

BEFORE THE
SURFACE TRANSPORTATION BOARD

STB Ex Parte No. 290 (Sub-No. 4)

RAILROAD COST RECOVERY PROCEDURES
– PRODUCTIVITY ADJUSTMENT

COMMENTS OF THE
ASSOCIATION OF AMERICAN RAILROADS

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Pursuant to the decision served by the Surface Transportation Board (“STB” or “Board”) in this proceeding on September 29, 2017 (“September 2017 decision”), the Association of American Railroads (“AAR”) respectfully submits these comments. The AAR and its member railroads have a strong interest in the proper measurement of costs and productivity in the railroad industry. As discussed below, the tentative value for the annual productivity change adopted in the September 2017 decision is reasonable and should be adopted as a final value.

Background

Consistent with a statutory mandate, the Board publishes a Rail Cost Adjustment Factor (“RCAF”) in two forms: a factor adjusted for productivity and one unadjusted.¹ To do so, the Board calculates an annual rate of productivity change by dividing an index of railroad outputs (“Output Index”) by an index of railroad costs and expenses (“Input Index”).² The Input Index compares the change in constant dollar-adjusted railroad freight expenses, fixed charges and

¹ See 49 U.S.C. § 10708.

² *Railroad Cost Recovery Procedures – Productivity Adjustment*, 5 I.C.C.2d 434, 437 (1989).

contingent interest from railroad Annual Reports (“R-1”). The Input Index is transparent and can be reproduced by stakeholders each year.

The Board develops the Output Index from the Confidential Waybill Sample (“CWS”). The CWS is a sample of railroad waybills that the Board uses for a variety of regulatory purposes. Because railroad waybills do not contain mileage or internal route information for shipments, the Board assigns mileages to shipments for its own regulatory purposes. The Board then applies the Uniform Railroad Costing System (“URCS”) to movements collected in the CWS, excluding certain movements that originate in Canada and Mexico or that lack sufficient information for the application of URCS unit costs, to develop a costed CWS each year.

To calculate the Output Index for the productivity adjustment, the Board assigns each movement in the costed CWS to one of 189 “segments.” The Board segments movements based on three mileage blocks, seven car types, three weight brackets, and three shipment sizes. That is, the Board sorts each movement in the costed CWS into one of 189 categories based on those variables. The output index is a composite of the year-to-year change in revenue ton-miles (“RTMs”) for each of the 189 segments weighted by each segment’s base-year share of total revenues. Because the costed CWS contains confidential information and the Board does not make public its break points for the categories, stakeholders cannot verify the Output Index.

In a corrected decision served on February 29, 2017 (“February 2017 decision”), the Board observed that revenue ton-mileage in the costed CWS declined in 2015 versus 2014. The Board attributed this decline to a change in the methodology used to assign route mileage for shipments in the CWS. The Board has historically used a contractor to process the CWS from the data collected from the railroads. However, the contract for the 2015 CWS eliminated the

sub-contractor, ALK Technologies Inc. (“ALK”), that had previously performed the miling phase of the contract through a proprietary process on behalf of the Board. For 2015, Railinc Corporation (“Railinc”) began performing the miling function for the first time. According to the February 2017 decision, the Board reviewed the 2015 CWS data and concluded that the mileage distances “appear to be generally shorter than the calculated mileages assigned in previous years.”³

The Board reasoned that, “[a]s a result of the change in approach, however, the aggregate number of revenue ton miles used as an input to the productivity adjustment will be smaller than would have been the case with the prior modeling approach.”⁴ To “avoid unfairly skewing the 2015 productivity adjustment,”⁵ the Board developed a mathematical linking factor to attempt to account for this general change in distances. To create the linking factor, the Board looked at moves that appeared in both the 2014 and 2015 samples that were local to one railroad and had the same origin station, destination station, railroad, and standard transportation commodity code. Those matches were then used to link the 2014 and the 2015 CWS records. Looking at the percentage change in average miles, weighted by net tons, the Board found a reduction that averaged 5.2% and applied a linking factor of 1.055 (1/1-0.052).

The Board used the resulting RTMs to calculate the Output Index, and the annual productivity change in 2015 was calculated to be 7.0%. Because the productivity adjustment is a 5-year rolling average, the result was a 2.0% increase in productivity. The Board adopted this value as a tentative value, held a technical conference, and sought public comment.

³ *Railroad Cost Recovery Procedures – Productivity Adjustment*, EP 290 (Sub-No. 4), slip op. at 2 (STB served Feb. 24, 2017).

⁴ *Id.*

⁵ *Id.*

On March 16, 2017, the Board suspended the deadline for comments pending further order to allow Railinc to review the 2015 Waybill Sample and better understand the apparent decline in mileage.⁶ As described in the September 2017 decision, the Board, the Federal Railroad Administration, and Railinc worked collaboratively to revise and implement the mileage methodology described in Railinc's 2015 Carload Waybill Sample Reference Guide, which is available on the Board's website.⁷

In the September 2017 decision, the Board compared the distances in the revised 2015 Waybill Sample to the distances reported in the 2014 Waybill Sample. In contrast to the comparison made in February, the mileages derived from the revised approach are, on average, longer than the calculated mileages assigned in prior years. Consistent with the February 2017 decision, the Board developed a linking factor to account for this general change in distances. As explained in the September 2017 decision and at an October 13, 2017 technical conference, the linking factor methodology proposal differed from that in the February 2017 decision. Rather than attempting to match movements between the 2014 and 2015 Waybill Samples, the Board used a simple linear regression to estimate the ton-mile figure that would have been produced for 2015 under the previously used miling methodology. The Board then compared this figure to the ton-miles reported in the revised 2015 Waybill Sample to develop a linking factor that adjusts for the change in methodology.⁸

⁶ *R.R. Cost Recovery Procedures—Productivity Adjustment*, EP 290 (Sub-No. 4) (STB served Mar. 16, 2017).

⁷ *R.R. Cost Recovery Procedures—Productivity Adjustment*, EP 290 (Sub-No. 4), slip op. at 3 & n.5 (STB served Sept. 29, 2017).

⁸ To produce the estimate of what the ton-miles likely would have been under the prior methodology, the Board calculated an ordinary least squares regression equation with aggregate ton-miles used in the Board's productivity calculation, which are based on the ton-miles reported in railroad R-1s, for each year from 1990-2014 as the independent variable and aggregate ton-miles reported in the Waybill Sample for the same years as the dependent variable. *Id.* at 3-4.

The Board estimated that the revised miling methodology results in ton-miles that, on average, are 4.4% higher in 2015 than 2014. Therefore, the Board applied a linking factor of 0.9579 ($1/(1+0.044)$) to the output index for 2015. With the linking factor adjustment, the Board calculated a decrease of 6.1% as the annual productivity change for the year 2015, which produces a 2.0% decrease in the five-year geometric average.

Comments

The Board was right to be concerned that the result reached in the February 2017 decision for the change in railroad productivity in 2015 was not reliable. The Board's original tentative calculation of a 7% annual productivity increase came at a time when other, publicly available proxies for railroad productivity decreased from 2014 to 2015. Traffic density as a measure of the utilization of infrastructure decreased: ton-miles per mile of road, ton-miles per mile of track, car-miles per mile of road, and car-miles per mile of track all decreased. Employee productivity was also down as measured by RTMs per employee and/or employee hour. Locomotives were less fuel-efficient based on RTMs per gallon of fuel consumed in freight service. Car-miles per locomotive and RTMs per locomotive were also lower. Assuming Unit Trains are more efficient than Way Trains or Through Trains, the percent of total car-miles for more efficient Unit Trains versus Way or Through Trains was also down for 2015.⁹ Thus, the revised decrease in productivity found in the September 2017 decision is much more consistent with other indicators of productivity than the increase found in the February 2017 decision.

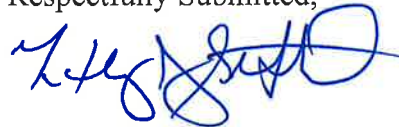
⁹ See *Railroad Ten-Year Trends 2005-2014 (with preliminary 2015 data)* for productivity indicators – pages 122, 128, 134, and 135. Page 117 shows business cycle contractions and railroad train-miles.

The disconnect between the calculated productivity change in the February 2017 decision and real world results can be directly traced to the Output Index. Though stakeholders cannot directly verify the Output Index because it relies on CWS data and an opaque segmentation process, the AAR reviews the Board's annual productivity adjustment decision each year and compares the change in total RTMs as reported to the STB by each Class I railroad in Annual Report Form R-1 to the STB's Output Index. The two values are usually correlated. But the values diverged and moved in opposite directions in the February 2017 decision for 2015. The revised value of the STB Output Index in the September 2017 decision of 0.913 is much more in line with a calculated R-1 value of 0.939.¹⁰

Conclusion

Based on the foregoing, the Board should adopt the tentative value published in the September 2017 decision as the final productivity adjustment in this proceeding.

Respectfully Submitted,



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¹⁰ The AAR calculated a change of 0.939 (or a 6.1 percent decrease) in revenue ton-miles by dividing 2015 revenue ton-miles, as reported by the seven Class I railroads in Annual Report Form R-1, by the 2014 number. The calculation is 1,738,283,304,000 divided by 1,851,228,975,000 = 0.939. Rounded versions of these numbers appear in the 2017 edition of the AAR's *Railroad Facts* book, on page 30.