

Research Department  
Federal Reserve  
Bank of  
San Francisco

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## Airline Deregulation

After four decades of regulation, domestic air transportation was largely deregulated upon passage of the Airline Deregulation Act (ADA) in 1978. Critics of deregulation policy point out that, since 1978, there have been major bankruptcies in the industry, unstable fares, labor contract disruptions and loss of service to small communities. Other critics fear a gradual monopolization of the industry and the ultimate onset of higher fares and inferior service. These concerns together motivated recent Congressional proposals to "reregulate" the airline industry. This *Weekly Letter* is a critique of the rationale for reregulation.

### Economic regulation

Prior to 1978, the domestic operations of U.S. airlines were subject to economic regulation by the Civil Aeronautics Board (CAB). The CAB regulated the level and structure of fares, drawing on historical operating cost information to make its determinations. The CAB also restricted entry of new carriers into the industry or into individual markets (routes). In fact, in the forty years of regulation, essentially no new entry occurred in scheduled service on major routes.

Economists argued that the lack of the threat of competitive entry dampened incentives for efficient airline operations. In addition, restrictions on price competition caused airlines to vie for market share in the non-price dimensions of service, such as schedule frequency, provision of non-stop service, and in-flight and airport amenities. The end result, they argued, was that airlines charged fares that were too high, offered inefficient service levels, and paid too little attention to controlling labor and other operating costs.

### Deregulation

Viewed from this perspective, most of the events that have followed the passage of the Airline Deregulation Act of 1978 were expected and desirable consequences of

deregulation. First, downward pressure on fares increased as airlines began to engage in price competition. Despite a sharp rise in fuel prices in 1979, fare revenues rose much less rapidly than costs (see Chart 1).

Second, airlines reduced the underuse of service capacity induced by regulation. Load factors (the percentage of seats sold compared to total seats available) rose sharply after deregulation from about 56 percent to 64 percent for carriers on major routes. Nonstop service was reduced and new "hub and spoke" service configurations were initiated to such cities as Kansas City, St. Louis and Denver. Although configurations are less convenient for the traveler, they permit an increase in service efficiency and lower fares. The fact that air travel rose after deregulation despite weak overall economic conditions indicates that the public clearly prefers the combination of lower fares and more spartan service.

New, aggressive entry also occurred with deregulation as twenty-five new carriers entered trunk and regional service between 1978 and 1982. The attractiveness of the industry to entrepreneurs is reflected in the trend of prices for versatile, medium-haul, used aircraft, (e.g., Boeing 727-200). Their prices appear to have risen sharply after deregulation even after accounting for the effects of general inflation (see Chart 2). Overall, these events contributed to a continued increase in employment in the airline industry of about 40,000 in the first two years after the deregulation compared with growth of only 20,000 in the prior two years.

### Price wars?

Air fares have fallen particularly sharply on the long, intercoastal routes. Indeed, it is not unusual for a San Francisco to New York fare to be lower than that on a route half the length. Critics of deregulation see such aggressive price-cutting behavior as evi-

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dence of the inherent instability of the airline industry under deregulation. In an ideally competitive market, episodic price "warring" should not be expected to occur.

However, an inherently unstable market structure is probably not the most likely explanation for the current pricing behavior of airlines. One alternative explanation for the discount fare "wars" on the intercoastal routes relates to the composition of airline fleets. Airlines had purchased large numbers of wide-bodied aircraft intending them for use on a variety of high density routes. In 1979, however, the large increase in fuel prices made these aircraft uneconomical to operate on all but the longest routes. In essence, the industry may have found itself with excess "long-haul" capacity, and has tried to increase its passenger loads through aggressive fare cutting. If this explanation is correct, the intercoastal fare "wars" should abate as the carriers recompose their fleets.

### **Headed for monopoly?**

Much depends, of course, on the ultimate structure of the industry. In spite of the large number of new carriers that started operation after deregulation, critics point to the high rates of bankruptcies in the airline industry and are concerned that the industry may end up dominated by a few very large firms with little competition on individual routes. Indeed, even before deregulation, most domestic non-stop routes were served by only one carrier. However, there is little theoretical or empirical evidence to support this fear.

On low and moderate traffic routes, economies of scale probably do dictate that only one carrier will be able to serve the route efficiently. However, as a number of economists, including Keeler and Panzar have pointed out, the provision of service by a monopolist does not necessarily mean that he will be able to exploit monopoly power if there is a realistic threat of competitive entry. Competitive entry, in turn, will be more likely if there are relatively low barriers to such entry.

In the airline industry, such barriers are usually low because the firms' airline capital is uniquely mobile: an airplane can be redeployed on a new route relatively easily. It is not "fixed" to a physical location as in the case of a plant in the manufacturing industry. Even monopoly suppliers of service on a route always face the *potential* of entry by carriers from other parts of the industry, and their behavior will be constrained accordingly. This notion of "contestability" of monopolized markets was examined by economist Gerald Kaplan in a study of the fares on individual routes after deregulation. Kaplan found that actual and potential entry protected the market from the exercise of monopoly power on thinly served routes.

Nor is there evidence that concentration in air transportation is increasing for the industry as a whole or on individual routes. In 1982, the share of traffic provided by the largest five carriers was only 67 percent, versus 69 percent prior to deregulation. In addition, in a study of 300 individual airline markets, economists Graham, Kaplan and Silby found that, in general, market concentration had either decreased or remained unchanged since deregulation.

### **Small community service**

Free entry and exit under deregulation raised a different concern in small communities. Such communities feared the total loss of service once CAB service requirements were abandoned. Economists had argued that although the type of service (i.e., aircraft and schedule frequency) and fares might change, entrepreneurs still would find means of serving these markets. Nevertheless, the Airline Deregulation Act contained a provision for transitory subsidies to carriers serving small markets.

In most cases, the fear of wholesale abandonment of small community service has proved to be exaggerated. In those cases in which there was significant loss of service (such as in the Bakersfield, California market) the loss was due to peculiar

manifestations of the transition from a regulated to a deregulated environment, such as the bankruptcy of a major carrier. Even in these cases, new entry usually provided replacement service.

In many cases, the increased post-deregulation competition has actually improved the quality of service to these communities. For example, a recent survey of 72 communities where major carriers had terminated service showed that flight frequencies increased by 30 percent between 1978 and 1981 due to an increase in commuter carrier service.

**Labor wrangles and bankruptcy**

The recent bankruptcies and labor disputes also are more likely to be characteristics of the transition to deregulation than indicators of the inherent instability of the industry. Under regulation, restrictions on the entry and exit of firms amplified the bargaining power of airline labor. An airline could not leave the industry without losing its operating authority; it thus could not use the threat of declaring bankruptcy to reorganize in the subsequent bargaining process. The restrictions on entry under regulation also protected the negotiating position of airline labor. Entry restrictions removed the threat that

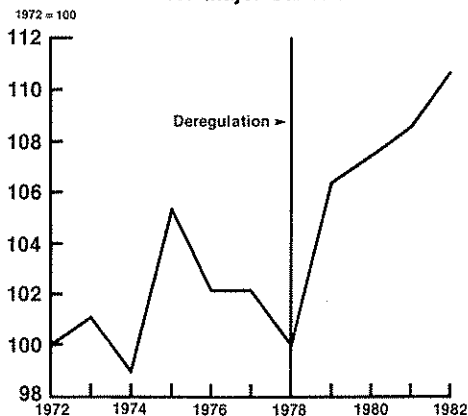
new low-cost entrants would erode the market share of the existing carriers, thereby blunting the incentives to cut costs by the regulated carriers.

Deregulation would be expected therefore not only to increase operating efficiency, but also to put downward pressure on the prices of labor and other inputs. During the transition period, the advantages of lower input prices are available largely to new entrants, since older carriers may be bound by contractual agreements. As a result, a new carrier in the Northeastern U.S., for example, can operate at approximately one half the cost per seat mile of its established counterparts.

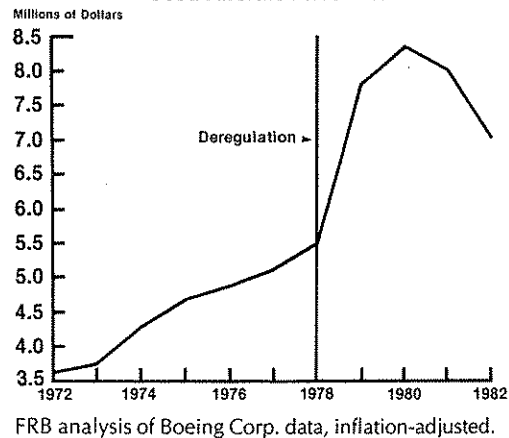
Facing such low-cost rivalry, it is not surprising therefore that major carriers have sought to find ways of renegotiating their wage bill. In one case, this was accomplished by a recent 18 percent negotiated wage reduction; in another, wage reductions were sought as part of a total financial reorganization. This process is likely to continue until all producers face a similar cost environment, at which point new entry will probably slow and the labor market will likely become more stable.

**Randall Pozdena**

**Chart 1**  
Index of Expense/Revenue Ratio  
for Major Carriers



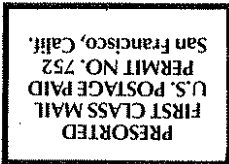
**Chart 2**  
Used Aircraft Price Trends



FIRST CLASS

Alaska • Nevada • Oregon • Utah • Washington  
Idaho • Arizona • California • Hawaii

San Francisco  
Bank of  
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**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**

(Dollar amounts in millions)

Selected Assets and Liabilities	Amount Outstanding	Change from	Change from			
			2/22/84	2/15/84	Dollar	Percent
<b>Large Commercial Banks</b>						
Loans, Leases and Investments <sup>1 2</sup>	175,497	110	—	528	—	1.7
Loans and Leases <sup>1 5</sup>	155,132	153	—	222	—	0.8
Commercial and Industrial	45,813	333	—	150	—	1.8
Real estate	59,163	—	5	264		2.5
Loans to Individuals	26,824	91		174		3.6
Leases	5,003	—	7	59		6.5
U.S. Treasury and Agency Securities <sup>2</sup>	12,225	—	55	281		12.5
Other Securities <sup>2</sup>	8,139	12		23		1.6
Total Deposits	183,973	—1,300	—	7,023	—	20.3
Demand Deposits	42,411	—1,637	—	6,825	—	76.7
Demand Deposits Adjusted <sup>3</sup>	27,492	—2,317	—	3,838	—	67.8
Other Transaction Balances <sup>4</sup>	11,930	—	80	844	—	36.5
Total Non-Transaction Balances	129,630	416		645		2.8
Money Market Deposit						
Accounts—Total	40,278	177		681		9.5
Time Deposits in Amounts of						
\$100,000 or more	38,016	214	—	148	—	2.2
Other Liabilities for Borrowed Money <sup>5</sup>	20,915	336	—	2,090	—	50.3
<b>Weekly Averages of Daily Figures</b>	<b>Week ended</b>	<b>Week ended</b>	<b>Comparable</b>			
	<b>2/22/84</b>	<b>2/15/84</b>	<b>year-ago period</b>			
<b>Reserve Position, All Reporting Banks</b>						
Excess Reserves (+)/Deficiency (—)	NA	NA		NA		
Borrowings	NA	NA		NA		
Net free reserves (+)/Net borrowed(—)	NA	NA		NA		

<sup>1</sup> Includes loss reserves, unearned income, excludes interbank loans

<sup>2</sup> Excludes trading account securities

<sup>3</sup> Excludes U.S. government and depository institution deposits and cash items

<sup>4</sup> ATS, NOW, Super NOW and savings accounts with telephone transfers

<sup>5</sup> Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

<sup>6</sup> Includes items not shown separately

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