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David McDaniel Keller
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December 8, 2021

William Brennan
Office of Economics
Surface Transportation Board
395 E Street SW
Washington, DC 20423

Re: Request for Unmasked Carload Waybill Sample

Dear Dr. Brennan,

An outstanding question in railroad economics is whether vertical mergers lead to vertical foreclosure and increased rates to shippers. I plan to conduct a research study using the CWS that addresses the impact of vertical mergers in the railroad industry with careful attention to the circumstances under which vertical foreclosure might arise. This research is relevant to the appropriate regulation of railroad mergers by the Surface Transportation Board ("STB") as well as the current review of the *Vertical Merger Guidelines* by the U.S. Department of Justice.¹ On behalf of my research team and myself, I request access to the unmasked carload waybill sample ("CWS") covering the years 1984 to present to undertake this work.

The research project described below is not being supported by or performed on behalf of any sponsor or client. Our intention is to publish the results in a scholarly journal.

Key Researchers' Qualifications

I am the David McDaniel Keller Professor of Economics at the University of Chicago Booth School of Business. I am also a Senior Managing Director of Compass Lexecon. I received my M.S. in Operations Research and Ph.D. in Economics from the Massachusetts Institute of Technology. I am author of *Modern Industrial Organization*, a leading economics textbook. I am the co-editor of the *Journal of Law and Economic* and was the 2014 Distinguished Fellow of the Industrial Organization Society. I have published over 130 articles in journals and books on a wide variety of topics. In addition to my academic experience, I served as Deputy Assistant Attorney General for Economic Analysis in the Antitrust Division of the U.S. Department of Justice where I supervised approximately 50 Ph.D. Economists and helped formulate antitrust policy. A copy of my academic curriculum vitae is attached. My curriculum vitae including testimony is available at compasslexecon.com.

Steven Peterson is an Executive Vice President at Compass Lexecon. Dr. Peterson earned his Ph.D. in Economics at Harvard University, where he specialized in economic theory and industrial organization. His practice focuses on competition matters and mergers. He has

¹ See, e.g., <https://www.ftc.gov/news-events/press-releases/2021/09/federal-trade-commission-withdraws-vertical-merger-guidelines>.

worked extensively in the transportation industry including railroads, airlines, and trucking. A copy of Dr. Peterson's and the other key researchers' CVs are attached.

Daniel O'Brien is a Senior Consultant at Compass Lexecon. He received his Ph.D. in Economics from Northwestern University. Dr. O'Brien has taught Economics at Northwestern University, University of Michigan, Georgetown Law School, and U.C. Berkeley. He is widely published in the *American Economic Review*, *Journal of Economic Theory*, *Rand Journal of Economics*, among other leading journals. Prior to joining Compass Lexecon, Dr. O'Brien was the Deputy Director of the Federal Trade Commission's Bureau of Economics and Chief of the Economic Regulatory Section at the Department of Justice's Antitrust Division.

Georgi Giozov is a Senior Vice President at Compass Lexecon. Mr. Giozov received his master's degree in Applied Economics from Johns Hopkins University. He is an expert in complex empirical analyses and specializes in applied econometrics and demand modeling.

In addition, the key researchers will be assisted by staff at Compass Lexecon. We will seek clearance for research staff to work with the CWS once access is granted.

Research Question

The economic view of the potential for vertical mergers to increase rail rates has evolved over the last 40 years. The standard neoclassical view is that a railroad with a monopoly segment that interlines with one of two competing railroads to complete a movement would ensure the total rate is equal to the monopoly rate. This outcome eliminates the risk that a vertical merger of the monopoly railroad with one of the competitive downstream railroads would lead to rate increases because the rate is already at the monopoly level. Advances in the modeling of the contracting between vertically related firms with asymmetric information have challenged this view. Game-theoretic models of contracting between a monopolist and downstream competitive firms indicate that, in some circumstances, the monopolist may not be able to commit to charging the monopoly rate when negotiating simultaneously with competing downstream railroads – that is, competition on part of the route can lead to a below-monopoly rate on the entire movement.² A vertical merger of the monopolist railroad with one of the competitive downstream railroads may eliminate the monopolist's commitment problem through the foreclosure of the unmerged railroad on the competitive segment, thereby increasing rail rates to shippers.

The resolution of the question of whether there are anticompetitive effects from vertical mergers in the railroad industry is ultimately an empirical question. As described below, my team and I intend to use the CWS to test whether a monopolist's simultaneous negotiations with competitive downstream railroads reduces its ability to exercise market power and create circumstances in which vertical mergers lead to foreclosure and increased rates in the railroad industry. The required information on rates, origin, destination, whether a shipment is interline, and so forth that are needed to analyze the impact of vertical railroad mergers is found only in the unmasked CWS. Moreover, real-world evidence from an industry in which mergers frequently have a vertical element will permit detailed analysis of economic theories of vertical foreclosure and the circumstances in which such effects may or may not be of concern.

² See, e.g., Hart, Oliver and Jean Tirole. "Vertical integration and market foreclosure." *Brookings papers on economic activity. Microeconomics* 1990 (1990): 205-286.

Research Plan

The detail included in the unmasked CWS permits multiple approaches to evaluating the effects of vertical mergers. The primary questions are whether a railroad with a monopoly segment faces a commitment problem that limits its ability to exercise its market power when negotiating with two downstream railroads to complete an interline movement and whether vertical merger resolves the commitment problem, raising shippers' rates. The CWS provides intertemporal information on how rates changed following mergers that extended railroads' networks. The observed changes in rates on routes experiencing vertical integration allow a direct measurement of whether vertical mergers led to foreclosure and increased rates.

The bargaining externalities that may restrain a monopoly railroad from charging the monopoly rate when negotiating simultaneously with downstream competitive railroads are highly dependent on the characteristics of the railroads' negotiations. For example, the standard vertical foreclosure model predicts no effects of a vertical merger when a monopolist directly faces customers and contracts with upstream competing railroads. Anticompetitive effects may result, however, when the monopolist contracts with downstream railroads that face customers and potentially generate commitment problems for the monopolist. Thus, the models in which vertical mergers threaten foreclosure and increased prices have specific predictions with respect to the direction of the move that can be tested using the CWS.

To sum up, the CWS will enable us to test whether the predictions of the theory of vertical foreclosure are borne out in the railroad industry, which will provide valuable insight into the circumstances where vertical foreclosure may or may not threaten competition in the railroad and other industries.

Results and Confidentiality

We will comply with the confidentiality provisions described in 49 CFR § 1244.9. My research team at Compass Lexecon has extensive experience with confidential data, including confidential railroad data, and possesses the necessary tools to securely store and process the CWS data. Steven Petersen will head my research team and the data will be stored and analyzed at Compass Lexecon. The planned research will measure pooled effects across railroads. Therefore, we do not anticipate reporting prices or price changes for any railroad or any small group of freight stations or railroads. We will provide all research to the Office of Economics for compliance review prior to any release or publication of results.

CWS Request

We request the complete unmasked CWS from 1984 to present to allow us to undertake the analysis of vertical mergers in the railroad industry. The CWS will be used solely for academic research. The names of the researchers who will need access to the CWS are below.

Best regards,



Dennis Carlton