

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

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Subject: Request for Academic Use of Unmasked Waybill Sample Data

Dear Dr. Brennan:

I am writing to request the Confidential Carload Waybill Sample for the purpose of academic research on the railroad industry. I would like to study the role of contracts in the rail freight transportation market using the CWS data. The goal of this project is to produce a research paper that would further our understanding of (I) how contracts affect market supply and demand and (II) the impact of alternative nonexempt rates and/or service quality regulations.

Research context:

The legalization and increasing adoption of rail freight contracts substantially changed the way shippers and carriers interact. The standard common carrier tariff system has been replaced with a combination of publicly available tariffs and privately negotiated contracts. Because railroads often have market power, bargaining may help reduce unreasonable rates. Moreover, contracts allow carriers to provide differential services to cater to the need of different shippers. It was believed that the new system would bring flexibility to pricing and service quality that would eventually benefit both railroads and shippers.

An individual shipper is likely to enjoy the lower rate and better service quality provided by a negotiated contract, but the equilibrium effect of contracting on market outcomes might not always be positive. For instance, the economic theory of price discrimination and bargaining suggests that common carrier shippers left out of negotiation may be adversely affected, as they might face higher prices and receive less transportation capacity or lower priority. Although differences between tariffs and contracts have been mentioned in several previous studies, few have quantified the overall effects of contract adoption on the rail freight industry.

Research objectives:

In this academic research project, my main question is the following: *in a rail freight market with carrier market power, what are the equilibrium effects of contract usage on the price and service quality for different shippers?*

In the first step to answer this question, I would like to conduct the following specific analyses:

- *Examine the relationship between tariff and contract rates for shippers in the same market.* When a tariff rate is publicly available, it may be used as a benchmark in shippers' negotiations with the carrier and hence influence the negotiated rate. At the same time, a carrier may adjust the tariff rate strategically in anticipation of the response from contract negotiations. Therefore, the two different pricing mechanisms may influence each other and jointly determine the overall transportation price faced by shippers. I would like to use regression analysis to document these effects.
- *Evaluate the effect of increasing adoption of contracts on the national rail freight transportation market.* Although each contract only concerns the individual shipper and carrier, the adoption of contracts may have an impact on all market participants. If more contract usage raises tariff rates, then not only tariff shippers can be hurt, but also contract shippers too through the pricing relationship discussed above. As the shares of contracted shipments have increased since the Staggers Act, it is important to know whether and how much contract prevalence can lower freight rates.
- *Predict the effect of alternative rate regulations.* In December 2022, the Board adopted a new procedure for small rate disputes, known as Final Offer Rate Review (FORR), which aims to facilitate tariff rate challenge process. Although contract rates are not directly under the Board's oversight, they might be indirectly affected by the changes in corresponding tariff rates. Therefore, any tariff regulation should not be considered in isolation, but with the spillover effect on contract rate accounted as well. Through a model of rail transportation supply and demand, I can estimate the counterfactual effect of alternative rate control on both tariff and contract shipment rates.
- *Understand the key service quality attributes of contracts.* Contracts may entail lower prices, but also more reliable transportation services for shippers and more efficient capacity management for carriers. I would examine whether there is quality improvement using the CWS data. One quality measure is whether contracted services receive regular shipments in periods of capacity shortage.

Overall, this analysis will inform how the interplay between contracts and posted tariff rates affects all market participants in equilibrium, and it can inform how alternate regulation will affect participants.

Details of Data Request:

I would like to request the complete unmasked confidential CWS from 1984 to 2021 to fulfill the research objectives. CWS provides by far the best source of information for the rail freight transportation industry. The Public Use version allows one to conduct some preliminary analysis, but only the unmasked confidential sample contains details about contract shipments and their unmasked revenue, which are crucial to this research.

Since different commodities and geographic areas use contracts in different ways, I want to consider all relevant markets to get a comprehensive picture. Also, because contract adoption has increased over time since the Staggers Act, it is necessary to examine not only recent trends but also historical data to understand what has happened in the market. Therefore, access to the full CWS data from 1984 to the present is important.

Confidentiality and Data Management

I understand the confidentiality restrictions described in 49 CFR 1244.9 and will adhere to all the requirements. My research will not identify any specific shipper or railroad, but only study the overall effect of contracting on railroad markets. I understand that my research product is subject to the Board's review and will make sure that strictly no individual information will be released.

The data will be used only for academic research purposes discussed above, and only by myself. As a researcher at Northwestern University, I have access to the University's Research Data Storage Service for secured storage and handling of restricted data.

Thank you for your consideration. Should you have any questions, please contact me any time.

Sincerely,

A handwritten signature in black ink, appearing to read "Jin Yang". The signature is fluid and cursive, with the first name "Jin" and last name "Yang" clearly distinguishable.

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