

The Effects of Financial Leverage on Air Carrier Earnings: Reply

Richard D. Gritta

The author teaches at the School of Business Administration at the University of Portland.

■ In his comment on my article in a recent issue of *Financial Management*, Mr. Steven Rothmeier [4], Vice President-Finance of Northwest Airlines, argued that the strong financial performance of his carrier was the result of superior cost controls, that it was not due to a favorable competitive situation or a superior route structure. Further, he maintained that Northwest (NWA) possesses neither advantage, as is widely believed. The purpose of this brief reply is to shed more light on this controversy.

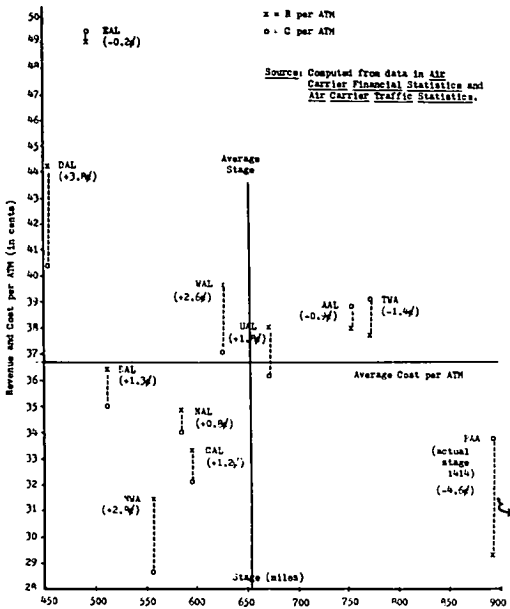
The exhibit is useful. It presents data on costs and revenues per available ton-mile (ATM) and the relationship to aircraft stage length (average haul in miles). While data are for 1978, the relationships pictured hold true for past years as well.*

This exhibit may help resolve the controversy. If a carrier does have a favored competitive situation, revenues per unit of output (ATM) should be higher. And if a carrier has a strong route structure, stage should be longer and should be negatively correlated with costs per unit of output (ATM).

*In reviewing my reply, Mr. Rothmeier noted that Northwest was on strike for 109 days in 1978 and that this might present a problem. He did suggest, however, that even in that strike year, unit costs were about the same as in the past five to six years. My data over the 1974-1978 period confirm his conclusion.

On the revenue side, the exhibit clearly shows NWA's revenue yield to be the lowest of the eleven carriers. In fact, NWA's yields have ranked last in the industry in every year since 1971 (as computed from data in [1]). But revenue yields should be influenced by the level of competition faced by a carrier. Fruhan [3], for example, maintains that greater competition would result in increased capacity, a lower overall load factor, and therefore lower revenues per ATM, as carriers fight to maintain market shares. NWA's actual loads, however, are quite low, ranking consistently last among the eleven over the past several years. In 1978, for example, Northwest's load factor was only 42.1%, compared to Delta's 51.3% and industry leader United's 52.5% [5]. Both these data and the lower revenue yields noted suggest, therefore, that NWA does not possess the competitive advantage it is reputed to have. Further supporting evidence for this position comes from primary data on competition contained in the Civil Aeronautics Board's *Origination and Destination Survey* [2]. A widely used measure of the degree of competitive exposure faced by a carrier is the percent of monopoly revenue passenger miles (RPMs) to total domestic RPMs. NWA's ratio of 22.9% ranks a lowly sixth in the industry, far behind leader United (31.3%) and Delta (29.4%), the two carriers facing the least intra-industry competition.

Exhibit. Revenue and Cost per Available Ton Mile versus Aircraft Stage-U.S. Domestic Air Carriers, 1978.



level when considering the ten carriers (but excluding Northwest). When Northwest is added to the sample, r drops to $-.40$ and is not statistically significant. In addition, NWA's predicted cost per ATM when using the regression run without Northwest is 38.6¢ , considerably higher than the carrier's actual cost of 28.6¢ . The evidence thus suggests that Northwest is not favored by a strong route structure.

The real key to Northwest's successful financial performance lies in the spread between revenue and cost per ATM. The carrier's spread was 2.8¢ in 1978, which ranked second only to Delta (3.8¢). Clearly, this favorable spread is not due to any innate advantage. Rather, Northwest's superior performance seems to lie in its ability to overcome a less than outstanding competitive situation and route structure. The popularly held belief that the latter two variables account for this success is therefore suspect, and I erred in perpetuating that notion. Northwest's ability to control costs, despite a shorter than average stage, plus its conservative financial policies outlined in my article, should be a model to be emulated by other carriers.

References

1. Civil Aeronautics Board, *Air Carrier Financial Statistics* and *Air Carrier Traffic Statistics*, December 1971-1979 issues.
2. Civil Aeronautics Board, *Origin-Destination Survey of Airline Passenger Traffic*, Table 10, First Quarter 1978.
3. W.E. Fruhan, Jr., *The Fight for Competitive Advantage: A Study of the United States Domestic Trunk Air Carriers*, Boston, Division of Research, Harvard Business School, 1972, p. 53.
4. S.G. Rothmeier, "The Effects of Financial Leverage on Air Carrier Earnings: Comment," *Financial Management* (Spring 1980), pp. 88-89.
5. Standard & Poor's Investor Services, *Standard & Poor's Industrial Survey*, various issues.
6. M.R. Straszheim, *The International Airline Industry*, Washington, D.C., Transportation Research Program, The Brookings Institute, 1969, p. 84.

What is more interesting, however, is the cost side of the equation. As is evident from the exhibit, Northwest's cost per ATM ranks lowest of the eleven airlines. Since airline economists [3, 6] have long held that costs per unit of output are negatively correlated with stage, this would imply that NWA's stage should be ranked near the top of the industry. The exhibit shows, however, that this is not true. Northwest's stage is only 556 miles, as compared to the industry average of nearly 680 miles, and yet NWA's cost per ATM of only 28.6¢ is well below the industry figure of 36.8¢ . Regressions run on cost per ATM versus stage confirm NWA's deviation from the expected relationship. The r of $-.64$ is significant at the 0.05