



FREIGHT POLICY TRANSPORTATION INSITUTE



Rail to Rail Competition and its
Importance to Agriculture

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FPTI Research Report Number 8

By

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FPTI Research Reports: Background and Purpose

This is the eighth of a series of reports prepared by the Freight Policy Transportation Institute (FPTI). The reports prepared as part of this Institute provide information to help advance knowledge and analytics in the area of transportation policy.

FPTI is funded by the United States Department of Transportation (USDOT). Dr. Ken Casavant of Washington State University is Director of the Institute. A Technical Advisory Committee (TAC) comprised of Federal, State and local representatives has been assembled in order to identify relevant and pressing issues for analysis, apply rigorous theoretical and analytical techniques and evaluate results and reports. The TAC includes Jerry Lenzi (WSDOT) as Chair, Ed Strocko (USDOT), Randolph Resor (WSDOT), Bruce Blanton (USDA), Timothy Lynch (American Trucking Association), Rand Rogers (MARAD), John Gray (AAR) and Daniel Mathis (FHWA – Washington State). The following are key goals and objectives for the Freight Policy Transportation Institute:

- Improve understanding of the importance of efficient and effective freight transportation to both the regional and national economy
- Address the need for improved intermodal freight transportation, as well as policies and actions that can be implemented to lower operating costs, increase safety and lower environmental impacts of freight transportation nationwide
- Improve freight transportation performance to specific industries and sectors of the economy

For additional information about the Freight Policy Transportation Institute or this report, please contact Ken Casavant at the following address:

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FPTI PREVIOUS REPORTS NOW AVAILABLE

1. Simmons, Sara and Ken Casavant. FPTI Research Report #1. "Historical Waterborne Commerce on the Columbia-Snake River System: Commodity Movements Up and Down River, 1991-2010." November 2010.
2. Simmons, Sara and Ken Casavant. FPTI Research Report #2. "Industry Preparations for the Columbia-Snake River Extended Lock Outage, July – December 2010." February 2011.
3. Khachatryan, Hayk, Jeff Poirer, and Ken Casavant. FPTI Research Report #3. "Determinants of Consumer Choice for Biofuels." March 2011.
4. Khachatryan, Hayk, Ken Casavant, Eric Jessup, Jie Chen, Shulin Chen, and Craig Frear. FPTI Research Report #4. "Biomass Inventory Technology and Economics Assessment." March 2011.
5. Khachatryan, Hayk and Ken Casavant. FPTI Research Report #5. "Spatial and Temporal Differences in Price-Elasticity of Demand for Biofuels." March 2011.
6. Casavant, Ken. FPTI Research Report #6. "The Critical Status of Agricultural Transportation in the Pacific Northwest." March 2011.
7. Casavant, Ken. FPTI Research Report #7. "Issues Affecting Barge Transportation in the Pacific Northwest." March 2011.

Rail to Rail Competition and its Importance to Agriculture

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This series of articles in Wheat Life abstracts from the recent USDA report on agricultural transportation in the United States, done with the assistance of Washington State University's Transportation Group (TRG) in the School of Economic Sciences, who were asked to partner in conducting that national study. This article looks specifically at the findings of that study that emphasize the role of rail to rail competition. The link for the overall study is www.ams.usda.gov/RuralTransportationStudy.

The Need Exists For Efficient Transportation

An affordable and reliable transportation network is necessary to maintain the strength and competitiveness of American agriculture and rural communities. Agricultural commodities are often produced in large quantities at locations distant from domestic and international markets, making rail a natural and preferred choice of transportation. Truck transportation is not cost-effective for many agricultural shippers who are often located long distances from markets. Barge transportation is not an option for most. Nine of the 10 top wheat-producing states are more than 150 miles from barge transportation on the Mississippi River, which usually provides the strongest intermodal competition to railroads for the long-distance movement of grain to export ports. Here in the Pacific Northwest, shippers are closer in some areas, but further away in others from the Columbia-Snake River System.

Nationally, rail is the only cost-effective transportation mode broadly available for many agricultural producers. Railroads transport nearly all of the grains and oilseeds produced in Montana, more than 70 percent of that produced in North Dakota and more than 50 percent of that produced in Arizona, Oklahoma and South Dakota. In Washington they carry about 40 percent overall, ranging fully from 0 percent to 100 percent in the different areas.

Reliance on Competition Rather than Regulation

Railroads were the first transportation industry regulated by the U.S. government because they possessed and exercised market power deemed contrary to the public good. Eventually, railroad economic regulation became so pervasive and limiting that the railroad industry nearly became bankrupt. The ensuing deregulation encouraged greater reliance on free markets to promote railroad profit-

ability and public benefits, but relied on competition to protect shippers and the general public. The loss of rail-to-rail competition due to railroad mergers and the associated increase in market power, was not foreseen by many when the Staggers Act was passed. However, the abandonment of rail lines was a predictable outcome of railroad deregulation. Railroads under regulation were burdened by significant excess capacity. Deregulation permitted mergers and line abandonments, which eliminated overcapacity as a problem for railroads, and also greatly increased railroad market power and profitability.

The Results of Loss of Rail-to-Rail Competition (The Evidence)

The preservation and protection of competition is vital for the economic prosperity of agricultural producers and shippers contending with a deregulated railroad industry. However, in deregulating the rail industry Congress recognized that intermodal competition had the potential to be as effective as rail-to-rail competition in restraining the exercise of market power. In fact, rail rates fell substantially following deregulation, but not all rates fell for all shippers. In recent years, rail rates have increased as costs have risen.

The loss of rail-to-rail competition also increases the opportunities for collusive behavior. Empirical evidence in Canada indicates that competition between two rail firms in Canada has been inadequate in many markets, despite mandated reciprocal switching and a requirement to provide competitive line rates. It is much more difficult to collude—either tacitly or overtly—when three railroad firms or more serve a market.

Railroads have had some exemptions from antitrust laws since 1914. Shippers believe that antitrust exemptions, which were granted during a time when railroads were regulated, should have been removed when the railroads were deregulated. Railroads, which must function as an interconnected network, argue that limited anti-trust immunity helps them to provide better service to shippers. Congress is currently considering legislation in this arena.

Railroad concentration for grains and oilseeds has increased substantially since 1980 due to railroad consolidation. Market concentration is even greater for some individual commodities, such as wheat. Analysis in our study shows the level of rail-to-rail competition for grains and oilseeds decreased significantly between 1985 and 2007.

The number of competing lines declined in many areas and only increased in a few, and the areas served by only one railroad increased significantly. As competition fell, rail rates rose. The ratio of revenue to variable costs increased in 83 percent of the measured areas but declined in only 17 percent.

Due to data limitations and time constraints, USDA and WSU's Transportation Research Group were unable to do the types of analyses required to draw conclusive results on the relationship between rail-to-rail competition and revenue to variable cost (R/VC) ratios, or to fully examine shipper concerns about the use of railroad market power. More exhaustive analyses are required. For example, the R/VC ratios presented in this study are an average of the R/VC ratios for movements by tariff rates only. It is possible that some contract rail rates, which were not available for this analysis, equal or exceed the tariff rates in particular CRDs. Also, an analysis of the range of the R/VC ratios for particular CRDs may give more conclusive information. Plans are to statistically test the use of railroad market power by CRD and pursue more detailed and exhaustive rail revenue analyses in the future.

Many grain- and oilseed-producing regions distant from barge-loading facilities were found to have changed to rail monopolies after deregulation. Many areas with less rail-to-rail competition are in regions important in the production of grain and oilseeds and are distant from barge-loading facilities.

Since the early 1990's, portions of west central Missouri, western Tennessee, north central Indiana, parts of Ohio, and a portion of Texas have lost the equivalent of 4.25 to 2.58 competing railroads. Parts of Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Missouri, Nebraska, Ohio, Oklahoma and Texas have lost the equivalent of 1.41 to 2.58 competing railroads. All were among the top 20 grain- and oilseed-producing states in 2007. Here in the Pacific Northwest shippers are dependent on two major railroad firms, aided by a few short line railroads.

In 1988, Montana and North Dakota shippers paid the highest nominal (not adjusted for inflation) tariff rail rates in the nation to move grain and oilseeds. By 2007, however, Nebraska, South Dakota, North Dakota and Iowa all paid more to ship grain than Montana.

Nominal tariff rates per ton-mile show that states lacking rail-to-rail competition do not necessarily pay higher rates than states with more transportation competition. This may be due to individual railroads being more sensitive to shippers' needs or their association's active participation in regulatory or negotiated settlements. It also could be due to greater engagement by governments at the state level. In addition, data analyzed at the state level can mask relation-

ships that may be more apparent in analyses done at the CRD level.

Although rail shipments of grains and oilseeds have increased at an average rate of 1.1 percent over the last fifteen years, truck shipments have increased by 4.4 percent. In other words, rail's market share has decreased. Farmers have other shipping options, and they appear to be taking advantage of them. The lack of competition between and among railroads may be driving shippers to this expensive and inefficient solution. ■

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