

We are aware that throughout these proceedings we have sought the ideal of a business cycle, and we are still of the view that, in an ideal world, the initial productivity adjustment should reflect data from an entire business cycle so that, at the beginning, it would include productivity from both up and down years. But even if we had started out with a full business cycle's data, by the second year the index would begin to be skewed depending on whether it reflected an "up" or a "down" portion of the new cycle. And as each business cycle tends to be different from the prior cycle, there is no particular benefit to be derived from capturing a cycle just to determine how long the averaging period should be. So beyond its value in starting the process off on the right foot--a result that, in this case, could not possibly have been achieved without delaying the process by several years--we now conclude that identifying a business cycle is not necessary.

AAR itself recognizes (comments at 3, 8-9) "that there is no perfect solution to the 'business cycle' problem." AAR proposes, however, to continue to lengthen the averaging period as new data become available, and to "deflate" the results through an arbitrary 30-35% adjustment that is supposed to reflect the difference between productivity during the "up" and "down" periods of prior cycles. AAR's proposal to continue lengthening the period, however, plainly cuts against our objective of maintaining a timely index. We see no reason to continue lengthening the averaging period.

We also find that AAR has not justified the use of a productivity deflator. First, as we discussed earlier (*see n.5, supra*), the current cycle has been volatile, with up and down years scattered throughout, and with three of the first five years of the averaging period being (moderate) down rather than up years.¹⁸ There is no indication that AAR's deflator would bear any relationship to the current cycle that it purports to correct. "Correcting" the formula based on prior trends that may or may not be relevant to the current business cycle would not in our view enhance the accuracy of the RCAF.

Moreover, even if it turns out, as AAR believes it will, that the first years of the adjustment represented positive productivity experience overall,

¹⁸ True, 1987 represented a sharp upturn in productivity that skewed the index upward for a period of years. But 1987 data, which have not yet been fully reflected in the index, will fall out of the index once 1992 data are incorporated, and the index will then presumably decline, and perhaps offset the years when it was (allegedly) too high.

it appears that the economy is coming out of the cycle that began sometime during the early 1980's, and at a minimum we know that 1991 was a fairly substantial down year for railroad productivity. So even if the index, during its first years, did report above-average productivity trends, there seems to be no basis for beginning to apply the deflator now that a downturn, which will be reflected in the index for five years, has occurred.¹⁹ Rather, as the shipper commenters have argued, if up years were indeed more prominent for a time, now down years should become more prominent for a time. And if AAR concludes that the offset proves to be inadequate, it can raise the issue after the data are all in.

At this point, the only conceivable basis for deflating or "restating" the index is that the railroads may have lost the "time value" of money, if in fact productivity was higher than average during the earlier parts of the business cycle (which we will not know until the cycle is determined to be over). But we would be very reluctant to make an adjustment now based on predictive data derived from other business cycles that may bear no relationship to this one. And as we have noted before, the RCAF is not a rate cap that forces rates to particular levels. Rather, other than whatever use is made of it in setting private contract rates (which we do not control, and which should not be and has not been our primary focus), the main purpose of the RCAF is to determine which rates on captive traffic are subject to challenge. As AAR has not shown that it was subjected to substantial additional complaint proceedings that would not have been available had its deflator been in effect, we see no reason to apply its arbitrary adjustment that may or may not reflect the amount by which productivity may have been higher than average during the early years of the business cycle.²⁰

¹⁹ The logical extension of AAR's argument is that, when down years become more prominent, the index should be *inflated* to reflect the fact that the down years are *below* the business cycle average. That type of continuous manipulation, it appears to us, is neither necessary nor appropriate.

²⁰ We have previously made adjustments in the RCAF and are always amenable to make any adjustments necessary to redress injustice or unfairness in our methodology. But the railroads have not made such a showing here. See *Edison Electric*, 969 F.2d at 1227-1228.

B. *Special Charges.* In our NPR we asked whether special charges should be included in the development of each year's annual productivity index. Special charges are non-recurring expenses, which can be major, for items such as write-downs of property values and labor buyouts. Currently all "above-the-line" special charges (defined as charges related to rail operations) are included in the RCAF calculation, while "below-the-line" special charges (defined as charges unrelated to rail operations) are generally excluded. In our NPR we noted that these charges have caused substantial year-to-year swings in the rail industry's costs but tend to result in little change in the multi-year productivity average because non-recurring costs incurred in one year are generally offset by cost reductions in later years. Accordingly, in our NPR we asked whether special charges should continue to be included in the input expense base at all.

The views of the commentators, although superficially diverse, are actually quite similar. In general, the shippers agree that special charges may be included if they are necessary to produce outputs (NTTL), sufficiently related to rail operations (ASG and Concerned Shippers), and consistently treated over time (AEP). AAR argues that although the ups and downs associated with including special charges may tend to offset each other, long-run equalization is not a certainty. Because special charges such as labor buyouts can reduce long-run costs and increase productivity, and because the costs that they save would have been included in the index had the special charges not been incurred, AAR recommends that special charges be reflected in the index as long as they are rail-related.

Discussion. We recognize that in our NPR we suggested that including special charges in the index could cause year-to-year swings. But AAR correctly notes that in other contexts we have recognized that special charges have become a fact of life in the railroad industry, that they are sometimes incurred for the express purpose of avoiding future labor costs, and that if they are truly expenses of running railroads, then there is no basis for excluding them. Moreover, any year-to-year swings that may be caused by including special charges will largely be smoothed out by the five-year averaging period we are adopting. Accordingly, we agree with AAR and with the sense of the shipper commentators that rail-related special charges should be included in the input index because they are legitimate expenses of running a railroad. We see no basis for requiring a case-by-case assessment of whether above-the-line special charges are railroad-

related, as all charges recorded above-the-line, special and regular, are railroad-related by definition.

Below-the-line special charges, by contrast, are by definition non-operating expenses, which relate to the production of railway services only in the most extraordinary circumstances. During the period currently covered by the productivity adjustment, only one railroad-related special charge has been recorded below-the-line (by Union Pacific in 1986), and that was a special situation in which the charges, under normal circumstances, would have been recorded above-the-line.²¹ Given the uniqueness and rarity of major below-the-line accounting items, we intend to evaluate below-the-line special charges on a case-by-case basis, and to include them only when they are clearly railroad-related.²²

C. *Other Matters.*²³ In *Productivity Adjustment*, 5 I.C.C.2d at 460-61, we rejected AAR's request that we substitute "direct physical measurement" of inputs for the method recommended by our consultant, Reebie Associates.²⁴ The Reebie method, like the underlying RCAF formula itself, measures inputs by calculating "expenses accumulated in accounting

²¹ This departure from normal Commission accounting regulations was authorized by the Commission's Accounting and Valuation Board at the request of the Union Pacific Railroad because of pending labor negotiations. It involved 1986 charges of \$659.7 million. Union Pacific contended that disclosure of these special charges would adversely impact a pending labor settlement. These charges would have been recorded above-the-line following our Uniform System of Accounts and Generally Accepted Accounting Principles, but an exception was granted. It was a temporary accommodation made in a special circumstance.

²² NTIL has suggested that large special charge items might be spread over the time period during which actual disbursements are made. It would not, however, be practical to seek to apportion buyout expenses between present and future payouts and to set a timetable for future payments. And Generally Accepted Accounting Principles (GAAP) dictate that special charges be recognized in the year they are recorded.

²³ AAR in passing asks that we reconsider our determination not to provide for sharing productivity among railroads and shippers. But as the RCAF is not a rate cap, our rules do not require railroads to share any productivity with any shipper; they simply open up, based in part on measured productivity changes, certain rates to challenge by shippers. And as AAR's premise for its request—that the productivity adjustment may adversely affect the railroad industry—has not been supported, we will not consider the issue further at this time.

²⁴ AAR recognizes that direct physical measurement of all inputs is not possible, but it recommends using the approach wherever it is feasible.

pools (and deflated across time periods to permit comparison)." *Id.* at 461. We recognized that direct measurement of fuel, labor hours, or track life expended during a given period may be "intuitively more appealing" than the deflated expenditure approach, but we concluded that it would be more difficult to implement, and that it was "not likely to produce substantially better results." We did, however, indicate that we would reconsider our determination "[i]f interested parties demonstrate that measurement of actual usage is in fact superior and practicable." *Id.*

AAR, in comments submitted in response to our ANPR and in additional pleadings submitted in response to our NPR, has sought reconsideration. Its argument, which the shippers oppose, is essentially that direct measurement is the input measurement method preferred by economists generally. AAR argues that our indirect deflated expenditure approach understates the growth in input use--and thus results in overstating productivity gains--because, among things, it poorly measures use of capital inputs.

As AAR recognizes, from a theoretical perspective, the direct measurement approach and the deflated expenditure approach should produce the same results. In reality, however, the two approaches do not always produce the same results because they measure costs differently. AAR's direct measurement method focuses on the "economic costs" of doing business, while the deflated expenditure approach relies on "accounting costs." Economic costs include the market return on debt and equity-financed capital, while the Commission's deflated expenditure approach substitutes the historical costs of debt-financed capital for these elements. In addition, accounting costs base depreciation on the historic value of assets, whereas economic depreciation is based upon the current market value of assets.²⁵

Although the direct measurement method may be acceptable in many contexts, AAR has not shown that it is appropriate for adjusting the RCAF. The adjusted RCAF, it must be remembered, is a measure of the changes in the costs of producing rail services. These production costs, which are initially expressed as accounting costs, change over time as the result of two

²⁵ AAR and the responding shippers thus recognize that the issue is really not whether asset use is measured "directly" through physical assets or "indirectly" through accounting data. The real issue is which types of costs are taken into account in measuring asset use.

forces: changes in input price levels (the "unadjusted RCAF"²⁶) and productivity. Under the "all-inclusive index" used to calculate the unadjusted RCAF -- which was developed by AAR in cooperation with the Commission and several other entities over a period of many years -- input prices are measured in terms of specific accounting costs. AAR, however, would adjust these accounting based input prices by a productivity factor that is based on economic costs. The hybrid adjustment that AAR contemplates would produce an adjusted RCAF that measures an undefined set of costs lying somewhere between economic and accounting costs, but that does not measure changes in either the accounting costs or the economic costs of producing rail freight service.

In *Productivity Adjustment*, 5 I.C.C.2d at 459, we stated that "it is vital to maintain consistency between the RCAF and the productivity measure used to adjust it." AAR, however, has not even attempted to address the apparently anomalous result it proposes. On the basis of what AAR has presented, we see no reason to measure inputs one way for purposes of developing the price index, and then measure them differently for purposes of estimating productivity that converts the price index into a cost index.

AAR's proposal, of course, does raise the question of whether we should move toward use of economic costs in each phase of the RCAF calculation process. AAR, although it has weighed in only as to the productivity side of the process, has argued that economic costs are generally superior. AAR has not, in our view, shown that economic costs should be the standard for all RCAF calculations.

One of the basic objectives of the RCAF process is to produce the RCAF quickly, easily, and mechanically. The RCAF, it must be understood, is only a rough way of estimating changes in the price level for the railroad industry as a whole. Because it is an average, it may or may not have any relevance to the actual experience of individual railroads. But what is clearly important is that the RCAF be a verifiable calculation that can be issued on a timely basis. The deflated expenditure method, under which accounting costs developed under Generally Accepted Accounting Principles can simply be looked up in a carrier's books, plainly facilitates prompt development of a reasonably accurate RCAF calculation.

²⁶ The unadjusted RCAF measures the impacts of the changes of the prices of inputs on freight operating expenses, fixed charges, and contingent interest. These are the costs which we have referred to as accounting costs.

Economic costs, by contrast, are not so easily developed, because they rely on economic estimates and assumptions that can be quite controversial. Thus, using direct measurement AAR calculated productivity during the 1980's to be much lower than that derived under the Reebie deflated expenditure method. Using a comparable direct measurement approach, but with different data and presumably different underlying economic assumptions, the recent BLS railroad productivity study (*see Multifactor Productivity in Railroad Transportation*, Monthly Labor Review, August 1992) yields *higher* productivity than the Reebie approach. If the assumptions underlying a particular application of the direct measurement program are not universally accepted, then the development of economic costs could prove to be a contentious, time-consuming process that could produce any number of "right" answers.²⁷

We remain receptive to changes that will improve the RCAF procedures. But AAR has not shown that the all-inclusive index that it developed is inadequate in light of the purposes it is designed to serve, nor has it shown that a change to a method using economic costs would produce timely and essentially mechanical, non-controversial RCAF calculations. Accordingly, at this time we do not intend to move toward a new RCAF process that is based on economic rather than accounting costs.

ENVIRONMENTAL AND ENERGY CONSIDERATIONS

This decision will not significantly affect the quality of the human environment or the conservation of energy resources.

REGULATORY FLEXIBILITY ANALYSIS

Pursuant to 5 U.S.C. 605(b), we conclude that our action in this proceeding will not have a significant economic impact on a substantial number of small entities. No new regulatory requirements are imposed, directly or indirectly, on such entities. The purpose of our action is to improve the measurement of railroad productivity changes. Reporting requirements remain unchanged. The economic impact on small entities,

²⁷ Thus, AAR's claim that its method will be simple because all of the information it uses is developed by a computer program is not really correct. The process will be simple and uncontroversial only if all of the involved interests accept all of the assumptions and estimates underlying the program, which is highly unlikely.

if any, is not likely to be significant within the meaning of the Regulatory Flexibility Act.

It is ordered:

1. A five-year fixed period will be used for averaging productivity changes in the railroad industry.
2. All above-the-line special charges will be included in the input index used in calculating railroad productivity changes. Only those below-the-line special charges found by the Commission to be clearly railroad-related will be included.
3. The request that we reconsider our determination not to use the "direct measurement" method is denied.
4. Notice of this decision will be published in the *Federal Register* on November 8, 1993.
5. This decision is effective on November 8, 1993.

By the Commission, Chairman McDonald, Vice Chairman Simmons, Commissioners Phillips, Philbin and Walden.

Sidney L. Strickland, Jr.
Secretary

(SEAL)

APPENDIX

TABLE 1

RAILROAD PRODUCTIVITY
(Individual Years and Multi-Year Averages)

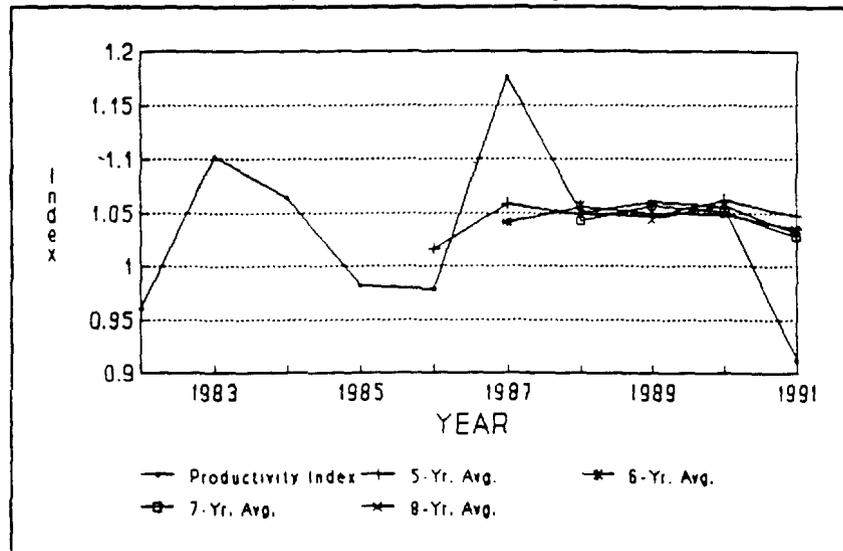
Period Ending	Product Index	5-Yr. Moving Avg.	6-Yr. Moving Avg.	7-Yr. Moving Avg.	8-Yr. Moving Avg.
1982	0.960				
1983	1.102				
1984	1.064				
1985	0.982				
1986	0.978	1.016			
1987	1.176	1.058	1.041		
1988	1.050	1.048	1.056	1.042	
1989	1.060	1.047	1.050	1.057	1.044
1990	1.056	1.062	1.048	1.051	1.057
1991	0.912	1.047	1.035	1.028	1.032

Note: The moving averages are the geometric averages of various years of the productivity index.

APPENDIX
GRAPH 1

RAILROAD PRODUCTIVITY

(Individual and Multiple Year Averages)



GRAPH 2

RAILROAD PRODUCTIVITY

(Various Multi-Year Averages)

