation-wide industry. However, Class A authorized and household goods carriers both collected receivables faster than do the comparable industry norm sectors, 27 days versus 31 days and 58 days versus 71 days respectively. Liquid petroleum carriers collected receivables about the same as the industry norm while carriers operating under special certificate and carriers operating under contract carrier authority in North Dakota collect receivables much slower (Table 19). Motor Carriers operating under Class A authority in North Dakota collect receivables faster

than all other sectors of motor carriers with operations in North Dakota (27 days), while contract carriers collect receivables, the slowest at 207 days. It should be noted that Class A motor carriers had a weaker liquidity position than did the other sectors, and a tight credit policy could be a necessity. In contrast, contract carriers in North Dakota had a very strong liquidity position and a potentially tight credit policy which may not be advantageous given the trade-off of potential lost revenues.

The turnover ratios are the relationships of revenues to total tangible assets (tangible assets do not include current or other assets of the financial statement shown in Appendix A), total assets, and capital (capital includes net worth and total debt). They are indicative of management efficiency with respect to how well resources are being used. It should be pointed out that an excessively high ratio may be an indication of an excessive strain on the assets and/or capital resources, and greater revenues could be obtained by expanding these resources. As shown in Table 19, motor carriers operating in North Dakota did not utilize their tangible assets to the extent that the industry norm did, turning over 3.5 times as compared with 4.6. However, liquid petroleum carriers did surpass the industry norm in this respect turning over tangible assets 4.5 times as compared with the industry norm of 3.7 times. Total assets including intangibles turned over in the aggregate

North Dakota industy 1.9 times, whereas, the nation-wide industry turned over total assets 2.2 times indicating slightly less utilization of total assets. Most of this difference was accounted for by the motor carriers operating under special certificate authority, contract carrier authority and household goods carriers. All of these had a statistic that indicates much less utilization of total assets (Table 19). This is also true with respect to the capital turnover statistics. Motor Carriers operating under special certificate turned over capital 32 percent less, contract carriers 67 percent less, and household carriers 50 percent less.

Leverage

Leverage ratios measure the funds supplied by creditors as compared with the funds supplied by the owners. A relatively high portion of funds coming from owners would indicate a margin of safety for any perspective creditor. Conversely, a relatively low portion of outside funding would indicate a greater degree of control by owners. The two ratios indicate the motor carriers with operations in North Dakota were generally less dependent on outside funding than were the industry norms. However, the motor carriers operating under Class A authority in North Dakota were more dependent on outside funding which could indicate this sector could have more difficulty borrowing additional funds than would the carriers of the industry norms.

Profitability

Profitability ratios used in this analysis are of two types. The first type is based on the income statement and the second type is based on the income statement as well as the balance sheet.

First, the operating ratio is the percentage of operating revenues that are paid out in operating expenses. Motor carriers operating in North Dakota have a lower operating ratio than did the industry norm. However, motor carriers operating in North Dakota under special carrier authority have an operating ratio of 97.3 percent which is 2.4 percent higher than the comparable industry figure (Table 19). In addition, household goods carriers have very high operating ratios, which are substantially higher than the rest of the industry. Profit margin on revenue is also based on the income statement. Normally this ratio is calculated by dividing net income by gross revenues. However, due to the reporting requirements of the NDPSC this ratio was calculated using operating income with supplementary figures based on net income provided in the Class A, common, and liquid petroleum sectors. Because of these figures relationships to the operating ratio, the figures added together are equal to one. As one might expect motor carriers operating under special certificate in North Dakota receive a very low margin on revenues (2.7) compared to the industry norm (5.1) and household carriers experience a very low margin in comparison to all of the sectors.

The remaining three ratios combine income statement and balance sheet data. The return on tangible property operating income/tangible property is indicative of the degree of efficiency in management of tangible property when compared to the industry norms. Motor carriers with operations in North Dakota generally receive greater returns on tangible assets. This could be indicative of higher rates and/or more efficient management surrounding the use of such assets. This is especially prevelant in the liquid petroleum sector (Table 19). However, motor carriers operating under special certificate authority received a 7.6 percent return as compared with a 24.2 percent return nation-wide, indicating either less efficient use of tangible assets and/or rates that are too low. It should be pointed out this sector turned over tangible assets only 2.8 times while the industry norm was 4.7 times (Table 19).

The return on total assets indicates managements efficiency in utilization of total assets. Again, the motor carriers with operations in North Dakota received a higher return than did the industry norm. Motor carriers operating under special certification and contract carrier authority both received a lower return than did the comparable industry norms. Furthermore, both of these sectors turned over their total assets less than did their comparable industry norms. This could indicate less efficient management and/or rates lower than the rates for comparable industry-wide sectors.

Return on net worth is the final ratio presented for analysis. This ratio measures the rate of return accruing to the stockholders and/or proprietorship's investment. This ratio is particularily important because if the rate is too low, investors would have the profit incentive to invest their dollars elsewhere. The motor carrier industry operating in North Dakota received a slightly higher rate of return on net worth than did the industry norm, 27.6 percent as compared with 26.1 percent. Most of this difference is due to liquid petroleum carriers operating in North Dakota who received a return 84 percent higher than the industry norm. However, special common motor carriers operating in North Dakota received a return 63 percent lower than the industry norm and motor carriers operating under contract authority received a return 43 percent lower than the industry norms. In addition, all household goods carriers (both North Dakota and nation-wide) receive a very low rate of 4.4 percent for motor carriers with North Dakota operations and 4.0 percent for the industry norm. When there is a wide disparity, there is an indication investors may consider investing elsewhere. This could be the case for the household goods carriers operating throughout the United States where total debt was 192 percent of net worth.

HIGHLIGHTS, CONCLUSIONS, AND POINTS OF FURTHER INTEREST

Regulation

The Motor Carrier Industry operating in North DAkota is of

crucial importance to industrial concerns, to the North Dakota economy, to other modes of transportation, and to each of us as consumers. Regulation is intended to provide each of these concerns with a safe, adequate, and reliable motor carrier service at reasonable and just rates. Rates granted by regulating agencies, while being reasonable from the users standpoint, must be high enough to ensure the financial stability and responsibility of the carriers and to allow a rate of return that is sufficient for motor carriers to attract capital and obtain credit. In addition, the stated purposes of regulating motor carriers operating in North Dakota include regulation designed to protect the highway, protecting the safety of the public on the highways, and coordination of transportation facilities.[123]

The development of motor carrier regulation involved several distinct and specific interest groups such as large established motor carriers, various shippers, railroads, and state regulatory agencies. The Motor Carrier Act of 1935 was the culminating event of the efforts of these groups, passed during a period of high unemployment and low production levels.

Early regulation of motor carriers closely resembled the already existing regulation of railroads even though the economic structures of the two industries bore little or no similarity.[124]

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[123] North Dakota Century Code 49-18-06.

[124] Dudley F. Pegrum, Transportation: Economics and Public Policy, rev. ed., (Homewood, Ill: Richard P. Irwin, Inc., 1968). p. 358.

Since then, regulation of motor carriers has evolved to become more applicable to the motor carrier industry. Nevertheless, as Dudley F. Pegrum stated "if there had been no railroads or railroad regulation, it is doubtful that the pattern of motor carrier regulation would have bourne any resembalance to that which exists today."[125] However, on July 1, 1980 the Motor Carrier Act of 1980 was passed, attuning motor carrier regulation to the industry's economic structure. This Act provides for easier entrance into the industry, greater rate flexibility, limitations on collective ratemaking, and elimination of gateway and circuitous restrictions.

States such as North Dakota are now faced with the decisions of whether or not to follow the lead of Congress and reform the regulation surrounding intrastate motor carriers. Legislators must ascertain need for regulation of entrance into the industry i.e., whether there are not sufficient economic barriers to entry or whether regulation is needed to avoid the situation of the 1920's and 1930's. These legislators must also determine the extent of rate flexibility warranted by the motor carrier industry's characteristics, and what role the regulatory agencies should play in this area. In addition, they must address the question of need for a collective ratemaking system. One other major issue is whether regulatory reform is actually needed. For example, are motor carriers providing reasonable transpor-

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[125] Ibid. p. 335.

tation services to the shipping public, and is regulation providing for a stable and responsible motor carrier industry. The next section describes financial characteristics of motor carriers operating in North Dakota which offers implications regarding the regulatory environments of motor carriers operating in the state as opposed to motor carriers operating throughout the nation.[126]

Financial Analysis of the North Dakota Motor Carrier Industry

Operating in North Dakota, Motor Carriers had a generally more favorable financial condition than did motor carrier operating throughout the United States. This could be an indication that motor carriers operating in North Dakota have a more favorable competitive and/or regulatory environment from the carrier's standpoint. This becomes clearer when activity ratios are examined because motor carriers in North Dakota generally used their resources to a lesser extent than did the nation-wide motor carriers in 1978, meaning it took less utilization of resources to produce a dollar or revenue.

An analysis of the period from 1960 to 1978 indicates that revenues and expenses of the aggregate industry have increased following a parabolic curve expressed in current dollars and a linear trend expressed in real dollars. Revenues and expenses per mile followed a polynomial function regardless of whether

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[126]It should be noted these implications are general in nature as Motor Carriers operating in North Dakota are in some cases subject to ICC and NDPSC jurisdiction. This makes definite conclusions concerning the regulation of the two agencies inappropriate.

expressed in real or current dollars. With revenues and expenses per-mile increasing absolute revenues and revenues and expenses increasing linearly, it can be assumed that freight traffic movements are not increasing as fast as the cost to move this freight.

Motor carriers operating under Class A certificate in North Dakota have experienced increasingly sharper trends in revenues per-mile transform from a parabolic curve when expressed in current dollars to a linear line when restated in real dollars. This is an indication of expansion of the market share of this sector relative to the other sectors. Income has increased following a linear function over the 19 years indicating income increases have not kept up with revenue and expense increases. One explanation for income not keeping up with revenue and expense increases could be explained by the fact that expenses per-mile have followed an increasing polynomial function while revenues per-mile have increased linearily. This is shown more directly in an analysis of the trends of the operating ratio which peaked in the early 1970's and have decreased ever since.

Class "A" motor carriers did have the lowest working capital as a percentage of total assets and the lowest number of days of cash operating expense covered by working capital of all North Dakota and nation-wide sectors. In addition they utilize tangible property and receive a rate of return on that property that is below the nation-wide norm.

Liquid petroleum motor carriers operating in North Dakota had revenue and expense trends that followed increasing parabolic curves whether expressed in both current dollars or real dollars. Revenues and expenses per mile have followed similar increasing parabolic trends over the same period indicating the regulatory environment allows revenue to increase in response to increasing expenses. However, this sector was very unstable with respect to income trends. In current dollars incomes tended to follow a linear trend, however, the R^2 figure of 27 percent indicates a weak relationship. When expressed in real dollars income was random, meaning no readily identifiable trend was followed over the 19 year period. Therefore, the incomes cannot be assumed to vary significantly from the average (or mean) income over the 17 year period. This indicates that this sector had very good growth statistics in terms of revenues and expenses but is dangerously unstable with respect to incomes which could be indicative of a high rate of ownership turnover in the sector.

The financial condition of this sector of the Motor Carrier Industry operating in North Dakota was more favorable than its nation-wide counterpart. This sector had more favorable financial characteristics in liquidity, activity, leverage, and profitability. However, these figures represent a one year time span and given the variability of operating income in this sector over the 19 year period, these ratios could be significantly different from year to year.

Current dollars revenues and expenses of contract carriers operating in North Dakota (absolute and per-mile) increased following a parabolic curve. The effect of adjusting for inflation was to "straighten" out the increasing parabolic curves into increasing linear functions. However, current dollar incomes retained current dollar linear trends when expressed in real dollars as did the trends of operating ratios.[127]

This sector of motor carriers operating in North Dakota had more favorable financial characteristics than did their counterpart, contract motor carriers operating throughout the nation with respect to liquidity, leverage and some profit figures. However, the activity ratios indicate this sector does not utilize its resources to the extent of contract carriers operating throughout the nation. These activity ratios could be one explanation for lower profitability figures in some cases than the contract carriers "norms".

Lastly, this sector had the lowest operating ratio (89%), and the highest operating profit on revenue than either its nation-wide counterparts or the other North Dakota sectors. This could be due to North Dakota Century Code 49-18-19 which disallows contract carrier minimum rates to fall below the rate changed by a common carrier for a similar service. The contract carrier operating is in most cases the more efficient

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[127]Even though income is increasing, it is increasing linearily indicating the rate of change is decreasing each year which is consistent with the operating ratio trend line.

of the two, because contract carriers normally operate with truckload traffic and with little or no terminal expenses. Therefore, this statue appeared to mandate an unreasonably high rate. However, it was repealed in April of 1981.

Special common motor carriers operating in North Dakota had current dollar linear trend transformed into a real dollar increasing parabolic function that increases at a decreasing rate i.e., a tapering function. Income and operating ratios reached maximum profits and profitability in the early 1970's and have decreased since. Revenues and expenses per mile followed an increasing parabolic function when expressed in current dollars, however, they followed a linear trend when expressed in real dollars. This indicates this sector is losing actual and/or potential traffic.

As compared with specialized motor carriers operating nationwide in 1978, carriers operating in North Dakota had a more favorable financial condition with respect to liquidity and leverage figures and a less favorable financial condition with respect to utilization of resources and profitability.

As compared with the Class "A" sector of the North Dakota Motor Carrier industry this sector had a more unfavorable financial condition with respect to profitability. This is an unexpected paradox as special common motor carriers have a greater degree of flexibility in their intrastate authority then do Class "A" motor carriers. Special Common Motor Carriers opera-

ting under intrastate authority serve irregular routes on unscheduled time, at the will and command of shippers.[128] Contrastly, Class "A" common carriers serve regular routes on scheduled time between fixed terminals.[129] These provisions indicate special common motor carriers could have greater discretion with respect to traffic management and therefore maximization of profit. However, higher profits weren't found. One explanation for this paradox could be inefficient utilization of resources as indicated by activity figures which are below the same figures for Class "A" common motor carriers.

The household goods sector of motor carriers operating in North Dakota have revenue trends that are similar to the aggregate and contract carrier sector of the North Dakota motor carrier industry i.e., an increasing parabolic function when expressed in current dollars that is transformed to a linear trend when adjusted for inflation. No expense data was available for this sector. However, financial data for the year 1978 was available. These carriers operating in North Dakota had a more favorable financial condition than did the nation-wide motor carrier industry with respect to liquid leverage and profitability and a more unfavorable position with respect to activity. However, when compared with other sectors, this sector was the least profitable, earning only a 4.1 percent return on tangible property, a 2.2 percent return on total assets and a 4.4 percent

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[128] N.D. Century Code 49-18-01.5.

[129] N.D. Century Code 49-18-01.5.

return on net income. If based on net income this figure could be much lower, implying the rate of return could be even lower. The implication of a low rate of return could mean less carriers providing services as the investment opportunities available elsewhere provide an opportunity for a greater rate of return. Because of the opportunity for a greater rate-of-return elsewhere investment will flow to those other investment opportunities.

The changing regulatory environment of the motor carrier industry and this study mandate future research topics entailing the adequacy of rates granted to motor carriers operating in North Dakota by the NDPSC, the alternatives of state regulatory agencies in light of federal deregulation, the possible negative effects of service to small communities as a result of deregulation.

APPENDIX A

AGGREGATE FINANCIAL STATEMENTS

TABLE 20
AGGREGATE MOTOR CARRIER INDUSTRY
BALANCE SHEET
December 31, 1978

	N.D. Operations (37) Carriers		Interstate ($ in Thous) (1813) Carriers	
Assets				
Current Assets:				
Cash	$2,129,108	8.9%	$976,089	8.6%
Receivables	6,268,478	26.2	2,469,351	21.6
Prepayments	509,737	2.1	385,547	3.4
Other	673,050	2.8	249,920	2.2
Total Current Assets	$9,580,373	40.0%	$4,080,907	35.3%
Net Tangible Property	$12,983,643	54.3%	$5,411,475	47.4%
Other Assets	1,359,991	5.7	1,918,503	16.8
Total Assets	$23,924,007	100%	$11,410,885	100%
Liabilities				
Current Liabilities:				
Payables	$4,302,601	18.0%	$1,728,012	15.1%
Accrued Liabilities	630,739	2.6	262,844	2.3
Other Current Liabilities	1,737,710	7.3	1,383,966	12.1
Total Current Liabilities	$6,671,050	27.9%	$3,374,822	29.5%
Long-Term Debt	$4,939,093	20.6%	$2,450,973	21.5%
Other Long-Term Liabilities	718,752	3.0	672,817	5.9
Total Liabilities	$12,328,895	51.5%	$6,498,612	56.9%
Net Worth	$11,595,112	48.5%	$4,912,273	43.0%
Total Liabilities and Net Worth	$23,924,007	100.0%	$11,410,885	100.0%

Source: 1978 Annual Reports Filed with the North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 21
AGGREGATE MOTOR CARRIER INDUSTRY
INCOME STATEMENT
For the Year Ended December 31, 1978

	N.D. Operations (37) Carriers		Interstate ($ in Thous) (1813) Carriers	
Operating Revenues:				
Freight Revenues	$44,131,135	97.4%	$24,636,049	99.2%
Other Revenues	1,175,375	2.6	202,172	.8
Gross Operating Revenue	$45,306,530	100%	$24,838,221	100%
Operating Expenses:				
Salaries and Wages	$22,492,896	49.6%	$12,291,532	49.5%
Operating Supplies	8,068,153	17.8	2,841,953	11.4
General Supplies	1,785,408	3.9	790,515	3.2
Taxes and Licenses	1,535,213	3.4	714,411	2.9
Insurance	1,054,412	2.3	715,880	2.9
Depreciation and Amortization	2,351,884	5.2	914,558	3.7
Revenue Equipment Rents and Purchased Transportation	2,117,756	4.7	4,716,056	19.0
Other Operating Expenses	2,695,255	5.9	569,636	2.3
Total Operating Expenses	$42,100,977	92.9%	$23,554,541	94.8%
Operating Income	$ 3,205,553	7.1%	$ 1,283,680	5.2%

Source: 1978 Annual Reports Filed with the North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations Inc.

TABLE 22
CLASS A COMMON MOTOR CARRIERS AND CLASS I AND
CLASS II COMMON MOTOR CARRIERS OF GENERAL FREIGHT
BALANCE SHEET
December 31, 1978

Assets	N.D. Operations (6) Carriers		Interstate ($ in Thous) (713) Carriers	
Current Assets:				
Cash, Working Funds, Spec. Dept., Temp. Cash Inv.	$885,281	13.4%	$645,703	9%
Receivable from Affiliates	2,789	--	146,021	2
Notes and Accounts Receivable	1,120,406	16.9	1,281,827	18
Prepayments	119,062	1.8	254,241	3.5
Other Current Assets	161,300	2.4	149,066	2
Total Current Assets	$2,288,838	34.6%	$2,476,858	34.5%
Other Assets:				
Carrier Operating Property(Net)	$3,599,678	54.4%	$3,251,644	45.3%
Other Tangible Property(Net)	185,707	2.8	78,849	1.1
Intangible Assets	316,795	4.8	488,919	6.8
Investments and Advances	154,639	2.3	184,813	11.3
Deferred Charges	72,471	1.1	69,932	1
Total Assets	$6,618,128	100%	$7,187,015	100%
Liabilities and Net Worth				
Current Liabilities:				
Payable to Affiliates	$2,503	--	$81,351	1.1%
Notes and Accounts Payable	845,078	12.8%	715,077	9.9
Salaries and Wages Payable	118,477	1.8	177,210	2.5
Accrued Taxes and Licenses	86,752	1.3	186,099	2.6
Current Equip and other Debts Due	437,873	6.6	185,101	2.6
Other Current Liabilities	487,267	7.4	672,211	9.4
Total Current Liabilities	$1,977,950	29.9	$2,017,049	28.1%
Long Term Liabilities:				
Long Term Debt	$1,564,715	23.6%	$1,422,122	19.8%
Deferred Credits	22,267	.3	413,149	5.7
Estimated Liabilities	13,980	.2	51,969	.7
Total Liabilities	$3,578,912	54.1	3,904,289	54.3%
Net Worth	3,039,216	45.9	3,276,726	45.7
Liabilities and Net Worth	6,618,128	100%	7,181,015	100%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 23
CLASS A COMMON MOTOR CARRIERS AND CLASS I AND
CLASS II COMMON MOTOR CARRIERS OF GENERAL FREIGHT
INCOME STATEMENT
For the Year Ended December 31, 1978

	N.D. Operations (6) Carriers		Interstate ($ in Thous) (713) Carriers	
Operating Revenues:				
Freight Revenue - intercity common	$14,954,136	98.68%	$14,492,916	96.32%
Freight Revenue - intercity contract	-0-		85,883	.57
Freight Revenue - local cartage	194,445	1.28	338,952	2.25
Freight Revenue - for other carriers	144	--	63,113	.42
Other Revenue	5,285	.03	66,117	.44
Gross Operating Revenues	$15,154,010	100%	$15,046,981	100%
Operating Expenses:				
Salaries and Wages	$ 8,258,876	54.6%	$ 7,388,687	49.1%
Fringe Benefits	1,717,689	11.3	1,525,802	10.1
Operating Supplies	1,528,148	10.1	1,599,938	10.6
General Supplies	558,944	3.7	520,353	3.5
Taxes and Licenses	453,961	3	426,215	2.8
Insurance	409,197	2.7	372,272	2.5
Communication and Utilities	195,377	1.3	209,294	1.4
Depreciation and Amortization	548,754	3.6	528,839	3.5
Rev. Eq. Rents and Purch. Transportation	473,467	3.1	1,488,632	9.9
Building and Office Rents	163,880	1.1	162,789	1.1
(Grain) or Loss on Disposal of Oper.Assets	(1,220)	--	(58,838)	(.4)
Miscellaneous Expenses	33,305	.2	59,321	.4
Total Operating Expenses	$14,340,378	94.6%	$14,222,782	94.5%
Operating Income	$813,632	5.4%	$824,199	5.5%
Other Income and (Deductions)	(98,416)	(.7)	75,646	.5
Income from Continuing Income	$715,216	4.7%	$748,553	5%
Taxes	298,562	2	306,083	2
Income before Extra Items	$416,654	2.7%	$442,470	2.9%
Equity in Earnings of Affil.	--	--	42,704	.3
Extra Ord/Disc. Oper/Accounting Change	--	--	(811)	--
Net Income	$416,654	2.7%	$484,363	3.2%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 24
SPECIAL MOTOR CARRIERS
BALANCE SHEET
December 31, 1978

Assets	N.D Operations (8) Carriers		Interstate ($ in Thous.) (730) Carriers	
Current Assets:				
Cash	$ 365,412	7.1%	$229,227	8.3%
Receivables	1,259,416	24.3	637,994	23.1
Prepayments	25,380	.5	89,646	3.1
Other (15%)	277,560	5.4	64,390	2.3
Total Current Assets	$1,927,768	37.2%	$1,021,257	37.0%
Tangible Property (Net)	$2,816,941	54.4%	$1,374,210	49.8%
Other (85%)	431,147	8.3	365,399	13.2
Total Assets	$5,175,856	100%	$2,760,866	100%
Liabilities and Net Worth				
Current Liabilities:				
Payables	$1,033,818	20%	$ 436,817	15.8%
Accured Liabilities	99,900	1.9	56,072	2.0
Other Current Liabilities (72%)	287,249	5.5	338,825	12.3
Total Current Liabilities	$1,420,967	27.4%	$ 831,714	30.1%
Long-Term Debt	$1,238,282	23.9%	$ 709,755	25.7%
Other Long-Term Liabilities (28%)	608,299	11.8	133,391	4.8
Total Liabilities	$3,267,548	63.1%	$1,674,860	60.7%
Net Worth	$1,908,308	36.9%	$1,086,006	39.3%
Total Liabilities and Net Worth	$5,175,856	100%	$2,760,826	100%

Source: 1978 Annual Reports Filed with the North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 25
SPECIAL MOTOR CARRIERS
INCOME STATEMENT
For the Year Ended December 31, 1978

	N.D. Operations (8) Carriers		Interstate ($ in Thous) (730) Carriers	
Operating Revenues:				
Freight Revenues	$7,445,273	94.9%	$6,439,407	98.9%
Other Revenues	402,853	5.1	69,173	1.1
Gross Operating Revenues	$7,848,126	100%	$6,508,580	100%
Operating Expenses:				
Salaries and Wages	$3,027,627	38.6%	$2,107,800	32.4%
Operating Supplies	1,556,224	19.8	858,427	13.2
General Supplies	187,977	2.4	182,454	2.8
Taxes and Licenses	247,347	3.2	192,971	3
Insurance	375,793	4.8	222,670	3.4
Depreciation and Amortization	396,695	5.1	257,071	3.9
Revenue Equipment Rent and Purchased Transportation	812,003	10.3	2,224,275	34.2
Other Operating Expenses	1,030,904	13.1	130,600	2
Total Operating Expense	$7,634,570	97.3%	$6,176,268	94.9%
Operating Income	$213,556	2.7%	$332,312	5.1%

Source: 1978 Annual Reports Filed with the North Dakota Public Service Commission and "1978 Motor Carrier Annual Reports", American Trucking Associations, Inc.

TABLE 26
CONTRACT CARRIERS
BALANCE SHEET
December 31, 1978

	N.D. Operations (9) Carriers		Interstate ($ in Thous) (181 Carriers)	
Assets				
Current Assets:				
Cash	$289,245	6.6%	$39,410	8.6%
Receivables	2,026,046	46.2	93,484	20.5
Prepayments	182,587	4.2	11,344	2.5
Other(27.3)	22,935	.5	13,053	2.9
Total Current Assets	$2,520,813	57.5%	$157,291	34.5%
Property (Net)	$1,817,254	41.5%	$264,283	57.9%
Other(72.7%)	44,739	1	34,707	7.6
Total Assets	$4,382,806	100%	$456,281	100%
Liabilities and Net Worth				
Current Liabilities:				
Payables	$1,349,365	30.8%	$98,101	21.5%
Accrued Liabilities	71,262	1.6	7,458	1.6
Other Current Liabilities(77.2%)	71,649	2.1	62,994	13.8
Total Current Liabilities	$1,513,436	34.5%	$168,533	36.9%
Long Term Debt	$267,484	6.1%	$90,760	19.9%
Other Long Term Liabilities (22.8%)	21,160		18,630	4.1
Total Liabilities	$1,780,920	40.6%	$277,943	60.9%
Net Worth	$2,601,886	59.4%	$178,338	39.1%
Total Liabilities and Net Worth	$4,382,806	100%	$456,281	100%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Reports", American Trucking Associations, Inc.

TABLE 27
CONTRACT CARRIERS
INCOME STATEMENT
For the Year Ended December 31, 1978

Operating Revenues:	N.D. Operations (9 Carriers)		Interstate ($ in Thous) 181 Carriers	
Freight Revenue	$3,466,292	97.1%	$1,043,790	100%
Other Revenue	104,059	2.9	--	
Gross Operating Revenue	$3,570,351,	100%	$1,043,790	100%
Operating Expenses:				
Salaries and Wages	$1,096,216	30.7%	$485,241	46.5%
Operating Supplies	733,206	20.5	147,547	14.1
General Supplies	372,640	10.4	34,842	3.3
Taxes and Licenses	132,640	3.7	35,797	3.4
Insurance	64,193	1.8	40,710	3.9
Depreciation and Amortization	173,998	4.9	49,713	4.8
Revenue Equipment Rents and Purchase Trans.	--	--	186,700	17.9
Other Operating Expenses	597,110	16.7	14,697	14.1
Total Operating Expenses	$3,170,003	88.8%	$995,247	95.3%
Operating Income	$400,348	11.2%	$48,543	4.7%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Reports", American Trucking Associations, Inc.

TABLE 28
LIQUID PETROLEUM CARRIERS
BALANCE SHEET
December 31, 1978

Assets	N.D. Operations (6) Carriers		Interstate ($ in Thous) (115) Carriers	
Current Assets:				
Cash, Working Funds, Spec. Dept., Temp. Cash Inv.	$430,214	7%	$55,177	8.2%
Receivable from Affiliates	121,435	1.9	13,933	2.1
Notes and Accounts Receivable	1,395,420	22.6	116,933	17.4
Prepayments	151,887	2.4	22,408	3.3
Other	172,272	2.8	15,681	2.3
Total Current Assets	$2,271,228	36.7%	$224,072	33.3%
Other Assets:				
Carriers Operating Property (Net)	$3,709,630	60%	$355,577	52.9%
Other Tangible Property (Net)	517	--	2,632	.4
Intangible Assets	54,938	.9	28,970	4.3
Investments and Advances	142,315	2.3	56,445	8.4
Deferred Charges	8,686	.1	5,035	.7
Total Other Assets	$3,916,083	63.3%	$448,659	66.7%
Total Assets	$6,187,311	100%	$672,731	100%
Liabilities and Net Worth				
Current Liabilities:				
Payable to Affiliates	$190,017	3.1%	$5,808	.7%
Notes and Accounts Payable	408,504	6.6	73,344	11.0
Salaries and Wages Payable	177,905	2.9	12,382	1.8
Accrued Taxes and Licenses	328,207	5.3	10,298	1.5
Current Equip. and other Debt Due	92,237	1.4	47,505	7.1
Other Current Liabilities	283,230	4.6	28,725	4.3
Total Current Liabilities	$1,480,100	23.9%	$178,062	26.4%
Long-Term Liabilities:				
Long-Term Debt	$1,410,213	22.8%	$191,293	28.4%
Deferred Credits	35,762	.6	41,845	6.2
Estimated Liabilities	--	--	3,108	.5
Total Long Term Liabilities	$1,445,975	23.4%	$236,246	35.1%
Total Liabilities	$2,926,075	47.3%	$414,308	61.6%
Net Worth	$3,261,236	52.7%	$258,423	38.4%
Total Liabilities and Net Worth	$6,187,311	100%	$672,731	100%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 29
LIQUID PETROLEUM CARRIERS
INCOME STATEMENT
For the Year Ended December 31, 1978

Operating Revenues:	N.D. Operations (6) Carriers		Interstate ($ in Thous) (115) Carriers	
Freight Revenue-intercity common	$15,013,530	90.7%	$1,250,436	93.4%
Freight Revenue-intercity contract	--		13,460	2.0%
Freight Revenue-local cartage	1,463,607	8.8	33.591	1.8
Freight Revenue-for other carriers	74,504	.5	14.786	1.9
Other Revenue	5,758	--	7,156	.9
Gross Operating Revenues	$16,557,399	100%	$1,319,429	100%
Operating Expenses:				
Salaries and Wages	$ 6,238,855	37.7%	$453,080	34.3%
Fringe Benefits	1,300,048	7.9	96,009	7.3
Operating Supplies	3,955,188	23.9	211,909	16
General Supplies	337,695	2	29,773	2.3
Taxes and Licenses	576,797	3.5	45,766	3.5
Insurance	117,711	.7	37,787	2.9
Communication and Utilities	204,201	1.2	18,162	1.4
Depreciation and Amortization	1,164,152	7	68,504	5.2
Revenue Equip. Rents and Purch. Trans.	770,563	4.7	281,872	21.4
Building and Office Rents	76,385	.5	8,402	.6
(Grain) or Loss of Disp. of Oper. Asts.	(36,370)	(.2)	(13,034)	(1)
Miscellaneous Expenses	108,791	.7	5,919	.4
Total Operating Expenses	$14,814,016	89.5%	$1,244,149	94.3%
Operating Income	$ 1,743,383	10.5%	$75,280	5.7%
Other Income and (deductions)	(162,194)	1	(16,007)	(1.2)
Income from Continuing Operations	$ 1,581,189	9.5%	$59,273	4.5%
Taxes	279,789	1.7	19,539	1.5
Income before Extraordinary Items	$ 1,301,400	7.8%	$39,734	3%
Equity in Earnings of Affiliates	--	--	1,434	.1
Extraordinary/Disc. Oper./Accounting Chg.	--	--	88	--
Net Income	$1,301,400	7.8%	$41,256	3.1%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 30
HOUSEHOLD GOODS CARRIERS
BALANCE SHEET
December 31, 1978

Assets	N.D. Operations (8) Carriers		Interstate ($ in Thous) (74) Carriers	
Current Assets:				
Cash	$158,956	10.2%	$6,632	69%
Receivables	342,966	22	179,159	52.7
Prepayments	30,821	2	7,908	2.3
Other (12.5%)	38,983	2.5	7,730	2.3
Total Current Assets	$571,726	36.77%	$201,429	59.2%
Tangible Property (Net)	853,919	54.7	$84,280	24.8%
Other(87.5%)	134,264	8.6	54,283	16
Total Assets	$1,559,909	100%	$339,992	100%
Liabilities and Net Worth				
Current Liabilities:				
Payables	$176,934	11.3%	$127,922	37.6%
Accrued Liabilities	44,618	2.9	2,917	.9
Other Current Liabilities(81.9%)	78,205	5	48,605	14.3
Total Current Liabilities	$299,757	19.2%	79,444	52.8%
Long Term Debt	$458,399	29.4%	37,043	10.9%
Other Long Term Liabilities(18.1%)	17,284	1.1	10,725	3.2
Total Liabilities	$775,440	49.7%	$227,212	66.8%
Net Worth	$784,469	50.3	112,780	33.2%
Total Net Worth and Liabilities	$1,559,909	100%	$339,992	100%

Source: 1978 Annual Reports filed with North Dakota Public Service Commission and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.

TABLE 31
HOUSEHOLD GOODS CARRIERS
INCOME STATEMENT
For the Year Ending December 31, 1978

	N.D. Operations (8) Carriers		Interstate ($ in Thous) (74) Carriers	
Operating Revenues:				
Freight Revenues	$1,519,204	69.8%	$859,715	93.5
Other Revenue	657,440	30.2	59,726	6.5
Gross Operating Revenues	$2,176,644	100%	$919,441	100%
Operating Expenses:				
Salaries and Wages	$ 853.585	39.2%	$235,435	25.6%
Operating Supplies and Expenses	295,387	13.6	24,132	2.6%
General Supplies and Expenses	328,152	15.1	23,093	2.5
Taxes and Licenses	124,468	5.7	13,662	1.5
Insurance	87,518	4.0	42,441	4.6
Depreciation and Amortization	68,085	3.1	10,431	1.1
Rev. Eq. Rents and Purch. Trans.	61,723	2.8	534,577	58.1
Other Operating Expenses	322,892	14.8	32,324	3.5
Total Operating Expenses	$2,141,810	98.4%	$916,085	99.6%
Operating Income	$34.834	1.6%	$3,346	4%

Source: Annual Reports filed with North Dakota Public Service Department and "1978 Motor Carrier Annual Report", American Trucking Associations, Inc.