USE OF LEASED RAIL EQUIPMENT IN NORTH DAKOTA

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UGPTI Staff Paper No. 20
June 1982

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JUNE 1982

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In the past, country elevators in North Dakota relied on railroads and for-hire truckers to supply virtually all of their transportation demands. However, chronic shortages of rail equipment throughout much of the 1970s and the inability of country elevators to market their grain in a timely manner during these shortages resulted in managers seeking alternatives in procuring transportation services. One alternative was to acquire transportation equipment by purchasing or leasing tractor/trailer rigs, boxcars and hopper cars.

Most elevator managers opted for leasing covered hopper cars. A survey conducted by the Upper Great Plains Transportation Institute (UGPTI) at North Dakota State University, indicated that 175 elevators leased hopper cars in 1980. The next most popular alternative was tractor/trailer rig ownership; almost 100 elevators owned trucks. Fifty elevators leased boxcars while less than 25 firms owned either boxcars or hopper cars.

OT-5 Authority

Shippers who own or lease rail cars must obtain permission from the railroads in order to place and use the equipment on the carrier's lines. This use authority is commonly called OT-5.

Shippers who use privately owned rail cars are entitled to compensation from the carriers. This compensation is in the form of mileage credits and varies according to the value of the car, type of shipment, and the loaded mileage traveled by the car. For

example, as of December 31, 1981, a hopper car worth $20,000 received a mileage credit of 26.2¢ per loaded mile while a hopper car worth $35,000 received 39.45¢ per loaded mile. These mileage credits were for single car shipments; mileage credits for multiple car shipments normally did not exceed 24¢ per loaded mile.

Direct Leases Versus Subleases

Grain shippers may either lease hopper cars directly from car leasing companies or may lease or sublease from other business concern such as grain companies. Common car leasing companies used by grain shippers in North Dakota include North American Car Corporation, Xtra Inc., Greyhound, Pullman Leasing Company, and General American Transportation Corporation. Grain companies either leasing or subleasing cars to country elevator included Benson Quinn, Atwood Larson, ConAgra, and GTA. Other companies may lease and/or sublease but were not identified in the survey conducted by the UGPTI.

The Lease Decision

Country elevator managers in North Dakota had an average monthly lease payment of $430 per car for their leased hopper cars in 1981. This lease payment ranged from a low of $195 to a high of $550. The net cost to the elevator is equal to the lease payment minus the revenue generated from mileage credits. Therefore, if:

Lease Payment = $430

Mileage Credit = 35¢/loaded mile

Utilization = 1,000 miles

The net cost would be:

$$\$430 - (1{,}000 \times .35) = \$80$$

The monthly net cost to the elevator would be $80 per car. Some car leasing companies do not permit lessees to earn revenues in excess of their lease payments. This is one variable that elevator managers should consider when negotiating the lease.

Since lease payment and mileage credits are fairly stable factors in the equation, utilization (in terms of loaded mileage) is an extremely important variable for elevator managers to consider in attempting to minimize the net cost of leased hopper cars. Directly related to utilization is the turnaround time to the various markets. Elevator managers will tend to get higher degrees of utilization from their leased cars as turnaround times decrease.

Table 1 illustrates the estimated (expected) annual utilization of a covered hopper car based on: (1) the average number of days per year freight cars are available for active service; (2) average turnaround times reported by elevator managers on leased hopper cars; (3) proportion of interstate grain shipments to the respective markets; and (4) the average distance shippers are from the markets. Based on these factors, the estimated annual utilization of leased hopper cars was calculated to be 10, 500 loaded miles.

TABLE 1. --ESTIMATED ANNUAL UTILIZATION OF LEASED HOPPER CARS BY COUNTRY ELEVATORS[a]

DESTINATION	ACTIVE CAR-DAYS AVAILABLE FOR SERVICE		AVERAGE TURN-AROUND TIMES		PROPORTION OF GRAIN SHIPMENTS		AVERAGE DISTANCE TO MARKET		EXPECTED UTILIZATION (LOADED MILEAGE)
	NUMBER OF DAYS				PCT.		MILES		
Duluth/Superior	305	+	15	×	46	×	450	=	4,200
Minneapolis/St. Paul	305	+	16	×	20	×	450	=	1,700
Pacific Northwest	305	+	24	×	10	×	1,500	=	1,900
Other	305	+	19	×	24	×	700	=	2,700
ESTIMATED UTILIZATION									10,500

[a] Figures are based on a survey of hopper cars lessees conducted in August and September 1981.

It may be useful to elevator managers to determine the per bushel cost to the elevator of leasing covered hopper cars. The following formula may be used for this calculation:

$$NC_b = \frac{[LP_a * C_\#) - [U_e * C_\#) * M_c]}{V}$$

where: NC_b =Net cost per bushel

LP_a =Annual lease payment per car

$C_\#$ = Number of cars leased

U_e = Expected utilization in loaded miles per year

M_c =Mileage credit expressed in cents per loaded mile

V = Annual grain volume of the elevator

For example, assume:

1. An annual lease payment (LP_a) of $4,800;
2. The number of cars leased ($C_\#$) at 7;
3. Expected utilization (U_e) of 10,000 miles per year;
4. Mileage credit (M_c) of 35¢ per loaded mile; and
5. Annual grain volume (V) of 1,000 bushels.

Based on these assumptions, the net cost per bushel would be:

$$NC_b = \frac{(4{,}800 * 7) - [(10{,}000 * 7) * .35]}{1{,}000{,}000} = 0.9¢$$

The decision elevator managers must make in determining whether or not to lease rail cars, is determining if the implicit benefit of equipment acquisition outweighs the explicit cost. In the above example, leasing the fleet of seven covered hopper cars would be an economically viable alternative if the benefit of procuring the rail cars outweighed the 0.9¢ per bushel cost. If the elevator managers could break even through high utilization, there would be no explicit cost.

The Utilization Problem

A problem that plagues grain shippers who lease hopper cars is the inherent volatility of grain movements. Grain movements are typically highest during and immediately following harvest and lowest during the winter and spring months. These irregularities in the movement of grain adversely affect equipment utilization.

Compounding the equipment utilization problem is the ongoing rail car surplus. While shippers suffered through several periods of car shortages throughout the 1970s, rail cars are presently in excess supply.

Railroads are currently more than able to fulfill shippers' requests for hopper cars and elevator managers have been hard-pressed to realize sufficient utilization of their leased equipment. This has resulted in many managers who intend not to renew lease agreements when their present leases expire.

On the other hand, elevator managers who intend to renew lease agreements in the near future may find it difficult to do so. The rail car surplus is also affecting the utilization the railroads are getting out of their equipment. As a result, many existing OT-5 agreements may not be renewed until grain movements pick up.

In either case, the use of leased rail equipment by grain shippers in North Dakota may have seen its peak--at least in the short-term. In the long-term, it is not economical for railroads to maintain a grain car fleet at overcapacity. Railroads are currently limiting orders of new cars. This, coupled with an unexpected movement in grain prices may once again cause rail equipment to be in short supply. If this does indeed happen, renewed interest in rail car leasing by grain shippers may again be the case.