

Introduction

Adam Smith, the father of economics, stated that “[b]y a perpetual monopoly, all the other subjects of the state are taxed very absurdly in two different ways; first, by the high price of goods, which, in the case of free trade, they could buy much cheaper; and, secondly, by their total exclusion from a branch of business, which it might be both convenient and profitable for many of them to carry on.”¹ That point remains true over two hundred years later. It is precisely for those two reasons, the costs to the flying public, and the elimination of competition, that the United States Department of Justice and Department of Transportation should reject the United Airlines/U.S. Airways merger; or in the less satisfactory alternative, require that United Airlines take steps to enhance competition as a precondition of approving any merger.

This report will illustrate the position that United Airlines currently holds at Denver International Airport (DIA) and how the position occupied by United Airlines leads to potential and actual monopoly issues for Colorado and the West, as well as the impact on consumers, and other local businesses such as the tourist industry and airline competitors. This report makes the case that United Airlines has in the past behaved in an anticompetitive manner, behavior enabled by its monopoly position. The report serves as a basis for rejecting the impending merger by United Airlines and U.S. Airways, as well as the recommendation, in the alternative, for conditioning any approval of the proposed merger on changes made to enhance competition.

In a free market, government intervention should not be the first response to problems. However, two reasons suggest this is a different case. First, government had a role in creating this problem by entering the market as a participant, because the City of Denver is the landlord at DIA, running it and running its predecessor Stapleton Airport. In 1994, when Continental Airlines made the decision not to maintain a hub in Denver, the City of Denver was forced to ensure it continued to have an anchor for DIA, putting United Airlines in a position of significant power in the bargaining and setting up a situation where United Airlines has virtual control over DIA. Because government is a participant in the market and continues to have a role in this situation by virtue of it entering the marketplace, government has a greater role ensuring the market operates well. Second, government has historically set the ground rules for the market, and when those rules are subverted, government has ensured market correction. That intervention is typical in cases where a monopoly exists. As a result of government entering this marketplace, and its duty to maintain a level playing field, government action to correct the problem is appropriate here.

¹ Smith, Adam; An Inquiry Into the Nature and Causes of the Wealth of Nations; The Modern Library, New York, NY; p. 712.

Background

National Background²

United Airlines operates nearly 2,300 flights per day to 134 destinations in 27 countries—including 91 cities in 49 states—with a fleet of about 600 jet aircraft. Within the United States, United provides service between other cities and its hubs in Chicago, Denver, Los Angeles, San Francisco, and Washington, D.C., using its aircraft and those of its independently owned regional affiliates, which operate under the name of United Express. As of March 31, 2000, United Express served another 133 cities in the country, producing a combined domestic network of 224 cities.

In 1999, US Airways flew to 236 cities in 38 states in the continental United States, along with nearly 30 other cities in 12 countries, territories, and commonwealths, using its own fleet of over 400 aircraft and those of its regional affiliates, which operate as US Airways Express. US Airways' system is heavily concentrated in the eastern United States, with hubs located in Charlotte, Philadelphia, and Pittsburgh. US Airways also has sizable operations at Baltimore-Washington International Airport and at Reagan National, where it operates an East Coast shuttle service to Boston's Logan International Airport and New York's LaGuardia Airport.

On May 24, 2000, United and US Airways agreed to merge their operations. Under the terms of their proposed merger, United would acquire US Airways in a transaction valued at \$11.6 billion. Specifically, United would pay \$60 for each share of common US Airways stock for a total of \$4.3 billion and would assume \$1.5 billion in US Airways net debt and \$5.8 billion in aircraft operating leases. According to information from United, the combined company would have approximately 145,000 employees. It would operate eight hubs in six states and serve a total of 380 airports throughout the country, reaching communities in every state.

The consummation of the proposed merger is subject to various conditions set forth in the agreement and approvals by various regulatory bodies. US Airways stockholders approved the merger on October 12, 2000. Both the U.S. Departments of Justice and Transportation have responsibilities for reviewing airline mergers and acquisitions. The Department of Justice has the authority to review mergers or stock acquisitions before they take place to determine whether they violate antitrust laws. Under the Hart-Scott-Rodino Act, an acquisition of voting securities above a set monetary amount must be reported to the Department of Justice for prior review. The Department of Justice has the authority to institute judicial proceedings under the Clayton Act if it determines that a merger or acquisition may substantially lessen competition in a relevant market or if it tends to create a monopoly. If the Department of Justice believes any agreement is anticompetitive in whole or in part, it may seek to block the agreement in federal court.

² This entire description drawn from: U.S. General Accounting Office, Aviation Competition, Issues Relating to the Proposed United Airlines-US Airways Merger; GAO-01-212, December 2000; p. 6-8.

Legal Test For Airline Monopoly

The United States, in its case brought against American Airlines for illegally monopolizing and attempting to illegally monopolize many routes to and from Dallas-Fort Worth, the U.S. Department of Justice applies Section Two of the Sherman Act, which makes it unlawful for a firm to “monopolize, or attempt to monopolize. . . any part of the trade or commerce among the several States. . . .”³ The Sherman Act was enacted to prevent “restraints to free competition in business and commercial transactions which tend to restrict production, raise prices or otherwise control the market to the detriment of purchasers or consumers of goods and services.”⁴ The elements of a Section Two monopolization claim are: (1) the possession of monopoly power in a relevant market; and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. The elements of a Section Two attempted monopolization claim are: (1) definition of the relevant market; (2) a dangerous probability of success in monopolizing that market; (3) the specific intent to monopolize; and (4) conduct in furtherance of that attempt.⁵ Under both monopolization and attempted monopolization, the United States must prove that (1) a relevant market or markets exist; and (2) that an airline had market power or monopoly power in the relevant market or markets.⁶

In the brief filed by the Department of Justice, the United States argued American Airlines “[i]n carrying out the DFW LCC Strategy, American disregarded its usual measures of performance, *i.e.*, revenue and profitability, focusing instead on whether its actions were decreasing the LCC’s market share and load factor.”⁷ The Justice Department goes on to adopt airline passenger service in city pair and nonstop airline passenger service as the relevant markets for that particular case.

City Pairs and Nonstop Flights – The Justice Department goes on to describe why city-pairs and city-pair nonstop air travel are the appropriate and relevant markets for a monopoly case under the Sherman Act:

“Passengers traveling on a particular city-pair route do not view service in other city pairs as a reasonable substitute: A person who wants to travel from Wichita to Dallas is unlikely to substitute a trip from Wichita to Kansas City because the price of the Dallas ticket has increased a small

³ Memorandum for the United States, filed in the case United States of America v. AMR Corp., American Airlines, Inc., and AMR Eagle Holding Corp.; Civil Action No. 99-1180-JTM; citing 15 U.S.C. § 2; p. 1.

⁴ Apex Hosiery Co. v. Leader, 310 U.S. 469, 493 (1940).

⁵ Memorandum for the United States, filed in the case U.S. v. AMR Corp.; citing Full Draw Prods. v. Easton Sports, Inc., 182 F.3d 745, 756 (10th Cir. 1999); p. 2.

⁶ Memorandum for the United States, filed in the case U.S. v. AMR Corp.; pp. 6-7. “A monopolization claim requires proof of monopoly power whereas the dangerous probability element of an attempted monopolization claim is “usually demonstrated through the market power” of the defendant. Bright v. Moss Ambulance Serv., 824 F.2d 819, 823 (10th Cir. 1987). “Market and monopoly power only differ in degree -- monopoly power is commonly thought of as ‘substantial’ market power” and the same evidence relates to each. Reazin v. Blue Cross & Blue Shield, 899 F.2d 951, 967 (10th Cir.), *cert. denied*, 497 U.S. 1005 (1990). “

⁷ A load factor is a measure of the percent of capacity sold and used on a particular flight. Memorandum for the United States, filed in the case U.S. v. AMR Corp.; p. 4.

amount. Moreover, except for short journeys, few travelers regard other modes of transportation (e.g., bus, train, or automobile) as a reasonable substitute for airline transportation. **Thus, airline passenger service in a city pair constitutes a relevant market.** Airlines may offer city-pair service on a “nonstop” basis or on a “connecting” or “one-stop” basis. Connecting or one-stop service requires a passenger to make one or more stops *en route*, usually to change planes along the way, and is generally less expensive than nonstop service. For many passengers, connecting or one-stop service is not a good substitute for nonstop service because connecting or one-stop service typically takes significantly longer than nonstop service and the risk of missed connections or lost luggage is greater; time-sensitive passengers, such as business travelers, are unlikely to substitute connecting or one-stop service for nonstop service in response to a small fare increase for nonstop service. **Consequently, nonstop airline passenger service in a city pair is also a relevant market.**⁸ (emphasis added)

Ability To Control Prices and Exclude Competition in Relevant Market – The Justice Department then looks to whether the airline has the ability to control prices and exclude competition in the relevant markets, which would be the city pairs and non stop city pairs.⁹

Hub Premium – The first indicator of direct evidence of an airline’s ability to control prices and exclude competition, used by the Justice Department in its brief against American Airlines, is the existence of a hub premium.¹⁰

Market Share – The Department of Justice cites market share as strong evidence of an airline monopoly power over city-pairs at an airport, in its argument that price control and predatory practices excluding competition in city-pairs and nonstop city-pairs (specifically noting that percentages ranging from 47% to 62%, with evidence of market characteristics and evidence of a defendant’s power over price and competition, has been sufficient to support a jury’s finding of monopolization).¹¹ Related to market share, the Justice Department also uses a measurement entitled the Herfindahl-Hirschmann index (HHI) to measure the relative concentration of the industry.¹² Based on a market share of the largest airline in a market, the index classifies industries with an HHI below 1,000 as “Unconcentrated”; industries with an HHI of 1,001 to 1,800 as “Moderately Concentrated”; and industries with an HHI above 1,801 as “Highly Concentrated”.

Entry Barriers – The Justice Department looks to entry barriers for evidence of an airline’s ability to control prices and exclude competition. Entry barriers can include

⁸ Memorandum for the United States, filed in the case U.S. v. AMR Corp.; p. 8.

⁹ Memorandum for the United States, filed in the case U.S. v. AMR Corp.; p. 9.

¹⁰ Memorandum for the United States, filed in the case U.S. v. AMR Corp.; p. 9.

¹¹ Memorandum for the United States, citing Reazin v. Blue Cross & Blue Shield, 899 F.2d 951, 967 (10th Cir.), *cert. denied*, 497 U.S. 1005 (1990)

¹² Julius Maldutis, Sal Colak and James Ladis; Airline Competition at the 50 Largest U.S. Airports – Impact of Proposed Mergers; CIBC World Markets, Inc., New York, NY; June 23, 2000.

structural conditions and entrenched buyer preferences.¹³ Entry barriers can also include contractual arrangements between the leasing authority and the airline, such as majority-in-interest clauses which require a majority of airlines agree to changes. The Department of Justice cites many of the benefits that American has as a hub airline at Dallas-Ft. Worth “[i]f a firm -- like American at DFW -- has high shares in markets that have entry barriers, then the prospect of entry is not likely to restrain the firm from charging prices that reflect its dominant position in the markets. Any airline that challenged American at DFW would have to overcome substantial entry barriers.”¹⁴

The Justice Department notes, in its legal complaint against American Airlines, that “[t]he effect of these entry barriers is exacerbated by the ability of a hub carrier to reduce its fares or increase its seating capacity and frequency of service virtually overnight, responding to expected entry before such entry can be successfully implemented.”¹⁵

Example of Evidence Cited by Department of Justice

Finally, when the Justice Department argued in its complaint that American Airline’s dominated Dallas-Ft. Worth Airport, it noted American Airlines carried 70% of the nonstop city-pair traffic to and from DFW, and 58% of the city pairs.¹⁶ It went on to note that the nearest competitor to American Airlines had only 16% of the traffic at Dallas-Ft. Worth Airport, and that “no major airlines are positioned to challenge American’s dominant market position in DFW city pairs.”¹⁷

Conclusions

The measures and tests that were used by the United States Department of Justice for American Airlines at the Dallas-Ft. Worth Airport can be applied to United Airlines at Denver International Airport. This report will present statistics and publicly available evidence that parallels the similar evidence that led the Department of Justice to allege that American Airlines had violated the Sherman Act by monopolizing the market in the Dallas-Ft. Worth Airport.

¹³ Memorandum for the United States, filed in the case U.S. v. AMR Corp; p. 11; citing Reazin, 899 F.2d at 968.

¹⁴ Memorandum for the United States, filed in the case U.S. v. AMR Corp; p. 10.

¹⁵ Complaint filed by the United States of America in the case United States of America v. AMR Corp., American Airlines, Inc., and AMR Eagle Holding Corp.; Civil Action No. 99-1180-JTM; (Dist. of Kan); May 13, 1999; paragraph 17.

¹⁶ May 13, 1999 complaint for the United States, in the case U.S. v. AMR; at paragraph 20.

¹⁷ May 13, 1999 complaint for the United States, in the case U.S. v. AMR; at paragraphs 20 and 22.

Denver and Colorado Background

United Airlines has steadily increased its market share at Denver (Stapleton International Airport and, now, Denver International Airport), when combined with its regional affiliate United Express, since 1994, the year before DIA opened until 1999. The graphs on the opposite page indicate the growth in market share, and also indicate that the largest competitors' market share has declined so that not one has more than 6% as compared with Continental Airlines' 17% in 1994.¹⁸

While United Airlines and its affiliates have increased their market share in the last six years, there is every indication that they will continue to maintain a high market share. According to data prepared for the City of Denver, in 1999, United and United Express accounted for 72.6% of the 23.5 million enplaned passengers. In connection with last year's bond offering by Denver to support DIA, Leigh Fisher Associates, an airline consultant, prepared a report analyzing DIA and many financial and market aspects of its operation. As part of that, forecasts were made to better provide prospective bond buyers with information upon which to base their decisions.

As part of that financial and market information, John F. Brown & Company, Inc. forecast that United and United Express will have a 73.2% market share in 2005.¹⁹ United Airlines is not contracting, and the professionals believe that United Airlines and United Express will actually increase market share in the future.

Tourism's Importance to Colorado

The Colorado economy is very dependent on tourism, which is one reason that a monopoly control of the regional airport leads to the possibility that, like the summer of 2000, disruptions in the service of a dominant carrier such as United Airlines can disrupt lives and business over all of Colorado and indeed the region. **Tourism in Colorado is the state's second largest industry**, in terms of dollars, following manufacturing.²⁰ Citing the Denver Metro Convention and Visitors Bureau, the top out-of-state urban areas from which tourists traveled to DIA were Albuquerque, Los Angeles, Dallas/Ft. Worth, Salt lake City, Chicago, Phoenix, Minneapolis/St. Paul, Philadelphia, and San Francisco, many through DIA.²¹ In fact, **of the \$7.2 billion tourism brings to Colorado's economy, \$4.9 billion or 69% of that goes to areas of Colorado outside of Denver metro region**, an enormous impact on the transportation, accommodation, food, retail and recreation sectors of the economy.²²

If airline service is more expensive and less competitive than otherwise it would be because of the monopoly domination of an airline, and all the service and cost issues that domination can bring, then Colorado tourism and the region's economy will inevitably suffer.

¹⁸ City and County of Denver, Airport System Revenue Refunding Bonds, Series 2000A, August 1, 2000, Figure 3, p. A-31.

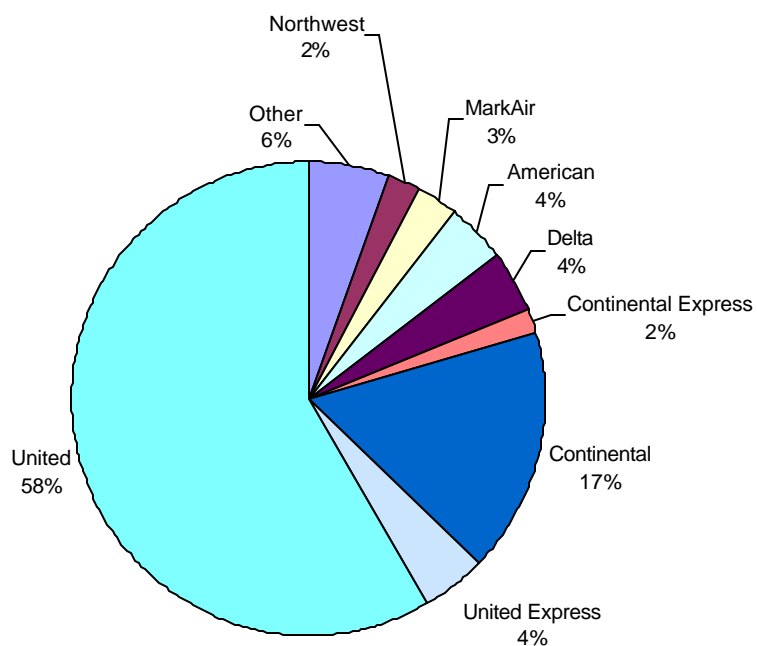
¹⁹ Ibid., p. A-52.

²⁰ Ibid., p. A-37.

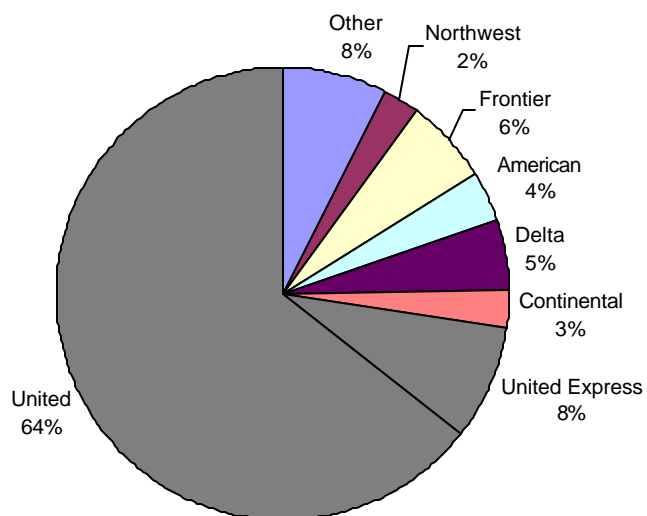
²¹ Ibid., p. A-37.

²² Drawn from strategic research on the Colorado travel and tourism industry for 1999 performed by Longwoods International, available at: "http://www.state.co.us/gov_dir/oed/tourism/LongwdIndex.htm".

Historical Enplaned Passenger Market Shares (1994)



Historical Enplaned Passenger Market Shares (1999)

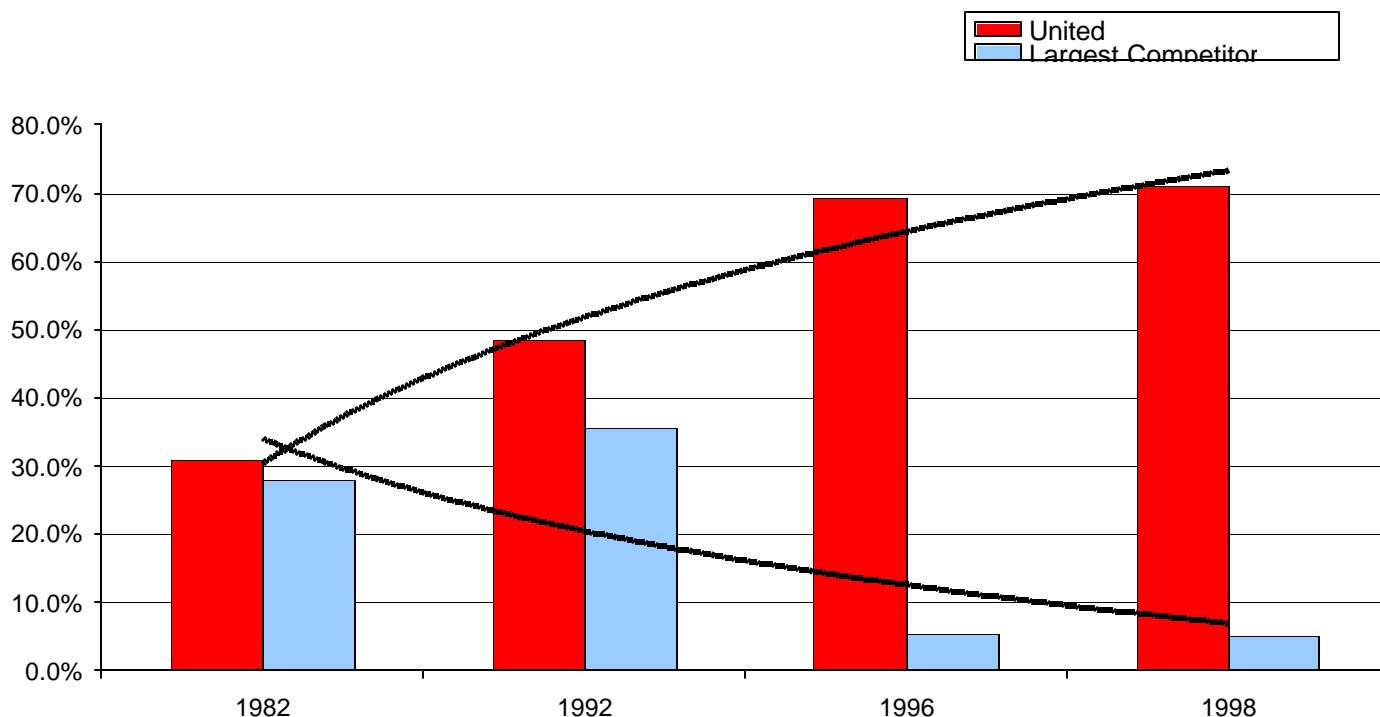


The U.S. Department of Justice Department uses a measurement entitled the Herfindahl-Hirschmann index (HHI) to measure the relative concentration of the industry.²³ The index classifies industries as follows:

HHI Below 1,000	Unconcentrated
HHI 1,001 – 1,800	Moderately Concentrated
HHI Above 1,801	Highly Concentrated

Dr. Julius Maldutis performed a study of the concentration of the airline industry at the 50 largest airports, calculating the HHI for each airport. Professor Paul Dempsey of the University of Denver School of Law compiled the market share and HHI index for Stapleton and Denver International Airport, which is detailed in the graph below with Maldutis data.²⁴ Data based on Maldutis' studies indicates that United's market share is even greater than that indicated by the Denver bond offering. The market share for United Airlines alone indicates the airline's growth to become the dominant and controlling airline at DIA over the last twenty-four years. United has moved from a 31% market share to over double that figure.

Market Share in Denver



²³ Julius Maldutis, Sal Colak and James Ladis; *Airline Competition at the 50 Largest U.S. Airports – Impact of Proposed Mergers*; CIBC World Markets, Inc., New York, NY; June 23, 2000.

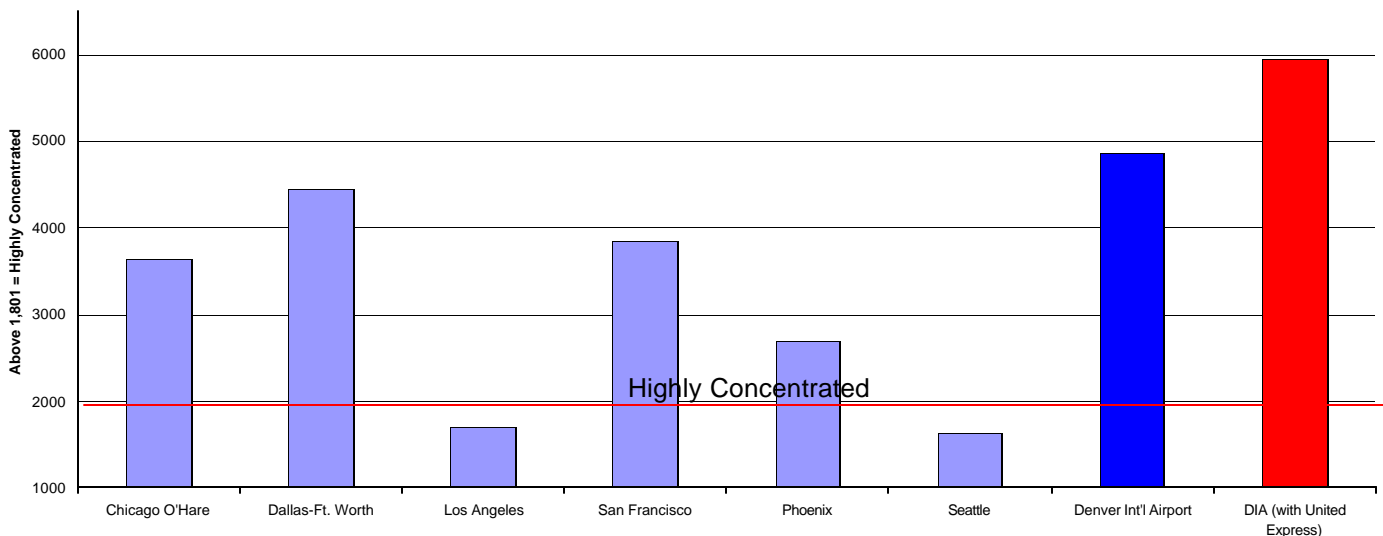
²⁴ Paul Stephen Dempsey, *Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition*; Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; pp. 5-7. 1982 data approximated based on 1982 average daily flights for United & Frontier.

Professor Dempsey of the University of Denver School of Law, and Director of the Transportation Law Program at D.U., as well as Director of the National Center for Intermodal Transportation and Vice-Chairman of Frontier Airlines,²⁵ argues that the HHI for DIA is even more indicative of the market power held by United Airlines at Denver.

Professor Dempsey argues that Maldutis' data actually understates the market concentration at these airports because it fails to aggregate the code-share partners together.²⁶ In Denver's case, this would mean including Mesa and Air Wisconsin, which together make up United Express, into United Airline's HHI, because United Airlines effectively controls that market as well.

When combined with United Express, in 1996 United Airlines in Denver has an astounding HHI of 5,693.²⁷ That is over 300% the amount that would indicate a "highly concentrated" industry, according to the HHI index. Professor Dempsey labels this one of the highest concentrations in the country.²⁸ When you consider what the impact in 1999 would be, including U.S. Airways in the HHI index with United Airlines, you reach an HHI index of 4,868 without United Express, and 5,944 if United Express is included.²⁹ By comparison, here are the HHI indexes for the top six airports from and to DIA:

Airport HHI Comparison



²⁵ Frontier Airlines, Inc. has not taken an official position either in favor of, or in opposition to, the proposed merger of United Airlines and U.S. Airways. The opinions Professor Dempsey has expressed about the merger are his own.

²⁶ Paul Stephen Dempsey, Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition; Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; p. 7.

²⁷ Ibid.; p. 7.

²⁸ Ibid.; p. 7.

²⁹ Derived from data produced by: Julius Maldutis, Sal Colak and James Ladis; Airline Competition at the 50 Largest U.S. Airports – Impact of Proposed Mergers; CIBC World Markets, Inc., New York, NY; June 23, 2000; p.19.

National Impact on Airline Concentration of Merger

Julius Maldutis calculated the HHI index, assuming a merger of United Airlines and U.S. Airways, effective in 1999 (the last year for which data were available). The impact on the industry is significant, based on market share, the **proposed merger would increase the industry concentration by 26% for 1999** based on HHI (increasing the industry-wide HHI of 1,028 to 1,295).³⁰ The graphs on the opposite page clearly indicate that increase, and the rather dramatic effect the merger would have on airline industry concentration nationwide.

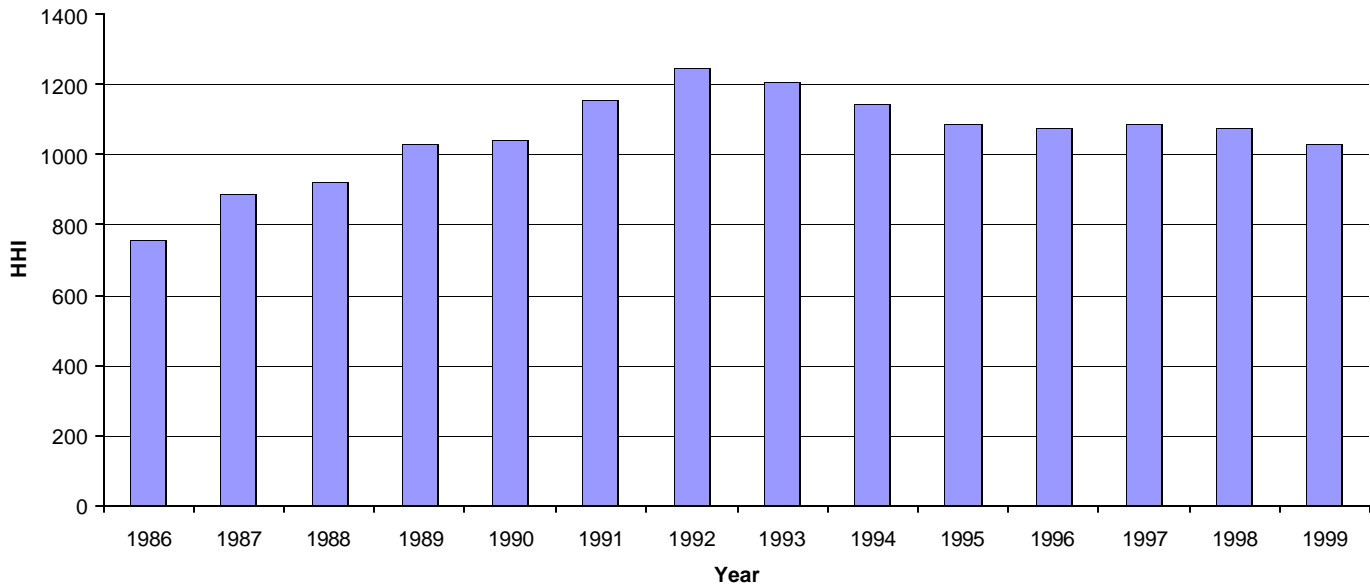
The overall HHI would increase to a higher concentration than any in recent airline history, following deregulation.

While the direct impact on DIA would not be large, because of the low overall market share that US Airways has in Denver, the impact would be felt in at least three ways.³¹ First, in markets where United and US Airways compete directly for flights, there will be a much more direct effect. Some of these impacts are analyzed later in this report. Second, the reduction in competition nationally will allow United to consolidate its monopoly in Denver and reduce competition system-wide, hurting consumers coming to Denver from elsewhere and Colorado consumers who travel to other areas of the country. One cannot argue, in a legitimate way, that Colorado will be an island as the rest of the national market becomes less competitive. Any decrease in competition will also lessen competition in Colorado. Third, the increased market share of United Airlines will drive other competitors to seek mergers out of a need to ensure continued viability and survival, leading to an overall reduction in competition in the air travel market.

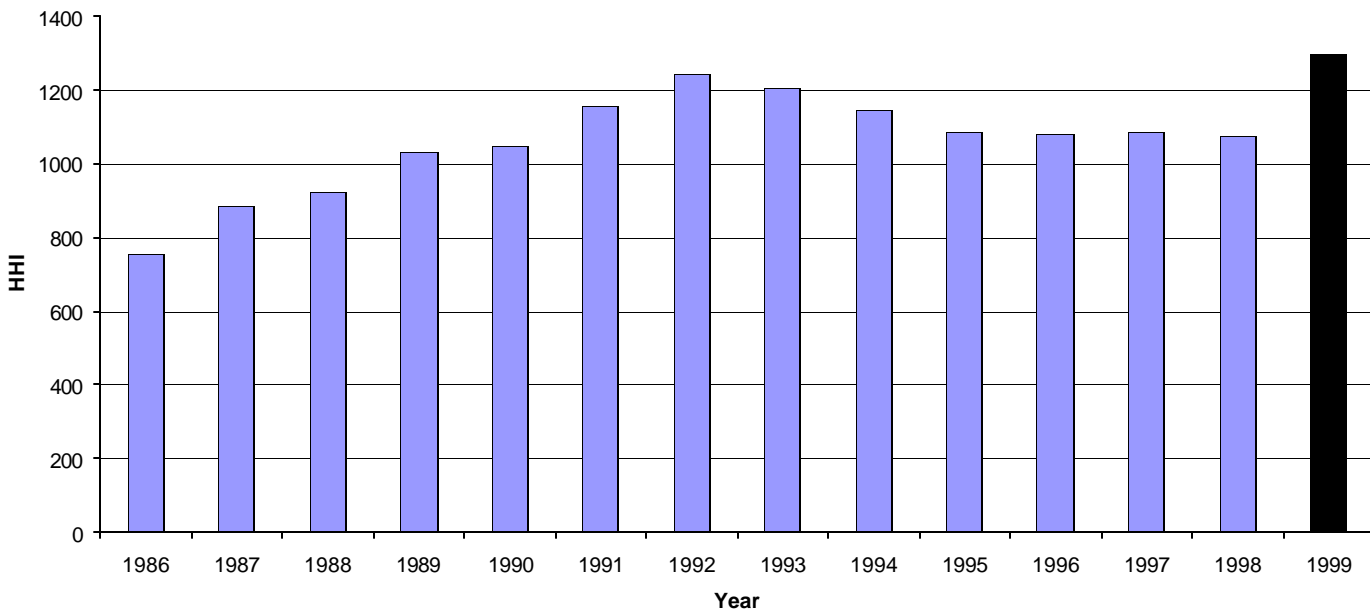
³⁰ Julius Maldutis, Sal Colak and James Ladis; Airline Competition at the 50 Largest U.S. Airports – Impact of Proposed Mergers; CIBC World Markets, Inc. , New York, NY; June 23, 2000, p. 5.

³¹ US Airways has consistently maintained approximately a 1.5% market share in Denver over the last several years. See, Maldutis, Airline Competition at the 50 Largest U.S. Airports – Impact of Proposed Mergers; at p. 19.

Airline Industry Concentration Before Merger



Airline Industry Concentration After Merger

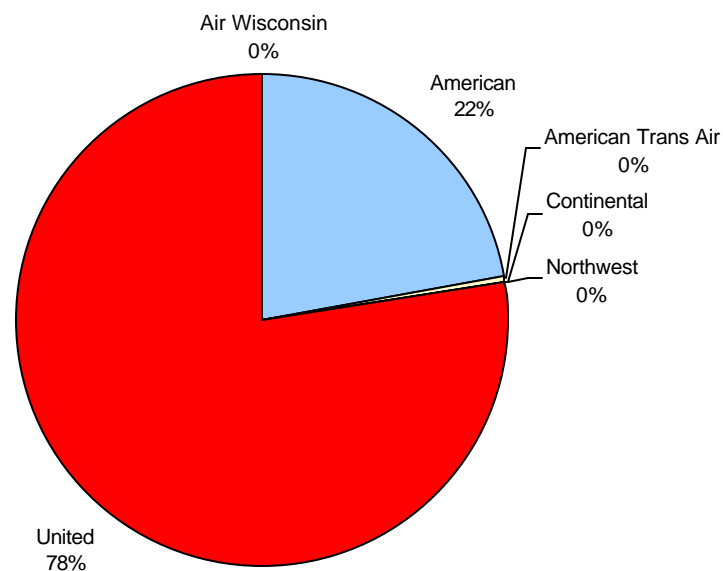


Individual Markets

Another useful mechanism for analyzing the monopoly control over the market by United Airlines at DIA is to analyze the market share controlled by United Airlines for direct flights, between cities. As illustrated above in the discussion of the Department of Justice's case against American Airlines, and according to the United States General Accounting Office, the Department of Justice, when analyzing a merger, defines both the product or service and the geographic market in which merging parties compete.³² In the airline industry, the relevant market to analyze has been defined as scheduled airline service between two points, often defined as a city pair. The GAO noted that the Department of Justice give particular importance to nonstop service between cities because business travelers are less likely to consider connecting service as a reasonable alternative.³³ The Department of Justice looks to non-stop city pairs to determine the impact of a merger, and looking to such non-stop city pairs can provide a useful indicator for monopoly power of an airline in a market.

The graphs below illustrate the domination that United Airlines has in the non-stop city pair market, **dominating five of the top six markets from Denver.**

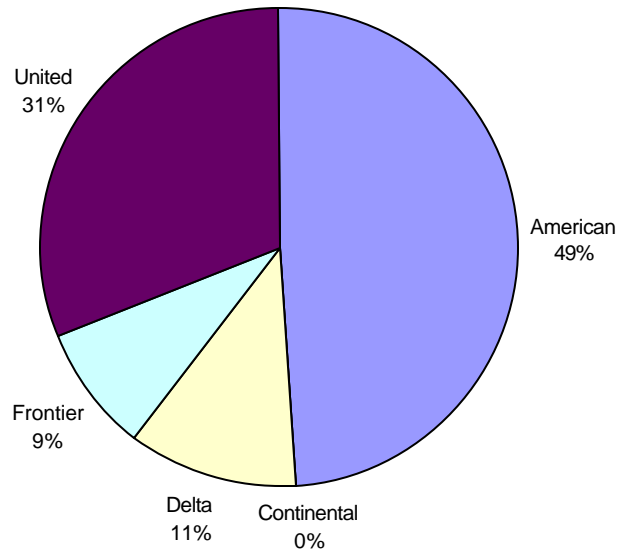
1. Market Share from Denver to Chicago-O'Hare



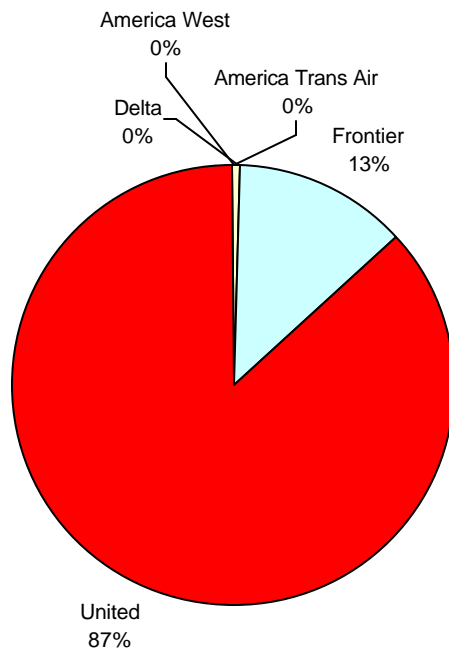
³² Memorandum for the United States, filed in the case U.S. v. AMR Corp.; p. 8; and U.S. General Accounting Office, Aviation Competition, Issues Relating to the Proposed United Airlines-US Airways Merger; GAO-01-212, December 2000; footnote 8.

³³ Ibid.; footnote 8.

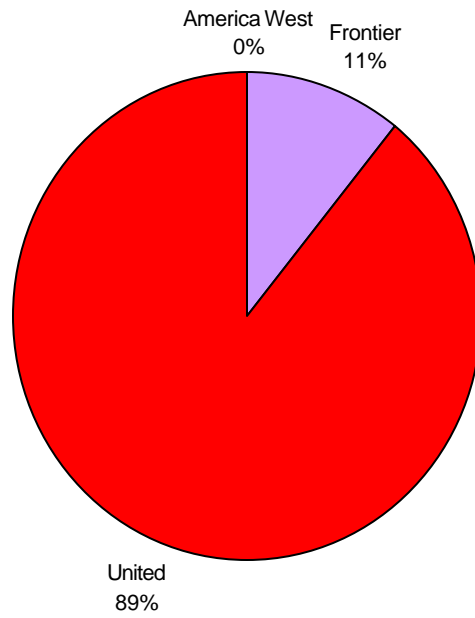
2. Market Share from Denver to Dallas-Ft. Worth



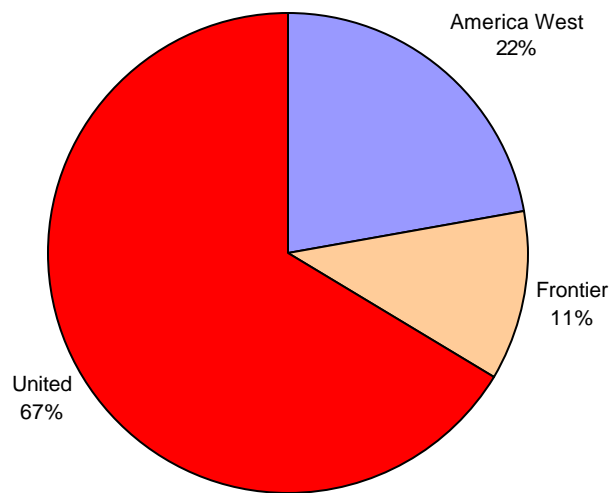
3. Market Share from Denver to Los Angeles



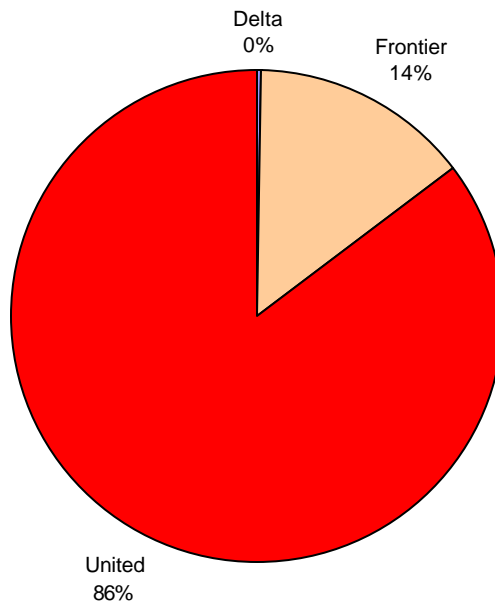
4. Market Share from Denver to San Francisco



5. Market Share from Denver to Phoenix



6. Market Share from Denver to Seattle



The above graphs indicate that United Airlines dominates the six largest non-stop city pairs to and from Denver, especially important to the Department of Justice in its analysis of market dominance and monopoly power.³⁴

Other data also supports the intuitive conclusion that United Airlines' dominates the air market for Denver, Colorado and the region, including the connecting air travel market which is critical to its position as a hub. For the year ending June 30, 1999, **United Airlines' Denver hub is already the nation's fifth largest in terms of annual connecting passengers**, according to Salomon Smith Barney.³⁵

The report prepared for the City of Denver's 2000 bond offering also indicated that about 45% of the 19 million passengers at DIA were connecting passengers, connecting from one flight to another. Of those passengers, many traveling to and from western Colorado and throughout the region, **United Airlines accounted for an astonishing 83% of all connecting passengers at Denver in 1999.**³⁶

³⁴ Source: U.S. General Accounting Office data drawn from U.S. Dept. of Transportation data.

³⁵ City and County of Denver, Airport System Revenue Refunding Bonds, Series 2000A, August 1, 2000, Figure 3, p. A-39.

³⁶ Ibid., at p. A-39.

Regional City-Pair Market Domination

The above graphs illustrate United Airlines' domination of the largest markets to and from DIA. This domination is further supported when investigating the regional impact, especially as that impacts the west. The New York Times recently published an article which highlighted the regional impact of the air travel problems out of Denver.³⁷

The regional dominance of United Airlines is evident based on the following statistics.

United Airlines has at least 50% of the market share for its non-stop and direct routes in:

- **All of its 20 western destinations**
- **7 of its 14 southern destinations**
- **All of its southwestern destinations**
- **7 of its 13 midwestern destinations**
- **7 of its 10 eastern destinations**
- **All of its 7 northwestern destinations³⁸**

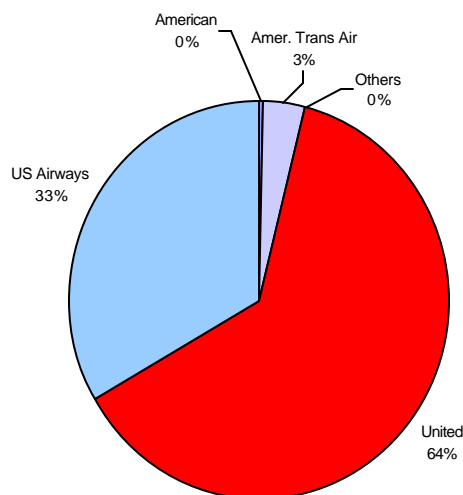
³⁷ New York Times, "Airline Woes Mount in Rural West," February 11, 2001.

³⁸ Data based on Fourth Quarter, 1999 analysis of Origin-Destination data for DIA provided by United States General Accounting Office.

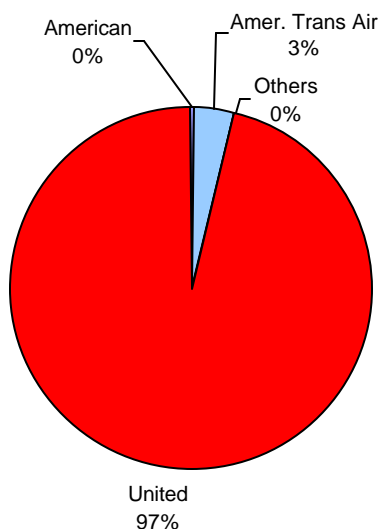
Merger Impact on Non-Stop City Pairs

The proposed merger will directly impact several non-stop city pair markets as well, transforming some competitive routes into monopoly routes. Several other routes are currently controlled and dominated by U.S. Airways, which would become dominated by United Airlines following a merger. On those routes, once U.S. Airways merges with United Airlines, any competition will effectively cease, and United Airlines will expand its control over additional non-stop city pair markets. The graphs below illustrate the impact on the Denver-Philadelphia market:

Denver-Philadelphia (Before Merger)



Denver-Philadelphia (After Merger)



United Airlines already maintains an enormous amount of control over the non-stop city pair market to and from DIA. The analysis of the largest 70 markets to and from Denver indicates that United Airlines maintains the following levels of monopoly market dominance:

The graph below indicates the number of airports at which United holds a certain percentage of all flights leaving DIA. Also cited is Air Wisconsin, an entity of United Express, and USAir because of a possible merger between the two. The total is the number of airports and the correlating percentage for all three companies combined.

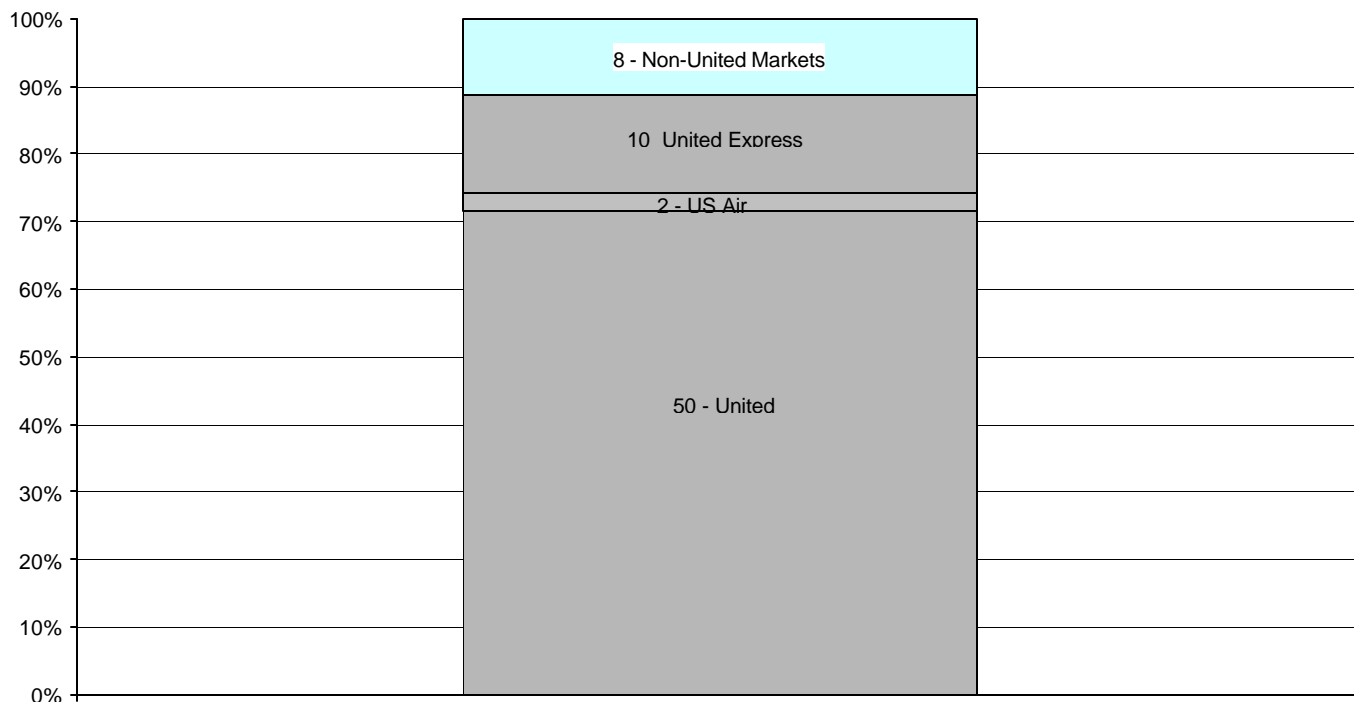
Company Over 42.5% Over 50% Over 75% Over 98% 100%

United Airlines (alone)	50	48	40	20	5
Total After Merger	62	60	55	39	20

Total includes United Airlines, United Express (Air Wisconsin) and U.S. Airways

Data drawn from the top 70 Denver International Airport Destinations.³⁹ Of the 70 destinations, 60 are currently at or above the 42.5 percent benchmark, which corresponds to the level of the HHI index of 1800 that indicated a market is “highly concentrated,” which would increase to 62 following a United Airlines and U.S. Airways merger. As the graph below indicates, United Airlines, following a merger, would have a highly concentrated market in 62 of 70 of the largest destinations:

United Airlines Dominance Over the Top 70 Markets



³⁹ Source: U.S. General Accounting Office data drawn from U.S. Dept. of Transportation data.

Impact of United Airlines' Monopoly Market Control on Colorado

This report has presented evidence of United Airline's current monopoly power at DIA as a result of its significant market concentration, as well as evidence of how a merger with U.S. Airways will not only worsen DIA market conditions, but dramatically worsen the overall concentration of the airline industry as a whole, and that evidence completely ignores likely competitor responses seeking additional mergers and further consolidation of the industry.

This section explores some of the results that occur when an airline market, here DIA and the Colorado air travel market, is effectively controlled by one airline. That impact is important given the enormous economic effect that DIA and regional air travel can have on Colorado.

Price Impact

Professor Dempsey cites a U.S. General Accounting Office study of 15 concentrated airports (defined as an airport having more than 60% of enplanements handled by a single airline – a group into which DIA would fall based on 1999 data) to determine the impact of the effect of market concentration or monopoly on pricing. The study compared pricing at the 15 concentrated hub airports and 38 relatively unconcentrated airports. The U.S. GAO found that **prices were 27% higher in the concentrated hubs.**⁴⁰ Moreover, prices per mile (a useful tool for the purposes of comparison) charged by dominant airlines at concentrated hubs were 38% higher than those charged at unconcentrated airports.⁴¹

Professor Dempsey, in testimony to the House Transportation Committee, also cited a U.S. Department of Transportation study of the impact of concentration on airline pricing, and concluded as follows:

⁴⁰ Paul Stephen Dempsey, [Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition](#); Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; p. 8, citing U.S. General Accounting Office, *Airline Competition* 2, 3 (1989); updated and expanded in 1990.

According to Professor Dempsey “[t]he higher fares at concentrated airports do not reflect a premium for non-stop service, since the average number of coupons per traveler at concentrated airports was virtually identical to that at the comparison, unconcentrated airports (2.26 vs. 2.28 coupons). And the difference persisted when average trip length was controlled for, 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 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, in some cases very much higher than other carriers at the same airport.” Paul Stephen Dempsey, *Flying Blind: The Failure Of Airline Deregulation* 18-19 (1990).

⁴¹ *Ibid.* at p. 8, citing U.S. General Accounting Office, *Airline Competition* 3 (1990).

“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.”⁴²

Dempsey’s data is corroborated by a recent Department of Transportation publication which found that “[i]n dominated hubs as a whole, 24.7 million passengers **pay an average 41% more** that do their counterparts flying in hub markets with low fare competition.”⁴³

The price impact of a monopoly hub carrier is even worse on passengers in short haul hub markets, like those to the west slope of Colorado from DIA. The Department of Transportation found that **passengers in short haul markets ended up paying 54% more** on average than passengers in comparable markets with a low-fare competitor.⁴⁴

Denver Statistics on Price Differential

The Department of Transportation found that in 1999, air travel passengers at DIA, on average, paid **28% more for long-haul markets and 37% more for short-haul markets** than comparable hub markets with a low fare competitor.⁴⁵

⁴² U.S. Dep't of Transportation, Secretary's Task Force On Competition In The U.S. Domestic Airline Industry, Executive Summary 8 (1990).

⁴³ U.S. Dep't of Transportation, “Dominated Hub Fares,” January 2001, p. 1.

⁴⁴ U.S. Dep't of Transportation, “Dominated Hub Fares,” January 2001, p. 2.

⁴⁵ U.S. Dep't of Transportation, “Dominated Hub Fares,” January 2001, p. 10 (table).

Gate and Baggage System Competition

As a result of United Airlines' size and market share at DIA, it has a very large footprint on the use and leasing of gates. United Airlines has also used its power as the majority gate holder to force certain agreements regarding which airlines share costs of useless baggage systems.⁴⁶ These issues are related. On February 28, 2000, the lease with Continental Airlines for ten gates on Concourse A was due to expire. In December of 1999, the City of Denver received a majority-in-interest approval to make changes on the rates for Concourse A, which can be read to mean United Airlines approval since it is the majority airline at DIA.⁴⁷

As of September of 2000, there were thirteen common-use gates available for airline use at DIA.⁴⁸ However, eight are designated as international use gates on Concourse A, and four are designated as domestic located on Concourse C. That leaves only one gate designated domestic use on Concourse A, which is where United Airlines' largest competitor at DIA Frontier Airlines is based, leaving very little room to grow without significant costs of construction.⁴⁹

As a result of the renegotiation, and further leasing on Concourse A to United Airlines, which now has leases on ten gates on Concourse A along with every gate on Concourse B, there is only one gate available for domestic use on Concourse A for expansion by DIA's second largest airline, Frontier Airlines.⁵⁰ This situation raises at least initial questions as to whether United Airlines, working with the Denver airport authority, has sought to prevent competitors from expanding by leasing and controlling the likely gates into which competitors would naturally expand.

Contractual Agreements with Leasing Authority

Another means by which an airline can exert power in the market place as a monopoly is in the leasing and other financial arrangements surrounding an airport. Originally, the decision to build DIA was predicated on the studies which forecast three airlines operating hubs at DIA, United, Continental and the original Frontier.⁵¹ By March of 1994, when Continental announced that it was dismantling its hub operations at DIA, it was down to just one airline that would maintain a hub at DIA, United Airlines.⁵² As such, the City of Denver was put in the poor bargaining position that it had to maintain a hubbing airline. George Doughty, who served as the Denver airport director under Mayor Frederico Pena

⁴⁶ City and County of Denver, Airport System Revenue Refunding Bonds, Series 2000A, August 1, 2000, p. 42.

⁴⁷ Ibid., p. 42.

⁴⁸ Competition Plan for Denver International Airport, submitted September 6, 2000, p. 16.

⁴⁹ It is believed that to expand Concourse A gates, a postal facility would need to be relocated, at a significant cost to whichever airline seeks that additional gate.

⁵⁰ Competition Plan for Denver International Airport, submitted September 6, 2000, Exhibit 1.

⁵¹ Paul Stephen Dempsey, Andrew Goetz and Joseph Szyliowicz, Denver International Airport – Lessons Learned, McGraw Hill, 1997, p. 33.

⁵² Ibid., p. 20.

and continued early into Mayor Webb's administration, stated:

"United had no incentive to move in 1994. They had just increased their operations at Denver in order to capture an even greater market share that would eventually force Continental to dismantle its hub. It was to their advantage not to move until that was assured ...

Mayor Webb was simply outmaneuvered by United... He was not in a position to make a decision counter to their wishes. Therefore, the project was forced to absorb a \$15 million a month delay cost until United said it was okay to move."⁵³

Included within the contract that United Airlines has with the City of Denver are two provisions, that when combined with the fact that United Airlines is by far the largest lessee, indicate the bargaining power United Airlines has, and gives the airline significant discretion over certain activities at DIA. First, the lease includes a majority-in-interest clause for changes in the rates charged, based on the number of airlines and the amount of rates, fees and charges paid by an airline.⁵⁴ This majority-in-interest clause can have the effect of insuring that United Airlines, which certainly pays a majority of the rentals, rates and fees, will have a virtual veto over any changes that could advantage its competitors.

Another clause provides direct evidence of United Airline's ability to dominate the bargaining with the Denver airport authority; it is a clause that allows United Airlines to terminate its use and lease agreement if the cost per enplaned passenger ever exceeded \$20, using 1990 base dollars.⁵⁵ While this limit has never been triggered, the existence of the clause which is not in other agreements between the City of Denver and other lessee airlines at DIA suggests that United has used its market position to ensure it has preferential contract agreements. Without other monopoly activity, such bargaining is to be expected in a free market. Coupled with the other monopoly behavior and impacts cited in this report, it provides another example of United Airline's monopoly behavior. In this case, the City of Denver is at least partially to blame as well.

Finally, in 1999, with United Airline's agreement, amendments were made to the way that costs for both Concourse A and Concourse C were calculated.⁵⁶ Based on descriptions of the changes in the 2000 bond offering, much of the cost of the inoperable baggage system was written off, which presumably lowers the rates charged in Concourse A.⁵⁷ These changes were followed by an amended use and lease agreement that was tendered to United and was pending as of

⁵³ George Doughty, Testimony before the House Transportation Subcommittee on Aviation, May 11, 1995; as cited by Dempsey, Denver International Airport – Lessons Learned, p. 405.

⁵⁴ Use and Lease Agreement, between United and the City of Denver, Amendatory Agreement, dated October 20, 1992, Section 6.01.

⁵⁵ Use and Lease Agreement, Amendatory Agreement, dated October 20, 1992, Section 6.05.

⁵⁶ City and County of Denver, Airport System Revenue Refunding Bonds, Series 2000A, August 1, 2000, p. 47.

⁵⁷ Ibid., p. 47.

August 2000 when the City of Denver published its bond offering. As part of that agreement with United Airlines, United leased eight new gates on Concourse A. The timing of this agreement to write off the costs of the baggage system when you consider the new United Airlines agreement to lease gates on Concourse A raises concerns that Denver acquiesced to another self-serving agreement for United Airlines.

United Airlines has ensured it will maintain a competitive edge by negotiating with the Denver airport authority to prevent competitors from gaining an advantage in per passenger costs, and has ensured that its largest current competitor cannot expand significantly in Concourse A without building additional gates.

Direct Evidence of Price and Seat Availability Impact at DIA

Professor Dempsey, in his testimony to Congress on the proposed merger of United Airlines and U.S. Airways, provided direct evidence that United Airlines had engaged in behavior that could be described as monopolistic and anticompetitive, dropping its price dramatically as well as increasing availability of seats to drive low fare competition out of individual markets.

The following is drawn from Professor Dempsey's testimony to Congress:

"In 1993, MarkAir filed a complaint with the U.S. Department of Transportation alleging that Alaska Airlines was engaging in below-cost pricing in several Alaska and Pacific Northwest Markets served by MarkAir in order to force it to exit those markets.⁵⁸

In August, 1993, MarkAir announced its intention to abandon Alaska and establish a hub at Denver. In March 1994, it was revealed MarkAir intended to move its corporate headquarters to Denver. In April 1994, it successfully emerged from Chapter 11 bankruptcy. Keep these dates in mind as you look through the accompanying charts, for they offer profound insights as to the motivation of United Airlines to sharply attack MarkAir with predatory pricing in the third quarter of 1994, which resulted in MarkAir's return to bankruptcy, and liquidation.

Denver-Seattle: United vs. MarkAir

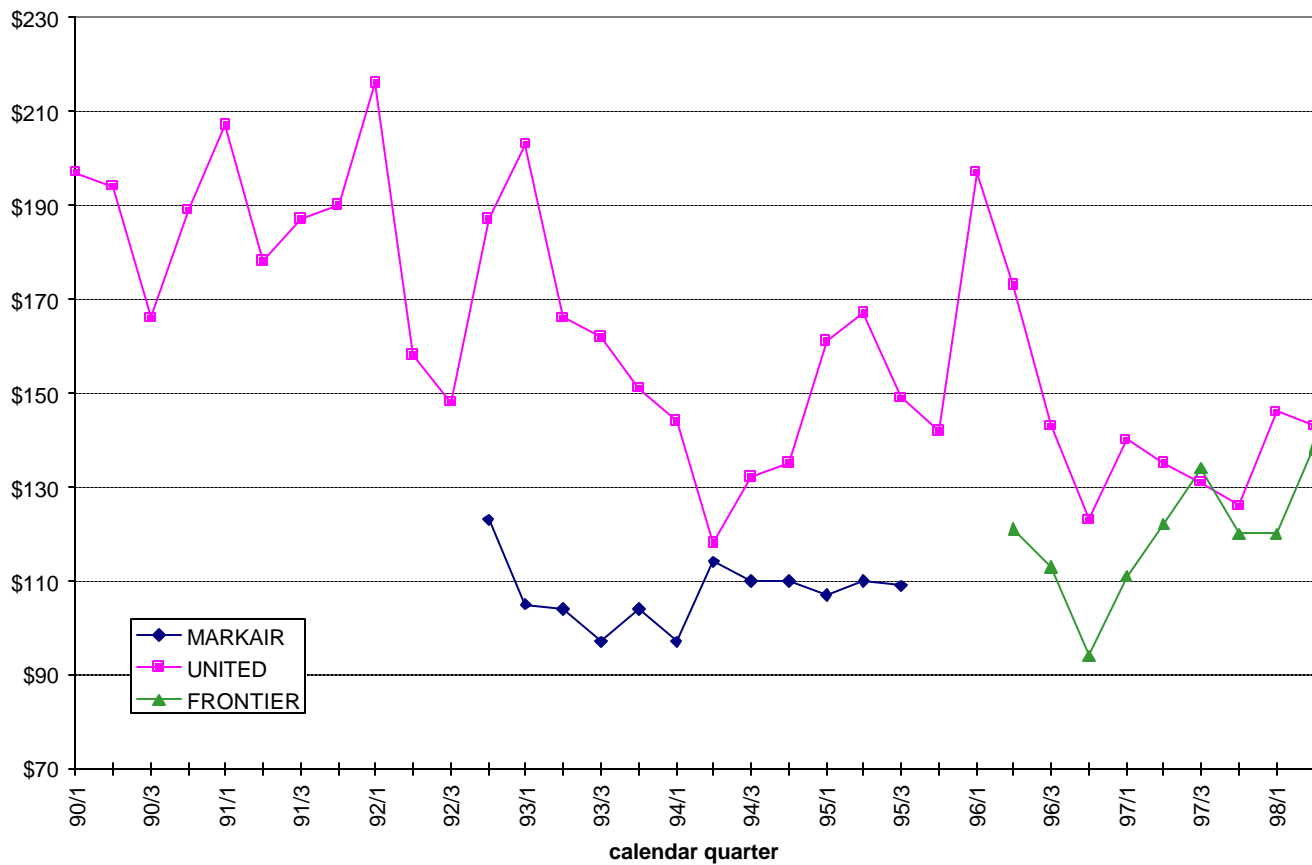
In the Denver-Seattle market, United ignored MarkAir's presence in the market until it announced it was shifting its base of operations from Seattle/Anchorage, to Denver. In the first quarter of 1993, United offered average fares of \$203, some *93% higher* than MarkAir's \$104. In August 1993, MarkAir announced it intended to shift its hub to Denver. After that, United dropped its fares to levels lower than those prevailing before or since in this decade. Note how United targeted MarkAir in the second quarter of 1994, as it was seeking to emerge from bankruptcy, *dropping fares 42%* (from \$203 in the first quarter of 1993 to \$118 in the second quarter of 1994). After MarkAir was driven out of business, United was able to enjoy recoupment of its short-term losses by raising prices 67% (to \$197 in the first quarter of 1996). Frontier Airlines entered the market on May 1, 1996, and United again began to lower fares sharply, pricing below Frontier in the third quarter of 1997."⁵⁹

⁵⁸ Transportation Research Board, *Entry and Competition in the U.S. Airline Industry: Issues and Opportunities*. C-6 (1999).

⁵⁹ Paul Stephen Dempsey, *Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition*; Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; pp. 33-35.

The graph below illustrates graphically how United Airlines' fares drop immediately upon MarkAir's entry, rise once again when Mark Air is bankrupt, and then drop again following the entry of Frontier Airlines.⁶⁰

DENVER - SEATTLE AVERAGE FARES

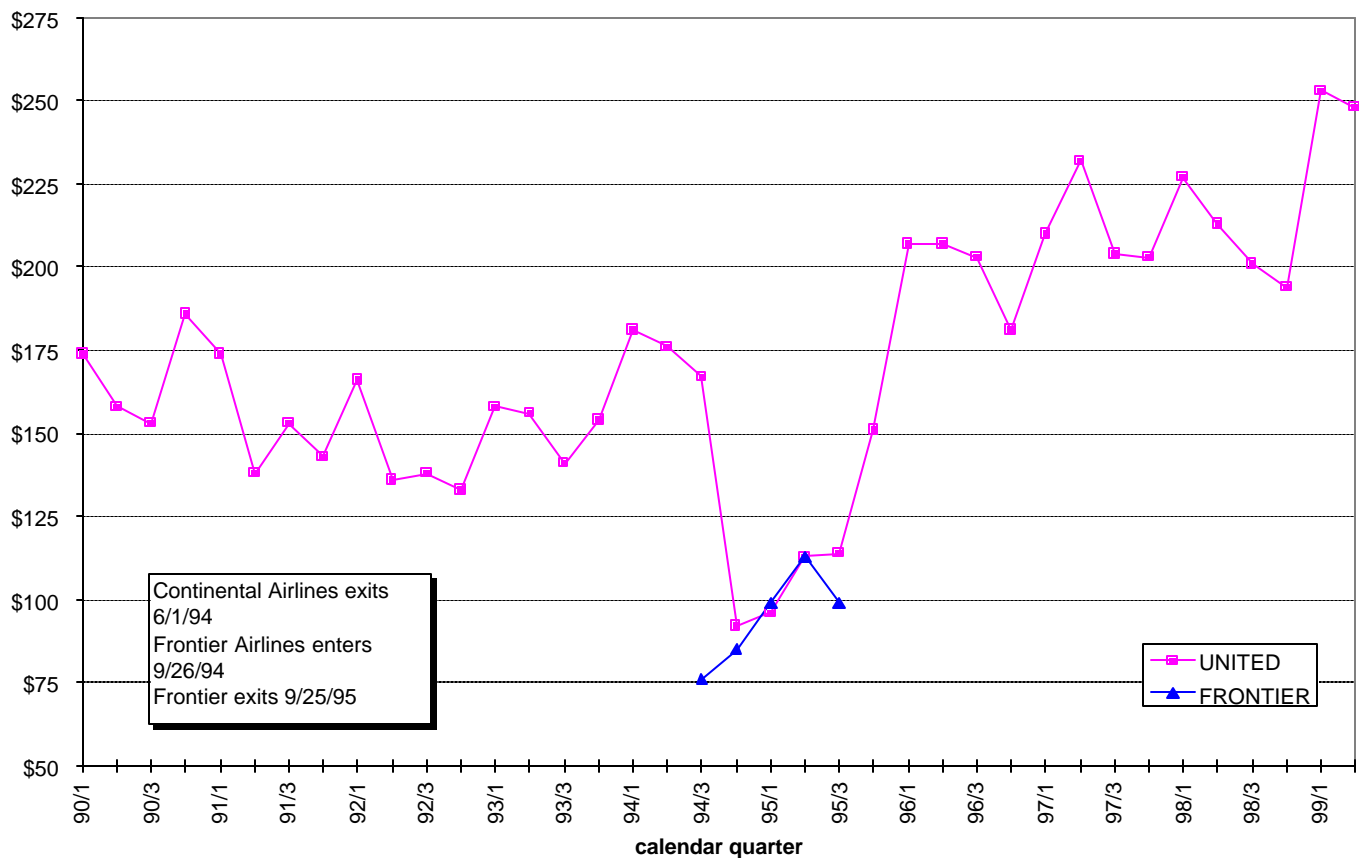


⁶⁰ Paul Stephen Dempsey, Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition; Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; pp. 35.

"Denver to Billings -- Frontier Airlines entered the Denver-Billings market on September 26, 1994. At the time, United's average fare was \$167. United responded to Frontier's entry by *slashing its average fares 45%*. By Frontier's first full quarter in the market, United was charging prices only 8% higher than Frontier's. By Frontier's second full quarter in the market, United was pricing its product *3% below* Frontier's. After Frontier was forced to withdraw from the market one year after it entered, on September 25, 1995, United enjoyed significant recoupment of its short-term losses, raising average fares 150%, to levels never before seen in the Denver-Billings market."⁶¹

The graph below illustrates the price behavior engaged in by United Airlines upon entry of a low fare competitor in a dominated city-pair market.⁶² It is generally accepted in the airline industry that a low fare airline will have a lower average seat cost per mile than a major airline, so if United Airlines matches low fare competitors' fares operating at or near cost, United Airlines is actually pricing those fares below its costs, since its faces a higher cost structure.⁶³

DENVER-BILLINGS AVERAGE FARES



⁶¹ Paul Stephen Dempsey, Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition; Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; pp. 42-43.

⁶² Ibid., at p.42.

⁶³ Robert Roach & Assoc., Scorecard: Airline Industry Cost Management 2Q 1995 12 (3rd Ed. 1996), as cited by Dempsey, Transportation Comm. Testimony at pp. 12-15. United Airlines had an ASM cost of 8.5 cents compared to 6.5 cents for Western Pacific (RMN, Apr. 23, 1996, at 9B).

Other Monopoly Impacts on Consumers, Including Regional Air Service

Often, large dominant carriers with a hub system set up regional code share arrangements with another airline, or a subsidiary airline. In the case of United Airlines at DIA, Air Wisconsin and Great Lakes Aviation through a contractual relationship have joined in a regional air alliance that effectively excludes other airline competition in the region because of the exclusive nature of these relationships.

Some experts have analyzed the situation comparing it to telephone deregulation. Under telephone deregulation, a consumer can get long distance service delivered by any number of providers, and without significant impediments placed on that delivery by the local telephone provider. The government has not provided any similar guarantee in regional air markets following airline deregulation, effectively ensuring that connecting market traffic from or to a region around any hub will likely be dominated by the hub airline, because only the hub airline will have the traffic to allow economic delivery of passenger traffic to regional air pass

Great Lakes Aviation recently announced that it will end its exclusive marketing arrangement with United Airlines in May of this year, and work with other airlines as well to provide air service to the 58 cities in 14 states.⁶⁴ That is a powerful step toward improving consumer access to air travel in the Rocky Mountain region, but Great Lakes Aviation only accounts for about 724,000 passengers or 2% of the traffic through DIA, as the smaller partner in the United Express system in the Rocky Mountain region.⁶⁵ Therefore, the lack of access by competitors to code sharing arrangements with United Airlines larger regional partner, Air Wisconsin, still prevents most Rocky Mountain region consumers from having effective choice and competition in their air travel market.

Another way that a hub monopoly airline can prevent competitors from serving a region and thereby impact consumers is to refuse to enter into a baggage handling agreement with any competitor. At DIA, with its design of three concourses far removed from the ticketing desks and baggage checks, the inability to easily check baggage through to another airline means that to transfer airlines poses a very significant impediment to air travel, especially with regard to regional airlines. For example, if a passenger flies into DIA on American Airlines and wants to transfer to United Express, absent a baggage handling agreement, that passenger would have to take the subway at DIA from the Concourse C to the baggage claim in the main concourse, pick up their bags, check the bags in with United Express, and then take the subway out to the concourse for the United Express flight. This process could easily take well over an hour, possibly longer. The obvious trouble that such a process entails acts as a major barrier to any competitor airline without a baggage agreement serving air passengers in

⁶⁴ New York Times, "Airline Woes Mount in Rural West," February 11, 2001.

⁶⁵ Denver Post, "DIA Passenger Traffic Up 3% in 2000," January 31, 2001, percentage growth figure corrected on February 2, 2001.

the Rocky Mountain region without establishing a regional airline partner – a significant undertaking.

Finally, Professor Dempsey points out that hub airlines can “bias computer reservations systems against connections which fail to share a designator code,” effectively placing another significant impediment to competition in the hub market dominated by a monopoly airline.⁶⁶

Another way that a hub competitor can achieve monopoly power is through use of its frequent flyer miles. While consumers seek these miles, and as such it enhances a hub airline in that hub, these airlines also offer the miles to hundreds of other businesses as a marketing tool. For example, credit cards, bank products, rental cars, vacation packages, hotels, and even flowers can include frequent flyer miles as a marketing promotion. Alone, the failure to offer these to competitors might not be indicative of a monopoly practice, but when combined with other hub operations including reservation systems and offering these frequent flyer miles to any other business, the fact that United Airlines will prevent only competitors from buying United Airlines’ frequent flyer miles serves as an additional direct example of monopoly power in a dominated hub.

Dominant hub monopolies can ensure, through exclusive contracts, the ability to “bias computer reservations systems against connections which fail to share a designator code,” refusing to enter into code sharing and baggage handling contracts with other airlines. Such actions effectively means that a dominant hub carrier can prevent any competitor from gaining any significant market share without huge investments of capital and energy. This technological and hidden barrier to competitive ticketing based on such normal measures as price and convenience can effectively ensure that a monopoly hub airline can continue to receive monopoly returns, evidenced by the so-called “hub premium.”

This hub premium, as well as the overall domination of the city-pair market is recognized as a result of monopoly hub power by the Department of Justice in its complaint against American Airlines, stating “[b]ecause of this market power, a hub carrier is often able to charge higher fares on its hub routes than it could charge on routes where it faces meaningful competition. These higher fares are commonly referred to as a ‘hub premium.’”

⁶⁶ Paul Stephen Dempsey, [Airport Monopolization and MegacARRIER Predation: Barriers to Entry and Impediments to Competition](#); Testimony before the U.S. House of Representatives Committee on Transportation and Infrastructure, Aviation Subcommittee Hearings; June 15, 2000; p. 11.

Conclusion

This report has provided ample evidence that:

- a) There is a specific set of tests and legal thresholds for airline monopoly;
- b) United Airlines, based on widely available statistics, holds a position at DIA that raises legitimate questions whether there could be a monopoly violation of the Sherman Act; and
- c) Actions by United Airlines at DIA, enabled in part by the airport authority, have been consistent with monopoly behavior preserving its hub premium by pricing its competition out of business.

The Department of Justice has taken similar evidence and concluded that American Airlines has violated the Sherman Act at Dallas-Fort Worth, and is pursuing an action in court against American Airlines as a result. United Airlines utter dominance in Denver led the Western Governor's Association to pass a resolution requesting the Department of Justice and the Federal trade Commission extend their deadlines for review of the proposed merger by United Airlines and U.S. Airways; and to include the impact on small community service from these hubs in their analysis of the proposed merger.⁶⁷

The above evidence is ample to raise legitimate doubt as to whether the United States Department of Justice should approve the proposed merger, based on the responsibility the federal government holds under the Sherman Antitrust Act. Moreover, should the United States Department of Justice decide to approve the proposed merger of United Airlines and U.S. Airways, it should seek to ameliorate the negative impact on competition in the air market served by Denver International Airlines by imposing conditions upon the merger approval that improve competition at DIA and in the region.

While the airline merger antitrust attorneys and professionals in the Department of Transportation and the Department of Justice are the professionals most knowledgeable about the mergers' negative competitive impacts and possible ways to address that impact, a few suggestions include:

1. Requiring United Airlines allow all its United Express partners (Great Lakes Airlines has already taken steps toward this) to establish code and baggage sharing arrangements with other airlines, to ensure that other airlines maintain the ability to compete regionally and ensure that Colorado and the western region have access to competitive airline service.
2. Ensuring that meaningful opportunity exists for competitors of United Airlines to offer reservations and expand into additional gates and space at DIA; and that no one competitor (such as United Airlines) acts to bias

⁶⁷ Western Governors' Association, Policy Resolution 00-035, December 1, 2000.

computer reservation systems, or control gates or space so as to effectively force competitors to overcome significant barriers or unreasonable costs in order to operate or expand service at DIA.⁶⁸

3. Alternatively, begin an independent inquiry into the monopoly power of United Airlines at DIA to determine whether, like American Airlines at Dallas-Ft. Worth, United Airlines meets the threshold for Sherman Act violations because of its monopoly behavior.

Of course, the United States Department of Justice has the knowledge and expertise to design and implement appropriate competitive conditions at DIA to help ensure that the already poor competitive situation is not worsened as a result of the system-wide impact of the proposed United Airlines and U.S. Airways merger.

In conclusion, this report has presented ample evidence that United Airlines does indeed hold a market dominating position at DIA, which appears to meet the tests used by the Department of Justice for an airline monopoly. This report includes evidence that United Airlines has in the past behaved in an anticompetitive manner, behavior enabled by its monopoly position. The report amply serves as a basis for rejecting the impending merger by United Airlines and U.S. Airways, as well as the recommendation, in the alternative, for conditioning any approval of the proposed merger on changes made to enhance competition.

⁶⁸ According to the Competition Plan for Denver International Airport, submitted September 6, 2000, DIA has thirteen common-use gates available for airline use (page 16). However, eight are designated as international use gates on Concourse A, and four are designated as domestic located on Concourse C. That leaves only one gate designated domestic use on Concourse A, which is where United Airlines' competitor Frontier Airlines is based, leaving very little room to grow without significant costs of construction.