

**PILOT STUDY OF MOTOR CARRIER
SERVICE TO EIGHT RURAL
NORTH DAKOTA COMMUNITIES**

By

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INTRODUCTION

The Motor Carrier Act of 1980 was signed into law by President Carter on July 1, 1980. This bill partially deregulates the interstate motor carrier industry by easing requirements of entry, allowing greater pricing flexibility, providing restrictions on collective rate-making, and eliminating circuitous routing and gateway restrictions.¹ Before passage of the Act, the potential loss of motor carrier service to small communities was commonly put forth by opponents of deregulation in the motor carrier industry.² In view of this potential service loss, the Motor Carrier Act of 1980 provided for the Interstate Commerce Commission (ICC) to "make a full investigation and study of motor carrier service to small communities (with emphasis on communities of population 5,000 and under)."³ The study must describe the extent of motor carrier service provided to these communities before the 1980 Act and the effects of the 1980 Act upon that service.

¹Public Law 96-296

²John W. Snow, "The Problem of Motor Carrier Regulation and the Ford Administration's Proposal for Reform", Regulation of Entry and Pricing in Truck Transportation: The Ford Administration Papers on Regulatory Reform, ed. Paul W. MacAvoy and John W. Snow (Washington, D.C.: American Enterprise Institute for Public Policy Research, 1977), p. 27.

³Public Law 96-296.

Various states including North Dakota are currently faced with a decision of whether or not to follow the lead of Congress and enact similar deregulatory legislation concerning intrastate motor carrier regulation. The potential loss of service to small communities is likely to be considered by state legislators throughout the nation as a potential drawback of deregulation at state levels. North Dakota with 61 percent of its population located in cities with a population of 5,000 or less in 1970, is especially dependent upon motor carrier service to these small rural communities. Therefore, the potential impact of deregulation of the motor carrier industry is of great concern to the legislators of North Dakota at the intrastate level.

PURPOSES OF STUDY

This study was undertaken as a pilot study of motor carrier services provided to eight communities located in North Dakota with populations of 5000 people or less. The intentions of the study are to provide insight into the level and adequacy of motor carrier service, traffic characteristics of the shipments, as well as the perceptions of business representatives with respect to deregulation. The findings of this study will be tested in a later study entitled "The Level and Adequacy of Motor Carrier Services Provided to Small Rural Communities in North Dakota." This later study will utilize stratified sampling techniques that will choose a sample of

business firms throughout the state. A copy of the questionnaire used in this study is provided in Appendix A.

DATA AND SURVEY METHODOLOGY

Data for this study were collected from forty-five commercial establishments located in eight communities. The eight communities were chosen on the bases of population, proximity to a "major" highway, and geographical region (see Figure 1).

The population figures were based on the 1970 census, and the communities were divided by population into two categories. The first category represents communities with a population from 1 to 1000 inhabitants. These are considered small communities. The second category consists of "medium-sized" communities with populations between 1001 and 5000 inhabitants.

For the purpose of this study a major highway was any U.S. or Interstate highway. A particular community was considered to be located on a "major" highway if that highway passed within five miles of that community.

One community was taken from each state planning region in North Dakota so that the communities were dispersed geographically throughout the state.

The characteristics of the eight communities fell into four sub-categories. Two communities were medium-sized and were located near a major highway. The other two medium-sized communities were not located near a major highway. Two com-

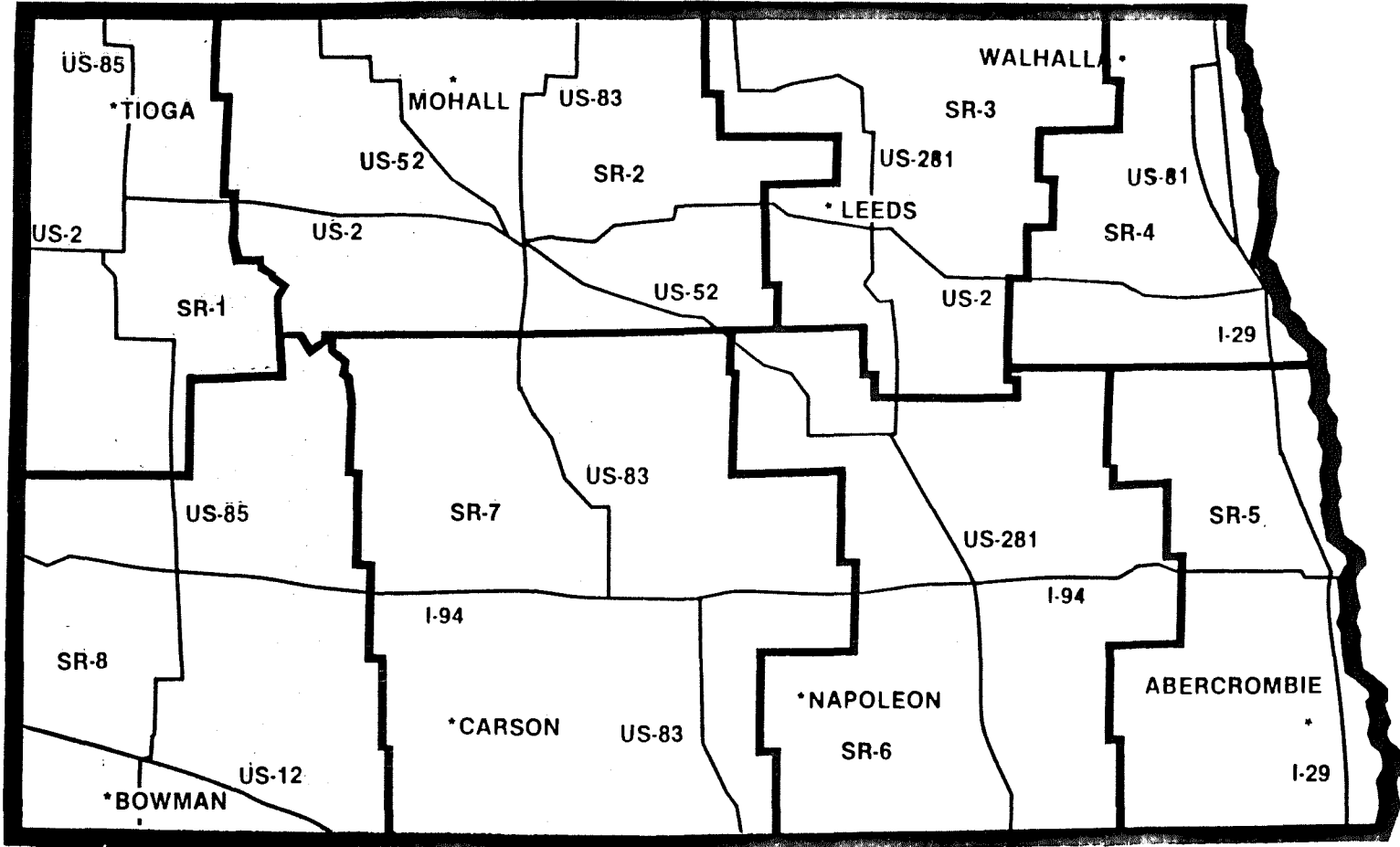


FIGURE 1 — LOCATION OF COMMUNITIES PERSONALLY SURVEYED IN NORTH DAKOTA AND MAJOR HIGHWAYS

munities were small and were located near a major highway. The other two small communities were not located on a major highway.

COMMUNITY AND FIRM CHARACTERISTICS

Table 1 indicates the size of each community surveyed in this study. The largest four communities had an average population of 1484 people in 1970, and the smallest four communities had an average population of 576 people. Also shown in Table 1 is the number of miles each community is located from a major highway. Four of the communities are either located on or within five miles of a major highway. The other four communities are an average of about 24 miles from the nearest major highway.

Nine categories of businesses were surveyed and are shown in Table 2. Farm implement dealers represent the category with the largest firms, both on the basis of the number of employees and on a revenue basis. Pharmacy, gift, and flower establishments represent the smallest category with an average number of full-time employees of 1.8 and an average number of part-time employees of 2.

TABLE 1.--POPULATIONS OF COMMUNITIES PERSONALLY VISITED
AND THE NUMBER OF MILES FROM A MAJOR HIGHWAY.

Community	Population ^a	Miles from a Major Highway ^b
Walhalla	1471	35-40
Leeds	626	-0-
Mohall	950	7-8
Tioga	1667	0-5
Bowman	1762	-0-
Carson	466	25-26
Napoleon	1036	26
Abercrombie	262	0-5

^aPopulation figures are based on the 1970 Census.

^bA major highway was defined as any Interstate or U.S. highway passing through the state.

TABLE 2.--NATURE AND SIZE OF FIRMS SURVEYED IN NORTH DAKOTA.

Nature of ^a Business	Average # of Full-Time Employees	Average # of Part-Time Employees	Average Range of Revenues (\$ in Thousands)
Farm Implement (6)	8.0	2.2	1,000 - 2,000
Auto Sales, Parts, & Service (6)	4.0	0.8	500 - 1,000
Lumber (3)	1.6	0.6	100 - 500
Supply (3) ^b	4.3	0.6	50 - 100
Bldg. Mtl. & Hdwr. (7)	2.3	1.3	500 - 1,000
Grocery (2)	1.0	3.5	100 - 500
Pharmacy, Gift, Flowers (5)	1.8	2.0	50 - 100
Clothing (5)	2.2	1.0	50 - 100
Other (8)	2.4	1.3	50 - 100

^aThe number in parentheses represents the number of firms surveyed in each category.

^bTwo of these supply companies were oil field suppliers, and the other was a miscellaneous agribusiness supply company.

WALHALLA

Community and Firm Characteristics

Walhalla, a community of 1471 inhabitants,⁴ is located in Pembina County in the northeastern corner of North Dakota. Although State Highway 32 passes directly through Walhalla, Interstate route 29 is the closest major highway and is located 35 to 40 miles east of Walhalla.

Five firms were surveyed in Walhalla.⁵ These firms ranged from a relatively large farm implement dealer with ten employees to a relatively small lumber yard with two employees (see Table 3).

TABLE 3.--CHARACTERISTICS OF FIRMS SURVEYED IN WALHALLA.

Nature of Business	# of Full-Time Employees	# of Part-Time Employees
Farm Implement	6	4
Auto Parts	2	0
Misc. Supply	4	1
Hardware	1	2
Lumber	1	1

Service Characteristics

The majority (85 percent) of all inbound freight to these business concerns is carried via motor carriage. All five of

⁴ All population figures included in this study are based on the results of the 1970 census.

⁵ Representatives of four of the five firms were personally interviewed. The fifth was unavailable for interview but had completed the questionnaire.

the business concerns use regulated motor carriage, and three of the five firms also use private motor carriage. The remainder of inbound shipments are carried by United Parcel Service (UPS), Parcel Post, and the railroad. Four of the five firms use UPS for an average of 8.75 percent of inbound shipments. Two of the five firms use Parcel Post for an average of about 7.5 percent of inbound shipments. The railroad was used by two of the five firms for five percent of their inbound shipments.

Three common motor carriers provide general freight service to Walhalla. The five firm representatives rated the services provided by common motor carriers as being generally good. Three of the five perceived motor carrier service as improving over earlier years. One representative thought the service has remained constant, while the fifth felt motor carrier service has deteriorated.

Four of the five firm representatives indicated they have had a problem with the motor carriers in the area of collection of loss and damage claims. However, this problem was centered around only one of the three carriers. Three of the five firms cited cost of motor carrier service as one of the major problem areas, and two of five stated speed of service as a major problem associated with motor carrier service.

Traffic Characteristics

Four of the five firm representatives indicated they receive service three times a week (the fifth indicated twice

a week) from these motor carriers and daily service from UPS. Three of the five representatives indicated they receive the amount of motor carrier service they desire. One of the other two indicated he would like service from the regulated common carriers five times a week.

Seventy-nine percent of the freight moving into this community originates out-of-state⁶ and twenty-one percent originates in-state. The results of the survey indicated that the freight shipped to four of the five firms travels an average of about 487 miles.⁷ The survey further indicated that the average weight of these shipments was about 700 pounds, each parcel weighing an average of about 30 pounds, and the average value of each shipment was about \$1750, ranging from \$1000 to \$3000.

Regulatory Considerations

Two of the five firms stated they had supported a motor carrier in an entry proceeding both of which now service the community. None of the firms ever filed a complaint with the Interstate Commerce Commission or the North Dakota Public Service Commission. Only three of the five firms surveyed indicated a reason for not filing such a complaint. These reasons are as follows:

)1 not worth the legal bother;

⁶This figure is an average for this community and an average is used throughout this study.

⁷The fifth firm representative was unable to give an approximation.

- 2) apathy;
- 3) time involved;
- 4) no need since another carrier has begun to offer service to the community.

Only two of the five firm representatives had an opinion concerning government regulation over entry into the motor carrier industry. These two firm representatives were split over the notion of government regulation over entry. Two of the five representatives favored government regulation over motor carrier rates and one disfavored the regulation.

Summary

Walhalla is a medium-sized community located 35 to 40 miles from a major highway. Based on the perceptions of those surveyed, this community appears to be adequately served by the existing transportation options of regulated motor carrier, private motor carrier, railroads, Parcel Post, and UPS.

LEEDS

Community and Firm Characteristics

Leeds is situated in Benson County, approximately 30 to 35 miles west of Devils Lake. US route 2 passes directly through this community with a 1970 population of 626 inhabitants.

Six representatives of commercial establishments were personally interviewed in Leeds, ranging from an implement dealer with 10 employees to a pharmacy and gift establishment with 3 employees (Table 4).

TABLE 4.--CHARACTERISTICS OF FIRMS PERSONALLY INTERVIEWED IN LEEDS.

Nature of Business	# of Full-Time Employees	# of Part-Time Employees
Implement	6	4
Lumber	3	0
Hardware	1	2
Grocery	1	4
Grocery	1	3
Pharmacy and Gift	1	2

Service Characteristics

All six establishments interviewed have used regulated motor carrier. However, both of the grocery stores indicated

that it is a "rare oddity" or an emergency when such a carrier is used. Four of the six establishments surveyed indicated that private motor carrier is used for a portion of their inbound shipments (the implement dealer and lumber yard do not use private motor carrier transportation). Both of the grocery stores used private motor carrier almost exclusively for their inbound shipments. Rail transportation was used only by the implement dealer and constituted about 20 percent of all inbound shipments. The remainder of the transportation needs are fulfilled by Parcel Post and bus transportation. United Parcel Service was not used in excess of 20 percent of inbound freight by any of the firm representatives interviewed (the average freight shipped by UPS was 11 percent excluding grocery stores, and 7.7 percent including grocery stores). Parcel Post was used by three of the six firms for an average of seven percent of inbound shipments (3.5 percent including all firms). The bus was used by three of the firms for an average of 5.3 percent ranging from one percent to ten percent.

Three regulated common motor carriers of general freight serve the community of Leeds. The representatives of the four business establishments which use regulated common motor carriers of general freight rated the consolidated transportation service provided by these carriers as good. Two of the motor carriers were rated as providing very good service. Similar to Walhalla, one of the carriers was the major source of dissatisfaction in Leeds. The four primary users of common carriage stated problems

relating to:

- 1) carelessness or lost and damaged freight;
- 2) collection of loss and damage claims;
- 3) speed of service;
- 4) availability of service;
- 5) cost of service.

These four firms all perceived the services provided by regulated motor carriers of general freight as having improved over services provided in previous years. One stated that improvement was within the last few years and further suggested that the improvement was a result of another carrier that began to serve Leeds at that time.

Traffic Characteristics

On the average, 40.5 percent and 59.5 percent of the freight shipments received by the four firms, excluding grocery stores, originate in-state and out-of-state, respectively. These figures are much higher than in Walhalla, where 21 percent of all freight originated in-state and 79 percent originated out-of-state. This indicates that intra-state freight rates, subject to PSC control, could have a greater impact on the businesses in this community. The inbound shipments traveled an unweighted average of 277.5 miles ranging from 90 to 500 miles. Each of the firms indicated that an average parcel shipped via motor carrier weighed less than 50 pounds. However, two firms noted that those figures apply only to a limited amount of their inbound freight which is shipped via UPS. They indicated that an average

weight of a parcel shipped by common motor carrier would fall into a category ranging from 100 to 500 pounds. The average weight of a shipment ranged from less than 50 pounds by the pharmacy and gift outlet to over 500 pounds in both the hardware and lumber establishments. The average value of these shipments was about \$415 based on three of the four firms. The fourth could not give an approximation of the amount.

Regulatory Considerations

Of the six firms interviewed, the lumber yard had supported a motor carrier in an entry proceeding which now serves Leeds. None of the six firms have ever filed a complaint with the North Dakota Public Service Commission or the Interstate Commerce Commission stating that they:

- 1) had not complaints with the service (3);
- 2) were not aware of this procedure (2);
- 3) thought it was not worth the hassle (1).⁸

Three of the six firms indicated they disfavor less stringent entry provisions in motor carrier proceeding. Two of the six indicated they favored less stringent entry provisions and one had no opinion on this matter. Four of the six favored more motor carrier discretion in setting their rates, one disfavored more rate flexibility, and one had no opinion.

⁸The number in parenthesis represents the number of responses from the firms.

Summary

Leeds is a small community located on a major highway. The firms in town have a variety of transportation options, including 1) regulated and private motor carrier; 2) railroad; 3) Parcel Post; 4) United Parcel Service; and 5) bus service. All are currently being used by six of the business establishments in town. The shippers and/or receivers get service from regulated motor carriers on a frequent basis, and five of the six indicated they receive the amount of motor carrier service they desire. This community appears to be receiving adequate motor carrier service.

MOHALL

Community and Firm Characteristics

Mohall has a population of 950 inhabitants. It is a community located on North Dakota route 5, in Renville County, approximately 45 miles north of Minot. U.S. route 83, about seven miles east of Mohall, is the closest U.S. Highway.

Data was collected from five commercial establishments. Four of the five respondents were personally interviewed, and the fifth forwarded the questionnaire via the postal service. The nature of business of each of these firms varied from an implement dealer to a clothing outlet (see Table 5).

TABLE 5.--CHARACTERISTICS OF FIRMS SURVEYED IN MOHALL.

<u>Nature of Business</u>	<u># of Full-Time Employees</u>	<u># of Part-Time Employees</u>
Implement	4	2
Clothing	5	1
Paint & Linoleum	5	2
Car-Truck Dealer	5	0
Hardware	2	0

Service Characteristics

Mohall receives service from only one regulated common carrier of general freight (excluding UPS). The remainder

of this communities transportation needs are fulfilled by UPS, Parcel Post, private motor carriage, bus, and the railroad. All five of the firms surveyed use United Parcel Service Inc. for 31.8 percent of inbound freight. Two of the five use Parcel Post for 7.5 percent, one uses bus freight for one percent, and the railroad is used by one firm, the implement dealer, for ten percent of its inbound freight. Three of the five concerns use private motor carrier, two of them significantly, which provides service ranging from 70 percent to 90 percent of all inbound shipments.

All five of these firms rate motor carrier service to Mohall as good to very good. Three of the five respondents perceived motor carrier service as improving while the other two believe motor carrier service has deteriorated from past service. Two of the five firms indicated no significant problems with the service provided by regulated motor carriers. The other three concerns cited problems relating to: 1) speed of service(2); 2) cost of service(1); 3) availability of service (1); and 4) collection of loss and damage claims(1).⁹

Traffic Characteristics

The only common motor carrier operating in Mohall is scheduled to provide daily service to Mohall. The business

⁹The number in parentheses represents the number of times a problem was cited.

firm representatives indicated they use this service anywhere from one to five times weekly. In addition, UPS provides daily service to this community.

Most of the inbound freight originates out-of-state, (average of 85 percent) traveling an average of 584 miles. In four of the five cases, the average weight was less than 25 pounds. (The fifth was unable to give an approximation). The average weight of a shipment ranged from less than 50 pounds up to 500 pounds and the value of these shipments ranged from \$50 up to \$60,000.

Regulatory Considerations

None of these firms had ever provided support to a motor carrier in an entry proceeding or filed a complaint with the North Dakota Public Service Commission or the Interstate Commerce Commission.

Three of the five firm representatives favored more ease of entry in the regulated motor carrier industry; the other two had no opinion. Four of the five split when asked their opinion about more motor carrier pricing flexibility. The fifth responded with no opinion, but stated his opinion would depend on the forces of competition.

Summary

Mohall is a small community located about seven miles from the nearest major highway. While Mohall has several transportation options, it has only one common motor carrier

of general freight providing service to the community (excluding UPS). Three of the five firms receive the amount of service they desire, and rated the service provided as being good to very good.

One of the representatives stated he would like to see "more trucks coming and going." Most of the firms indicated that availability of motor carrier transportation services was not a problem, including the respondent that would like to see more trucks coming and going.

TIOGA

Community and Firm Characteristics

Tioga, a community of 1667 inhabitants in 1970 is located in Williams County in northwestern North Dakota. U.S. route 2 is the closest major highway and it runs two to three miles south of this community.

Personal interviews of six business representatives were conducted in Tioga. These firms varied from a small clothing store with one full-time worker (the proprietor) and one part-time worker (the proprietor's husband) to a large oil field supply firm with seven full-time employees and one part-time employee (Table 6).

TABLE 6.--CHARACTERISTICS OF FIRMS PERSONALLY INTERVIEWED IN TIOGA.

Nature of Business	# of Full Time Employees	# of Part-Time Employees
Oil Field Supply	7	1
Pharmacy	5	2
Hardware	3	2
Oil Field Supply	2	0
Clothing	3	1
Clothing	1	1

Service Characteristics

All the firms indicated that the majority of all inbound freight transported to their particular firm was carried via

motor carrier. Five of the six firms indicated use of regulated motor carrier (excluding UPS) for transportation of inbound freight. Four of the six business firms use private motor carrier. One of these four uses private motor carrier for 90 percent of all inbound shipments. The remainder of all inbound shipments to these six firms travels via Parcel Post, UPS, bus, and air freight. Parcel Post is used for an average of about five percent. United Parcel Service was used by all six of the interviewed business concerns in Tioga for an average of about 40 percent of all inbound freight. One of these firms relies exclusively on UPS and Parcel Post for all inbound shipments (95 percent and five percent respectively). This representative was very satisfied with the service provided by UPS stating, "UPS is the best thing in transportation, subject to their regulatory limitations".

In addition to these transportation options, bus and air freight transportation services are also used in Tioga. One business concern used bus transportation for five percent inbound freight. Another business concern stated use of air freight for five percent of its inbound freight needs.

Generally, the representatives of the business firms rated regulated motor carrier service being provided to their community as poor. Most of them believe these services have deteriorated as compared with the services provided in prior years.¹⁰ Much of the dissatisfaction with motor carrier service centers

¹⁰Two of the representatives thought the service has improved.

around the acquisition of one motor carrier by another resulting in a loss of service to the community. The concerns of these business representatives surrounding motor carrier service entail speed of service(6), cost of service(4), availability of service(3), and collection of loss and damage claims.¹¹

Two regulated common motor carriers of general freight serve the community of Tioga. One of the carriers is scheduled to provide service five times a week. However, the representatives of the firms surveyed indicated they used the service only one to two times a week.

Traffic Characteristics

An average of about 86 percent of all inbound freight carried to these six firms originates out-of-state and 14 percent in-state. These shipments travel an estimated 1200 miles and weigh an average of 300 pounds. Five representatives indicated a parcel weight of less than 50 pounds, while one indicated a weight in excess of 500 pounds. The average maximum value of a shipment to the six concerns was \$19,500 with the upper extreme of \$100,000.

Regulatory Considerations

Not one of the six firm representatives have supported a motor carrier in an entry proceeding. Two of the six have filed a complaint with the North Dakota Public Service

¹¹The number in parentheses represent the number of responses.

Commission. The complaints were in regard to acquisition that resulted in a loss of service. Those two complaintants further indicated a negative result of that complaint. The other four concerns cited the following reasons for not having filed a complaint: 1) bother and/or paper work involved; and 2) no complaints with the service.

Four of the six would favor less stringent entry provisions in the regulatory environment of motor carriers. One had no opinion, and the other did not favor less stringent entry provisions. Three of the six favor more motor carrier flexibility in setting their rates; the other three disfavor more rate-making discretion.

Summary

Tioga is a medium-sized community located near U.S route 2. The community has transportation options of regulated motor carrier, private motor carrier (in some cases), UPS, Parcel Post, bus transportation, a railroad, and air freight.

Four of the six firms do not receive the amount of motor carrier service desired. However, the addition of three more common carriers could improve the amount of service currently being provided to Tioga.¹²

¹²Telephone conversation with Robert Senger, Director of Motor Carrier Division, North Dakota Public Service Commission, 9-29-80.

BOWMAN

Community and Firm Characteristics

Bowman, the county seat of Bowman County, is located in southwestern North Dakota. It has 1762 inhabitants and is situated on U.S. route 12 and U.S. route 85 which are both major highways.

Five firms were surveyed in this community. As shown in Table 5, these five firms represent wide transportation needs ranging from a large implement dealer to a relatively small music store.

TABLE 7.--CHARACTERISTICS OF FIRMS SURVEYED IN BOWMAN.

Nature of Business	# of Full-Time Employees	# of Part-Time Employees
Implement	9	0
Bldg. Mtls.	4	0
Hardware	2	1
Music Store	1	2
Clothing	1	1

Service Characteristics

All of the firms indicated use of motor carrier transportation ranging from 40 percent to 90 percent of all inbound freight shipments. UPS was used extensively by four of the stores. The four firms used UPS from 10 percent to 60 percent of their total inbound freight shipments. The remaining firm used private motor carrier for 88 percent of his inbound freight shipments.

The rest of these firms' transportation needs are fulfilled by using the railroad and Parcel Post. The implement dealer was the only business concern surveyed that used the railroads for incoming freight amounting to ten percent of total incoming freight. Parcel Post was used by two firms for two percent and ten percent of their inbound freight shipments.

Only one regulated common motor carrier provides service to Bowman. The five commercial establishments rated regulated motor carrier service provided to their community as being good. The representatives generally perceived service via motor carrier as improving over the service provided in the past. However, the representatives indicated that while service is good, it has neither improved nor deteriorated from the service provided in prior years. The only significant problem provided by the common motor carrier was the cost of service.

Traffic Characteristics

As stated above, only one common motor carrier of general freight other than UPS provides service to the community of Bowman. This carrier is scheduled to provide service daily.

An average of 84.5 percent of inbound freight delivered to the four firms originates out-of-state. The freight shipments travel an average of 795 miles and weigh an average of about 250 pounds. Three firm representatives indicated parcel weight was less than 50 pounds and one representative indicated parcel weight between 51 and 75 pounds.

Regulatory Considerations

Not one of the five firm representatives indicated support of a motor carrier in an entry proceeding. Two of the five did not favor ease of entry into the North Dakota regulated motor carrier industry. One favored ease of entry and two had no opinion. Three of the five favor more rate flexibility while another favored more "within limits". The other had no opinion.

Summary

Bowman is a medium-sized community with about 1762 people and is located on two major highways (U.S. 12, U.S. 85).

Freight that does not fall within the limitations of UPS is "captive" to the one common carrier or private carrier. The one common carrier presently provides a relatively good, daily service and all firms surveyed are satisfied with the service being provided. The only significant problem cited was cost. Given that the community of Bowman is "captive" to the one common carrier, it is surprising that some of the businesses are not in favor of easier entry which presumably would provide more transportation options (competition). It is also surprising that the majority of surveyed firms would favor more motor carrier discretion in rate-making. One firm representative indicated that he would not favor easier entry because he perceived it would result in discontinuous service. He also mentioned that existing motor carriers may not find it feasible to operate through Bowman further indicating that the competitors who would drive this carrier out would provide a lower quality service.

To avoid high transportation costs, one firm tries to transport most of its business goods either by UPS or by the firm itself. When one of these two options is not possible, this firm tries to have only one or two large shipments per month to take advantage of the economies of large freight shipments.

UPS has a limitation on intrastate traffic that no shipment of parcels from one consignor to one consignee at one location may weigh more than 100 pounds (in the aggregate). From the data collected, this limitation appears to be a limiting factor in many cases. Parcel weight in three cases was less than 50 pounds, however in only one case was shipment weight less than 100 pounds.

This community appears to be adequately served. The appropriateness of the rates should be examined for reasonableness. The UPS limitations described above appear to be a factor in some cases, but a statewide analysis should be made to judge the affect on the other general freight carriers, UPS, and the business concerns involved.

CARSON

Community and Firm Characteristics

Carson has a population of 466 persons and serves as the county seat for Grant County. It is located about 60 miles southwest of Mandan, North Dakota and is not located on a major highway. The closest highway is interstate route 94 located 25 miles to the north.

Seven businesses were surveyed in Carson, with five of the seven representatives personally interviewed. These firms represent a cross-section of transportation needs, ranging from a farm implement dealer to a liquor establishment as shown in Table 8.

TABLE 8.--CHARACTERISTICS OF FIRMS SURVEYED IN CARSON.

<u>Nature of Business</u>	<u># of Full Time Employees</u>	<u># of Part Time Employees</u>
Petroleum, Hdwr., Misc.	4	1
Implement	3	1
Liquor Establishments	2	3
Auto Parts-Garage	3	0
Service Station	1	2
Clothing	1	1
Pharmacy	0	2

Service Characteristics

The seven firms surveyed indicated use of motor carrier

transportation services. The use of regulated motor carrier (excluding UPS) ranges from one percent to 100 percent of all inbound freight. Private motor carriage, used by only two of the seven firms, was used significantly for 75 percent and 98 percent of all inbound freight in each firm.

The rest of these seven firms' transportation needs are fulfilled by the railroad, UPS, Parcel Post, and bus transportation services. Rail transportation was employed only by the implement dealer. However, it was used for 65 percent of that firm's incoming freight. UPS was used by five of the seven firms to varying degrees, ranging from less than one percent to 80 percent of all incoming freight. Parcel Post was used by six of the seven firms for an average of 3.9 percent of inbound shipments (based on five of the six firms that use UPS).

The seven firm representatives rated common motor carrier service being provided to Carson as good. The representatives perceived motor carrier service as remaining relatively the same or improving slightly over the service provided in the past.

Three of the seven firms indicated no complaints with the service provided by regulated motor carrier. The other four cited problems with motor carrier service relating to:

- 1) cost of service;
- 2) speed of service; and
- 3) availability of service.

Traffic Characteristics

There is only one regulated motor carrier of general freight providing service to Carson. This carrier is scheduled to provide service three times a week on Monday, Wednesday, and Friday. Freight originating both in-state and out-of-state travels an estimated 419 miles. An average of 45 percent of this inbound freight originates out-of-state, and 55 percent originates in-state. The shipments of these seven firms fall into two categories: 101-500 pounds (5) and over 500 pounds (2).¹³ The average weight of a parcel also falls into two categories as follows: 1) 0-50 lbs(3); 2) 51-75 lbs(4). The average maximum value of these shipments ranges from \$750 to \$15,000 for an overall average of \$2,125 (shipped via regulated motor carrier).

Regulatory Considerations

One of the seven firms surveyed had supported a motor carrier in an entry proceeding. The entry proceeding took place 15 years ago and, according to this representative, the North Dakota Public Service Commission denied this request for operating authority. Not one of the seven firms surveyed had ever filed a complaint with the North Dakota Public Service Commission or the Interstate Commerce Commission. The two reasons cited for not filing a complaint were no complaint with the service and not aware of the procedure.

¹³The numbers in parentheses represent the number of responses.

Three of the seven disfavored less stringent entry provisions, one favored, and three had no opinion. Two of the seven favored more motor carrier rate-flexibility. Two disfavored and three had no opinion.

Summary

Carson is a relatively small community located 60 miles southwest of Mandan. They are "captive" to one common motor carrier on freight that is subject to the UPS limitations. Three of the seven business representatives disfavor less stringent entry provisions and two of seven would favor more rate-making flexibility.

At present only one common motor carrier of general freight provides service three days a week while UPS provides daily service. All seven firms surveyed indicated this is all the service they desire.

With respect to UPS, it appears from the available data that UPS weight limitations are a limiting factor for many shippers who may want to ship via UPS. The average parcel weighs between 51 and 75 pounds and UPS is limited to parcels weighing 50 pounds or less. Also, the average weight of a shipment is over 100 pounds which exceeds the aggregate intra-state limitation for UPS when the freight is transported between one consignor to one consignee to any one location.

It appears that the three day a week and five day a week service provided by the common carrier of general freight and UPS is adequate, based on the perceptions of the business representatives surveyed in Carson.

NAPOLEON

Community and Firm Characteristics

Napoleon is a community of about 1036 people located about 55 miles southeast of Bismarck and is the county seat of Logan County. Interstate route 94 is the closest major highway and it passes by Napoleon 26 miles to the north.

Six business firm representatives were interviewed in this community. The firms varied from a large implement dealer with 22 employees to a relatively small flower and gift shop with 2 employees (see Table 9).

TABLE 9.--CHARACTERISTICS OF FIRMS PERSONALLY INTERVIEWED IN NAPOLEON.

<u>Nature of Business</u>	<u># of Full-Time Employees</u>	<u># of Part-Time Employees</u>
Implement - Car	20	2
Car, Parts, Service	5	1
Hardware	3	2
Pharmacy	2	3
Appliance and TV	2	0
Flower and Gift	1	1

Service Characteristics

Motor carrier (private and regulated), (UPS), Parcel Post, the railroad, and bus transportation supply the needs of the six firms surveyed in Napoleon. There is only one regulated

motor carrier of general freight other than UPS serving this community, and five of the six firms interviewed use the service provided by this regulated common motor carrier. One of the firms used the regulated common motor carrier extensively for 95 percent of its inbound shipments. The firm that does not use the regulated common carrier was the flower and gift shop. This firm uses UPS and bus transportation because of the nature of the goods sold in this business and the cost of service. Private motor carrier is used by four of the six firms.

The hardware store uses private motor carrier for 97 percent of its inbound shipments. This store is part of a chain of stores which accounts for the significant use of private carrier. All six firms use the service provided by UPS ranging from one percent (the hardware store) to 40 percent (the flower and gift store) of the transportation of inbound freight. Parcel Post was used by three of the six firms for an average of almost seven percent. The railroad is used only by the implement dealer for about ten percent of its inbound shipment. Transportation via bus was indicated by the flower and gift shop which uses bus transportation for 60 percent of inbound freight. This business concern picks up the articles shipped via bus to Steele, North Dakota which is located about 35 miles northwest of Napoleon. The reason for this procedure is speed of service and better handling of freight.

Generally, these six concerns rated the service provided

by the regulated common motor carrier as being fair to good. UPS on the other hand, is rated by these firm representatives as providing good to very good service. Five of the six firms perceived the motor carrier service provided to their community as remaining relatively constant with the service provided in prior years.

The primary problem of the firms is the handling of freight by the regulated common carrier (two of the six firms). However, these firms do not have any problem collecting the claims which result from loss or damage. Other problems or concerns cited as significant include: 1) cost of service; and 2) speed of service.

The regulated common motor carrier is scheduled to provide service Monday through Saturday. The five users of the service provided by this carrier (excluding flower and gift shop) indicated they receive service three times a week. Five of the six concerns indicated they receive the amount of motor carrier service they desire.

Traffic Characteristics

The inbound freight of these business concerns travel an estimated 400 miles with an average of 80.8 percent originating out-of-state. The average weight of a shipment ranged from less than 50 pounds to well over 500 pounds. The maximum value of these shipments ranged from \$1200 to \$25,000 for an average of \$12,840.

Regulatory Considerations

None of the six firms has ever supported a motor carrier in an entry proceeding or filed a complaint concerning unfavorable motor carrier service. All six indicated the reason was that no complaints with the service were significant enough to warrant filing a complaint.

Four of the six representatives indicated they would favor less stringent entry provisions and one representative indicated he would disfavor ease of entry in the motor carrier industry. The sixth had no opinion on the issue. All of the representatives indicated they would favor more rate flexibility for motor carrier in the rate-making process.

Summary

Napoleon is a medium-sized community located off a major highway. Only one regulated common motor carrier of general freight provides service to this community three days a week. UPS provides a daily service and is used for up to 40 percent of inbound freight.

More than any other community surveyed, Napoleon is more apt to support any deregulatory movement in North Dakota. Four of the six firms favor ease of entry and all six favor more rate-flexibility of motor carriers.

Based on survey responses this community appears to be served adequately. They receive service three times a week

from the regulated common motor carrier and daily service from UPS. They have no significant problems other than normal concerns common to virtually all shippers and/or receivers.

ABERCROMBIE

Community and Firm Characteristics

Abercrombie, site of Fort Abercrombie, is a community located about 35 miles south of Fargo in Richland County. This community has a population of 262 inhabitants and is located very close to Interstate route 29, a major highway.

The nature and firm sizes of the five commercial establishments surveyed in Abercrombie are shown in Table 10.

TABLE 10.--CHARACTERISTICS OF FIRMS SURVEYED IN ABERCROMBIE.

<u>Nature of Business</u>	<u># of Full-Time Employees</u>	<u>#of Part-Time Employees</u>
Auto - Implement	8	0
Liquor-On Sale	2	2
Meat	2	0
Lumber	1	1
Crafts	1	0

Service Characteristics

All of the freight carried to these five firms is carried via private motor carrier, regulated motor carrier, UPS, or Parcel Post. All five of the firms receive shipments by motor carrier. However, in three of the five cases, regulated motor carrier (excluding UPS) is not used at all. The two firms that use regulated motor

carrier (excluding UPS) do so for 20 percent of their total inbound freight shipments. Three of the five firms use UPS for an average of 60 percent of all inbound freight shipment. Two of the five firms use Parcel Post, both for five percent of total inbound freight shipments.

Motor carrier service to this community is rated by these five firms as being good to very good. Three of the five firm representatives perceive current motor carrier service as remaining constant with the service provided to Abercrombie in prior years. One felt the service has deteriorated, and the last was unable to give an opinion on the subject because the business is in its first year.

Three of the five concerns indicated no significant problems with any motor carrier service. The other two firms cited their primary problems as:

- 1) cost of service(1);
- 2) dependability of service(1);
- 3) speed of service(1);
- 4) collection of loss and damage claims(1); and
- 5) receipt of damaged merchandise(1).¹⁴

Traffic Characteristics

Two regulated common motor carriers of general freight serve the community of Abercrombie. One is scheduled to

¹⁴The number in parentheses represents the number of responses in each category.

serve five times weekly. The other is largely an interstate carrier that serves only one firm in Abercrombie. The firm representatives who used the "regular" serving common carrier indicated sporadic once-a-week service.

An average of 43 percent of inbound shipments carried to these firms originates out-of-state, traveling an estimated 120 miles. The average weight of these shipments is over 500 pounds(2) at one extreme and less than 50 pounds(2) at the other.¹⁵ The average parcel weighed anywhere from less than 20 pounds to about 2000 pounds with only two firms indicating an average parcel weight of less than 50 pounds.

Regulatory Considerations

One representative indicated support of a motor carrier in an entry proceeding. According to the representative, the result of that proceeding was favorable and the carrier now serves Abercrombie. Not one of the five firms has ever filed a complaint concerning motor carrier service. All five indicated the reason for not filing a complaint was because there were no complaints with the service provided.

Two of the firm representatives indicated support for more ease of entry into the motor carrier industry while two disfavored and the fifth had no opinion. Two of the five favor more motor carrier rate-flexibility, one disfavored, and two had no opinion on this issue.

¹⁵The number in parentheses represents the number of responses in each category.

Summary

Abercrombie is located near Interstate route 29, the closest major highway. This community receives service from two common motor carriers of general freight, one of which provides sporadic service to those firms. The other carrier is an interstate carrier which provides volume shipments on the average of once a month to the one firm that uses the service repetitious.

This community is provided with service from the regulated motor carrier service other than UPS usually from one to three times a week. The five business concerns surveyed indicated this is all the service they desire. UPS provides daily service to Abercrombie if needed.

SUMMARY

Eight North Dakota Communities

Service Characteristics

Thirty-nine of the 45 representatives surveyed indicated they receive motor carrier services an average of 2.8 times per week. Twenty of the 39 indicated they received service three times weekly. Nineteen indicated they received service one to two times weekly, and 21 indicated receipt of service four to five times weekly (see Table 11). Seventy percent of these business representatives rated motor carrier service as good to very good, and 47 percent indicated the service has improved over the service provided in earlier years (see Table 11). In addition, 78 percent indicated they received all of the motor carrier service they desired (see Table 11). These representatives cited cost of service 18 times and speed of service 16 times as their major problems with major carrier service. Other problems cited include collection of loss and damage claims (11 times), availability (9 times), dependability (7 times), and handling (4).

Traffic Characteristics

These business representatives indicated that an average of 32 percent of all inbound freight originates in-state while 68 percent originates out-of-state. This freight

TABLE 11
MOTOR CARRIER SERVICE CHARACTERISTICS OF
EIGHT RURAL COMMUNITIES IN NORTH DAKOTA
(45 representatives)

Frequency of Service Per Week (60 responses)	Rating of Service (54 responses)		Service Improving or Deteriorating? (42 responses)		Amount of Service Desired (45 responses)		Problems with Motor Carrier Service (65 observations)							
	#	%	#	%	#	%	#	%						
Once or less	14	24	Very good	25	46	Greatly Improved	6	15	Yes	35	78	Cost	18	27
Twice	5	8	Good	13	24	Improved	14	35	No	10	22	Availability	9	14
Three	20	33	Fair	6	11	Same	12	30	Total	45	100%	Dependability	7	11
Four	1	3	Poor	3	7	Deteriorated	7	18				Collection of Loss and Damage Claims	11	17
Five	20	33	Very poor	6	11	Greatly Deteriorated	1	2				Speed	16	25
Total	60	100%	Total	54	100%	Total	40	100%				Handling	4	6
Average	2.8 times											Total	65	100%

TABLE 12
TRAFFIC CHARACTERISTICS OF EIGHT
RURAL NORTH DAKOTA COMMUNITIES
(45 representatives)

Origination of Freight (44 responses)		Miles Traveled by Freight (43 responses)		Average Shipment Weight (40 responses)		Average Parcel Weight (46 responses)		Value of Shipment		Mode Distribution (43 responses)			
%	%	Miles Traveled	Responses	Pounds	Responses	Pounds	Responses	Average (31 Responses)	Maximum (21 Responses)	Mode	% Share		
In-State	Out-of-State	0-100	6	0-50	7	0-25	15	0-\$1000	23	6-\$5000	14	Motor Carriage	72
27	0-25%	101-500	21	51-100	4	26-50	16	1001- 2000	6	5001-25,000	4	Railroad	3
3	26-50	501-1000	8	101-500	21	51-75	9	2001- 3000	2	25,001-50,000-0-	0	Parcel Post	3
8	51-75	over 1000	8	over 500	8	76-100	1	over 3000	0	over 50,000	3	UPS	20
6	76-100	Average	525	Total	40	over 100	5	Average \$1737		Average \$18,577		Bus	2
12%	Average 68%					Total	46					Air	--
												Total	100%

travels an average of 525 miles from origin to destination. A majority of shipments weigh in the 101 to 500 pound range, and the majority of responses indicated an average parcel weight of less than 50 pounds. The average value of a shipment was less than \$2000 while the average maximum value was indicated as about \$18,500.

Motor carriers carry 72 percent of all inbound shipments to these communities. Private motor carriers carry about 55 percent of the 72 percent while regulated motor carriers carry 45 percent. UPS carries 20 percent of the shipments and the remaining eight percent is distributed among the railroad, Parcel Post, bus, and air transport.

Perceptions of Deregulation

Business representatives in these eight rural North Dakota communities are likely to support an intrastate deregulation movement. Forty percent of those surveyed indicated they would favor easing of entry requirements, 29 percent would disfavor, and 31 percent had no opinion. 51 percent favored motor carrier rate flexibility, 27 percent disfavored, and 22 percent had no opinion (Table 13).

TABLE 13.--DEREGULATION VIEWS OF BUSINESS REPRESENTATIVES OF EIGHT RURAL NORTH DAKOTA COMMUNITIES.

	<u>Favor</u>		<u>Disfavor</u>		<u>No Opinion</u>		<u>Total</u>	
	Responses	%	Responses	%	Responses	%	Responses	%
Ease of Entry	18	40%	13	29%	14	31%	45	100%
Rate Flexibility	23	51%	12	27%	10	22%	45	100%

Comparison of Small and Medium-Sized Communities

Service Characteristics

Business representatives of small communities received motor carrier service an average of 2.62 times per week while medium sized communities received service an average of 3.03 times per week (Table 14 and 16). Seventy-six percent of small community business representatives rated motor carrier service as good and very good with 66 percent in medium sized communities. Eighty-five percent indicated they receive the amount of service they desire compared with 68 percent of medium sized communities. The most often cited problem with motor carrier service to small communities was speed of service while in medium sized communities cost of service was most often cited as a major problem.

Traffic Characteristics

The business representatives indicated 44 percent of their inbound freight originates within the state of North

Table 14
Motor Carrier Service Characteristics of Four Rural North Dakota
Communities with a Population of 1000 People or Less
(21 representatives)

Frequency of Service per Week (28 responses)	Rating of Service (25 responses)		Service Improving or Deteriorating? (20 responses)		Amount of Service Desired (25 responses)		Problems with Motor Carrier Service (24 observations)							
	#	%	#	%	#	%	#	%						
once or less	6	21%	very good	13	52%	Greatly Improved	-0-	-0%	yes	20	87%	Cost	5	21%
twice	2	7	good	6	24	Improved	10	50	no	3	13	Availability	3	12
three	11	39	fair	4	16	Same	5	25				Dependability	4	17
four	1	4	poor	1	4	Deteriorated	4	20				Collection of Loss and Damage Claims	4	17
five	8	29	very poor	1	4	Greatly Deteriorated	1	5				Speed	7	29
Total	28	100%	Total	25	100%	Total	20	100%	Total	23	100%	Handling	1	4
Average	2.62 times											Total	24	100%

Table 15
Traffic Characteristics of Four Rural North Dakota Communities
with a Population of 1000 People or Less
(21 responses)

Origination of Freight (23 responses)		Miles Traveled by Freight (23 responses)		Average Shipment Weight (22 responses)		Average Parcel Weight (24 responses)		Value of Shipment		Mode Distri- bution of In- bound Freight (20 responses)			
% In- State	Out-of State	Miles Traveled	Responses	Pounds	Responses	Pounds	Responses	Average (18 Responses)	Maximum (9 Responses)	Mode	% Share		
0-25%	10	0-100	6	0-50 lbs	4	0-25 lbs	8	0-\$1000	16	0-\$5000	7	Motor Carriage ^a	71%
26-50	2	101-500	12	51-100	1	26-50	7	1001-2000	1	5001-25,000	1	Railroad	5
51-75	5	501-1000	4	101-500	10	51-75	6	2001-3000	0	25,001-50,000	0	Parcel Post	3
76-100	6	over 1000	1	over 500	7	76-100	-0-	over 3000	1	over 50,000	1	UPS	21
Average	Average	Average	327	Total	22	over 100	3	Average	\$2268	Average	\$9183	Rus	1
44%	56%		miles			Total	24					Air	
												Total	100%

^aBased on 13 responses the motor carriage percentage of inbound traffic is distributed as 76 percent private and 24 percent regulated.

Dakota (see Table 15). In contrast, business representatives of medium-sized communities indicated that only 21 percent of inbound freight originates within the state of North Dakota (see Table 17). Freight shipments of medium sized communities tend to travel much farther (714 miles) than small community shipments (327 miles). Even though shipment weight and parcel weight don't appear to be affected by size of community, medium sized communities tend to receive lower value goods than do smaller communities. The average value of shipments to small communities was \$2268, whereas to medium sized communities the average value was \$1167, a difference of about \$1100. The motor carriers's share of traffic to both sizes of communities is about 70 percent of total traffic. However, in smaller communities, about 75 percent of the motor carrier share is private whereas in medium-sized communities the private share is only about 31 percent. This could be indicative of the medium-sized communities' dependence on the regulated motor carrier sector (Tables 15 and 17).

Perceptions of Deregulation Based on Community Size

Business representatives of medium-sized communities appear to be much more in favor of a deregulatory movement in North Dakota than do business representatives of smaller communities. In smaller communities, only 33 percent of the

Table 16
 Motor Carrier Service Characteristics of Four Rural North Dakota Communities
 with a Population Between 1000 and 5000 Persons
 (24 representatives)

Frequency of Service per Week (20 responses)			Rating of Service (23 responses)			Service Improving or Deteriorating? (23 responses)			Amount of Service Desired (24 responses)			Problems with Motor Carrier Service (43 observations)		
#	%		#	%		#	%		#	%		#	%	
once	8	25	very good	12	42	Greatly Improved	6	27	yes	15	68	Cost	13	32
twice	3	9	good	7	24	Improved	4	18	no	7	32	Availability	6	15
three	9	28	fair	2	7	Same	7	32				Dependability	3	7
four	0	0	poor	3	10	Deteriorated	5	23				Collection of Loss and Damage Claims	7	17
five	12	38	very poor	5	17	Greatly Deteriorated	0	0				Speed	9	22
Total	32	100%	Total	29	100%	Total	22	100%	Total	22	100%	Handling	3	7
Average	3,025											Total	41	100%

Table 17
 Traffic Characteristics of Four Rural North Dakota Communities with a Population
 Between 1000 and 5000 People
 (24 responses)

Origination of Freight (21 responses)		Miles Traveled by Freight (20 responses)		Average Shipment Weight (18 responses)		Average Parcel Weight (22 responses)		Value of Shipment			Mode Distribution of Inbound Freight (21 responses)		
% In-State	Out-of-State	Miles Traveled	Responses	Pounds	Responses	Pounds	Responses	Average (14 Responses)	Maximum (12 Responses)	Mode	% Share		
0-25%	17	0-100	0	0-50 lbs	3	0-25 lbs	7	0-\$1000	7	0-\$5000	7	Motor Carriage ^a	72%
26-50	1	101-500	9	51-100	3	26-50	9	1001-2000	5	5001-25,000	3	Railroad Parcel	2
51-75	3	501-1000	4	101-500	11	51-75	3	2001-3000	2	25,001-50,000	0	Post	3
76-100	0	over 1000	7	over 500	1	76-100	1	over 3000	0	over 50,000	2	UPS	20
Average	Average	Average	714	Total	18	over 100	2	Average \$1167	Average \$25,516	Bus	3	Air	0-
21%	79%		miles			Total	22			Total	100%		

^aBased on 12 responses the motor carriage percentage of inbound traffic is distributed as 31 percent private and 69 percent regulated.

respondents favor easier entry into the motor carrier industry whereas in medium-sized communities, 46 percent of respondents favor easier entry. In addition, 42 percent of smaller community respondents favor motor carrier rate flexibility; in medium-sized communities 58 percent of respondents favor motor carrier rate flexibility. However, in both sizes of communities, a significant number of respondents had no opinion (see Tables 18 and 19).

TABLE 18.--DEREGULATION VIEWS OF BUSINESS REPRESENTATIVES IN FOUR RURAL NORTH DAKOTA COMMUNITIES WITH A POPULATION OF LESS THAN 1000 PERSONS.

	<u>Favor</u>		<u>Disfavor</u>		<u>No Opinion</u>		<u>Total</u>	
	<u>Responses</u>	<u>%</u>	<u>Responses</u>	<u>%</u>	<u>Responses</u>	<u>%</u>	<u>Responses</u>	<u>%</u>
Ease of Entry	7	33%	8	38%	6	29%	21	100%
Rate Flexibility	9	42%	6	29%	6	29%	21	100%

TABLE 19.--DEREGULATION VIEWS OF BUSINESS REPRESENTATIVES IN FOUR RURAL NORTH DAKOTA COMMUNITIES WITH A POPULATION BETWEEN 1000 AND 5000 PEOPLE.

	<u>Favor</u>		<u>Disfavor</u>		<u>No Opinion</u>		<u>Total</u>	
	<u>Responses</u>	<u>%</u>	<u>Responses</u>	<u>%</u>	<u>Responses</u>	<u>%</u>	<u>Responses</u>	<u>%</u>
Ease of Entry	11	46%	5	21%	8	33%	24	100%
Rate Flexibility	14	58%	6	25%	4	16%	24	100%

Comparison of Communities Based on Location

Service Characteristics

As could be expected, business representatives of communities located within five miles of a major highway indicated more frequent motor carrier service (slightly over three times per week) than did business representatives of communities located more than five miles from a major highway (slightly more than two and one half times weekly). However, UPS provides service to most communities on a daily basis. The representatives in communities located more than five miles from a major highway rated motor carrier service slightly better than did representatives of businesses located within five miles of a major highway. However, business representatives of communities located within five miles of a major highway generally perceive motor carrier service as improving over prior years than did business representatives of communities located more than five miles from a major highway. Over 75 percent of all business representatives surveyed indicated they receive the amount of motor carrier service they desire (see Tables 20 and 22). Cost and speed of service were the most often cited problems by business representatives in both sizes of communities.

Table 20
 Motor Carrier Service Characteristics of Four Rural North Dakota
 Communities Located Within 5 Miles of a Major Highway^a
 (27 representatives)

Frequency of Service per Week (17 responses)	Rating of Service (25 responses)		Service Improving or Deteriorating? (21 responses)		Amount of Service Desired (22 responses)		Problems with Motor Carrier Service (35 observations)							
	#	%	#	%	#	%	#	%						
once or less	9	33	very good	10	40	Greatly Improved	4	19	yes	17	77%	Cost	9	26%
twice	3	11	good	8	32	Improved	7	33	no	5	23	Availability	4	11
three	5	19	fair	2	8	Same	4	19				Dependability	7	20
four	0	0	poor	2	8	Deteriorated	5	24				Collection of Loss and Damage Claims	5	14
five	10	37	very poor	3	12	Greatly Deteriorated	1	5				Speed	9	26
Total	27	100%	Total	25	100%	Total	21	100%	Total	22	100%	Handling	1	3
Average	3.1 times											Total	35	100%

^aA major highway for these purposes is defined as any U.S. or Interstate Highway passing through the state of North Dakota.

Table 21
 Traffic Characteristics of Four Rural North Dakota Communities
 Located Within 5 Miles of a Major Highway^a
 (22 responses)

Origination of Freight (21 responses)		Miles Traveled by Freight (21 responses)		Average Shipment Weight (19 responses)		Average Parcel Weight (23 responses)		Value of Shipment			Mode Distribution of Inbound Freight (21 responses)		
% In-State	Out-of-State	Miles Traveled	Responses	Pounds	Responses	Pounds	Responses	Average (13 Responses)	Maximum (11 Responses)	Mode	% Share		
0-25%	11	0-100	4	0-50 lbs	4	0-25 lbs	10	0-\$1000	12	0-\$5000	9	Motor Carriage ^b	67%
26-50	3	101-500	7	51-100	1	26-50	6	1001-2000	3	5001-25,000	0	Railroad	2
51-75	4	501-1000	4	101-500	8	51-75	4	2001-3000	0	25,001-50,000	0	Parcel Post	3
76-100	3	over 1000	6	over 500	6	76-100	-0-	over 3000	0	over 50,000	2	UPS	27
Average	Average	Average	584	Total	19	over 100	3	Average	\$692	Average	\$23,090	Bus	1
34.5	65.5	miles		Total	23							Air	-0-
												Total	100%

^aA major highway for these purposes is defined as any U.S. or Interstate Highway passing through the state of North Dakota.

^bBased on 11 responses the motor carriage percentage of inbound traffic is distributed as 80 percent private and 20 percent regulated.

Table 22
 Motor Carrier Service Characteristics of Four Rural North Dakota
 Communities Located More Than Five Miles From a Major Highway^a
 (23 representatives)

Frequency of Service per Week (33 responses)	Rating of Service (29 responses)		Service Improving or Deteriorating? (21 responses)		Amount of Service Desired (23 responses)		Problems with Motor Carrier Service (28 observations)							
	#	%	#	%	#	%	#	%						
once	5	15	very good	15	52	Greatly Improved	2	10%	yes	18	78	Cost	9	30
twice	2	6	good	5	17	Improved	7	33	no	5	22	Availability	5	17
three	15	46	fair	4	14	Same	8	38				Dependability	0	0
four	1	3	poor	2	7	Deteriorated	4	19				Collection of Loss and Damage Claims	6	20
five	10	30	very poor	3	10	Greatly Deteriorated	0	0				Speed	7	23
total	33	100%	Total	29	100%	Total	21	100%	Total	23	100%	Handling	3	10
Average	2.65											Total	30	100%

^aA major highway for these purposes is defined as any U.S. or Interstate Highway passing through the state of North Dakota.

Table 23
 Traffic Characteristics of Four Rural North Dakota Communities
 Located More than 5 Miles from a Major Highway^a
 (23 responses)

Origination of Freight (23 responses)		Miles Traveled by Freight (22 responses)		Average Shipment Weight (21 responses)		Average Parcel Weight (23 responses)		Value of Shipment		Mode Distri- bution of In- bound Freight (22 responses)					
% In- State	Out-of State	Miles Traveled	Responses	Pounds	Responses	Pounds	Responses	Average (16 Responses)	Maximum (10 Responses)	Mode	% Share				
0-25%	16	0-25	4	0- 100	2	0-50 lbs	3	0-25 lbs	5	0-\$1000	11	0-\$5000	5	Motor Carriage ^b	71%
26-50	0	26-50	3	101- 500	14	51-100	3	26-50	10	1001- 2000	3	5001-25,000	4	Railroad	4
51-75	4	57-75	1	501-1000	4	101-500	13	51-75	5	2001- 3000	2	25,001-50,000	0	Parcel	3
76-100	3	76-100	15	over 1000	2	over 500	2	76-100	1	over 3000	0	over 50,000	1	Post	19
Aver- age	30%	Aver- age	70%	Average	463 miles	Total	21	over 100	2	Average	\$2586	Average	\$14,983	UPS	3
						Total	23							Air	0
														Total	100%

^aA major highway for these purposes is defined as any U.S. or Interstate highway passing through the state of North Dakota.

^bBased on 14 responses the motor carriage percentage of inbound traffic is distributed as 40 percent private and 60 percent regulated.

Traffic Characteristics

The freight, of businesses located in communities close to major highways, travels an average of 584 miles as compared with freight traveling 463 miles (inbound) to communities located more than five miles from a major highway. There appears to be little difference between the two in all other freight characteristics except for average value of shipments and mode distribution of freight. The average value of shipments to businesses in communities located more than five miles from a major highway is almost four times greater than the average value of shipments to businesses located near a major highway (see Tables 21 and 23). Business concerns of communities located more than five miles from a major highway tend to use motor carriers slightly more than business concerns located near a major highway (71 percent versus 67 percent). However, the former uses regulated motor carriers for 60 percent of inbound freight carried via motor carrier whereas the latter uses regulated motor carriers for only 20 percent of inbound freight carried via motor carrier. This seems to indicate that business concerns located near a major highway are much more dependent on regulated motor carrier than businesses located more than five miles from a major highway.

Perceptions of Deregulation

Business representatives of communities located near a major highway are slightly more in favor of deregulating the motor carrier industry than are their counterparts (see Tables 24 and 25). In those communities located more than five miles from a major highway, business representatives tend to be more undecided than representatives of communities located near a major highway. Fifty percent have no opinion on entry deregulation and 50 percent have no opinion concerning rate flexibility.

TABLE 24.--DEREGULATION VIEWS OF BUSINESS REPRESENTATIVES IN FOUR RURAL NORTH DAKOTA COMMUNITIES LOCATED WITHIN FIVE MILES OF A MAJOR HIGHWAY.

	<u>Favor</u>		<u>Disfavor</u>		<u>No Opinion</u>		<u>Total</u>	
	Responses %		Responses %		Responses %		Responses %	
Ease of Entry	9	41%	8	36%	5	23%	22	100%
Rate Flexibility	12	55%	6	27%	4	18%	22	100%

TABLE 25.--DEREGULATION VIEWPOINTS OF BUSINESS REPRESENTATIVES IN FOUR RURAL NORTH DAKOTA COMMUNITIES LOCATED MORE THAN FIVE MILES FROM A MAJOR HIGHWAY.

	<u>Favor</u>		<u>Disfavor</u>		<u>No Opinion</u>		<u>Total</u>	
	Responses %		Responses %		Responses %		Responses %	
Ease of Entry	9	39%	5	22%	9	39%	23	100%
Rate Flexibility	11	48%	6	26%	6	26%	23	100%

CONCLUSIONS

There appear to be significant differences in motor carrier service and traffic characteristics between small and medium sized communities. These differences are also apparent among communities located on or near a major highway and those located more than five miles away from a major highway. Smaller communities receive less motor carrier service but business representatives rate that service better than did the representatives of larger communities who received more frequent service. A greater percentage of freight originates out of state in medium sized communities than in smaller communities. This could be indicative of a greater dependence of these communities on interstate granted rates, i.e., rates subject to Interstate Commerce Commission jurisdiction. Furthermore, representatives of these communities indicated that cost of motor carrier service was one of their most significant problems with regulated motor carrier service. This could be indicative of interstate rates being at higher levels than intrastate rates.

The eight communities receive regulated motor carrier service almost three times weekly and daily service from UPS. Firm representatives indicated they generally received the level of motor carrier service they desire. Motor carrier service is generally rated as being good and improving over time. Cost of service, speed of service, collection of loss

and damage claims, and availability of service were most often cited as major problems with regulated motor carriage service.

Collection of loss and damage claims was cited by business representatives mainly in two communities. Furthermore, they cited this problem in reference to one specific carrier. The procedure for collection of loss and damages includes filing a form with the carrier. The carrier has up to 30 days to notify the claimant of receiving the claim. Most of the claimants indicated a lengthy time-span before any further advancements were made. One reason for this lengthy time span may be due to an interline shipment, i.e., more than one carrier is involved in the transportation. In this case, the carrier must file a claim with the interlining carrier who has up to 90 days to give notice of receiving the claim. This results in a possible time span of 120 days or four months. Many times the original shipper requests the damaged freight for inspection in which case the receiver must surrender the freight for shipment to the original shipper. As seen above, the time span can be come lengthy. Most of the shippers don't pursue loss and damage claims beyond this point because of the presumed "legal" bother, value of the item, etc. However, the firms can and have asked their suppliers to ship via an alternative carrier.

Cost of service, availability of service, and speed of service are interrelated problems. Motor carriers are pre-

sumably profit-maximizers. At a given rate level, frequency of service should be at a level where the marginal revenue (the additional revenue received for an additional unit of output) is equal to or ceases to exceed the marginal cost (the additional cost of providing the service).¹⁶ This would indicate that there is a direct relationship between cost of motor carrier service and frequency of motor carrier service. Associated with more frequent service is an additional cost. By the same token, a less expensive service is associated with a loss of service. It should be noted that much of the traffic to these communities is less-than-truck-load (LTL). This class of traffic is generally more expensive than is truckload traffic due to the additive expenses of terminal, handling, and storage.

United Parcel Service was used for about 20 percent of total inbound freight shipments to these communities. The service provided by UPS was generally perceived to be faster, cheaper, and more available than regulated motor carrier. However, UPS traffic is limited to the following criteria in traffic subject to North Dakota Public Service Commission Authority:

- 1) no package may weigh in excess of 50 pounds or exceed 108 inches in length and girth combined;
- 2) the aggregate weight of packages from any one consignor to any one consignee may not exceed 100 pounds on any one day.

¹⁶This assumes that the average variable cost (AVC) does not exceed marginal revenue (MR). No service would be provided if the AVC did exceed MR unless forced by the regulatory system.

The first criterion was met by about 65 percent of the surveyed businesses. UPS is a highly specialized small parcel carrier utilizing equipment and vehicles designed to handle parcels within the size and weight limits set forth above. However, the second criterion was a limiting factor in 29 out of 40 surveyed firms. If the second criterion was substantially relaxed more freight would be available to UPS and thereby reduce several problems of users of motor carrier service. The aggregate weight restriction has already been removed for all UPS interstate traffic and the company intends to seek removal of the restriction for intrastate traffic within the state of North Dakota.

Deregulation is generally favored by the representatives of business concerns in these eight communities. Additional research is needed to ascertain the effect of deregulation on communities such as these throughout North Dakota. This study is designed to be a pilot study. Consequently, a broader study is in progress. That study will discuss the legal obligation of motor carriers in North Dakota which serve small communities and will statistically test many of the questions raised in this pilot study of motor carrier service to rural North Dakota communities.

APPENDIX A

The Survey Questionnaire

I. Demographics

1) Name of Community: _____

2) Name of County: _____

3) What is the population of your community? (please check one).

less than 1000 _____

1000 to 5000 _____

over 5000 _____

4) How many miles is your community located from the closest of the following major highways: I-94, I-29, US-83, US-85, US-2, US-52, US-281, US-12?

0 - 5 miles _____

16 - 20 miles _____

6 -10 miles _____

over 20 miles _____ (please specify below)

11 -15 miles _____

II. Firm Characteristics

1) What is the nature of your business? (please check one)

wholesale _____

manufacturer _____

construction _____

agri-business _____ (what kind? implement, fertilizer, etc) _____

retailer _____ (what kind? grocery, hardware, etc) _____

other _____ (please specify) _____

2) How large is your firm?

a) number of full-time employees? _____

number of part-time employees? _____

b) reported 1979 gross revenues (please check one)

0 - \$50,000	_____	\$2,000,001 - \$3,000,000	_____
50,001 - 100,000	_____	3,000,001 - 4,000,000	_____
100,001 - 500,000	_____	over 4,000,000	_____
500,001 - 1,000,000	_____		
1,000,001 - 2,000,000	_____		

3) Do you use motor carrier (truck) transportation services?

yes _____

no _____

a) if yes, what type of carrier were they?

class A common motor carrier
(regular routes, regular schedules) _____

special common motor carriers
(irregular routes, irregular schedules) _____

contract motor carriers _____

private motor carriers (owned)
by yourself, customer, supplier) _____

bus _____

UPS _____

other (please specify below) _____

b) if no, why? (please check one)

unreliable service _____

rates too high _____

service not available _____

other (please specify below) _____

4) If you use motor carrier (truck) transportation, how did you locate the particular carrier? (please check one)

- a) yellow pages _____
 - b) advertisements _____
 - c) word of mouth _____
 - d) American Trucking Association's National Motor Carrier Directory _____
 - e) National Highway and Airway Carriers and Routes Directory _____
 - f) Actively solicited by the motor carriers (trucks) _____
 - g) other (please specify below) _____
-

5) What percentage of your inbound freight is carried by:

- motor carriers _____%
 - railroads _____%
 - parcel post _____%
 - UPS _____%
 - Bus _____%
 - other (please specify below) _____%
-

a) If you used motor carriers, what type of motor carrier did you use? (please check one)

- class A (regular routes and schedules) _____
 - special (irregular routes and schedules) _____
 - contract _____
 - private (owned by you, your customer or supplier) _____
 - other (please specify below) _____
-

6) What percentage of your outbound freight is carried by:

motor carriers	_____ %
railroads	_____ %
parcel post	_____ %
UPS	_____ %
Bus	_____ %
other (please specify below)	_____ %

a) If you used motor carriers, what type of motor carrier did you use?

class A (regular routes and schedules)	_____
special (irregular routes and schedules)	_____
contract	_____
private (owned by you, your customer or supplier)	_____
other (please specify below)	_____

7) How would you rate motor carrier (truck) service to your community?
(on a scale of 1 to 5, 1 being very good, please check one)

1	_____
2	_____
3	_____
4	_____
5	_____

8) Do you believe motor carrier service has improved or deteriorated over the past in your community?

greatly improved	_____
improved	_____
same	_____
deteriorated	_____
very deteriorated	_____

- 9) What are your primary problems with regulated motor carriers (truck) service? (please rate 1 being primary problem 6 being least)

cost of service _____
availability of service _____
dependability of service _____
collection of loss and damage claims _____
speed of service _____
other (please specify below) _____

- 10) Does your firm consolidate shipments with other firms for a larger shipment?

yes _____

no _____

III. Traffic Characteristics

- 1) How frequently do you receive regulated motor carrier (truck) service?

once a week _____ four times a week _____

twice a week _____ daily _____

three times a week _____ other (specify) _____

- 2) What percent of your inbound shipments originate in-state or out-of-state?

in-state _____%

out-of-state _____%

- 3) What percent of your outbound shipments terminate in-state or out-of-state?

in-state _____%

out-of-state _____%

4) Approximately, how many miles does your inbound freight travel?

_____ miles

5) Approximately, how many miles does your outbound freight travel?

_____ miles

6) What is the average weight of your shipments carried by regulated motor carriers? (please check one)

0 - 50 lbs. _____

51 - 100 lbs. _____

101 - 500 lbs. _____

over 500 lbs. _____ (please specify below an approximate figure)

7) What is the average weight of a parcel carried by a regulated motor carrier (including UPS)?

0 - 25 lbs. _____

101 - 500 lbs. _____

26 - 50 lbs. _____

501 -1000 lbs. _____

51 - 75 lbs. _____

1001 -2000 lbs. _____

76 -100 lbs. _____

over 2000 lbs. (please specify below) _____

8) What is the name or names of the motor carrier or carriers (trucks) that provide service to your community?

9) What improvements would you like to see in motor carrier service?

IV. Regulation

1) Have you ever supported a motor carrier (truck) in an entry proceeding?

yes _____

no _____

2) Have you ever filed a complaint with the ND Public Service Commission or Interstate Commerce Commission concerning unfavorable motor carrier service?

yes _____

no _____

a) if yes, were the results favorable?

yes _____

no _____

b) if no, why?

no complaints with service _____

not aware of this procedure _____

other (please specify below) _____

3) Would you favor or disfavor less stringent entry provisions of regulated motor carriers in North Dakota?

favor _____

disfavor _____

no opinion _____

4) Would you favor or disfavor more motor carrier (truck) discretion in setting their rates?

strongly favor _____

favor _____

neutral _____

disfavor _____

strongly disfavor _____

5) Has a motor carrier firm ever actively solicited your business?

yes _____

no _____

6) What is the approximate average value of your shipments by motor carrier (trucks)?

\$ _____

7) Do you receive the amount of motor carrier service you desire?

yes _____

no _____

8) What improvements would you like to see in motor carrier service?

9) What are your communities transportation options?

regulated motor carriage _____

railroads _____

private motor carriage _____

bus _____

parcel post _____

UPS _____

other (please specify below) _____
