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AIRLINES, AIRPORTS AND ANTITRUST:
A PROPOSED STRATEGY FOR
ENHANCED COMPETITION

ROBERT M. HARDAWAY*
PAUL STEPHEN DEMPSEY**

I. INTRODUCTION

PRIOR TO DEREGULATION, the consensus among many economists was that removal of governmental barriers to entry and pricing for airlines would result in a healthy competitive environment, one perhaps approaching that of perfect competition.¹ Destructive competition,
whose purported existence gave birth to regulation of these two industries in the 1930s, was deemed unlikely to occur.\textsuperscript{2} It was predicted that concentration was highly unlikely, for new entry would keep the industry hotly competitive.\textsuperscript{3}

\textsuperscript{2} A 1978 Senate Committee report on federal regulation provided a fairly typical summary of those attributes of destructive competition deemed not likely to surface in a deregulated air and motor carrier industry:

A justification sometimes offered for regulation is that in the absence of regulation competition would be "destructive." In other words, without regulation, an industry might operate at a loss for long periods . . . . When there is excess capacity in a competitive industry . . . prices can fall far below average cost. This is because individual producers minimize their losses by continuing to produce so long as their variable (avoidable) costs are covered, since they would incur their fixed (overhead) costs whether they produced or not . . . . Similarly, if resources are mobile [as they are in the trucking and airline industries,] depressed conditions in an industry or a region would result in the shift of resources to other employments . . . .

What is "destructive" about large and long-lasting losses? Some economists have suggested that they would result in long periods of inadequate investment and slow technical progress which in turn might lead to poor service and periodic shortages . . . .

Another scenario that has sometimes been suggested is that periods of large losses will result in wholesale bankruptcies and the shakeout of many small producers with the result that the industry in question becomes highly concentrated in a few large firms . . . .

A third and related notion is the possibility that powerful firms might engage in predation . . . .

"Destructive competition" seems . . . unlikely in the cases of airlines and trucks.

\textsuperscript{3} Although almost every airline opposed deregulation in 1978, the nation's largest carrier, United Airlines, was a vigorous proponent. Alfred Kahn has admitted that, in advocating deregulation, he had underestimated the advantages of the large firms in the airline industry. Hearings Before the California Public Utilities Comm., at 6190, 6223 (Jan. 31, 1989) (testimony of Alfred E. Kahn) [hereinafter Kahn Oral Testimony]. As Kahn said, "We underestimated the importance of economies of scale and scope." \textit{Id.} Elsewhere, Kahn has conceded, "We advocates of deregulation were misled by the apparent lack of evidence of economies of scale . . . ." Surprises of Airline Deregulation, 78 AEA PAPERS \& PROCEEDINGS 316, 318 (1988) [hereinafter Surprises of Airline Deregulation]. Kahn also admitted, "We underestimated the ease of entry on the national level by new carriers." Kahn \textit{Oral Testimony}, supra, at 6205. So it must have come as quite a shock when large firms came to dominate the industry. A decade ago, Kahn dismissed fears...
Transportation, however, has turned out not to be the

that the industry would become highly concentrated. Testifying before a House Subcommittee in 1978, Congressman Harsha posed the following question:

[Y]ou are going to invite into the area of new entry the severest competition between airlines serving that particular market and ultimately the big will eat the little, and those who are able to withstand the severe competition and the reduced fares—even below operating expenses—will prevail. Then the airlines that cannot prevail, of course, will have to either go out of business or do something else.

After that transition period then you are going to see the air fares go back up again and the big will control the airline industry.


Kahn dismissed these fears as unfounded. He remarked:

First, the assumption that you are going to get really intense, severe, cut throat competition just seems to me unrealistic when you are talking about a relatively small number of carriers who meet one another in one market after another. We don't find in American industry generally when you have a few relatively large carriers competing with one another that they engage in bitter and extended price wars.

But number two, the fear that the big will eat the little, that is one that I would really like to nail. If you look, as I did last week, at the stock market prices of the securities of the big airlines today you will find that while the average certificated carriers in the United States stock is selling at about two-thirds of book value... three of the five biggest carriers... stock is selling at 33 to 37 percent of book value.

That means to me the investors do not believe that prediction.

Id. at 178-79 (emphasis added).

Similarly, in 1977 hearings before a House Subcommittee, Kahn said, “I do not honestly believe that the big airlines are going to be able to wipe out the smaller airlines, if only because every study we have ever made seems to show that there are not economies of scale.” Aviation Regulatory Reform: Hearings on H.R. 11145 Before the Subcomm. on Aviation of the Comm. on Public Works and Transportation, 95th Cong., 1st Sess. 1137 (1977) [hereinafter 1977 House Hearings].

New entry in the airline industry has become extremely difficult, and mergers and bankruptcies stimulated by the worst economic period in the industry’s history have thinned the ranks of competitors and created high levels of concentration. Of the 121 small airlines which entered after 1978, fewer than fifty are still operating. Focus: A Decade of Deregulation, TRAFFIC WORLD, Dec. 5, 1988, at Supp. A. [hereinafter Deregulation Focus]. Kahn recently characterized the failure rate of new airlines as “frightening.” Alfred E. Kahn, Transportation Deregulation... and All That, ECONOMIC DEVELOPMENT, 1987, at 91, 99. Whether considered individually or collectively, their share of the domestic passenger market is relatively insignificant. Moreover, since promulgation of the Airline Deregulation Act of 1978, the airline industry has become a national oligopoly, and in many markets, a monopoly.

In a 1988 article in the Transportation Law Journal, Alfred Kahn admitted that prices are likely to rise, saying, “I have little doubt that... the disappearance of most of the price-cutting new entrants and the marked reconcentration of the in-
ideal model of perfect competition that many proponents of deregulation insisted it was. There appear to be significant economies of scale, scope and density,\textsuperscript{4} and economic barriers to entry in the airline industry. Widespread bankruptcies and mergers have reduced the number of competitors to the point that major oligopolies now exist. Large airlines now dominate the infrastructure of airports, their gates and landing slots, as well as com-

\textsuperscript{4} Economies of scale are realized when a firm increases its total production while simultaneously decreasing its cost to produce each unit. As the scale of production grows, the enterprise becomes more efficient. The classic example of the phenomenon of economies of scale is the enormous cost savings experienced from producing automobiles on an assembly line rather than one car at a time. The cost savings resulting from economies of scale can be attributed to: (1) indivisibility — a large capital-intensive piece of equipment operates most efficiently at full capacity; and (2) division and specialization of labor — highly specialized labor is more productive labor. Hub and spoke operations in the airline industry are largely successful because of significant economies of scale.

A related concept to economies of scale is economies of scope. A firm achieves economies of scope by combining one or more activities into a single operation. Thus, the additional cost of producing one more item (marginal cost) is diminished when the scope of activity broadens. Thus, scheduled service can easily gobble up charter service. \textit{See} \textit{Joe Bain, Barriers To New Competition} 56 (1956); \textit{Robert Heilbroner \& Lester Thurow, Economics Explained} 53 (1982); W. Shepard, \textit{ECE Economics of Industrial Organization} (1979).

Another related concept is economies of density. By combining passengers and groups of passengers, an airline can carry the aggregation of passengers more cheaply than if it carried those passengers separately. Through careful scheduling of flights, consolidating operations and routing passengers through its “hub,” an airline streamlines its system, making it more dense and thus more efficient. The “hub and spoke” scheme employed by all of the major airlines is testimony to this phenomenon. For example, an airline that carries 100 passengers in a single plane to a destination as opposed to carrying 50 passengers in two aircraft to that same destination is making use of economies of density. \textit{See generally} Ann E. Friedlaender \& Richard Spady, \textit{Freight Transportation Regulation: Equity, Efficiency and Competition in the Rail \& Trucking Industries} (1981); A. La-mond, \textit{Competition in the General-Freight Motor Carrier Industry} (1980).
computer reservations systems. The theory of contestable markets served as a major intellectual justification for deregulation. The theory posits that if a monopolist or oligopolist begins to earn supracompetitive profits, new competitive entry, or the threat thereof, will restore pricing competition. If incumbents raise rates above competitive levels, new entrants would be attracted like sharks to the smell of blood. The

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6 Assumptions about ease of entry and the importance of potential entry as a means of keeping markets competitive served as an essential foundation for airline deregulation. It is doubtful that Congress would have promulgated the Airline Deregulation Act of 1978 if it had known that the ultimate result would be an oligopoly.

But even assuming a high level of concentration, deregulation theory had a solution. In the late 1970s, Kahn proclaimed:

[A]lmost all of this industry's markets can support only a single carrier or a few: their natural structure, therefore, is monopolistic or oligopolistic. This kind of structure could still be conducive to highly effective competition if only the government would get out of the way; the ease of potential entry into those individual markets, and the constant threat of its materializing, could well suffice to prevent monopolistic exploitation.

Alfred E. Kahn, Address Before the New York Society of Security Analysts (Feb. 2, 1978), at 24. Kahn saw few economies of scale in the industry; hence entry, or the threat of potential entry would keep monopolists from extracting monopoly profits. Id. at 26. Again, this was the essence of contestability theory. In 1977, Kahn testified before a House Subcommittee on the importance of the automatic entry provisions of a pending airline deregulation bill, saying:

[A] realistic threat of entry by new and existing carriers on the initiation of management alone is the essential element of competition.

It is only this threat that makes it possible to leave to management a wider measure of discretion in pricing. It is the threat of entry that will hold excessive price increases in check.


In a recent interview, Alfred Kahn noted, "Certainly one of the assumptions behind airline deregulation was that entry would be relatively easy." Interview with Alfred E. Kahn, Antitrust, Fall 1988, at 4, 6 [hereinafter Kahn Interview]. But in another instance, Kahn admitted, "We didn't dream of the way airlines could manipulate fares with such great sophistication . . . . We were a little naive
theory is premised upon the belief that economic barriers to entry and economies of scale in the airline industry are
relatively modest. Even the threat of entry would be sufficient to discipline the market and restore the competitive equilibrium.\(^7\)

Contestability has not served as a significant competitive catalyst in the deregulated airline industry, and has since been abandoned by the Justice Department, which now regulates airline mergers. Because of formidable barriers to entry, many airlines are now able to exert market power in the markets which they dominate.\(^8\) With the creation of frequent flyer programs, travel agent commission overrides, and megacarrier dominance in fortress hubs and computer reservations systems, the entry of new carriers is highly unlikely today. In a situation where market power exists, prices rise and the level of service can deteriorate; excessive wealth is transferred from consumers to producers, and society's resources are misallocated. As consumers purchase alternative products or services it costs society more to produce.

II. DEREGULATION AND CONCENTRATION

A. The Short Term—Long Term Picture of Competition

During the first decade of deregulation, the airline in-
dustry suffered the worst economic losses in its history.9 This period of economic anemia began before the onset of economic recession in the early 1980s and ascending fuel prices, and continued steadfastly.10 While the bottom line has recently improved as the industry has become highly concentrated, its average annual net profit margin over the last eleven years has been a meager 0.7%, compared with 4.5% for other American industries.11


11 James Ott, Industry Officials Praise Deregulation, But Cite Flaws, Aviation Wk. & Space Tech., Oct. 31, 1988, at 88. In 1988, the industry's profit margin shrank to 1.3%, compared to 2% a decade earlier. See Stockton, supra note 9. Alfred Kahn maintains that the airline industry's profit margin "fell to a puny 0.10 in the 1979-87 period." Surprises of Airline Deregulation, supra note 3, at 316 n.1. As one careful observer of the airline industry, Melvin Brenner, noted:

The eight years of deregulation comprise the worst financial period in airline history. The cumulative industry operations in those eight years generated a loss of over $7 billion, when interest payments are included with operating expenses .... The deregulation era is the first time that the industry as a whole has recorded a cumulative loss over an eight-year period ....

The principal cause of the poor financial results has been the tendency of airlines to engage in destructive competition in the absence of regulation — a tendency evident particularly in excess capacity and fare wars .... By failing to cover fixed costs, marginal cost reliance jeopardizes the industry's long term viability.

Melvin A. Brenner, Airline Deregulation — A Case Study in Public Policy Failure, 16 Transp. L.J. 179, 200-01 (1988). Ten years after he implemented airline deregulation as President Carter's Chairman of the Civil Aeronautics Board, Alfred Kahn admitted, "There is no denying that the profit record of the industry since 1978 has been dismal, that deregulation bears substantial responsibility, and that the proponents of deregulation did not anticipate such financial distress — either so intense or so long-continued." Kahn, supra note 3, at 248. After five years of deregulation, with carriers going "belly up" in bankruptcy, in an interview published in the Wall Street Journal, Kahn noted that "there's a lot of turmoil, but that's what we intended." Bill Richards, CAB's Ex-Chairman, Alfred Kahn, Looks At Airline Industry He Helped to Deregulate, Wall St. J., Oct. 4, 1983, at 35. He then acknowledged that "the turmoil is more intense and lasting longer than most of us anticipated." He was also willing to concede that the new entrants would likely never account "for more than 5% of the total travel." Id. But Kahn then expressed surprise with the magnitude of the turmoil, saying in 1983, "I've been dismayed because the airlines suffered more pain than I envisioned." Stroller, Al Kahn Has Few Regrets, Airport Press, Aug. 1983, at 1. In 1987 hearings before the Senate Judiciary Committee Kahn acknowledged that deregulation "caused a great deal of turmoil—more, I think, than most of us would have predicted. Tur-
In the short run, more than 120 new airlines appeared, although most were small, commuter lines. This flood of entry caused pricing to spiral downward. While a short term boon for consumers, the pricing competition which emerged from deregulation was an unmitigated catastrophe for the airline industry. In the long run, more than 200 airlines have ceased operations or been acquired in mergers, and only seventy-four carriers remain.

In one important sense, the economic characteristics of transportation differ from those of most other sectors of the economy and make it inherently vulnerable to over-capacity. If a manufacturer or retailer suffers a period of slack demand, it can usually store unsold inventory and sell it another day, when demand improves. In contrast, transportation firms sell what is, in essence, an instantly perishable commodity. Once an aircraft taxis down the runway, any unused capacity is lost forever. Empty seats cannot be warehoused and sold another day as could, say, canned beans. It is as if a grocer was faced with spoilage.

moil has, however, socially positive as well as painful aspects: a release of creativity, entrepreneurship and innovation, along with a painful readjustments, bankruptcies and unprecedented financial losses." Airline Deregulation, supra note 6, at 67. Kahn recently said, “I found it distressing in the middle of this. I hated to be responsible for the industry suffering so. I wanted to be sure that it would always be financially healthy and able to attract capital.” Kahn Oral Testimony, supra note 3, at 6247-48. He acknowledged that the low fares consumers had enjoyed were a short-term phenomenon, saying, “I have little doubt that . . . the disappearance of most of the price-cutting new entrants and the marked reconcentration of the industry --- will produce higher fares.” Id.

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14 Pelline, supra note 13, at 21. In the Darwinian scramble for survival and market share unleashed by deregulation, hundreds of carriers have gone “belly up” in bankruptcy or been absorbed by the megacarriers, including such darlings of deregulation as Air Florida, Freddie Laker’s Skytrain, and Donald Burr’s People Express. Alfred Kahn once pointed to these new upstart airlines as evidence that deregulation was a brilliant success. But they have all since dropped from the skies into a social Darwinist grave. America West, Presidential, and Midway remain, but they have a relatively insignificant share of the domestic air transport market. A rash of mergers and bankruptcies has turned the industry into a national oligopoly, and in many hubs and city-pairs, a virtual or actual monopoly.
of all its canned goods on a daily basis—as if they had the properties of open jars of unrefrigerated mayonnaise. He would be forced to have a fire sale every afternoon. This inevitably leads to distress sale pricing during weak demand periods, or when excess capacity created by unlimited entry abounds. Hence, the vicissitudes of the market cycle are particularly brutal for transportation.

In the short run, the pressure of overcapacity has a downward impact upon profitability as carriers scramble to lower prices to fill empty seats. In order to establish itself as a viable competitor, most carriers find they must carve out a geographic territory (usually a region, or cluster of city pairs), lease gates, and provide the number of frequencies sufficient to satisfy business passenger demand. The short term marginal cost of adding another passenger to a scheduled flight is nil—printing another ticket, adding another meal, a few drops of additional fuel. Any ticket sold makes some contribution. Hence, strong incentives exist to sell empty seats for whatever will lure a bottom to fill them.\(^\text{15}\) Carriers competing head to head spiral downward in destructive competition. In such circumstances, while carriers cover short-term marginal costs, fixed costs are necessarily ignored.

These characteristics of air transport created distress sale pricing in the early 1980s. While a bonanza for passengers, the first decade of deregulation was the darkest financial period in the history of domestic aviation. To survive, carriers had no choice but to slash wages, trim service and maintenance, and defer new aircraft purchases.

Airlines perceived that they needed monopoly opportunities to stem the economic brutality of destructive competition, so they merged and developed hub-and-spoke systems, giving them regional and city-pair market power. Hubbing is the dominant megatrend on the deregulation

\(^{15}\) The difficulty airlines face is in managing yield in a way which lures only passengers not otherwise likely to fly; hence, Saturday stay-over requirements, which are unappealing to business travelers.
landscape. Hubbing allows airlines to bring a number of flights from spoke cities into a central hub airport, interchange the traffic, and send the flights out to their final destinations several times a day. Hub domination allows airlines to raise prices significantly above competitive levels for passengers who begin or end their trips at the hub.

It is natural for firms facing extinction to seek out or create monopoly market opportunities to afford them the market power to raise prices. Thus, the large number of industry bankruptcies and mergers, and the growth of national and regional (hub) concentration, owe their existence to the destructive competition unleashed by deregulation.16

B. National Concentration

Of the 121 small airlines which entered after 1978, fewer than fifty are still operating, and they are quite small.17 Whether considered individually or collectively, the small airlines' share of the domestic passenger market is relatively insignificant. Since promulgation of the Airline Deregulation Act of 1978, all but four hub airports have come to be dominated by a single airline (three with Eastern's demise). Today, the overwhelming number of city-pairs are monopolies or duopolies.

Fifty-one mergers and acquisitions were consummated between 1979 and 1988. More than twenty of those were approved by DOT after 1985, when it assumed jurisdiction over mergers.18 The six largest airlines increased their passenger share from seventy-three percent in 1973 to eighty-four percent in 1986.19 The eight largest air-

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16 Dempsey, supra note 1, at 589.
17 Deregulation Focus, supra note 3, at Supp. A.
18 In January 1986, the five largest airlines accounted for 54% of the domestic passenger market; by 1987, the figure had grown to 72%. Fifteen independent airlines operating at the beginning of 1986 had been merged into six megacarriers by the end of 1987. The mergers approved by DOT consolidated about 70% of the nation's aircraft capacity. See Brenner, supra note 11, at 180.
19 Id. In the short term, competition unleashed by deregulation reduced the
lines accounted for eighty percent of the domestic market in 1978, and ninety-two percent in 1990.20

Much criticism has been levied at the Department of Transportation for approving every merger submitted to it since it assumed the Civil Aeronautics Board's jurisdiction over mergers, acquisitions and consolidations (under section 408 of the Federal Aviation Act) upon the CAB's demise on December 31, 1984. The Airline Deregulation Act of 1978 insisted that the agency guard against "unfair, deceptive, predatory, or anticompetitive practices" and avoid "unreasonable industry concentration, excessive market domination" and similar occurrences which might enable "carriers unreasonably to increase prices, reduce services, or exclude competition."21 But these admonitions fell on deaf ears at DOT, which never met a merger it didn't like.

For example, DOT approved Texas Air's (i.e. Continental and New York Air) acquisition of both People Express (which included Frontier), and Eastern Airlines (which included Braniff's Latin American routes);22 domination by the largest airlines. Thus, in January, 1986, the five largest airlines accounted for 54.3% of the domestic passenger market. But by June of 1987, after a series of unprecedented mergers, their share had soared to 72.2%. Dempsey, supra note 1, at 543.

20 Deregulation Focus, supra note 3, at Supp. D (updated by Happiness Is a Cheap Seat, ECONOMIST, Feb. 4, 1989, at 68). In contrast, in 1977, the ten largest airlines accounted for 89% of the market. Ott, supra note 11, at 89. One commentator summarized the structural changes in the industry that have occurred since promulgation of the Airline Deregulation Act of 1978:

The 11 major airlines have shrunk to eight; the eight former local service carriers are now two and they are trying to merge; the eight original low-cost charter airlines have been reduced to one, through bankruptcy and abandonment; 14 former regional airlines have shrunk to only four; over 100 new upstart airlines were certificated by the CAB and about 32 got off the ground and most of those crashed, leaving only a handful still operating; of the 50 top commuters in existence in 1978, 29 have disappeared . . . .

Airline Deregulation, supra note 6, at 61-62 (testimony of Morten S. Beyer).

Today, the top 50 commuter carriers who constitute 90% of that industry are captives of the major carriers, in part or in total owned, controlled, and financed by the giant airlines and relegated to serving the big airlines at their hubs. Id.


22 DOT did require that some shuttle routes be sold off in the northeastern
United's acquisition of Pan Am's transpacific routes; American's acquisition of Air Cal; Delta's acquisition of Western; Northwest's acquisition of Republic (itself a product of the mergers of North Central, Southern and Hughes Airwest); TWA's acquisition of Ozark; and USAir's acquisition of PSA and Piedmont. The major mergers which have been consummated since deregulation are graphically depicted on the following chart.23

<table>
<thead>
<tr>
<th>CHART I — MAJOR AIR CARRIER MERGERS, ACQUISITIONS, PURCHASES AND CONSOLIDATIONS SINCE PROMULGATION OF THE AIRLINE DEREGULATION ACT OF 1978</th>
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<td><strong>MARKET SHARE</strong></td>
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<td><strong>AMERICAN</strong></td>
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<tr>
<td>• American</td>
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<tr>
<td>• Air Cal</td>
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<tr>
<td>• Pan Am (transpacific routes)</td>
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<tr>
<td><strong>UNITED</strong></td>
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<td>• United</td>
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<td><strong>DELTA</strong></td>
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<td>• Delta</td>
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<td>• Western</td>
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<td><strong>TEXAS AIR</strong></td>
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<td>• Texas International</td>
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<td>• Continental</td>
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<td>• New York Air</td>
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<td>• People Express/Frontier</td>
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<td>• Britt</td>
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<td>• PBA</td>
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<tr>
<td>• Eastern/Braniff (Latin America)</td>
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<tr>
<td>• Rocky Mountain</td>
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<tr>
<td><strong>MARKET SHARE</strong></td>
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<tr>
<td>AMERICAN</td>
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<td>13.8    15.2    16.6    17.4</td>
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<tr>
<td>UNITED</td>
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<td>16.9    16.4    16.2    16.9</td>
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<tr>
<td>DELTA</td>
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<tr>
<td>12.2    12.0    13.3    13.5</td>
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<td>TEXAS AIR</td>
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<tr>
<td>19.0    19.3    15.9    13.1</td>
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corridor, but otherwise the Eastern acquisition by Texas Air passed through un-molested. See Dempsey, supra note 1, at 538.

23 To these mergers of passenger carriers, add the major air cargo acquisition of Seaboard by Flying Tigers, and the recent announcement by Federal Express of its intent to acquire Tigers, as well as the acquisition of Emery and Purolator by CF Air. Moreover, concentration levels in the passenger industry are even more pronounced when one recognizes that before deregulation, America had a healthy charter airline industry, and enjoyed significant market share. Under deregulation, it has very nearly vanished. See Brenner, supra note 11, at 184. In 1977, non-scheduled airlines had 43,000 domestic departures, compared with 18,000 in 1986. Federal Aviation Administration, Airport Activity Statistics of Certificated Route Carriers 798-800 (1986); Federal Aviation Administration, Airport Activity Statistics of Certificated Route Carriers 747-49 (1977).
<table>
<thead>
<tr>
<th>Airline</th>
<th>Percentage market share as measured by revenue passenger miles.</th>
<th>Sources:</th>
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<tr>
<td>NORTHWEST</td>
<td>10.3 8.9 9.6 11.6</td>
<td>BUSINESS WEEK, Oct. 5, 1987, at 40; WALL ST. J., Mar. 10, 1989, at A8; and AVIATION DAILY, July 13, 1990, at 85. Figures for 1990 are for the first six months of that year only.</td>
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<tr>
<td>Republic/North Central</td>
<td>10.3 8.9 9.6 11.6</td>
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<td>Southern</td>
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<td>Hughes Airwest</td>
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<td>USAIR</td>
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<td>PSA</td>
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<tr>
<td>Piedmont/Empire</td>
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<td>Henson</td>
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<td>TWA</td>
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<td>Ozark</td>
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<td>PAN AM</td>
<td>6.3 7.1 5.9 6.9</td>
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<td>Pan Am</td>
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<td>National</td>
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<td>Ransom</td>
<td>6.3 7.1 5.9 6.9</td>
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Nor are these likely to be the last of the mergers. Carl Icahn, who owns TWA, has announced that he would like to purchase another airline. But TWA may itself be shrinking, for its fleet is the oldest in the industry, and until March, 1989, it had no new aircraft on order. Pan Am has been mentioned as ripe for acquisition or bankruptcy. So to stay aloft, Pan Am has already cannibalized its transpacific routes and aircraft, its Inter-Continental Hotel chain, and its Manhattan skyscraper.

Eastern entered bankruptcy in early 1989. Even before bankruptcy, Eastern was the incredibly shrinking airline, announcing the sale of its east coast shuttle to Donald Trump, and selling its computer reservations system and other valuable assets to firms controlled by Frank Lorenzo's Texas Air.

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There is strong evidence that the airline industry will become more heavily concentrated than it already is. In 1989, the three largest airlines (American, United and Delta) accounted for more than ninety percent of the profits of the major, publicly held carriers.\textsuperscript{27} American itself accounted for twenty-two percent of the operating revenue and forty-three percent of the profits.\textsuperscript{28}

At the same time, four major airlines (Continental, Eastern, Pan Am and TWA) have a negative debt-to-equity ratio, and several have been deemed by industry experts to be on the endangered species list.\textsuperscript{29} In 1989, three of these carriers (TWA, Eastern, and Continental) accounted for two-thirds of the major airline’s interest expenses.\textsuperscript{30} More than eight percent of TWA’s and Eastern’s operating expenses is devoted to interest payment, effectively wiping out operating profit.\textsuperscript{31} As of December 31, 1989, Pan Am had a negative net worth of nearly a billion dollars.\textsuperscript{32}

These four anemic airlines combined, account for twenty-eight percent of the passenger market.\textsuperscript{33} Should they collapse, their market shares will be likely distributed among the largest, and most profitable airlines, leaving the industry even more highly concentrated than it already is.\textsuperscript{34}

\textsuperscript{27} American Generates 22 Percent of Majors' 1989 Revenues, AVIATION DAILY, Mar. 20, 1990, at 545.
\textsuperscript{28} Id.
\textsuperscript{30} TWA, AVIATION DAILY, July 25, 1990, at 155.
\textsuperscript{31} See U.S. Major and National Carriers Interest Expenses, First Quarter 1990, AVIATION DAILY, July 30, 1990, at 192 (Figures are for the first quarter 1990.).
\textsuperscript{32} Pan Am Projecting First Quarter Loss Larger than 1989's, AVIATION DAILY, Apr. 12, 1990, at 85.
\textsuperscript{33} See AVIATION DAILY, July 13, 1990, at 85. Market share statistics are based on revenue passenger miles for the first six months of 1990.
\textsuperscript{34} With the globalization of air transport, the potential also looms for the creation of international megacarriers. Already American, JAL, and Qantas are trying to buy 35% of Air New Zealand; British Airways has acquired British Caledonian; SAS has purchased a large interest in Continental Airline Holdings (formerly Texas Air); and several European airlines have bought into United's Apollo/Covia computer reservations system. Martha Hamilton, Is the Airline Industry on the Verge
Alfred Kahn characterized the contemporary airline environment as an "uncomfortably tight oligopoly." He has been particularly critical of the Department of Transportation's permissive approach to airline mergers, saying, "they have been permitted by a totally, and in my view indefensibly, complacent Department of Transportation. It is absurd to blame deregulation for this abysmal dereliction."36

As previously mentioned, DOT deserves severe criticism for its abdication of antitrust responsibility to protect the public from excessive concentration.37 Never before has the United States experienced the level of concentration in aviation than we have now. National levels of concentration have risen to unprecedented levels.


By the end of the century, there may be as few as nine or ten global megacarriers, with only four or five major airlines flying the U.S. flag. Stockton, supra note 9, at 6. U.S. megacarriers already dominate the global aviation industry:

WORLD'S TOP TEN AIRLINES, 1987

<table>
<thead>
<tr>
<th>AIRLINE</th>
<th>SCHEDULED PASSENGERS (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Airlines</td>
<td>59.1</td>
</tr>
<tr>
<td>United Airlines</td>
<td>55.2</td>
</tr>
<tr>
<td>Eastern Airlines</td>
<td>44.7</td>
</tr>
<tr>
<td>Continental Airlines</td>
<td>39.4</td>
</tr>
<tr>
<td>TWA</td>
<td>24.8</td>
</tr>
<tr>
<td>British Airways</td>
<td>19.1</td>
</tr>
<tr>
<td>Japan Air Lines</td>
<td>17.9</td>
</tr>
<tr>
<td>Lufthansa</td>
<td>16.9</td>
</tr>
<tr>
<td>Pan American</td>
<td>14.8</td>
</tr>
<tr>
<td>Alitalia</td>
<td>14.3</td>
</tr>
</tbody>
</table>


35 Alfred E. Kahn, Despite Waves of Airline Mergers, Deregulation Has Not Been a Failure, DENVER POST, Aug. 31, 1986, at 3G.
36 Kahn, supra note 3, at 234.
37 Dempsey, supra note 1, at 535.
C. Hub Airport Concentration

Before deregulation, no single airline accounted for more than fifty percent of gates, enplanements or takeoffs and landings at any major airport. Today, more than twenty major airports are dominated by a single carrier, with more than sixty percent, seventy percent, and sometimes eighty percent of landings, takeoffs, gates, and passengers.88

Since deregulation, all major airlines have created hub-and-spoke systems, funneling their arrivals and departures into and out of hub airports where they dominate the arrivals, departures, and infrastructure.39 While entry and exit regulation formerly constricted their geographic operations, deregulation has freed airlines to leave competitive and smaller markets, and consolidate their strength into regional hub and city-pair market monopolies and oligopolies. The destructive competitive environment of deregulation has led them to prefer monopoly opportunities to stem the hemorrhaging of dollars, even with the inefficiencies hub systems create by requiring circuitous routing of relatively small aircraft. As the dust settles upon the bankruptcies and mergers of deregulation, and the hub consolidation facilitated by unlimited entry and exit, a horizon devoid of meaningful competition appears.

Clearly, the merger of Northwest and Republic resulted in sharply increased levels of concentration at Minneapolis/St. Paul and Detroit; and equally clear, the same happened at St. Louis when DOT approved the merger of

88 General Accounting Office, Airline Competition 15 (1990). These include the hubs of Baltimore (51% USAir), Charlotte (76% Piedmont), Cincinnati (68% Delta), Dayton (64% Piedmont), Detroit (64% Northwest), Houston Intercontinental (72% Texas Air), Memphis (67%, Northwest), Minneapolis/St. Paul (82% Northwest), Nashville (60% American), Newark (65%, Texas Air), Pittsburgh (83% USAir), Salt Lake City (75% Delta), and St. Louis (82% TWA). Only four of America’s hubs are duopolies: Atlanta (95% Delta and Eastern), Chicago (72% American and United), Dallas (87% American and Delta), and Denver (89% Texas Air and United). Most market shares are for 1986, which explains why they differ from those set forth in Chart III. See Brenner, supra note 11, at 190.

TWA with Ozark Airlines. But as Chart II reveals, massive hub concentration has occurred at a large number of cities where no merger had a significant impact.

<table>
<thead>
<tr>
<th>AIRPORT</th>
<th>1977</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baltimore/Washington</td>
<td>24.5% USAir</td>
<td>69.3% USAir*</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>35.0% Delta</td>
<td>78.0% Delta**</td>
</tr>
<tr>
<td>Detroit Metropolitan</td>
<td>21.2% Delta</td>
<td>67.3% Northwest</td>
</tr>
<tr>
<td>Houston Intercontinental</td>
<td>20.4% Continental</td>
<td>76.3% Continental</td>
</tr>
<tr>
<td>Memphis</td>
<td>40.2% Delta</td>
<td>83.0% Northwest**</td>
</tr>
<tr>
<td>Minneapolis/St. Paul</td>
<td>45.9% Northwest</td>
<td>79.5% Northwest</td>
</tr>
<tr>
<td>Nashville Metropolitan</td>
<td>28.2% American</td>
<td>62.0% American**</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>43.7% USAir</td>
<td>86.9% USAir</td>
</tr>
<tr>
<td>St. Louis-Lambert</td>
<td>39.1% TWA</td>
<td>81.3% TWA</td>
</tr>
<tr>
<td>Salt Lake City</td>
<td>39.6% Western</td>
<td>83.8% Delta</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>33.8%</td>
<td>77.6%</td>
</tr>
</tbody>
</table>

* includes Piedmont
** second column market share figures for Cincinnati, Memphis and Nashville are for 1988.


To these cities, add the excessive levels of concentration that also have emerged in the following monopoly and duopoly hubs as of 1989:

- Atlanta (91.6% Delta and Eastern combined);
- Charlotte (93.4% USAir);
- Chicago O'Hare (82.4% United and American combined);
- Dallas/Ft. Worth (92.6% American and Delta combined);
- Dayton (79% USAir);
- Denver (82.6% United and Continental combined);
- Greensboro (64% USAir);
- Raleigh/Durham (69% American); and
- Syracuse (61% USAir).40

40 Aviation Daily, June 29, 1990, at 628-30; General Accounting Office, Airline Competition 33 (1990). Also note the following market concentration figures: Chicago Midway (65% Midway), Dallas Love (71% Southwest), Newark
Indeed, the explanation for significant levels of concentration at all but Detroit, Minneapolis/St. Paul and St. Louis is not DOT's generous approval of airline mergers, but simply the entry and exit opportunities unleashed by deregulation. Carriers adopting particular cities as hubs have increased frequencies and leased more gates, while incumbent airlines have quietly exited in favor of market dominance opportunities of their own in other hub airports. Alfred Kahn is therefore wrong. Freedom to enter and exit markets is the very heart of deregulation, and it is more responsible for concentration at more hub airports than is the DOT's abysmal dereliction. The CAB would likely not have approved the widespread entry and abandonments which produced this massive hub concentration. Nonetheless, the DOT's antitrust delinquency is responsible for national concentration levels which are unacceptable, and which dampen competition by reducing the number of competitors in particular city-pairs.

Dr. Julius Maldutis performed a study of concentration at the nation's fifty largest airports between 1977 and 1987, calculating the Herfindahl-Hirschman Index (HHI) for each. The HHI is the methodology employed by the U.S. Department of Justice for determining acceptable

(65% Texas Air), and Phoenix (65.4% America West and Southwest combined). See also Brenner, supra note 11, at 190 updated and expanded in James Ott, Congress, Airlines Reassessing Deregulation's Impact, AVIATION WK. & SPACE TECH., Nov. 9, 1987, at 163; Martha Hamilton, The Hubbing of America: Good or Bad?, WASH. POST, Feb. 5, 1989, at H1.

Even Chicago O'Hare and Atlanta Hartfield are increasingly dominated by a single firm. In 1977, United had 29% of all boardings in Chicago; by 1988, it had 53%. Even before the bankruptcy of Eastern, Delta controlled 62% of Atlanta. Id. As Eastern flew into bankruptcy in March of 1989, it sold its gates at Philadelphia to USAir, giving it more than 50% of that city. Judith Valente & Robert H. Rose, Concern Heights About the Airline Industry's March Toward Near Domination by Only a Few Major Carriers, WALL ST. J., Mar. 10, 1989, at A10.

Since Frontier was absorbed, first by People Express and then by Continental (Texas Air), no airport has enjoyed the three hub carrier competition which theretofore existed at Denver. Dempsey, supra note 1, at 592-93.

See Stockton, supra note 9, at 3-6.

Paul S. Dempsey, Deregulation Has Spawned Abuses in Air Transport, AVIATION WK. & SPACE TECH., Nov. 21, 1988, at 147.
levels of concentration for antitrust review. It provides a measure based on squaring the market share of individual firms, and adding them together. For example, a firm with a 100% monopoly would have an HHI of 10,000. Under the Justice Department’s analysis, an HHI below 1000 is presumed unconcentrated; an HHI of between 1000 and 1800 is believed moderately concentrated; and an HHI of above 1800 is deemed highly concentrated.

By 1987, forty of these fifty airports had an HHI above 1800; in other words 80% of these airports were highly concentrated. Moreover, Dr. Maldutis calculated the weighted average of concentration for all fifty airports, finding that it rose from an HHI of 2215 in 1977 to 3351 in 1987. This corresponds to a reduction in the number of “effective” competitors in the average of the fifty airports from 4.51 in 1977 to 2.85 in 1987.

Hub concentration translates into escalating fares. “Passengers who live in a hub city and begin their flight there end up paying higher fares, in some cases 50 percent more than they would have had deregulation not occurred.” The General Accounting Office found that after TWA’s merger with Ozark, TWA increased fares thirteen to eighteen percent on formerly competitive routes radiating from St. Louis. A similar study compared fares in markets radiating from Minneapolis-St. Paul in which Northwest and Republic formerly competed, and found that rates rose between eighteen and forty percent.

In fifteen of the eighteen hubs in which a single carrier controls more than fifty percent of the market, passengers

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44 Id.
45 FLYING BLIND, supra note 5, at 17-18.
46 William Stockton, When Eight Carriers Call the Shots, N.Y. TIMES, Nov. 20, 1988, at 3-1.
47 GENERAL ACCOUNTING OFFICE, AIRLINE COMPETITION 2, 3 (1988).
48 Hamburger, supra note 3, at 1A.
pay significantly more than the industry norm. Before Thanksgiving, 1988, the industry announced the highest price increases in the history of airline deregulation. Between September 1988 and February 1989, the largest carriers announced four fare increases, and several more since Eastern's bankruptcy in March 1989. Hence, the pricing benefits many consumers enjoyed under deregulation may be a short-term phenomenon. As the industry becomes more highly concentrated, prices are rising.

A recent study of nine hub airports by the Department of Transportation found that fares at all but two increased faster between 1985 and 1988 than the 11.1% increase in the airline component of the Consumer Price Index:

<table>
<thead>
<tr>
<th>Hub Airport</th>
<th>Dominant Carrier</th>
<th>Fare Increases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>Delta (62%)</td>
<td>5%</td>
</tr>
<tr>
<td>Charlotte</td>
<td>Piedmont (89%)</td>
<td>34%</td>
</tr>
<tr>
<td>Cincinnati</td>
<td>Delta (81%)</td>
<td>25%</td>
</tr>
<tr>
<td>Detroit</td>
<td>Northwest (62%)</td>
<td>27%</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>Northwest (77%)</td>
<td>21%</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>USAir (80%)</td>
<td>-6%</td>
</tr>
<tr>
<td>Raleigh</td>
<td>American (67%)</td>
<td>35%</td>
</tr>
<tr>
<td>St. Louis</td>
<td>TWA (83%)</td>
<td>22%</td>
</tr>
<tr>
<td>Salt Lake City</td>
<td>Delta (77%)</td>
<td>26%</td>
</tr>
</tbody>
</table>


The most comprehensive study to date of the effect of airport concentration upon pricing is that performed by the General Accounting Office (GAO). The GAO compared prices at fifteen concentrated hub airports and thirty-eight relatively unconcentrated airports. It found that prices were twenty-seven percent higher in the con-

49 Hamilton, supra note 40, at H2.
50 A Cheap Seat, supra note 25, at 68.
51 Concentrated airports were those defined as having more than 60% of enplanements handled by a single airline.
centrated hubs.\textsuperscript{52} Prices per mile charged by dominant airlines at concentrated hubs were thirty-eight percent higher than those charged at unconcentrated airports.\textsuperscript{53}

The Department of Transportation also conducted a study of the impact of concentration on airline pricing and concluded:

The average fare per mile at the eight most concentrated hubs is higher than the national average. Adjusting for the average trip distance and the size of the market served at the eight most concentrated hubs, fares were on average 18.7\% higher than similar markets for other airports. This finding supports the conclusion that high hub concentration leads to high fares for passengers traveling to and from such cities. Fares are highest for travel between large cities within 1,000 miles of the hub.\textsuperscript{54}

Kenneth Mead, director of the GAO’s transportation division found that “no single factor is responsible for higher fares at concentrated airports, but that it is the interaction of a number of barriers that allows carriers at these airports to charge higher fares.”\textsuperscript{55} The GAO found several factors correlating with higher fares:

\begin{itemize}
\item \textsuperscript{52} \textit{General Accounting Office, Airline Competition} 2, 3 (1989). The report was subsequently updated and expanded. \textit{General Accounting Office, Airline Competition} 3 (1990).
\item \textsuperscript{53} The higher fares at concentrated airports do not reflect a premium for non-stop service, since the average number of coupons per traveller at concentrated airports was virtually identical to that at unconcentrated airports (2.26 vs. 2.28 coupons). The difference persisted when average trip length was controlled by excluding from the comparison group of airports those where average trip length was significantly longer than for concentrated airports. Thus, neither a higher proportion of non-stops nor a higher proportion of short-haul (and thus more costly) flights can explain the fare premium at concentrated airports. The study also found that the increase in fares from 1985-1988 was generally greater at concentrated airports, and that the increase in fares was especially dramatic when a carrier established dominance during the period. Finally, the study found that in 13 of the 14 concentrated airports, the dominant carrier had higher fares, and in some cases substantially higher fares than other carriers at the same airport. \textit{Flying Blind, supra} note 5, at 18-19.
\item \textsuperscript{54} \textit{General Accounting Office, Airline Competition} 3 (1990).
\item \textsuperscript{55} \textit{U.S. Dep’t of Transportation, Secretary’s Task Force On Competition In the U.S. Domestic Airline Industry, Executive Summary} 8 (1990).
\item \textsuperscript{55} \textit{Airline Concentration, Competition Concern Senate Subcommittee, Aviation Daily}, Apr. 10, 1990, at 67.
\end{itemize}
1. The larger the share of gates a carrier leased at an airport, especially on a long-term, exclusive use basis, the higher the fares;
2. Flights at airports where a majority-in-interest clause might reduce expansion opportunities have about 3% higher fares;
3. Flights at airports where entry was limited by slot controls have about 7% higher air fares;
4. Airports with congested runway capacity and limited expansion due to majority-in-interest clauses have about 3% higher fares; and
5. Carriers with a code-sharing agreement at one of the airports on a route charge fares almost 8% higher than carriers do on routes on which they do not code share.\(^{56}\)

D. CITY-PAIR CONCENTRATION

Many defenders of deregulation insist that the airline industry is still hotly competitive because there are now fewer monopoly city-pair markets.\(^{57}\) The following chart, at first glance, sustains this allegation:

<table>
<thead>
<tr>
<th>No. of CARRIERS</th>
<th>OCT. 1978</th>
<th>JULY 1988</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4,093</td>
<td>3,481</td>
</tr>
<tr>
<td>2</td>
<td>899</td>
<td>1,054</td>
</tr>
<tr>
<td>3</td>
<td>293</td>
<td>413</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
<td>192</td>
</tr>
<tr>
<td>5</td>
<td>21</td>
<td>83</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>7</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>10+</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

**TOTAL** 5,359 5,314


\(^{56}\) Id.

\(^{57}\) Surprises of Airline Deregulation, *supra* note 3, at 319.
It is true that the overall number of monopoly markets has fallen since deregulation. But remember that under regulation a monopoly cannot extract monopoly rents from buyers because its rates are required by law to be "just and reasonable."58 Neither telephone companies nor electric utilities can charge monopoly rates despite their monopoly position because their rate and service levels are regulated by governmental agencies.59 But an unregulated monopoly can charge whatever the market will bear.

In 1978, single firms which dominated seventy-six percent of America's city-pair markets were limited by the Civil Aeronautics Board to charging "just and reasonable" rates, and earning no more than a reasonable return on investment.60 In 1988, monopoly carriers in nearly two-thirds of America's city-pair markets could charge whatever the market would bear. At the time the Airline Deregulation Act was before Congress, Alfred Kahn urged that "no automatic [pricing] freedom should be allowed in markets dominated by a single carrier."61 Today, nearly two-thirds of our nation's city-pairs are unregulated monopolies.

Steve Morrison and Clifford Winston of the Brookings Institution maintain that the effective number of competitors has increased from 1.5 per city-pair market before deregulation to 1.9 today.62 In other words, we have traded government protection for consumers against monopoly or oligopoly pricing for less than one half of one competitor per city-pair.

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60 14 C.F.R. § 399.31 (1978).
61 Kahn, supra note 3, at 232.
Neither are duopolies hot beds of competition. Two firms may implicitly agree to lethargic increases in pricing and service competition. In 1978, ninety-three percent of America’s markets were regulated monopolies or duopolies; in 1988, eighty-five percent of America’s markets were unregulated monopolies or duopolies. Statistically, this suggests an improvement. But remember that today, no government agency protects the public against monopoly pricing or the extraction of monopoly profits.

Before deregulation, even a high level of concentration could be tolerated because fare levels were regulated. A monopolist could not reap monopoly profits from a market because the CAB regulated rates, ensuring that they were "just and reasonable." But in a post deregulation environment, these high levels of concentration are a matter of serious concern, since the regulatory mechanism which formerly shielded consumers from price gouging has been eradicated by deregulation.

E. BARRIERS TO ENTRY

For several reasons, it is unlikely that a new entrant will emerge to rival the megacarriers. First, the infrastructure of gates, terminal facilities, and at four of America's busiest airports (i.e., Chicago O'Hare, Washington National, and New York's LaGuardia and Kennedy) landing slots have been consumed. Sixty-eight percent of our airports have no gates to lease to new entrants. Even if an in-

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64 DOT Secretary Burnley points out that the number of city-pairs served by two carriers has increased under deregulation from 1266 to 1833. James H. Burnley, Soaring Air Travel in Unfettered Skies, WASH. TIMES, Oct. 31, 1988, at 4-D.
65 Id.
cumbent would be willing to lease a gate to an upstart airline (and at a carrier's hub, few are so willing), the incumbent could nevertheless exact monopoly rents for the lease. The decision of DOT to allow carriers to buy and sell landing slots means that the deeper-pocket carriers can purchase market share, thereby enjoying market power to reap monopoly profits. Incumbent airlines also control hub airport expansion through "majority-in-interest" clauses. Moreover, restrictions on the type of equipment that carriers can use at several noise restricted airports also constrains new entry.

Second, the largest airlines today own the largest computer reservations systems (CRS), from which ninety percent of tickets are sold. Many critics argue that such vertical integration offers the incumbents the potential to enjoy various forms of system bias (including screen, connecting point, and database bias). The GAO has also found that the airline-owned systems are so dominant that they stifle competition in the industry. An airline which owns a CRS has a thirteen to eighteen percent greater likelihood of selling its tickets through the system.

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68 Id.

69 Often an airport will expand its capacity in order to accommodate a carrier that decides to set up a hub there. The carrier and the airport will typically enter into a long-term lease agreement for space at the facility. The revenues from the lease payments will be used to underwrite the airport bonds sold to pay for the capacity expansion and thereby lower the costs of borrowing. As a quid pro quo, the airline may require the airport to include a majority-in-interest clause in the lease agreement giving the airline substantial influence in any future airport construction activities that would affect its lease payments. GENERAL ACCOUNTING OFFICE, AIRLINE COMPETITION 26 (1990).


72 Tom Hamburger, Fighting Back Begins As Costs Go Up, Up and Away, MINNEAPOLIS STAR TRIB., Dec. 24, 1988, at 6A.

73 Id. (quoting Michael Levine).
United and American own the dominant computer reservations systems, which together account for seventy-seven percent of passenger bookings.

Moreover, the advantages of being listed in the computer as an “on line” connection with one of the major airlines has led forty-eight of the fifty small air carriers to affiliate themselves with the megacarriers, renaming their companies (for example, United Express, Continental Express, or American Eagle) and repainting their aircraft in megacarrier colors. Ninety percent of the 31.7 million passengers who flew aboard regional airlines in 1987 were carried aboard code-sharing airlines. The small carriers have become, in effect, franchisees of the behemoths of the industry, and are therefore an unlikely source from which new competition will spring. They are also declining in number. The regional airlines, peaking at 246 in 1981, dwindled to 168 by 1987. Sophisticated computers also give airlines the ability to manage yield in a way to adjust the number of seats for which discounts are offered on an hourly basis, depending on passenger demand for seats.

Third, large airlines have more attractive frequent flyer programs, which serve as a lure to business travelers, the most lucrative segment of the market. Once committed to a carrier’s frequent flyer program and having some investment in accumulated mileage, a business traveler may prefer that carrier over its rivals even when the rivals’ flights are cheaper. After all, most business travel is not paid by the individual flying, but by the firm.

Brand loyalty makes it difficult for a new rival to find a niche, particularly when its frequent flyer program offers free travel to decidedly less exotic destinations. Suppose a major airport could be found with sufficient capacity to allow a new rival to establish a hub. How could, for exam-

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75 *Id.*
76 *GENERAL ACCOUNTING OFFICE, AIRLINE COMPETITION: IMPACT OF COMPUTERIZED RESERVATIONS SYSTEMS* 6 (1986).
ple, an Air Omaha lure passengers away from its rivals' frequent flyer programs with their free trips to Hawaii, when Air Omaha could only offer a free weekend in Cedar Rapids?

Not only are the frequent flyer programs creating passenger loyalty, but commission overrides and promotions are generating travel agent loyalty.\(^\text{77}\) Hence, both the passenger and agent often prefer a more expensive, established airline, to a discount carrier. Indeed, the travel agent has been given an incentive to engage in fraud. Suppose a consumer calls and asks whether there is a flight on Carrier A at noon. There is, but the agent is working toward commission overrides on Carrier B this month. It would be easy for the agent to say, “Sorry, the noon flight is sold out. But I can get you a seat at 1:30 on Carrier B.”

Fourth, although new entrants enjoyed significantly lower labor costs in the inaugural years of deregulation, the squeeze on carrier profits unleashed by deregulation has forced management to exact serious concessions in terms of labor wages and work rules. Some, like Continental and TWA, have effectively crushed their unions. Others like United, American, and Delta, established two-tier pay scales, with B grade pay for newly hired employees. Thus, the margin of labor cost and productivity between a new entrant and an established airline has been narrowed.

Fifth, incumbents have shown that they will not sit idly by while new rivals rob them of market share. When the new entrants offer lower fares, the incumbents almost always match them. This destroys the new rival for a number of reasons. For example, suppose our new carrier, Air Omaha, does some calculations and finds that if it offers a forty-nine dollar fare between Omaha and Minne-

\(^{77}\) Domestic commission overrides range from 1% to 5% above the standard 9% to 10% commission. International bonuses can be several times the standard 8% commission. Robert A. Rose, Travel Agents' Games Raise Ethics Issue, WALL ST. J., Nov. 23, 1988, at B1.
apologies, it will fill about seventy percent of its seats because the incumbent, Northwest, offers no fare so low. Because of lower labor costs and the use of leased, relatively old equipment, assume Air Omaha's break even load factor is a modest 55%. So, Air Omaha begins operations and rolls in a healthy profit, right? Wrong. Northwest matches the forty-nine dollar fare, and Air Omaha's load factors drop to, say thirty-five percent, well below its break even load factor. The antitrust laws have little to say about following a price leader. Not only can Northwest withstand the loss because of its deeper pocket, but the discount fare actually costs it little, because it is only offered to passengers traveling between two points (origin and destination traffic). Remember, Northwest has a major hub in Minneapolis, and most of its passengers are traveling to beyond points; they are not offered the bargain fare. Thus, only a portion of its passengers are enjoying the discount. Moreover, many of the business travelers in the city-pair market will be willing to pay more than forty-nine dollars because they are addicted to Northwest's frequent flyer program. Air Omaha must eventually exit the market, for only a carrier with a hub at the other end point can successfully challenge a rival at its hub.

Finally, with more than 150 airlines having failed since 1978, many having been pushed into the abyss of bankruptcy by the predatory behavior of their larger rivals, investor confidence in new airline ventures has largely evaporated.

Hence, significant new entry is highly unlikely in the deregulated airline industry. The dominance by incumbent carriers of gates, terminal space, landing and takeoff

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81 See Dempsey, supra note 1, at 593-94.
slots, computer reservations systems, and the most attractive frequent flyer programs makes it unlikely that new entrants will emerge to challenge the megacarriers. In fact, no major carrier has emerged since 1985.82

The theory of contestable markets, which provided an intellectual justification for deregulation, has been refuted by an overwhelming body of empirical evidence.83 The theory was premised upon the false assumption that transportation was inherently competitive, and that the only barriers to entry were governmental requirements that carriers obtain certificates of public convenience and necessity before being allowed to compete. Here again, deregulation's proponents overestimated the competitive nature of the industry. As Alfred Kahn noted, "certainly one of the assumptions behind airline deregulation was that entry would be relatively easy."84 Former DOT As-

82 Hamburger, supra note 3, at 9A.
83 As one commentator noted:
Entry into the industry by new carriers seems remote, and entry onto new routes is far more difficult than many envisioned it would be with deregulation. Many airline observers thought that the 1978 deregulation of pricing and entry would make airline markets 'contestable.' That is, airlines could engage in hit-and-run entry into each other's markets in response to profit opportunities — simply by shifting a plane from one route to another. Instead the evidence compiled in the USAir-Piedmont record, as well as a large body of solid research by economic and legal scholars in the past three years, demonstrates that incumbent airlines are frequently able to charge higher prices on routes where other carriers face barriers to entry.

84 Kahn Interview, supra note 6, at 6. In response to the question of whether there was "too much emphasis given to the absence of entry barriers and to the theoretical possibility of entry, as opposed to actual entry," Kahn recently recounted his support for pricing regulation in markets having but one or two carriers, as 85% of America's city-pairs today do:
Unquestionably. Certainly one of the assumptions behind airline deregulation was that entry would be relatively easy.... The original deregulation bill retained a rate regulatory ceiling on any routes in which a single carrier accounted for 90 percent or more of business. As Chairman of the Civil Aeronautics Board, I testified on behalf of a unanimous board which had adopted the posture of favoring deregulation, that the ceiling trigger should be changed to 70 percent. We believed that while entry should be legally free and would be relatively easy, we never thought that would provide ade-
Assistant Secretary Matthew Scocozza recently confessed, "To be very honest, in 1978 we envisioned that there would be a hundred airlines flying to every major hub ...." 85

The foundation upon which the theory rested has been shattered by a decade of evidence that proves that economic barriers to entry, significant advantages in terms of traffic density, and economies of scale and scope do exist in the airline industry, and are of some significance. As Assistant Attorney General for Antitrust, Charles Rule, recently observed, "Most airline markets do not appear to be contestable, if they ever were .... Difficulties of entry, particularly on city pairs involving hub cities, mean that hit-and-run entry is a theory that does not comport with current reality." 86

Even if new entry is unlikely, why should we be concerned with the high level of concentration which has emerged in the airline industry under deregulation? After

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85 Power, supra note 12, at 73.

86 Charles Rule, Antitrust and Airline Mergers: A New Era, in 57 TRANSP. PRAC. J., Mar. 7, 1989, 62, at 68, 70. On January 1, 1989, the Justice Department took over the largely latent airline merger authority of DOT. Id. Mr. Rule's recognition of market reality appears to be a breath of fresh air over his DOT's counterpart's blind faith in market theory.
all, even though Coke and Pepsi dominate the soft drink industry, don’t we still have pricing competition between them? Although other American industries are dominated by huge firms, transportation is different because of the way it impacts the economy. Melvin Brenner said it best:

Other industries, even when comprised of only a few large firms, do not usually end up with a one-supplier monopoly in specific local markets. But this can happen in air transportation.

Moreover, because of the nature of transportation, a local monopoly can do greater harm to a community than could a local monopoly in some other industry. This is because transportation is a basic part of the economic/social/cultural infrastructure, which affects the efficiency of all other business activities in a community and the quality of life of its residents. The ability of a city to retain existing industries, and attract new ones, is uniquely dependent upon the adequacy, convenience, and reasonable pricing of its airline service.87

III. EXISTING ANTITRUST LAW

A. HISTORY

The tremendous rise in industrial activity after the Civil War gave rise to a concentration of the means of production in the United States. This development in turn led to the creation of cartels and agreements to fix prices at levels above competitive levels. These and other abusive practices led Congress in 1890 to pass the Sherman Antitrust Act, which forbade unlawful attempts to monopolize, as well as conspiracies in the restraint of trade.88 The original language of this seminal piece of antitrust legislation remains substantially unchanged:

§ 1 Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or com-

87 Brenner, supra note 11, at 189.
88 See, e.g., Standard Oil Co. v. United States, 221 U.S. 1 (1911); Northern Sec. Co. v. United States, 193 U.S. 197 (1904).
merce among the several States, or with foreign nations, is declared to be illegal…

§ 2 Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States… shall be… guilty of a felony.

Early Supreme Court cases interpreting the Act were narrow, holding that the word "commerce" in the Act limited application of its provisions to the actual trading of commodities and not to the manufacture of commodities. It was only after the trustbearing policies of the Theodore Roosevelt administration ignited broader interpretations of the Act that Congress created the Federal Trade Commission and passed the Clayton Act. This Act expanded upon the Sherman Act by prohibiting price discrimination and restricting such practices as tying contracts, exclusive dealing arrangements, and the use of interlocking directors. However, inasmuch as the Clayton Act also broadly expanded application of the antitrust laws, subsequent antitrust legislation and case law was directed primarily to providing exemptions to such entities as sports leagues, labor unions, and government subdivisions. Although the Robinson-Patman Act and Keller-Kefanner Act subsequently filled "jurisdictional holes," the Sherman Act remains the cornerstone of antitrust law in the United States.

90 Id. § 2.
92 See W. Hamilton & I. Till, Antitrust in Action (Monograph at 16, National Economic Committee), 76th Cong., 3d Sess. 11 (1940) (cited in Ernest Gellhorn, Antitrust Law and Economics 27 (1986)).
B. THE LAWFUL MONOPOLY

At first blush it would appear that the existing state of monopolization of airport resources by one or two dominant carriers is in direct violation of section two of the Sherman Act that forbids monopolization of "any part of . . . commerce among the several States." In this regard, section two of the Act applies to any entity "who shall monopolize," or "attempt to monopolize" and, unlike section 1 is not limited to a "contract . . . combination . . . or conspiracy." There are, however, several legal obstacles to overcome before the Sherman Act can be directly applied to either airline or airport monopolization of airport resources.

First, the airport itself may be immune from antitrust action under the State Action Doctrine first set forth by the Supreme Court in *Parker v. Brown*.

However, subsequent cases have attempted to set out exceptions to this doctrine. Second, if the focus is to be on the airline itself, it must be shown either that an airline "conspired" to

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97 *Parker*, 317 U.S. at 351-52. Here, state "participation" in the form of agricultural production provisions was held not to be in violation of the Commerce Clause. Further, "the state command to the Commission and to the program committee of the California Prorate Act is not rendered unlawful by the Sherman Act since, in view of the latter's words and history, it must be taken to be a prohibition of individual and not state action." *Id.* at 352. There is no suggestion of a purpose to restrain "State Action" in the Act's legislative history.

The state, in adopting and enforcing the prorate program, made no contract or agreement and entered into no conspiracy in restraint of trade or to establish monopoly but, as sovereign, imposed the restraint as an act of government which the Sherman Act did not undertake to prohibit. *See Olsen v. Smith*, 195 U.S. 332, 344-45 (1904); *but cf.* Lowenstein v. Evans, 69 F. 908, 910 (1895). However, a state does not give immunity to those who violate the Sherman Act by authorizing them to violate it or by declaring that their action is lawful. *Northern Sec. Co. v. United States*, 193 U.S. 197, 332 (1904).

restrain trade (in violation of section one of the Sherman Act), or that an airline "monopolized" a market (in violation of section two). Moreover, the airline itself might also be protected under the airport's immunity umbrella pursuant to the Noerr-Pennington Doctrine.99

Since monopolization of airport resources can be traced to long-term lease agreements entered into between airlines and airports, but not to specific agreements between individual airlines, a successful section one strategy appears unlikely. This leaves a section two strategy based on the empirical evidence and undeniable fact that airport resources are monopolized at the nation's most important airports by one or two dominant carriers.100 That such monopoly power has been used to raise fares above competitive rates is also clear from the empirical evidence.101

However, even this evidence may not be enough, since "monopolization" has been interpreted by the courts to require not only monopoly power, but a finding that a firm "willfully acquired or maintained that power."102 Lest such a formulation appear as a semantical convolution, one scholar has attempted to clarify the rule and define a lawful monopoly as follows:

Proof of the existence of monopoly power does not prove the offense of monopolization. . . . [I]f the firm does not engage in market conduct which has the purpose or effect of protecting, enhancing, or extending its power - then the firm, despite its monopoly power, is not in violation of Section 2; it is a lawful monopoly. A party charging the offense of monopolization must prove both the existence of monopoly power and either that the power was acquired or has been used in ways which go beyond normal, hon-


100 See supra Part II and text accompanying notes 38-56.


C. The State Action Doctrine

Most antitrust actions brought by airlines or operators against airports owned by municipal corporations and authorities have been defeated by application of the State Action Doctrine. First enunciated by the United States Supreme Court in *Parker v. Brown*, this doctrine states that "nothing in the language of the Sherman Act... suggests that its purpose was to restrain a state... from activities directed by its legislature." In *Pueblo Aircraft Service Inc. v. City of Pueblo, Colorado*, fixed based airport operators brought an antitrust action against the City of Pueblo, Colorado as owners of the local municipal airport. The Tenth Circuit Court of Appeals upheld a finding of municipal immunity from antitrust action. In doing so, it relied on the U.S. Supreme Court case of *Community Communications Co. v. City of Boulder, Colorado*, which held that municipal action need not itself constitute state action in order to qualify for immunity, but need only constitute "municipal action in furtherance or implementation of clearly articu-

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104 317 U.S. 341 (1943).

105 Id. at 350-51. See also Apex Hosiery Co. v. Leader, 310 U.S. 469, 492-93 (1940); Standard Oil v. United States, 221 U.S. 1, 54-58 (1910); United States v. Addyston Pipe & Steel Co., 175 U.S. 211, 228 (1899).


107 A fixed base operation is one that requires the operator who enters into a lease agreement-contract with City to provide specific facilities, services, equipment and personnel to meet the requirements for certain operations of an airport used by aircraft, passengers, crews and freight shippers. In most cases, the leases include those portions of the airport premises with hangars and other improvements thereon where the services and supplies are performed and kept.

108 Id. at 809.

In *Pueblo*, the court found that allegedly anti-competitive airport actions under a municipal ordinance enacted pursuant to a home rule provision of the Colorado constitution did not constitute "municipal action" qualifying for *Parker* immunity. It nevertheless granted immunity to the Pueblo airport based on the statutory grant to the city by the state "to acquire and operate a municipal airport." This statute further declared that such airport operations were "public governmental functions, exercised for a public purpose, and matters of public necessity."

Similar considerations led to a conferral of antitrust immunity on the Massachusetts Port Authority in 1966, and again in 1987, when airlines brought antitrust actions based on the Port Authority's denial of access to airport resources. Although the First Circuit acknowledged in the 1987 case that the Supreme Court had "tightened the immunity rules for certain kinds of state instrumentalities," it nevertheless granted antitrust immunity to the Port Authority based on such "typical governmental attributes as the power of eminent domain, rulemaking authority, bonding authority, and tax exempt status."

Thus, the court found that the immunity requirement of a

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111 *Pueblo*, 679 F.2d at 807.

112 Id. at 808 (relying on COLO. REV. STAT. § 41-4-101 (1973)).

113 Id.


115 *Interface Group*, 816 F.2d at 13.

116 *Id.* (citing MASS. GEN. LAWS ANN. ch. 91 app., §§ 1-3, 1-4, 1-8, 1-9, 1-17 (West 1992)); but cf. *Commuter Transp. Sys., Inc. v. Hillsborough County Aviation Auth.*, 801 F.2d 1286, 1290 (11th Cir. 1986) (citing these attributes as a rationale for finding that the Authority was similar to a municipality).
finding of municipal action pursuant to a "clearly articulated and affirmatively expressed state policy"\textsuperscript{117} was satisfied.

Likewise in \textit{Rocky Mountain Airways, Inc. v. Pitkin County},\textsuperscript{118} the court granted antitrust immunity to a county considered to be a political subdivision of the state.\textsuperscript{119} In \textit{Rocky Mountain}, an airline alleged that the airport had used its monopoly power to charge fees and rents that were far above competitive levels. Relying on \textit{Pueblo} and \textit{Community Communications}, the court found that the county, by operating the airport, was "undeniably acting in its governmental (rather than proprietary) capacity and, like the City of Pueblo [was] immune from the . . . Federal Antitrust laws."\textsuperscript{120} The court relied on the fact that \textit{Pueblo} conceded and that the state "by affirmative legislative action granted [municipalities] an exemption from operation of federal antitrust laws."\textsuperscript{121}

Although most other reported cases of antitrust lawsuits against municipal or county airports have failed due to application of the State Action Doctrine, there are a few cases in which the courts have refused to grant immunity. In \textit{Pumpkin Air, Inc. v. City of Addison},\textsuperscript{122} for example, the district court refused to grant immunity to a city in an antitrust action brought by aviation-related entities who alleged that they were denied access to airport resources.\textsuperscript{123} Despite language in a Texas statute stating that "every municipality is authorized . . . to plan . . . operate, [and] regulate . . . airports,"\textsuperscript{124} the court nevertheless concluded that the legislation did not contemplate the implementation of anti-competitive activities in airport

\textsuperscript{117} \textit{Interface Group}, 816 F.2d at 13 (quoting Lafayette v. Louisiana Power & Light Co., 435 U.S. 389, 410 (1978)).
\textsuperscript{118} 674 F. Supp. 312 (D. Colo. 1987).
\textsuperscript{119} Id. at 316.
\textsuperscript{120} Id.
\textsuperscript{121} Id. (quoting \textit{Pueblo}, 679 F.2d at 809).
\textsuperscript{122} 608 F. Supp. 787 (N.D. Tex. 1985).
\textsuperscript{123} Id. at 795.
operation. "While it is conceivable that (the legislation) was not intended to encompass the antitrust laws, its plain meaning cannot be ignored." Further, the court distinguished the Colorado statute that had been held to confer immunity in Pueblo by noting that "[a]lthough the Colorado provisions are similar in their authorizations to the Texas Act, the former is not comparable to the (Texas legislation), subordinating the law's provisions to the mandates of federal law."

D. The Noerr-Pennington Doctrine

Private firm defendants argue, like their municipal partners, that they too were clothed with antitrust immunity under the Noerr-Pennington Doctrine set forth in two Supreme Court cases. Under this doctrine a private firm enjoys immunity where its monopoly is the result of the firm's exercise of its First Amendment rights in lawfully petitioning or lobbying the city for concessions or privileges. In 1988, the Supreme Court reiterated that "[p]rivate action that is not genuinely aimed at procuring favorable government action is a mere sham that cannot be deemed a valid effort to influence government action." This is categorized as the "sham" exception, and is noted by a circuit court: "Actions taken to discourage and ultimately prevent competitors from meaningful access to the processes of administrative agencies fall within the sham exception to Noerr-Pennington immunity." In Noerr, the Court conceded: "[T]here may be situations in which a publicity campaign, ostensibly directed towards influencing governmental action, is a mere

126 Id. at 792.
sham to cover what is actually nothing more than an attempt to interfere directly with the business relationships of a competitor and the application of the Sherman Act would be justified."¹³⁰

Furthermore, *City of Columbia v. Omni Outdoor Advertising, Inc.*¹³¹ provided that the "sham exception to *Noerr* encompasses situations in which persons use the governmental process — as opposed to the outcome of that process — as an anticompetitive weapon."¹³² An example of such a weapon is the filing of frivolous objections to the license application of a competitor, with no expectation of achieving denial of the license but simply in order to impose expense and delay.¹³³ Further, a "sham" situation involves a defendant whose activities are ingenuously aimed at obtaining favorable government action.¹³⁴

E. THE LOCAL GOVERNMENT ANTITRUST ACT OF 1984

Although a municipality and the associated private de-

¹³⁰ *Noerr*, 365 U.S. at 144.
¹³² *Id.* at 1354. Note, however, that the Court rejected an alternate exception to the *Noerr*-Pennington Doctrine: the "co-conspirator" exception. This was the most significant indication of a crack in the dike of state immunity that now holds back antitrust actions against airports for monopolization of resources. In *Omni*, the plaintiff, a private billboard firm, brought an antitrust action against the city of Columbia, South Carolina, and another private firm for allegedly conspiring to keep the plaintiff out of the city's outdoor advertising market. The Fourth Circuit acknowledged that, in order to enjoy antitrust immunity, a city need not show that its acts were under legislative compulsion, that the state actively supervised the city's activities, or even that the state expressly authorized the city to engage in anti-competitive conduct, so long as anti-competitive aspects are a foreseeable result of the authorized actions. *Omni*, 891 F.2d at 1131. Rather, all that is required of a city is that it is adhering to state policy to replace competition with regulation. *Id.*

Despite finding that this latter requirement was met, however, the court refused to clothe the city with immunity where the jury had found that the city "conspired solely to further a private firm's commercial purposes to the "detriment of competition." *Id.* Citing dictum from *Parker*, the court adopted the "conspiracy" exception: "We have no question [in this case] of the municipality becoming a participant in a private agreement or combination with others for restraint of trade." *Id.* at 1133 (quoting *Parker*, 317 U.S. at 351-52).

¹³⁴ *Omni*, 111 S. Ct. at 1357.
fendant may not be immune from antitrust liability, the city might nevertheless be immune from damages under the Local Government Antitrust Act of 1984.\textsuperscript{135} This Act, passed by Congress in response to the outcry of local governments fearful of the financial ruin of antitrust treble damage liability, prohibits damages, interest, costs and attorneys' fees in antitrust actions brought against local governments.\textsuperscript{136} Although the statute does not purport to limit injunctive relief, it was clearly expected to limit the number of antitrust actions against local governments. A commentary to the Act states:

\begin{quote}
Note that the Act does not change the legal tests for showing that a local government has violated the antitrust laws. It is limited to changing the remedies available to a private plaintiff who does prove a violation. Nevertheless, the removal of the incentive of treble damage liability may be expected to curb the prior explosive growth in treble damage actions against local governmental units but not necessarily eliminate them.\textsuperscript{137}
\end{quote}

Thus, even if a court refuses to confer immunity on a municipality where there is evidence that the municipality was not acting pursuant to a state statutory scheme or direction but rather conspiring to further a private entity's commercial purposes, the Local Government Antitrust Act makes action against a municipality an unpromising strategy for breaking up an airport monopoly.

F. \textsc{Empirical Evidence For Antitrust Liability}

Even if the defense of immunity can be overcome, there remains the question of the legal basis for an antitrust attack on airport monopolization. It is concluded that the empirical evidence does not provide a strong factual basis for a finding of section one antitrust liability.

The existing state of monopolization of airport re-

\begin{footnotes}
\item[136] Id. § 36.
\item[137] ROBERT M. HARDWAY, AIRPORT DEREGULATION LAW AND PUBLIC POLICY 227 (1991).
\end{footnotes}
sources can be traced to two distinct developments. Incumbent airlines originally obtained their rights of access to airport resources through long-term lease agreements with airport authorities. Such agreements have long been an essential feature of airport financing, since guarantees of airline use of airport facilities are considered a prerequisite to investor support and the sale of municipal bonds.138 "Majority-in-interest" clauses in such leases often assure a participating airline of a significant role in important decisions regarding the development of the airport.139

Since many of these leases extended for periods as long as thirty years or more,140 effective airline control of airport resources was also extended for such periods. Such control made entry by new firms extremely difficult. Indeed, by the mid-1980s, many major airports had no gates or terminal space available for new entrants.141

When the FAA in 1969 designated five major airports as "high density" airports, the number of take-offs and landings were limited by means of the FAA’s High Density Rule (HDR).142 Later, in 1985 incumbent airlines were grandfathered to most existing "slots," further consolidating the grip of incumbent airlines on airport resources.143 Although the 1985 FAA "Buy-Sell" Slot Rule permitted the sale of slots by incumbents to new firms, and a few slots were distributed by lottery, competitive pressures were such that, in practice, few slots changed hands, and those which did often were sold at exorbitant prices.144

The second development was a multitude of airline mergers, the most significant of which occurred during

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138 Id. at 93-104.
139 Deregulation at the Crossroads, supra note 66, 19-20 (1980).
140 Id. at 45-46.
141 HARDAWAY, supra note 137, at 187-88.
142 Deregulation at the Crossroads, supra note 66, at 3.
143 Id. at 4.
144 Id. at 27-28; HARDAWAY, supra note 137, at 193.
the period 1984 to 1988.\textsuperscript{145} The result of such mergers was to consolidate control of the aviation industry in the hands of a few dominant carriers. Many firms were purchased not for their tangible assets (in many cases they had no tangible net worth) but rather for their rights of access to airport resources in the form of slots and lease rights to gates and terminal space. By 1988 this process of consolidation was already in its final phase, and access to the majority of major airports was controlled by one or two dominant carriers.

G. ANTITRUST THEORIES

In seeking the most appropriate antitrust strategy for breaking up the airport monopolies, several theories and doctrines have been considered and rejected. Traditional antitrust theories based on monopolization under Section 2 have been rejected as lacking sufficient evidence of willful acquisition of monopoly power.\textsuperscript{146} For example, under an "exclusive dealing" theory, it might be argued that an airline's lease agreement with an airport discourages an airport from leasing additional space to competitors.\textsuperscript{147} Evidentiary support for this thesis might be found in the language of majority-in-interest and other clauses in lease agreements that give an airline veto power or other effective control over whether an airport may expand or further develop its facilities. Such expansion would, of course, make space available to the incumbent airlines' potential competitors. An antitrust policy against such exclusive dealing can be found in the case of \textit{Standard Oil Co. of California v. United States}\textsuperscript{148} in which the Court declared agreements between Standard Oil Company and independent gas stations, whereby the independent sta-

\textsuperscript{145} The market and deregulatory dynamics that motivated such mergers are discussed in Part II.


\textsuperscript{148} 337 U.S. 293 (1949).
tions agreed not to sell other than Standard's brand, illegal.\textsuperscript{149} Even if an analogy could be found between selling gasoline and selling (or leasing) terminal gates, however, the focus of any antitrust action would be on the airport (which is likely immune), not the airline.\textsuperscript{150} Furthermore, airport lease agreements generally do not in fact contain specific exclusionary clauses\textsuperscript{151} and "legitimate business reasons" can be found for the majority-in-interest clauses.

A "tie-in" theory, based on International Salt Co. \textit{v. United States},\textsuperscript{152} might be based on the argument that an airline's agreement to use an airport's facilities "tied-in" to an agreement to purchase only fuel sold by the airport at above market prices. Such a theory, although useful in an antitrust action by an incumbent airline against an airport (assuming no immunity), would not provide a basis for breaking up the monopolization of airport resources.

Likewise, a "boycott" or "joint venture" theory might be based on the premise that incumbent airlines, by contracts or combinations, have agreed that an airport will not sell airport access rights to competitors.\textsuperscript{153} However, this theory lacks sufficient evidentiary foundation. While there is some anecdotal evidence of airline scheduling committees refusing to allocate slots to new entrants or competitors even when those slots were available, such evidence is derived primarily from the pre-1979 regulatory period when the committees enjoyed antitrust protection.

\section*{H. The Essential Facilities Doctrine}

The Essential Facilities Doctrine is the most appropri-
ate theoretical basis for antitrust action. We recognize that there is presently considerable debate both as to this doctrine’s place in the law of antitrust and its economic underpinnings.\textsuperscript{154} Indeed, if there is any consensus at all regarding the doctrine, it is that the standards that have emerged are by no means clear and consistent.\textsuperscript{155} This has been explained by the observation that “[n]o single case is comprehensive in its treatment of the issue,”\textsuperscript{156} that the case claimed to be the source of the doctrine, \textit{Otter Tail Power Co. v. United States},\textsuperscript{157} is not an essential facilities case at all, and that the doctrine is often confused with the related doctrine of vertical foreclosure.\textsuperscript{158}

The most cited example of the application of the Essential Facilities Doctrine is the 1912 Supreme Court case of \textit{United States v. Terminal Railroad Association of St. Louis}.\textsuperscript{159} In \textit{Terminal Railroad}, an association of railroads acquired control over the critical bridge spanning the Mississippi River in St. Louis. Competing railroads were either excluded from access to the bridge (which provided the only economical rail link to the west), or given access only on discriminatory terms. The Court held that the railroad had to share its exclusive lines with competing railroads.\textsuperscript{160} The doctrine based on this result was later summarized by a federal court as follows: “Any company which controls an ‘essenceential facility’ or a ‘strategic bottleneck’ . . . violates the antitrust laws if it fails to make ac-


\textsuperscript{156} Tye, supra note 154, at 344.

\textsuperscript{157} 410 U.S. 366 (1973).

\textsuperscript{158} Tye, supra note 154, at 344-45 (citing Floyd L. Norton & Michael B. Early, \textit{Limitations on the Obligation to Provide Access to Electric Transmission and Distribution Lines}, 5 \textit{ENERGY L.J.} 47, 54-55 (1984)).

\textsuperscript{159} 224 U.S. 383, 411 (1912).

\textsuperscript{160} \textit{Id.} at 409-13.
cess to that facility available to its competitors on fair and reasonable terms that do not disadvantage them."^{161}

The essential facilities doctrine has since been applied to declare illegal the refusal of a sports arena to lease its premises to a competitor.^{162} In another classic application of the doctrine, the Federal Communications Commission prohibited American Telephone and Telegraph from refusing competitors access to its telephone lines.^{163} However, the courts have refused to apply the doctrine in other cases, such as where the owner of a minidome refused to lease to competitors.^{164}

The Supreme Court addressed the corollary question of refusal to deal with competitors in *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*^{165} This case involved a dispute between Aspen Skiing, operator of three of the four ski facilities in Aspen, Colorado, and Aspen Highlands, operator of the fourth. Aspen Skiing would only agree to offer a multi-area ticket used at all four of the Aspen ski facilities if Aspen Highlands would accept an unreasonably low fixed percentage of the revenue. Aspen Highlands refused and suffered a sharp decline in its revenues.

The jury found the three operators liable for monopolization under section two of the Sherman Act, and characterized the defendants' actions in excluding the plaintiff as a refusal to deal.^{166} Defendants argued on appeal to the Tenth Circuit that no such duty exists unless the defendant, through vertical integration, has come to monopolize the "supply of a component necessary for production, distribution or sale of a rival's product or service."^{167} The

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^{162} Fishman v. Estate of Wirtz, 807 F.2d 520 (7th Cir. 1986).

^{163} American Tel., 524 F. Supp. 1336.


^{166} Id. at 597.

Tenth Circuit, however, declined to "adopt a narrow rule that would immunize an unintegrated monopolist from antitrust liability," and instead asserted that "in a case where there is a unilateral refusal-to-deal by a monopolist . . . the bottleneck doctrine is applicable."

Noting that the duty to deal constitutes one of the most "unsettled and vexatious" issues in antitrust law," the Tenth Circuit preceded to recognize two lines of cases. The first line deals specifically with the essential facilities doctrine under which "a business or group of businesses which controls a scarce facility has an obligation to give competitors reasonable access to it." The second line of cases employs an intent test whereby a business may deal with whomever it chooses as long as no "purpose to create or maintain a monopoly" exists. The second line of cases focuses on the actual intent manifested by the refusal to deal, rather than whether the facility in question is in fact essential. Instead of choosing between the two lines, the circuit court in Aspen applied both lines, to support the finding of antitrust liability against the defendants. The Tenth Circuit stated the proposition that four elements (the MCI requirements) are necessary to establish liability under the essential facilities doctrine: 1) control of the essential facility by a monopolist; 2) a competitor's inability to duplicate the facility; 3) denial of the use of the facility to competitor, and 4) the feasibility of providing the facility.

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168 Id. at 1519.
169 Id. (quoting Byers v. Bluff City News Co., 609 F.2d 843, 860 (7th Cir. 1979)).
170 Id. (quoting Byers, 609 F.2d at 846).
171 Id. (citing Associated Press v. United States, 326 U.S. 1 (1945) (enjoining Associated Press from refusing to furnish its service to its Members competitors)); Gamco, Inc. v. Providence Fruit & Produce Bldg., 194 F.2d 484 (1st Cir. 1952), cert. denied, 344 U.S. 817 (1952) (prohibiting fruit wholesalers who jointly own a warehouse from excluding a competing wholesaler absent some justification).
172 Aspen Skiing, 738 F.2d at 1519 (quoting United States v. Colgate & Co., 250 U.S. 300, 307 (1919)).
173 Id.
174 Id. at 1520.
175 Id. (citing MCI Communications Corp. v. American Tel. & Tel. Co., 708 F.2d 1081, 1132-33 (7th Cir.), cert. denied, 464 U.S. 891 (1983)).
the second test a showing of intent to "create or maintain a monopoly must be established."176

The Supreme Court affirmed the Tenth Circuit’s judgment on the grounds of monopolization, and therefore did not reach the issue of the applicability of the essential facilities doctrine.177 However, the Supreme Court cautioned that there was no general "duty to deal," and affirmed that any section two violation of the Sherman Act required both the power and the intent to monopolize.178 Intent, however, could be shown by the failure to prove a valid business excuse.179

Despite the less than enthusiastic references to the essential facilities doctrine by the Supreme Court in Aspen, its affirmance of the judgment recognizes limits to liability for refusal to deal with a competitor. Some scholars suggest that the Supreme Court’s test for monopolistic intent is so broad that "it could find liability in nearly all refusals that generate anti-competitive effects."180 Robert Bork suggests that, absent any anti-competitive incentives to refuse to deal, there should be an assumption that economic efficiency provides the motive for a refusal to deal.181 David Gerber suggests that application of the essential facilities doctrine involves a "type of price regulation for monopolists who are fortuitously situated in natural monopoly industries and who may be required to share the wealth. Courts should be cautious in imposing a duty to deal in such cases so that they do not indiscriminately penalize successful and lawful competitors."182

Nor have the circuit courts been willing to give broad interpretation to Aspen. In Olympia Equipment Leasing Co. v.

176 Id. at 1521 (quoting United States v. Colgate, 250 U.S. 300, 307 (1919)).
177 Aspen Skiing, 472 U.S. at 611 n.44.
178 Id. at 600-01, 603 n.28.
179 Id. at 597.
180 Gerber, supra note 155, at 1081.
181 Id. at 1085 (citing ROBERT BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 290 (1978)).
182 Id. at 1113.
Western Union Telegraph Co., 183 Judge Posner observed that Aspen is narrowly written: "If it stands for any principle that goes beyond its unusual facts, it is that a monopolist may be guilty of monopolization if it refuses to cooperate with a competitor in circumstances where some cooperation is indispensable to effective competition." 184

In light of such criticism, both judicial and scholarly, the question remains whether the essential facilities doctrine can be a useful vehicle for the breaking up of the airport monopolies. For the reasons stated in the following section, we submit that the essential facilities doctrine, even encumbered with the Posner proviso, is the most potent weapon available for attacking today's airport monopolies. It requires, however, adaptation to the unique circumstances surrounding today's modern airport.

IV. TOWARD AN ANTITRUST STRATEGY

For purposes of applying the essential facilities doctrine as an antitrust strategy for breaking up the airport monopolies, it is submitted that both the four MCI elements and the Aspen intent test for monopolization can be satisfied from the available empirical data. 185

First, the empirical data clearly reveals that major airports in the United States are monopolies. Unlike the defendant railroads in Terminal Railroad, however, the "monopolist" airport is technically a governmental entity — usually a municipality, authority, or county. In most cases the state action doctrine will shield the governmental monopolist 186 who acts pursuant to statutory or regulatory authority. A conceptual analogy to Terminal Railroad can be found, however, by noting that even though the airport authority remains the fee owner of most airport

183 797 F.2d 370 (7th Cir. 1986).
184 Id. at 379.
185 Note that there are no clear-cut solutions to regulate the biased use of CRSs. The DOT may regulate these systems directly to ensure equal access to unbiased services. Of course, this option has met with serious opposition from the CRS owners. Traditional anti-trust theories are another option.
186 See supra notes 125-29 and accompanying text.
facilities, the airlines exercise *de facto* control over airport facilities through long-term leases and majority-in-interest clauses. We submit, however, that the lack of a fee interest by the airlines is irrelevant to satisfying *MCI* requirements. In this regard it should be noted that the first *MCI* requirement is "control of the facility by a monopolist," and not "ownership of the facility by a monopolist."^187

The second *MCI* requirement, "a competitor's inability to duplicate the facility,"^188 is easily established by taking judicial notice of the large cost of building airports, and the fact that most major metropolitan areas have no remaining available land for new airports. It is therefore manifest that an airline excluded from a major airport will, like the excluded railroads in *Terminal Railroad*, be unable practically or reasonably to duplicate the facility or its economic function.^189

The third requirement, "denial of the use of a facility to a competitor," is admittedly more problematic.^190 Certainly at those airports where insufficient gate or terminal space is available to a competitor to conduct operations, that competitor is effectively denied the use of the facility. The question is, denied by whom? It is, of course, the airport entity which makes the denial, not the incumbent airline. Nevertheless, that denial is the direct result of the airlines' effective control of the use of airport facilities through its rights in long-term leases and majority-in-interest clauses. Since the airport and airline are both parties to such leases, there is joint action which results in the denial of airport resources to the competitor. Furthermore, implicit in many leases is the assurance of an airline's exclusive use of an airport resource during the term of the lease.^191 In short, the data supports a finding that

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187 See *supra* note 175 and accompanying text.
188 Id.
190 See *supra* note 175 and accompanying text.
191 This is in contrast to the practice at some European airports where gates are rented either for short terms or for specific times during the day.
denial of access at major hubs can be traced directly to airport agreements entered into between the dominant hub carrier and the airport.

The fourth requirement does pose an evidentiary problem. The "feasibility of providing the facility" must be shown before the monopolist can be liable. At first blush, it would appear that the airport can do little in the way of providing access if its gates and terminal space are already leased out pursuant to long-term leases which are legally enforceable. Furthermore, the airline is bound to honor the lease and has no unilateral power to break the lease.

There are two responses to this analysis. First, a court might, in accordance with the Local Government Antitrust Act, enjoin an airport lacking Parker immunity from renewing long-term leases unless it opens up the bidding for such leases on a non-discriminatory basis, assuming that the lease contains no right of renewal provisions. Although many lease rentals are based on prior financial commitments by the airlines, adjustments for such financial commitments could be taken into account in any open bidding process ordered by a court or the DOT. With regard to the airline, however, it should be noted that most leases permit the sublease of gates and terminal space. Subleasing of gates, when done at all, is often done at exorbitant prices, which serve to raise a competitor's costs to the point where effective competition is rendered impossible. Injunctive relief against an airline could, therefore, include an order requiring an airline to make a reasonable number of gates and terminal space available to competitors at a reasonable cost. Whether the incumbent airline is in fact using these facilities productively would be a factor in determining the number of gates and slots to be made available.

Finally, with regard to the general requirement of "intent to monopolize," we submit that there is sufficient em-

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192 See supra note 175 and accompanying text.
pirical data to meet this requirement. The signing of agreements containing majority-in-interest clauses, refusal to sublease gates or slots except at rates which unreasonably raise competitors' costs, resistance to the building of new facilities or airports which might serve to expand facilities available to competitors, and the action taken by airlines during the past ten years in creating the monopolistic "fortress hubs" - all provide the factual basis for a case to be made for "intent to monopolize."

V. CONCLUSION

Most of this country's major airports are monopolies or duopolies at which one or two dominant carriers control a high percentage of terminal facilities. Airlines have used this market power to raise fares on flights originating and terminating at such airports. Although this power has been gained in part through the process of buy-outs and mergers in the airline industry itself, it has also been gained through actions taken in concert with airport authorities, such as when agreements are entered into that effectively limit the availability of airport facilities to new entrants and other competitors.

Airlines, by virtue of rights gained in their leases with airports, have achieved effective control, if not fee ownership of airport facilities. We submit that they are, therefore, subject to antitrust action under section two of the Sherman Act that makes it illegal to "monopolize, or attempt to monopolize . . . any part of trade or commerce." Specifically, the airlines' monopoly power over airport resources should be broken up pursuant to the essential facilities doctrine, which provides that any company controlling an essential facility or a strategic bottleneck, violates the antitrust laws if it fails to make access to that facility available to its competitor on fair and reasonable terms. Although incumbent airlines have no

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193 See generally Part II.
general “duty to deal” with competitors (i.e., by subleasing gates or terminal space) they are, even according to such critics of the doctrine as Judge Posner, guilty of monopolization if they “refus[e] to cooperate with a competitor in circumstances where cooperation is indispensable to effective competition.”

It has been suggested that airlines should be permitted to earn oligopoly profits as a means of solving their chronic profitability problems, thus enabling them to obtain sufficient capital for new aircraft and equipment. It is true that the airline industry today is an oligopoly, which may in fact earn oligopoly profits. Whether that airline oligopoly itself should be broken up, or whether antitrust action should be taken to break up the airline industry itself is, of course, an entirely separate question not considered in this article. What is clear, however, is that the earning of oligopoly profits through monopolization of such essential facilities as airports, is anti-competitive and results in a misallocation of resources. It is also a violation of antitrust laws.

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195 Olympia Equip. Leasing Co. v. Western Union Tel. Co., 797 F.2d 370, 379 (7th Cir. 1986).
196 The deregulation of domestic airlines in 1978 failed to consider many of the structural variables that resulted in sunk costs and barriers to entry. These permitted the incumbent airlines to develop market power through the use of the hub-and-spoke network thereby discouraging entry into the industry. These factors played an important role in installing the “contestability” that was predicted by deregulation’s advocates.

Some of these barriers to entry have been the product of the ongoing process of deregulation. Here, networking and information economics have made it impossible for new competitors to enter and survive in the industry. Other barriers have been erected for the protection of particular airlines and not for the well-being of society. These practices must be recognized and counteracted with sound economic and antitrust policy such that society will benefit from the deregulation of airlines.

It should be noted that no antitrust action should be taken merely on the basis of market concentration. It is not possible for all trunks to coexist in a market where the exploitation of economics of density, vis-a-vis the hub-and-spoke networks, yields a minimum efficient number of firms. The antitrust policy should be aimed towards barriers to entry that give unfair advantages to incumbent firms.
