

**THE EXEMPT MOTOR CARRIER
NORTH DAKOTA'S DILEMMA**

by

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INTRODUCTION

The interstate economic regulation of transportation has affected all surface modes of transportation in the United States including the motor carrier industry. However, the entire motor carrier industry has never been regulation from an economic point of view.¹ The carriage of raw, unprocessed agricultural commodities was exempted in the *Motor Carrier Act of 1935* which provided for the economic regulation of the Motor Carrier industry and eventually became Part II of the Interstate Commerce Act. The regulation extended only to carriers involved in interstate operation and only to those commodities which moved in interstate commerce. The economic regulation of that time period was necessitated by the unstable nature of the then fledgling motor carrier industry.

Economic regulation of the movement of agricultural commodities was opposed by farm organizations which, "feared that regulation would hamper and restrict trucking operations and tend to restore a railroad monopoly."² As a result of this opposition from farm groups and other minor interests, agricultural commodities, including livestock and fish, were exempted from economic regulation in the Motor Carrier Act of 1935. Trucks

¹The entire Motor Carrier industry is subject to Safety Regulation administered by the United States Department of Transportation.

²Locklin, Philip D., *Economic of Transportation*, Richard D. Irwin, Inc., Homewood, IL. Seventh Edition. 1973, p. 676.

operated by cooperative associations, defined in the Agricultural Marketing Act, were exempted by this legislation as well. This exemption continues today and cooperative restrictions were further loosened in the regulation of the Motor Carrier industry in 1980.

THE ROLE OF EXEMPT CARRIERS IN TRANSPORTING NORTH DAKOTA BULK AGRICULTURAL COMMODITIES

Transportation is the vital and totally necessary link if North Dakota producers are to be successful in the marketing of the commodities which they produce. Several different modes are necessary to move North Dakota grain and oilseed from point of production to point of final consumption including rail, truck, barge and ocean vessel. However, transportation between production point and the terminal markets of Minneapolis/St. Paul, Duluth/Superior and the Pacific Northwest has been provided by only two modes in recent history, rail and truck.

The early history of transporting North Dakota crops to the terminal markets which served the state was characterized by the monopoly of the rail mode.³ No economically or logistically viable alternative was available to the farm producers of the state to transport their commodities to the terminal markets. Beginning in the 1950's this domination of the rail mode began to change as the exempt motor carrier industry began to siphon some of the grain traffic away from the traditional rail mode. The entry of this new mode which provided competition and an alternative to railroads was a result of several factors including an improved highway system, technological improvements in large trucks and a relatively cheap energy source.

³Although more than one railroad firm served the state it is debated whether there was any price competition between rail competitors. Competition between railroads is generally in the form of service competition when serving origin territories which produce agricultural commodities.

The exempt carrier industry had a modest beginning as many new industries do. The exempt carrier accounted for only 3.5 percent of the wheat movement from North Dakota in the 1956-57 crop year.⁴ The market share continually increased for the exempt carrier until it reached 17.3 percent of total wheat movement in 1963-64.⁵ From this time forward the exempt carrier became a formidable competitor to the railroad and railroad management has been cognizant of the potential and real diversion of North Dakota grain traffic from the rail mode to the truck mode as a result of this competition.

In the past six years the truck movement of grain has become increasingly important to North Dakota in moving its farm commodities to the terminal markets. Trucks have increased their share of the market from 19 percent in 1974-75 to 38 percent in 1979-80 as is shown in Figure 1. The increase has been a very steady upward trend with the exception of the most recent crop year when the truck share declined 3 percent from the previous year (Figure 1).

The exempt carrier has increased the absolute amount of grain and oilseeds transported from the state as well as increasing its share of the modal split. This is particularly important during periods of transportation capacity shortage such as the most recent one which occurred throughout the period of September 1978 to January 1980. Grain and oilseed movements by truck have increased almost fourfold in the past six years increasing from 53,565 million bushels in 1974-75 to 181,724 million bushels in 1979-80 (Table 1).

⁴Nelson, David C., *Truck and Rail Shipments of Hard Red Spring and Durum Wheat*, Upper Great Plains Transportation Institute, North Dakota State University, Fargo, North Dakota, Research Report No. 14, June 1971, P. 6.

⁵Ibid, p. 6.

Figure 1. Modal Share of North Dakota Grain and Oilseed Movements by Rail and Truck.

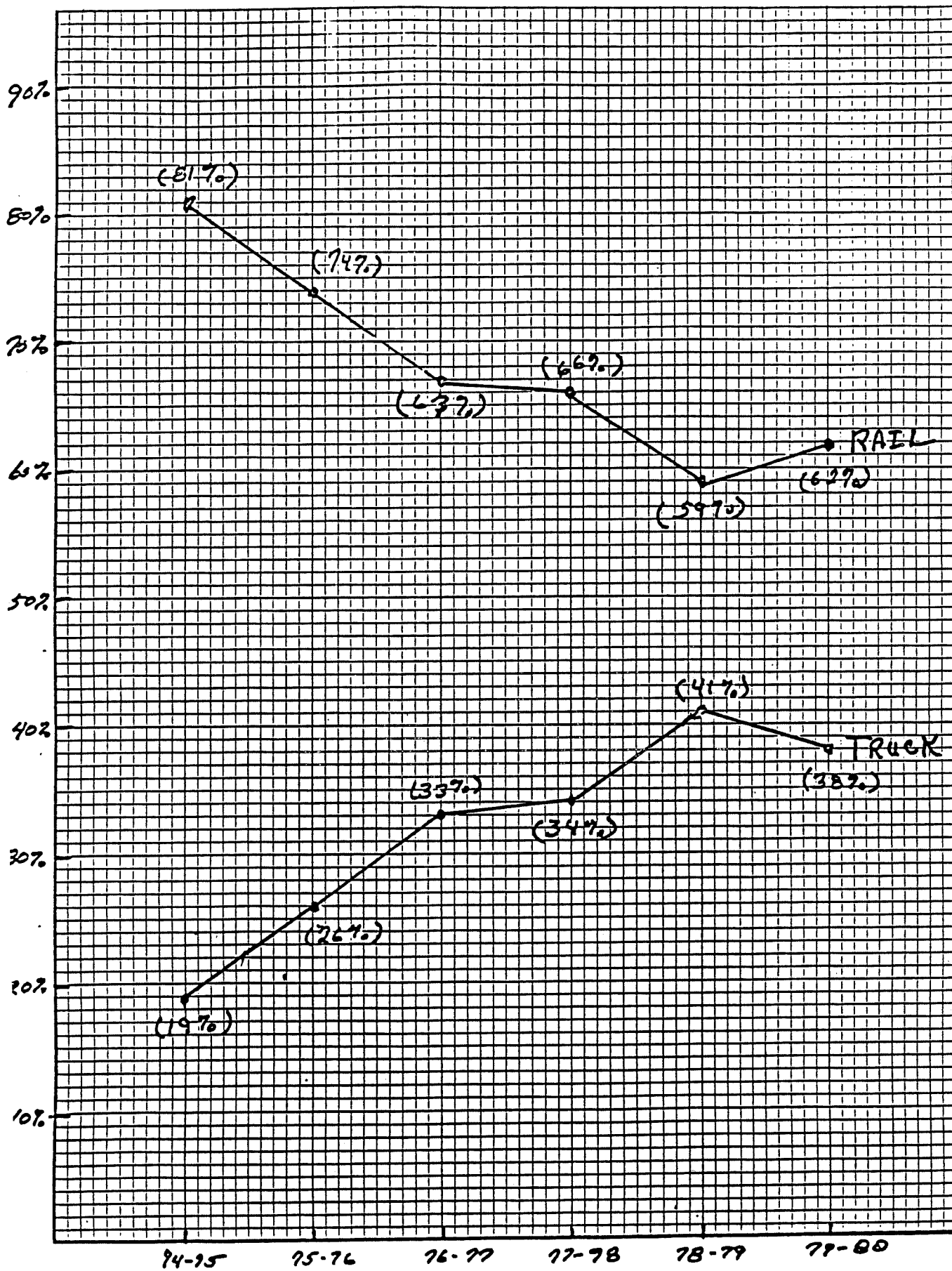


TABLE 1. NORTH DAKOTA GRAIN AND OILSEED SHIPMENTS BY RAIL AND TRUCK AND DESTINATION												
	1974-75		1975-76		1976-77		1977-78		1978-79		1979-80	
Destination	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck
(thousand bu.)												
Minn.-St. Paul	90,556 (84%)	17,537 (16%)	83,290 (79%)	21,610 (21%)	82,764 (76%)	26,856 (24%)	60,859 (71%)	24,372 (29%)	61,186 (66%)	32,168 (34%)	138,318 (60%)	92,225 (40%)
Duluth-Superior	88,428 (81%)	21,157 (19%)	110,012 (72%)	42,502 (28%)	80,207 (63%)	47,837 (37%)	121,899 (63%)	71,025 (37%)	140,112 (56%)	110,541 (44%)	79,040 (66%)	40,672 (34%)
West	17,148 (72%)	6,679 (28%)	15,376 (70%)	6,654 (30%)	11,703 (56%)	9,120 (44%)	19,386 (67%)	9,645 (33%)	33,461 (72%)	12,952 (28%)	31,878 (68%)	15,076 (32%)
Misc. Markets	25,790 (76%)	8,192 (24%)	27,813 (68%)	13,027 (32%)	30,455 (64%)	16,970 (36%)	33,034 (64%)	18,384 (36%)	36,310 (55%)	29,504 (45%)	45,106 (57%)	33,750 (43%)
TOTAL	221,922 (81%)	53,565 (19%)	236,491 (74%)	83,793 (26%)	205,129 (67%)	100,783 (33%)	235,178 (66%)	123,426 (34%)	271,069 (59%)	185,165 (41%)	294,342 (62%)	181,724 (38%)

SOURCE: North Dakota Grain and Oilseed Transportation Statistics, 1979-80, Upper Great Plains Transportation Institute, North Dakota State University, Fargo, North Dakota

In summary the exempt carriage of grain and oilseeds from North Dakota to the terminal markets has taken on a role of major proportions and is currently supplying North Dakota producers with 38 percent of their demand for transportation.

THE ECONOMIC NATURE OF THE EXEMPT CARRIER INDUSTRY

The exempt motor carrier industry, exclusive of regulated carriers seeking a backhaul, can generally be described as competitive with rates being charged somewhat in relation to costs. The stability of the industry has been debated among professional economists. One hypothesis is that the industry is quite unstable with a great deal of exist and new entry over time due to the competitive nature of the industry. The alternate hypothesis is that the industry is stable with a level of profitability sufficient to retain existing firms within the industry but not so great as to attract a large number of new entrants into the industry.

There are a large number of exempt truck firms which serve North Dakota. The most recent "Truck Directory" lists firms which serve the state.⁶ Competition within the industry is enhanced by the large number of firms within the industry and prevents individual firms from pricing their services significantly above their costs.

The large number of firms in the industry is due to several factors. The industry in the past has been characterized by easy entry. Initial capital costs have been relatively small when compared to other businesses which has made entry relatively easier, although as a result of the impact of inflation on the cost of equipment, this appears to be changing. Easy entry is also enhanced by the lack of special training and education required of an

⁶North Dakota State University, Upper Great Plains Transportation Institute, 1980 *Grain Trucking Directory*, Fargo, North Dakota.

owner-operator or small exempt carrier firm. Operations are not sufficiently vigorous or complex to prevent most individuals from entering business for themselves.

Public right of ways constructed for both the automobile and truck alike also enhance entry allowing anyone who can license a vehicle the right to travel on the public road system.

The firms within the industry are dominated by the owner-operator single truck firms and small firms (2-5 trucks) accounting for 88 percent of all firms.⁷ (These firms should not be confused with those firms that have some form of truck rights issued by the ICC and use grain as a backhaul). The reason for the dominance of small firms in the industry is generally attributed to the lack of economies of scale in the industry and the exempt nature of the industry. Large firms with a large number of trucks do not appear to have lower per unit costs than small firms.

It is valid to conceive large firms existing as a result of economic regulation which would limit entry and regulation rates resulting in excessive profits.

Market share is also dominated by small firms. Owner-operators accounted for seventy percent of the loaded grain miles with only twenty-nine percent attributed to large firms.⁸ This lack of concentration supports the hypothesis that economies of scale do not exist and that the industry is very competitive.

⁷Cosgriff, John. G., *The Cost and Operations of Exempt Motor Carriers in North Dakota*, Upper Great Plains Transportation Institute, North Dakota State University, Fargo, North Dakota. Report No. 33, November 1978, p. 10.

⁸Ibid, p. 21.

THE IMPACT OF EXEMPT CARRIAGE ON NORTH DAKOTA RAIL GRAIN RATES

The exempt motor carrier industry has provided the only form of competition to the railroad in North Dakota in recent history and has been responsible for the reduction of rail rates on grain from North Dakota on several occasions. This is a direct result of the competitive nature of the exempt carrier industry, the preference of country elevator grain merchandisers to ship by rail, and the pricing behavior of the railroads. It is generally assumed that truck costs set rail rates in the long run and truck rates follow rail rates in the short run, assuming no extreme shortages in transportation capacity. The country merchandiser prefers to ship grain by rail to the extent that 81 percent of the elevator operators would ship by rail rather than truck if truck rates were higher and 56 percent prefer rail when the rates are equal.⁹ Another factor influencing truck rates is the competitive nature of the industry. It is rational to assume that if one firm raised its prices sufficiently that other firms would be attracted and price competition would take place and result in reduced rates. The elevator manager would be encouraged to seek out other truck firms if an individual firm tried to increase the price of his service significantly, thus the price charged by trucks will gravitate towards the industry.

When truck costs are sufficiently below rail rates a diversion of traffic from the rail mode to the truck mode will take place and reduce the railroad market share. Railroad management, seeing that they are losing traffic to a competitive mode, will price their services to recapture the traffic. This will result in reduced rail rates at or below truck costs.

⁹Ibid, p. 14.

Such a series of events has happened within the state at least five times and has resulted in reduced rail rates. In 1960 as a result of truck competition, which had captured 15 percent of the market in 1958-59,¹⁰ the railroads established reduced rates on wheat to Minneapolis and Duluth from parts of North Dakota. As a result of continued diversion of traffic and competition the railroads further reduced their rates approximately 10 percent in 1963 from selected North Dakota origins. Trucks accounted for 17 percent of the movement in 1963-64.

A third reduction in rail rates, due to diversion of traffic from the rail to the truck mode, occurred in December of 1971. Trucks just prior to the reduction in 1970-71 accounted for 55 percent of the hard red spring wheat movement to Duluth and 38 percent of the same grain to Minneapolis.¹¹ This adjustment resulted in reduced rates of approximately 25 percent. The three reductions in rail rates, a direct result of truck competition, have resulted in rates in the extreme eastern part of the state being 32 percent less than they would have been without truck competition (76 cents/cwt vs. 111 cents/cwt) and similarly 15 percent in the extreme western part of the state (153 cents/cwt vs. 181/cwt) in terms of rate levels effective today.

The barley rates to Duluth-Superior have also been affected by truck competition and have recently been reduced. Trucks accounted for 73 percent of the North Dakota barley

¹⁰Wilson, William et al., *Impacts of Seasonal Rail Rates or Grain Flows and Storage in North Dakota*. Department of Agricultural Economics and Upper Great Plains Transportation Institute, North Dakota State University, Fargo, North Dakota. February 1981, pp. 7-13 and Nelson, op. cit., p. 6.

¹¹Tosterud, Robert J., *Truck and Rail Shipments of Grain*, Upper Great Plains Transportation Institute, North Dakota State University, Fargo, North Dakota, Research Report No. 21, October 1974, p. 17.

movement to Duluth in 1977-78 just prior to the reduction in rail rates. In the succeeding two years the truck share of the market dropped to 41 percent and 31 percent in 1978-79 and 1979-80 respectively.

The most recent and dramatic reduction in rail rates involving truck competition was on wheat to the Pacific Northwest which resulted in reduced single car rates as well as the first unit train rates to be published for North Dakota origins. The reductions were due primarily to truck-barge competition. Wheat was being diverted from rail to truck from western North Dakota and Montana to Lewiston, Idaho and other points which had barge loading facilities on the Columbia-Snake River system. From there the wheat was barged to ocean ports on the Columbia where the wheat was exported. Wheat was also being trucked from Montana and even North Dakota directly to Portland and other ports. This competition deprived the railroads from a long and profitable haul. To meet this competition the railroads reduced the Pacific Northwest single car rates from North Dakota from 243½ cents/cwt to 215 cents/cwt and introduced a 26 car multiple car rate of 195 cents/cwt and 52 car unit train rate of 190 cents/cwt.

EXEMPT CARRIER ECONOMIC PROBLEMS

The exempt carrier is faced with several problems, some current and others which will possible arise in the near future, all of which will affect his economic viability. One of the biggest current problems faced by the trucker is inflation, particularly, but not limited to, fuel. As fuel prices increase the truck becomes less competitive with the rail mode in the movement of bulk agricultural commodities because the truck is the more fuel intensive mode. In particular, if rail cost increases are less than cost increases for comparable truck

movements and if rail rates increase at the rate of rail cost increases, trucks will become increasingly less competitive over time as inflation continues. Inflation of other inputs and equipment are also having a negative impact on truck carriers.

Changes in user tax policy, which have been recommended by the Federal Highway Administration, will also increase the exempt carrier costs and alter the competition between truck and rail. Although the issue of heavy trucks being subsidized by automobiles and light truck is somewhat controversial, the more accepted hypothesis is that such an allegation is indeed true. If a policy of increased user taxes related to investment and maintenance requirements as a result of heavier axle loads is implemented at the federal and state levels, truck costs will definitely increase making them less competitive with the rail mode.

Another factor that is detrimental to the economic viability of the exempt carrier is the efforts of the state of North Dakota, particularly the Wheat Commission and Public Service Commission, to seek more equitable and just rates related to rail costs. If such efforts are successful in reducing rates, holding rates down at their current level, or even reducing the rate of increase, it will result in reduced revenues or constant revenues to truckers which will impact them negatively during inflationary periods.

Reregulation of the railroads may also have an impact on the viability of the exempt carrier. The railroads will have more flexibility in raising and lowering their rates as a result of the Staggers Rail Act without fear of interference from the Interstate Commerce Commission. This flexibility will allow them to be more selective in publishing rates to meet truck competition without interfering with other rate structures and will result in the railroads recapturing the traffic to the extent they feel it is profitable.

This newfound flexibility in rates will also make it easier for railroads to implement multiple car and unit train rates which will be amplified, if the rates associated with this type of service are significantly below truck costs.

THE BACKHAUL ISSUE

Backhauls do increase economic viability of the exempt carrier even when the revenue does not cover operating costs for the return trip. Because costs are fixed, for all practical purposes, whether a local, partial load or no load, any revenue will reduce these costs. The ease of legally obtaining a backhaul was improved by the passage of the Motor Carrier Act of 1980 by easing the restrictions on what owner-operators may legally haul and increasing the amount of traffic that can legally be transported by a cooperative. However, North Dakota presently has such an imbalance of traffic that backhauls provide little long run hope for significantly increasing the economic viability for the industry as a whole. It must also be noted that, on occasion, backhauls may provide some help for individual owner-operators.

THE DILEMMA

The exempt carrier has provided competition to the rail mode in the movement of North Dakota grain and oilseed to terminal markets. It has also provided valuable transportation capacity at times when a shortage of rail equipment existed. In so doing it has, in the past and currently, benefited the state of North Dakota by the resulting lower transportation costs to the producer and increasing the availability of markets during rail car and motive power shortages.

The exempt carrier trucking industry is facing a host of new economic problems with inflation being one of the more significant, and prospective staff and innovative price

competition from the railroads being another. In addition, North Dakota interests are actively seeking lower rail rates and/or to stabilize rail rates through the regulatory mechanism, namely the ICC, which also impacts the economic viability of the exempt carrier.

Herein lies the dilemma. If North Dakota supports and facilitates increased truck rates and reduced competition in the exempt carrier industry it will insure competition for the railroad but only at the cost of the producer in the form of higher rates. The net result will be reduced income and a decrease of the competitive position of North Dakota agricultural commodities in the major markets. On the other hand, as trucks become less and less economically viable, North Dakota shippers become increasingly captive to the rail mode.

As additional issue is the relative efficiencies of the two modes. Railroads are more efficient in moving bulk agricultural commodities over long distances than trucks in the utilization of our scarce resources, both natural and human. This conforms to economic theory which suggests that trucks are most competitive in the short haul and railroads much more competitive in the long haul. This theory is empirically supported by rail and truck costing studies.

A POLICY ALTERNATIVE

Lower transportation costs for the movement of North Dakota bulk agricultural commodities benefits producers in at least two ways. First, it improves his competitiveness with similar commodities competing for the same markets. A lack of competitiveness will result in the North Dakota producer becoming a residual supplier faced with the carrying costs associated with such a position and potentially reduced prices. Secondly, reduced rates generally result in some increase in commodity price to the

producer and result in increased farm income which improves the producer's economic viability.

Another factor as important as transportation costs is transportation capacity. North Dakota producers have in the past been unable to market in a timely manner and sometimes not at all because of transportation capacity and related problems. However, it appears that in the future it will be difficult if not impossible for trucks to provide competition to the rail mode and provide additional transportation capacity.

A subterminal system may present North Dakota producers with a choice which avoids this dilemma and achieves several things which are positive for North Dakota which are as follows:

- multiple car and unit train rates significantly less than the present single car rates,
- more efficient use of equipment and thus a relative increase in available equipment which will increase accessibility to markets,
- short haul intrastate trucking of bulk agricultural commodities,
- more efficient use of scarce resources by utilizing railroads for a long haul,
- reduce damage to roads over long haul routes,
- more efficient marketing of agricultural commodities as a result of marketing in larger quantities, and
- overall improved commodity price and marketing capability.

Such an alternative could eliminate the dilemma of the exempt carrier and it is possible that the industry will participate in the move from the farm and country elevator to subterminals. This alternative, however, is not without pitfalls.

Such a subterminal system could result in increased damage to rural roads and bridges resulting in increased public investment in the supporting road and bridge infrastructure. Whether the benefits of such a system exceed the costs is not positively known at this time.

Another problem is that of energy efficiency. Whether a subterminal system in North Dakota is more energy efficient or relative to the present day system is also not known.

The biggest unknown, however, lies in the distant future and concerns the level of rail rates. The railroads, by offering an incentive rate in the form of reduced multiple car and unit train rates, are in reality paying for part of the development of a subterminal system. At the same time they are creating tremendous efficiencies in doing so and are benefiting more than they are giving up in the form of reduced revenue per unit of output. This results in a relatively high revenue cost ratio for this type of operation. However, in the distant future when a subterminal system has been established, it is feasible, as a profit maximizer, that railroads will increase their multiple car and unit train rates to approximately the level of truck costs. This would mean the North Dakota producer would have multiple and unit train rates at the single car level.

North Dakota retention of some of the benefits created by efficiencies of such a system would depend on the degree and how the Interstate Commerce Commission chooses to regulate such rates in the future.