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Public Interest Comment[1] on

Solicitation of Information
Association of American Railroads – Petition for Rulemaking, Docket No. EP 752

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The George Washington University Regulatory Studies Center improves regulatory policy through research, education, and outreach. As part of its mission, the Center conducts careful and independent analyses to assess rulemaking proposals from the perspective of the public interest. This comment on the Surface Transportation Board's (STB's) solicitation of information on the Association of American Railroads' petition for a rulemaking on benefit-cost analysis does not represent the views of any particular affected party or special interest, but is designed to assist the board in developing analytical methods to identify the primary impacts of proposed rules and feasible alternatives.

Introduction

On July 8, 2019, the STB decided to delay consideration of a petition asking the board to adopt a procedural rule that would require benefit-cost analysis in certain board rulemakings.[3] On November 4, 2019, the STB solicited further information from the public about specific methods that could be used for benefit-cost analysis of rules related to economic regulation of freight

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[3] Surface Transportation Board, "Association of American Railroads—Petition for Rulemaking: Decision," Docket No. EP 752 (July 8, 2019) at 2.

railroads.[4] The STB is prudent to explore methods for improving its economic analysis of regulatory proposals—as several other independent agencies have done in recent years.[5]

The board asked commenters to address a hypothetical rule that would reduce the revenue/variable cost (R/VC) percentage threshold used to infer that a railroad is not market dominant from 180 percent to 165 percent.[6] At the time the board released its SOI, I had already drafted a comment outlining how the analytical framework in Office of Management and Budget (OMB) Circular A-4,[7] OMB's regulatory impact analysis guidance, could be applied in the Market Dominance Streamlined Approach and Final Offer Rate Review proceedings, and I submitted that comment both in those proceedings and in response to the SOI.[8] This comment briefly explains how the principles and concepts outlined in my earlier comment could be applied to the hypothetical regulation on which the STB requested comment.

Regulatory impact analysis should start with an evidence-based analysis of the problem the regulation seeks to solve. Unfortunately, the SOI does not even postulate a particular problem. I know of no economic literature that demonstrates that setting the R/VC threshold at 180 percent of variable cost creates any kind of systematic problem that can be solved by reducing the threshold to 165 percent. The use of R/VC ratios based on the Uniform Rail Costing System (URCS) to infer whether a railroad is market dominant has been roundly criticized by economists, but the solution to this problem is to stop using R/VC ratios and employ different criteria. Consequently, a sound RIA for this hypothetical rulemaking should include rate benchmarking as an alternative to using R/VC ratios as a screen to determine which rates the STB should examine more closely.

A reduction in the R/VC threshold from 180 to 165 percent could create transfers from railroads to shippers, and I suggest how the STB could generate an upper bound estimate of the size of the transfers. Any such estimate will be subject to two significant uncertainties that should be accounted for in the analysis: (1) It is uncertain what percentage of rate cases railroads will win,

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[4]   Surface Transportation Board, "Association of American Railroads – Petition for a Rulemaking: Solicitation of Information," Docket No. EP 752 (November 4, 2019) at 2. (Hereinafter "SOI.")

[5]   See, e.g., Federal Deposit Insurance Corporation, "Request for Information on a Framework for Analyzing the Effects of FDIC Regulatory Actions," 84 FED. REG. 65,808 (2019); Securities and Exchange Commission, Division of Risk, Strategy, and Financial Innovation/Office of General Counsel, *Memorandum: Current Guidance on Economic Analysis in SEC Rulemakings* (March 16, 2012); Federal Communications Commission, "In re Establishment of the Office of Economics and Analytics," 83 FED. REG. 63,073 (Dec. 7, 2018).

[6]   SOI at 2.

[7]   U.S. Office of Mgmt. & Budget, CIRCULAR A-4, REGULATORY ANALYSIS (2003), *available at* https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/. (Hereinafter "Circular A-4.")

[8]   Jerry Ellig, "Public Interest Comment on the Surface Transportation Board's Proposed Rules: Market Dominance Streamlined Approach, Docket No. EP-756, Final Offer Rate Review Docket Nos. EP 755 and EP 665 (Sub-No. 2), and Solicitation of Information: Association of American Railroads – Petition for Rulemaking, Docket No. EP 752," November 6, 2019, https://regulatorystudies.columbian.gwu.edu/stbs-market-dominance-and-final-offer-rate-review.

and (2) it is uncertain whether reducing the R/VC threshold alone will generate significantly more rate cases or give shippers significantly more leverage in their negotiations with railroads.

The social benefits of any rate reductions captive shippers receive are likely to be small, because captive shippers by definition have no good transportation alternatives and hence have a low elasticity of demand for rail service. Significant social costs would arise only if the transfers from railroads to shippers are large enough to affect railroad investment in ways that reduce the quantity, quality, or safety of rail service.

The AAR Petition and the Regulatory Impact Analysis Framework

The framework for benefit-cost analysis most commonly employed by federal agencies is based on the analytical principles and requirements articulated in President Clinton's Executive Order 12866[9] (which has been reaffirmed by every president since) and OMB Circular A-4.[10] The most common and accurate term for this type of analysis is "regulatory impact analysis"[11] (RIA), because a full RIA involves more than just estimation of benefits and costs. It is clear from language in the text of the AAR petition that AAR is calling for regulatory impact analysis, not just benefit-cost analysis.[12]

The basic RIA framework consists of four main elements:

(1) Assess the nature and significance of the problem the agency is trying to solve, so the agency knows whether there is a problem that could be solved through regulation and, if so, whether the agency can tailor a solution that will effectively solve the problem;[13]

(2) Identify a wide variety of alternative solutions;[14]

(3) Define and estimate the benefits of each alternative;[15]

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[9] Exec. Order No. 12866, 58 Fed. Reg. 51,735 (Oct. 4, 1993).

[10] Circular A-4.

[11] This term of art appears nowhere in Executive Order 12866. It originated in President Reagan's Exec. Order 12291, 46 Fed. Reg. 13,193 (Feb. 17, 1981), § 3. The name stuck.

[12] See Association of American Railroads, Ex Parte No. 752, "Petition for Rulemaking" (March 14, 2019) at 2 (mentioning regulatory impact analysis), 7 (citing OMB Circular A-4 on all the major elements of RIA), and 17 (noting examples of STB regulations that had poor problem analysis or failed to consider alternatives).

[13] Exec. Order No. 12866, §§ 1(b)(1) and 6(a)(3)(B)(i).

[14] *Id.* at § 6(a)(3)(C)(iii). *See also* Circular A-4 at 3-5.

[15] Exec. Order No. 12866, §§ 6(a)(3)(C)(i) & 6(a)(3)(C)(iii). *See also* Circular A-4 at 7–9.

(4) Define and estimate the costs of each alternative,[16] including cumulative costs of regulations.[17]

Problem Analysis

A thorough problem analysis should offer a coherent theory that identifies the cause of the problem the regulation seeks to address, along with evidence that the problem is real and significant. The SOI, however, names no particular problem that a reduction in the 180 percent R/VC threshold might address.

One could imagine a potential problem might exist if there is evidence that the 180 percent threshold creates consistent, systematic errors. This would occur if railroads actually do have market dominance over a large number of shipments that pay rates between 165 and 180 percent of variable cost. I am aware of no theory in the scholarly literature that offers a coherent explanation of why the 180 percent R/VC threshold would systematically lead to erroneous findings of no market dominance for shipments paying rates below 180 percent of variable cost. To make a credible case that the current R/VC threshold creates these errors, an RIA would need to include not just a coherent theory, but also empirical evidence showing that railroads have market dominance for a substantial number of shipments with R/VC ratios between 165 and 180 percent.

There are sound theoretical and empirical reasons to believe that the R/VC ratio is a poor guide to the existence of railroad market power over a shipment, but lowering the R/VC threshold would not solve this problem. The Uniform Rail Costing System (URCS) used to calculate variable costs has been widely criticized as arbitrary because it counts as variable many costs that are not attributable to the individual shipment.[18] As Wesley Wilson and Frank Wolak note,

> [A]rbitrary changes in cost allocation rules for non-causal cost components could significantly change what shipments are subject to further regulatory scrutiny. Moreover, depending on how much of these non-causal costs are eliminated from the URCS "variable costs," virtually any shipment could have a R/VC ratio that exceeds the 1.80 threshold.[19]

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[16] Exec. Order No. 12866, §§ 6(a)(3)(C)(ii) & 6(a)(3)(C)(iii). *See also* Circular A-4 at 18–42.

[17] Exec. Order No. 12866, § 1(b)(11); Exec. Order No. 13563, 76 Fed. Reg. 3,821 (Jan. 21, 2011), § 1(b)(2).

[18] Richard L. Schmalensee, Kenneth D. Boyer, Jerry Ellig, José A. Gómez-Ibáñez, Anne V. Goodchild, Wesley L. Wilson, and Frank A. Wolak, MODERNIZING FREIGHT RAIL REGULATION, Transportation Research Board Special Report No. 318 (2015), https://www.nap.edu/download/21759 [Hereinafter referred to as "Modernizing Freight Rail Regulation"]; Wesley W. Wilson and Frank A. Wolak, "Freight Rail Costing and Regulation: The Uniform Rail Costing System," 49 *Review of Industrial Organization* 229 (2016).

[19] Wilson and Wolak, Id. at 250.

The problem identified by these scholars is not that regulators are using the wrong R/VC threshold, but that using an R/VC threshold to infer market dominance (or absence thereof) is wrong. If arbitrary reallocations of joint and common costs could make almost any shipment have an R/VC ratio above 180 percent, then arbitrary reallocations of joint and common costs could also make almost any shipment have an R/VC ratio above 165 percent. Reducing the R/VC threshold would not fix the problem created by inherently arbitrary allocations of joint and common costs.

Alternatives

If the STB's analysis did determine that the current 180 percent R/VC threshold systematically misclassifies many shipments where a railroad is market dominant, the next step in the analysis would be to develop alternative solutions to this problem. The SOI suggests no alternatives to the proposed change in the threshold from 180 percent to 165 percent. If the analysis developed a coherent theory showing why the 180 percent R/VC threshold leads to systematic errors and evidence showing that the theory is true, this knowledge of cause and effect might make it possible to identify other alternative solutions to consider.

The arbitrariness of using any R/VC threshold is a genuine problem documented in the scholarly literature.[20] Rate benchmarking is a clear alternative way of identifying rates that might be the result of railroad market dominance and hence would be good candidates for further scrutiny. Benchmarking identifies rates that are unusually high given the characteristics of the shipment. Benchmarking has a much stronger basis in economic theory than examining R/VC ratios, and it avoids numerous well-documented problems that could lead to misclassification of shipments under the current URCS-based R/VC comparisons.[21] Therefore, an RIA that effectively implements the principles of Circular A-4 should analyze rate benchmarking as an alternative to altering the R/VC threshold.

Benefits

A sound RIA should carefully distinguish between social benefits and transfers between affected parties. Reducing the R/VC threshold from 180 to 165 percent could make more shipments eligible for rate relief. Any additional rate relief shippers would receive as a result of the regulatory change is a transfer from railroads to shippers, not a social benefit.

The primary social benefit of reducing the R/VC threshold would be the value of expanded output (increased shipments) that any resulting rate relief facilitates. But to qualify for rate relief, these

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[20] Modernizing Freight Rail Regulation at 107-22; Wilson and Wolak, *supra* note 18.
[21] Modernizing Freight Rail Regulation at 141-43 and Appendix B; Wesley W. Wilson and Frank A. Wolak, "Benchmark Regulation of Multiproduct Firms: An Application to the Rail Industry," National Bureau of Economic Research Working Paper No. 25268 (2018), https://www.nber.org/papers/w25268.

shippers would still have to demonstrate that the railroad has market dominance – i.e., that they are captive shippers. As a matter of economic theory, one would expect the increase in output to be small for captive shippers who receive rate relief. Captive shippers, by definition, have a low elasticity of demand for the railroad's transportation service, which means output would not be expected to increase much in response to a rate reduction.[22] In the absence of evidence to the contrary, both economic theory and prior empirical analysis suggest that the STB can presume the social benefits of rate reductions motivated by a reduction in the R/VC threshold will be small.

Costs

As is the case with benefits, the additional rate reductions railroads may have to grant shippers as a result of a reduction in the R/VC threshold are not social costs; they are transfers from railroads to shippers. The primary social costs associated with the proposed rate relief procedures consist of two elements: administrative costs, and any reductions in the quantity or quality of railroad output that occur due to the cumulative effect of rate reductions on railroad investment.

Administrative costs

If the R/VC threshold is reduced to 165 percent, administrative costs could possibly increase because more shipments would be eligible for a full market dominance determination and rate reasonableness inquiry. The RIA should assess whether this is likely to occur.

To determine the total administrative cost of the new procedures, the STB needs a credible estimate of the number of new cases likely to be filed if the threshold falls to 165 percent of R/VC. Other recent proceedings imply that the STB has some basis for estimating how caseloads might respond to changes in the regulatory process, but the assumptions underlying the estimates are not well-documented. The Paperwork Reduction Act section of the Final Offer NPRM states that the STB receives four rate complaints per year and that the final offer procedure will lead to the filing of four additional complaints per year.[23] The Paperwork Reduction Act section of the Market Dominance NPRM states that the STB receives four rate complaints per year and the simplified market dominance procedure would lead to the filing of five additional complaints per year,

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[22] Consistent with economic theory, empirical analysis has found that the elasticity of demand for the categories of commodities that account for most captive shipments is relatively low, and the total "deadweight loss" (value of forgone output) associated with rate differentials between captive and non-captive shippers is relatively small. See Curtis Grimm and Clifford Winston, "Competition in the Deregulated Railroad Industry: Sources, Effects, and Policy Issues," in Sam Peltzman and Clifford Winston (eds.), DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT? (AEI-Brookings Joint Center for Regulatory Studies, 2000) at 65.

[23] Surface Transportation Board, "Final Offer Rate Review: Notice of Proposed Rulemaking," Docket Nos. EP 755 and EP 665 (Sub-No. 2) (September 11, 2019), at 27.

including the four counted in the Final Offer NPRM.[24] No factual basis is given for the estimates of the number of new complaints. Estimates of burden hours and "non-burden costs" are given for both the existing and the new complaints, but no sources for the figures are provided. Thus, it is not clear what evidence these estimates are based on, whether the assumed number of new complaints is a reasonable quantitative estimate of the likely shipper response to the new procedures, or whether the burden hours and non-burden costs cover all of the administrative costs of a rate complaint. An RIA would need to overcome such shortcomings in order to produce a credible estimate of the number of additional rate cases the regulatory change is likely to generate.

Cumulative costs

The cumulative costs of a rate complaint procedure are the value of railroad output forgone if the new rate procedure affects railroad revenues sufficiently to reduce railroad investment.[25] To assess the cumulative costs of reducing the R/VC threshold, the key empirical question the STB must answer is whether the new threshold would affect railroad investment significantly enough to affect the quantity, quality, or safety of rail service.[26] The value of any reduction in quantity, quality, or safety would count as a social cost of a rate complaint procedure that reduced railroad investment.

Cumulative costs have the potential to be large if (1) reducing the R/VC threshold leads to a large number of small rate cases, (2) reducing the R/VC threshold increases the number of large rate cases, or (3) decisions in a few rate cases give shippers greater leverage to obtain concessions from railroads in contract negotiations, thus creating an effect on railroad revenues that is larger than the revenues at stake in the rate cases that are actually brought. For this reason, a thorough analysis would investigate the size of the likely effect of reducing the R/VC threshold on railroads' revenues, assess whether that revenue impact is likely to affect investment, and assess the effect of any substantial change in investment on the quantity, quality, and safety of rail service.

Transfers

Any estimate of potential transfers must recognize that lowering the R/VC threshold to 165 percent would not necessarily qualify a shipment paying a rate in that range for a rate reduction. To qualify for rate relief, shippers paying rates between 165 and 180 percent of variable cost would still have to demonstrate that the railroad has market dominance – i.e., that they are captive shippers – and that their rates are unreasonable. Both of these issues involve fact-intensive inquiry in individual

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[24] Surface Transportation Board, "Market Dominance Streamlined Approach: Notice of Proposed Rulemaking," Docket No. EP 756 (September 11, 2019) at 20.

[25] Ellig, *supra* note 8, at 13.

[26] A recent study finds that railroad investment is positively related both to revenue and returns. See George S. Ford, "Infrastructure Investment in the Railroad Industry: An Econometric Analysis," Phoenix Center Perspectives (December 9, 2019), https://phoenix-center.org/perspectives/Perspective19-07Final.pdf.

cases, and the STB cannot know how these cases would be resolved at the time it proposes a rule to change the R/VC threshold. The analysis should also recognize that the total transfers attributable to the proposed change in the threshold are not just the rate reductions that could occur as a result of rate cases, but rather the total reduction in rail rates that may occur because the reduced threshold gives shippers more leverage in negotiations with railroads. Despite these difficulties, the STB could estimate the maximum possible revenue at stake by taking the following steps:

(1) Use the unmasked carload waybill sample to identify the shipments that are being charged between 165 and 180 percent of variable cost.

(2) Remove from this sample any shipment that satisfies any indicia that would qualify it as competitive, such as being an exempt shipment; having access to rail, barge, pipeline, or truck competition; or satisfying some proxy indicia for product or geographic competition (if available). These are shipments for which market dominance would not likely be found in a rate case.

(3) For the remaining shipments, calculate the total revenue represented by the difference between the rate charged and a rate equal to 165 percent of variable cost. That difference is plausibly the maximum amount of revenue at stake if the R/VC threshold falls to 165 percent (since the railroad could avoid rate cases by reducing these rates to 165 percent of variable cost).

The revenue figure calculated under (3) above would be subject to two significant uncertainties, which should be included in the analysis to create a range of estimates. First, in some cases the STB may find that the railroad is market dominant but the rate is reasonable, and so the size of the estimated transfer should be reduced to reflect this possibility. The record of past rate cases could perhaps be employed to estimate the percentage of cases that railroads might be expected to win. Second, other STB proceedings have discussed the significant cost of bringing rate cases, and it is not clear whether simply reducing the R/VC threshold would by itself make those costs worthwhile from the shipper's perspective. Thus, it is not clear whether this change would in fact produce many rate reductions. This is an uncertainty that should certainly be noted in the analysis and, ideally, should be investigated further to develop a more realistic estimate of the possible transfer.

These uncertainties also illustrate the importance of including in the analysis the cumulative effects of multiple regulatory changes. For example, a reduction in the R/VC threshold could create very different sized transfers from railroads to shippers if the STB also adopted the proposed rules on streamlined market dominance procedures and final offer rate review.

Conclusion

The STB is prudent to seek further information on ways to improve its economic analysis of proposed regulations. An economic analysis of the hypothetical reduction in the R/VC threshold

should start not with calculations of benefits and costs, but with a clear definition and evidence-based assessment of the problem the proposed regulatory change is intended to solve. It is not clear to me that the hypothetical change does address a well-defined problem. Rather, the most significant systematic problem related to the use of R/VC ratios to assess railroad market power identified in economics literature is the inherent arbitrariness of joint and common cost allocations. Changing the R/VC threshold would not solve this problem. For this reason, a relevant economic analysis of this proposal should include an assessment of alternative screens to identify rates eligible for further scrutiny, such as rate benchmarking.

It should be possible for the STB to produce an upper-bound estimate of the revenue this proposal would transfer from railroads to shippers, using data from the carload waybill sample. The social benefits associated with these rate reductions are likely to be small, because captive shippers by definition have a low elasticity of demand for rail service. The social costs would be large only if the transfers from railroads to shippers are large enough to affect railroad investment in ways that reduce the quantity, quality, or safety of rail service.