

Decision ID No. 51761

Surface Transportation Board
Washington, D.C. 20423-0001

Office of Economics

June 8, 2023

Jin Yang
Economics PhD Candidate
Department of Economics
Northwestern University
2211 Campus Dr.
Evanston, IL 60208

Re: Waybill Request WB23-30

Dear Mr. Yang:

The Surface Transportation Board (STB) has received your request under 49 C.F.R. § 1244.9(c) of May 11, 2023 for permission to access the unmasked 1984-2021 confidential Carload Waybill Sample (CCWS). Your request explained that the requested data would be used for academic research purposes. The objectives of your research are to study the role of contracts in the rail freight transportation market using the CCWS. Ultimately, the goal of your project is to produce a research paper that would further out understanding of how contracts affect market supply and demand and the impact of alternative nonexempt rate and/or service quality regulations. Your request explained that the CCWS is required to fulfill your research objectives and that the revenue data from the CCWS is needed to conduct your analysis and cannot be obtained anywhere else. Notice of your request was published in the Federal Register on May 18, 2023, and no objections were received.

Based on the complete and sufficiently detailed explanations and justifications contained in your request, you will be authorized to access the requested data. Specifically, you will have access to the 1984-2021 unmasked waybills. Although, it is the Board's practice to generally limit disclosure to masked revenue data, unmasked revenues are being released because your request explains with particularity how revenue data will be used and the need to conduct your academic research with actual revenue data. This data may only be used for the academic purpose detailed in your request and may not be used for any other purpose such as private, commercial consulting. ***This approval becomes effective when signed agreements from the individuals listed below are received by the STB:***

a) *Jin Yang – Northwestern University*

The expiration date for this agreement is June 30, 2024. Unless you seek and obtain a renewal from the STB, this agreement upon expiration obligates you to return or destroy all copies of the data (see item 6 of the agreement). Any request for renewal will need to provide a detailed explanation for why continued access to the data is necessary and demonstrate that you are continuing to actively use the data for the originally requested purpose.

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Several aspects of the CCWS limit the conclusions that may be drawn from analysis of the CCWS: 1) the CCWS is a sample, and 2) the CCWS is based on terminating shipments from relatively large carriers. Only those railroads with more than 4,500 annual terminating carloads are included in the sample. The limited sampling of small railroads may have a substantial effect on studies covering areas served predominately by non-sampled railroads. For additional information on the CCWS, see *Reference Guide* @ <https://www.stb.gov/reports-data/waybill/> on the Board's website.

The rules for release of waybill data are codified at 49 C.F.R. § 1244.9. The CCWS contains confidential shipper and railroad data. As a result, the CCWS is commercially sensitive and has the potential to cause competitive harm to shippers and railroads if disclosed. Therefore, the following agreement must be signed, and a copy of the signature pages returned to the STB, before any waybill data can be used.

Your signature acknowledges your agreement to comply with the following:

1. You will use the CCWS data released to you solely for the purpose requested.
2. Absent permission from the STB, you shall make the information contained in the CCWS (including work product and analyses derived from the CCWS) available only to the individuals identified above. The STB may approve access for additional individuals within your entity working on the particular project or study requiring the waybill data. Each such additional individual must review and sign this agreement, and return a copy of the signature page to the STB.
3. You will not release any CCWS data (including work product and analyses derived from the CCWS) to anyone who has not signed this agreement and been approved for access by the STB until the STB has had the opportunity to review the materials proposed for disclosure to ensure confidentiality.
4. You acknowledge that, in addition to the restrictions described in paragraphs 1 and 2 above, you are bound by the STB's rules governing use and disclosure of CCWS data. These include the confidentiality provisions of 49 C.F.R. §§ 1244.9(f)(1)-(3), which require that "[a]ny shipper data obtained from the Waybill Sample shall not be publicly released unless the data are aggregated to include at least three shippers." In addition, you agree not to disclose CCWS data that permits identification of an individual railroad.
5. You will refer any requests for CCWS data in your possession (including work product and analyses derived from the CCWS) to the STB for processing and will inform the requesting party of such referral to the STB. If you are compelled by law or order of a governmental or judicial body to release CCWS data, you shall notify the Board in writing within three days of any determination that CCWS

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data must be released, and in no event later than five days before the CCWS data is scheduled to be released.

6. In order to retain access to the CCWS beyond the expiration date specified above, you must submit a written request for an annual extension of the agreement no later than thirty days prior to the expiration date and the renewal request must be approved by the Office of Economics. **If an annual agreement is not signed and approved, you must certify by no later than the expiration date that all CCWS data (including all work product and analyses derived from the CCWS) obtained under this agreement has been destroyed or returned to the STB.**
7. Failure to request an extension (if necessary), or destroy or return CCWS data when required, may prevent any future release of CCWS data to you. Violations of this agreement may subject you to sanctions by the Board.

After all parties have signed and returned this agreement, please contact Mr. Dusenberry (202) 245-0319 to make the necessary arrangements to have a copy of the data sent to you. The STB will provide the data by email through file transfer protocol. Prior payment of processing and mailing cost of **\$60 (\$60 per confidentiality agreement)** is required. Payment can be made through the Board's electronic payment system, Pay.gov. Your payment through Pay.gov will generate a unique Pay.gov transaction number, which you will need to provide with your signed agreement. Pay.gov accepts payment through bank accounts, credit cards, debit cards with a MasterCard or Visa logo, and digital wallet.

Sincerely,

William Brennan

William Brennan, PhD
Chief Economist & Director,
Office of Economics

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I have read and understand the conditions for release of the CCWS data. I agree to comply fully with these conditions and the provisions of this confidentiality agreement. No later than thirty days before the agreement expires, I will request an extension of this agreement, if necessary. If no extension is requested, I will return or destroy all CCWS data and certify that I have done so. I have the authority to sign this agreement.

By: Jin Yang

Signature 

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

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?*

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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.

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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.

Jin Yang
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