Flight Plan

Airline Competition in Minnesota

2
Summary

4
Introduction

5
Fares high at concentrated airports

9
Airport is a major economic engine

10
Origins of Northwest's dominance

13
Obstacles to competition

17
Efforts to increase competition

MINNESOTA PLANNING is charged with developing a long-range plan for the state, stimulating public participation in Minnesota's future and coordinating public policy with state agencies, the Legislature and other units of government.

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Summary

The 1998 pilots' strike that idled Northwest Airlines heightened public awareness of Minnesota's heavy dependence on a single airline. Northwest carries 81 percent of boarding passengers at Minneapolis-St. Paul International Airport, making the airport one of the most concentrated in the nation. Studies have found high airfares at airports such as Minneapolis-St. Paul where there is little competition.

The apparent relationship between airport dominance and high fares, coupled with the nearly total loss of air service during the strike, is forcing Minnesotans to weigh the convenience and economic benefits of hosting one of the world's largest airlines against the costs of high fares.

Flight Plan: Airline Competition in Minnesota summarizes research on the relationship between airport concentration and high fares, describes how Northwest Airlines achieved its dominant position, analyzes obstacles and offers possible policy options for increasing competition.

Fares are higher at concentrated airports

Several studies have found higher-than-average fares at airports such as Minneapolis-St. Paul that are dominated by one or two airlines. These studies consistently name Minneapolis-St. Paul as one of the most concentrated airports and among the most expensive for travelers. The most recent, released by the U.S. General Accounting Office in March 1999, found that airfares at Minneapolis-St. Paul were 49 percent higher than the national average for trips of comparable distance. The finding is consistent with earlier studies by other researchers.

- A University of California economist estimated that Twin Cities fares in 1995 were 32 percent higher than the national average for trips of the same distance.
- A U.S. Department of Transportation study found that in 1995, Twin Cities passengers paid 41 percent more than passengers at airports that had more competition from low-fare airlines.

Minnesota Senate staff estimated that higher than average fares cost Twin Cities travelers $500 million per year.

Northwest argues that fares appear higher at Minneapolis-St. Paul in part because the airport has a disproportionate number of business travelers and because charter flights siphon off some low-price passengers. High fares most affect business travelers and other passengers who must book flights on short notice or want business- or first-class amenities. Passengers willing to pay nonrefundable fares well in advance get lower rates.

Airline hubs bestow benefits but contribute to concentration

After the federal government freed airlines to choose their own routes in the late 1970s, major airlines developed hub-and-spoke routes systems to improve operating efficiency. In these systems, airlines collect passengers from smaller "spoke" cities and bring them to a larger "hub" city, where they can help fill planes for longer-haul flights.

Cities hosting major airline hubs have more air service than they otherwise would have. The Twin Cities area has more air passenger service per capita than cities such as Cleveland, Indianapolis and Kansas City that do not have airline hub operations. Airlines operating at Minneapolis-St. Paul offer nonstop service to 129 cities, including 17 international destinations. In addition, because they serve as collection and transfer points for passengers, airports with hub operations handle more passengers, increasing their economic impact in their communities.

On the other hand, major airlines tend to dominate their hub airports. Hub operations require many closely clustered arrivals and departures several times a day, making it necessary for the airline to control many gates and resulting in the airline accounting for much of the traffic at its hub airport. The ease of flight connections, coupled with marketing inducements such as frequent flier awards, encourages passengers to stay on the hub airline, making it more difficult for other airlines to compete.

Airport is a major economic engine

Minneapolis-St. Paul International Airport, the 19th busiest in the world, is a major contributor to the local economy. Because it collects passengers at Minneapolis-St. Paul for connections to other cities, the Northwest Airlines hub operation almost certainly makes the airport busier than it otherwise would be. The Department of Trade and Economic Development believes that much of the growth in airport operations this decade is directly attributable to Northwest's hub operation.

The airport and directly related businesses generated the equivalent of 27,500 full-time jobs in 1997. Northwest is the state's fourth-largest private employer, with about 20,000 employees. It had a Minnesota payroll of $1.2 billion in 1997 and spent $2.1 billion here on such items as fuel, food catering and taxes.

The airport links Minnesota businesses with customers and suppliers around the world. A high level of air service also makes Minnesota more attractive for tourism and convention business.

Origins of Northwest dominance

Northwest Airlines not only dominates traffic at Minneapolis-St. Paul, it also has no or limited competition on many major routes. Analysis of published schedules for September 1998 showed Northwest to be the only airline offering nonstop service to 12 major destinations. Northwest had more than half the daily flights offered to another half-dozen cities.

Several factors have helped Northwest achieve its leading position in the Minnesota market. As a homegrown airline, Northwest has had a strong presence for decades. It took advantage of deregulation to develop a strong hub-and-spoke route system centered on Minneapolis-St. Paul. With its purchase of Republic Airlines in 1986, Northwest jumped from 43 percent of Twin Cities passengers in 1985 to 79 percent in 1987, further solidifying its position.

Northwest also received financial assistance from the state. By the early 1990s, high fuel prices and airline fare wars pushed Northwest near bankruptcy. The Minnesota Legislature approved a $270 million working capital loan in exchange for Northwest's commitment to build additional facilities in Minnesota. The airline also negotiated wage concessions from its labor unions and secured investments from KLM Royal Dutch Airlines.

During the 1990s, Northwest and other major U.S. airlines have turned their attention to international competition. Northwest developed the first international alliance when it entered into a code-sharing and marketing alliance with KLM. It also recently began code-sharing with Continental Airlines. The U.S. Justice Department is challenging the Northwest-Continental alliance.

Obstacles to competition

Realizing the goal of increasing consumer choice and price competition at Minneapolis-St. Paul faces several obstacles.

The U.S. General Accounting Office found in 1996 that long-term, exclusive-use gate leases seriously inhibit competition at Minneapolis-St. Paul. At airports where most gates are tied up in such leases, new entrants are often forced to sublease gates, which usually results in gate access at less desirable times and higher cost.

Major airlines also have marketing advantages over new entrants. They use frequent flier awards to reinforce customer loyalty, offer incentives to travel agencies and use code-sharing arrangements to funnel passengers onto their planes. Major airlines, including Northwest, have been accused of predatory pricing behavior to undercut challengers, although they argue that they are simply making good business decisions necessary to compete.

Efforts to increase competition

The Metropolitan Airports Commission has been criticized for allowing a single airline to dominate the Twin Cities market. Although one low-fare airline, Vanguard, offers several flights daily, the commission has not been able to attract the nation's most prominent low-fare carrier, Southwest.

The commission responds that it has contacted or met with 30 domestic and international airlines in the past three years to try to draw them to the Twin Cities. Several recent commission actions reflect sensitivity to the criticisms. New gate leases will allow the commission to reallocate gates based on use. In addition, five of 12 planned new gates will have short-term leases, making it easier to make gates available to new carriers. The commission has also announced plans to organize task forces of business and community leaders to bring low-cost carriers to the Twin Cities.

Reno, Kiwi International and Sun Country airlines have made brief forays into the Twin Cities market but have withdrawn after Northwest added service and cut fares to compete. Sun Country airlines, founded as a charter airline, recently announced plans to offer low-fare, no-frills scheduled service to 10 cities already served by Northwest, beginning in the summer of 1999.

Strategies for boosting competition

The time is ripe for a concerted effort to encourage a more competitive airline market in the Twin Cities. Three kinds of strategies could be used to promote competition at Minneapolis-St. Paul:

- Guarantee ongoing open access to new and existing airport gates for new or expanding carriers.
- Assemble public and private leaders and incentives to aggressively recruit new or expanding airlines.
- Support some form of federal restriction on predatory actions against small and midsized airlines entering new markets.

The state could also set performance goals for increasing competition, offer incentive funding to the airports commission to reach those goals, reduce reliance on airlines for airport financing and seek federal support for regulating incentives that major airlines offer travel agents to book passengers on their flights.

Introduction

Minnesota is home to the world's 19th busiest airport and home base for one of the world's largest airlines. Minneapolis-St. Paul International Airport and its major tenant, Northwest Airlines, bring numerous benefits to the state, including jobs, links to global markets and convenient air travel options for business and leisure travelers.

Over recent decades, Northwest Airlines management, the Metropolitan Airports Commission, and public and private leaders have worked diligently to keep Minnesota's homegrown airline strong and to retain the benefits of hosting the headquarters of a major airline. But in the 20 years since airline deregulation — an era of recessions and airline bankruptcies and consolidations — Northwest has acquired a near-monopoly position at Minneapolis-St. Paul.

Northwest's dominant position is measured in gate control and market share:

- Northwest controls 53 of 70 gates.
- Northwest carries 81 percent of all passengers passing through the airport.

Several studies suggest that this market power enables Northwest to charge higher fares. A U.S. General Accounting Office study estimated that fares were 45 percent higher at Minneapolis-St. Paul in 1995 than at other large airports with more competition.

The 1998 pilot's union strike against Northwest heightened public awareness of Minnesota's dependence on a single airline. This sense of vulnerability, coupled with the realization that increased competition might result in lower fares, has led to calls for recruiting more airlines for the local market. *Flight Plan: Airline Competition in Minnesota* examines the consequences of Northwest's dominance and explores options for increasing competition at Minneapolis-St. Paul International Airport.

The analysis of fares in this report is based on studies available through October 1998. Fares fluctuate constantly, making comparisons difficult. Comparisons of current Twin Cities fares to those in other markets are not available. Information on airline schedules and flight connections from the Twin Cities is based on published airline schedules for September 1998.

Business travelers are most affected by high fares

High fares most affect business travelers and other passengers who must book flights on short notice. Airlines use their ability to price each seat differently to maximize their revenues. The highest fares are charged in exchange for the amenities associated with first-class or business-class seats. In addition, airlines can charge higher fares to customers who need a seat on short notice.

Airlines offer lower fares to passengers willing to pay nonrefundable fares well in advance. Also, airlines have become adept at selectively offering deep discounts to fill seats that might otherwise go unsold and generate no revenue. Each Wednesday, for example, Northwest offers bargain fares over the Internet for round-trip travel completed between the following mid-day Saturday and Tuesday night. For the last full week in January, such bargain fares to Detroit and Albuquerque from Minneapolis-St. Paul were $119 and $129, respectively.

Business travelers make up only 40 percent of all passengers, but because they pay higher fares, they account for 50 to 70 percent of all airline revenue, according to the U.S. General Accounting Office. As a result, airlines aggressively court business travelers — not with low fares but with perks such as in-flight amenities, frequent flier awards and airport lounges.

In late January 1999, Northwest and other airlines followed the lead of Delta and raised business fares by 2 percent and leisure fares by 4 percent. Analysts expected the increases to hold steady across the industry, adding $750 million in profits in 1999. If the fare boost sticks, it would be the first across-the-board increase in 18 months.

Business travelers value price and convenience

Business travelers and their employers consider several factors in choosing airline flights. Price and service are important, but frequency and convenience are often the overriding factors.

Price: National surveys and interviews conducted by Minnesota Planning for this report confirm that price is a major factor in air travel purchases. Minnesota business travelers report that fares from Minneapolis-St. Paul are, as one respondent said, "shocking" to business clients in other cities who pick up the costs of service calls or training visits.

On-time performance and schedules: Convenient scheduling of flights and on-time performance are two of the top three components of airline customer satisfaction, accounting for 37 percent of satisfaction, according to a 1998 annual survey by J.D. Power and Associates and *Frequent Flier* magazine. The survey did not include consideration of price.

Interviews with Minnesota business travelers confirm that a choice of preferred flight times during the day is of great importance. To avoid the risk of missed connections, nonstop or same-plane flights are also very desirable. This gives an edge to a large airline at its hub airport. Due to its greater number of flights, it can accommodate more business travelers' preferred departure times and offer more flexibility in changing travel plans.

Gate location and check-in: Combined, these two factors determine 24 percent of customer satisfaction, according to the J.D. Power survey. Curbside check-in, baggage claim and ticketing are all affected by location.

Frequent flier programs: These programs build customer loyalty. In a hub city, the frequent flier program may induce travelers to stick with the major airline rather than shop around.

Nationally, business travelers belong to about three programs on average, though they may favor one. Business travelers may be earning personal mile credits for trips paid by their employer and thus may be less likely to book flights by price. Since unused frequent flier credits typically expire after a certain period of time, travelers have an added incentive to use the same airline consistently. Airlines also allow frequent fliers to exchange credits for seating upgrades.

Fares high at concentrated airports

Several studies have found higher-than-average fares at airports such as Minneapolis-St. Paul that are dominated by one or two airlines. These studies consistently name Minneapolis-St. Paul as one of the most concentrated airports and among the most expensive for travelers. The development of highly concentrated hubs, with limited competition and high fares, occurred in the last 20 years in the wake of government deregulation of the airline industry.

Proponents of deregulation believed that increased direct route competition would keep fares down. The mere threat of competition, they held, would prevent dominant airlines from raising fares too high, even on routes with no direct competition.

In the first few years of deregulation, most large airlines lost market share to smaller and new airlines. A 1985 study by the U.S. General Accounting Office found that while full fares rose, the growing use of discounts meant that fares for most travelers fell. As the industry concentrated through mergers and the failures of small and new airlines, and as major airlines developed regional dominance through hub-and-spoke networks, concern grew that dominant airlines were taking advantage of the lack of competition to boost fares. The hub-and-spoke systems collected passengers from many "spoke" cities and funneled them into an airline's hub in order to fill planes on the airline's major long-distance routes. For example, passengers from Fargo, Duluth and Sioux Falls might fly first to Minneapolis-St. Paul, then take the same flight to Los Angeles. Major airlines with hub operations tended to become more dominant in their hub airports.

The 1986 merger with Republic Airlines catapulted Northwest into a dominant position at Minneapolis-St. Paul and may have led to fare increases. In 1990, the Department of Justice found that after the merger of Northwest and Republic, fares rose 7.8 percent on long-distance routes where the two airlines had once competed.

A March 1999 U.S. General Accounting Office study found overall fares at Minneapolis-St. Paul in 1998 were 49 percent above the average fares at nonconstrained airports serving communities of similar size. Although fares actually declined 13 percent from 1990 to 1998 at Minneapolis-St. Paul, they fell much more at airports with more competition. Fares from Minneapolis-St. Paul to popular leisure destinations are less than the national average, but those on routes dominated by business travel much exceed the average. In response to the GAO study, Northwest Airlines told the Minneapolis *Star Tribune* that business destinations simply attract more business travelers, who tend to want more expensive amenities and services.

Two more recent studies found fares from Minneapolis-St. Paul substantially higher than fares from airports with more competition in 1995:

- University of California economist Severin Borenstein estimated that the fares of all carriers at Minneapolis-St. Paul International Airport were 32 percent higher than the national average.
- The U.S. Department of Transportation found that Twin Cities-based passengers paid 41 percent more than passengers at large and medium-size hubs that had competition from low-fare airlines.

The Department of Transportation estimated the total cost of this fare premium in the range of $400 million. Using Borenstein's data, Minnesota Senate staff estimated the extra cost at $500 million per year — $375 million to business travelers and $125 million to leisure travelers.

Studies of air fares generally compare flights of the same distance. Although the estimates of how much fares differ vary somewhat, most major studies over the past 10 years have consistently found a link between lack of competition and high fares:

- Fares at airports dominated by one or two airlines were 27 percent higher than fares at less-dominated airports in 1988, according to a 1990 General Accounting Office study. The dominant airlines charged 38 percent more per passenger mile than the average of all airlines at other airports.
- Fares were 22 percent higher at 14 concentrated airports than at 35 less-concentrated airports in 1992, according to a 1993 U.S. General Accounting Office report.

In 1988, Northwest had a yield of 17.1 cents per passenger mile at the Minneapolis-St. Paul airport, compared to the average yield of 14.5 cents at unconcentrated airports. In 1993, the yields of all airlines at Minneapolis-St. Paul averaged 21.3 cents, compared to 16.4 cents at unconcentrated airports. The airport had the ninth-highest fares among 14 concentrated airports.

Borenstein estimated that Northwest's fares at Minneapolis-St. Paul were 34 percent higher than the national average for trips of the same distance. For other major hubs, the difference ranges from 2 percent below average in Salt Lake City and St. Louis to 64 percent above average in Cincinnati.

Northwest points out several facts that might account for at least some of the higher fares at Minneapolis-St. Paul.

- If trips bought with frequent flier credit were included in the analysis, the fares paid at Minneapolis-St. Paul would fall. Borenstein responds that the difference probably accounts for only about 2.5 percent in the prices he calculated.
- Minneapolis-St. Paul has more charter traffic than most airports. Charter traffic might siphon off some low-price passengers, leaving a higher proportion of full-fare business travelers on scheduled service. Borenstein responds that charter travel is most popular in markets with high air fares and that many leisure charter travelers would not fly at all without the lower charter fares.
- Minneapolis-St. Paul has more business travelers than other airports, as measured by the proportion of customers paying full fares. Borenstein notes that this might be because Northwest simply makes fewer discount tickets available than airlines at other hubs.

Many Minnesota travelers have benefited from lower fares. Immediately after deregulation, new low-fare airlines forced the major airlines to deeply discount fares to fill planes. In 1984, 81 percent of travelers used discount fares, compared to only 39 percent in 1977. Today, airlines offer dozens of fares on the same flight in order to fill seats.

Concentration, not the hub, is the main issue

The findings from these fare studies strongly imply that increased competition produces lower fares. Northwest's choice of the Minneapolis-St. Paul airport for a major hub operation is not the issue. Hub-and-spoke systems might

STUDIES FIND HIGHER FARES AT MINNEAPOLIS-ST. PAUL

Year	Comparison	Fares at Minneapolis-St. Paul Airport
1998	9 constrained and 36 nonconstrained airports	Overall fares were 49% above average (U.S. General Accounting Office, 1999)
1995	30 busiest U.S. airports	Northwest was 34% above average (Severin Borenstein, 1996 testimony to Minnesota Legislature)
1995	60 large and medium airports	Overall fares were 41% above average. (U.S. Department of Transportation, 1996)
1995	10 constrained and 33 nonconstrained airports	Overall fares were 45% above average of nonconstrained airports. (U.S. General Accounting Office, 1996)
1992	Concentrated and unconcentrated airports	Overall fares were 30% above average of unconcentrated airports. (U.S. General Accounting Office, 1993)
1988	15 concentrated and 38 unconcentrated airports	Northwest was 18% above average for all airlines at unconcentrated airports. (U.S. General Accounting Office, 1990)

Note: A constrained airport has competition limited by gate assignments or time slot restrictions. A concentrated airport is dominated by one or two airlines.

actually contribute to lower fares if it permits the airline to operate more efficiently. The more important issue is the dominance of a single airline and its lack of competition on many routes. A study for the Air Transport Association comparing fares at 30 hubs and 30 nonhub airports found that nine of the hub airports had below-average fares.

However, the hub system has clearly enabled airlines to limit their exposure to competition. After deregulation, the number of U.S. routes served by two or more airlines increased 55 percent between 1978 and 1984. With the establishment of hubs, the trend reversed. For example, between 1988 and 1992, the number of destinations with same-plane service from Minneapolis-St. Paul increased by seven, but the number of routes with no competition increased by 19.

Borenstein's analysis shows that fare premiums paid by Northwest customers in Minneapolis-St. Paul increased dramatically between 1989 and 1990, and have remained high since then. Northwest's Detroit fares jumped in 1992, but are not as far above the national average. At the same time, fare premiums paid to the dominant airlines in St. Louis (TWA) and Salt Lake City (Delta) declined, and were actually slightly below average by 1995.

In a 1996 report, the U.S. Department of Transportation reasoned that the decline in fares at St. Louis and Salt Lake City reflect extensive service there from Southwest, a low-fare airline. Fare premiums increased substantially at cities with no low-fare competition. Low-fare airlines serve only 3 percent of passengers at Minneapolis-St. Paul, the lowest percentage of 53 large and medium-sized hubs with at least some low-fare service. Seven other hubs had no low-fare service at all in 1995.

Hub cities enjoy convenience, many connections

Although evidence indicates that many hub cities, including the Twin Cities, face higher-than-average fares, hub cities benefit from their status in many ways. Cities that host a major airline hub have better air connections than they otherwise would. Advantages to Minnesota business travelers — more nonstop service, more same-plane service and better schedules — stem both from Northwest's size and the location of its hub in Minneapolis-St. Paul.

The airport's lower ranking in cargo tonnage reflects its regional population and its distance from more populous markets. However, its passenger ranking is clearly high in proportion to its population. The Twin Cities area has significantly more air passengers per capita than cities of similar size without an airline hub, such as Cleveland, Indianapolis and Kansas City, although precise population comparisons of metropolitan areas are difficult to make.

PATTERN OF AIRPORT CONCENTRATION WAS SET A DECADE AGO

Percentage of passengers carried by a single airline

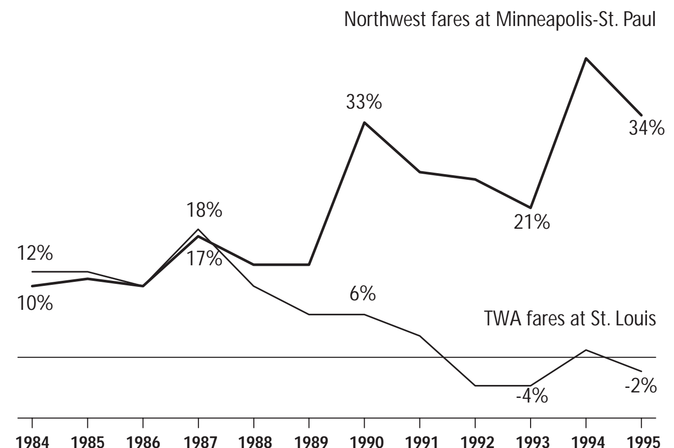
	1988	1992
Charlotte	93%	96%
Pittsburgh	87	90
Cincinnati	78	88
Atlanta	—	88
Salt Lake City	80	84
Raleigh-Durham	69	82
Memphis	83	81
Minneapolis-St. Paul	**78**	**81**
Nashville	62	77
St. Louis	82	75
Dayton	79	72

Notes: These figures include passengers originating at or passing through the airport. In 1988, Atlanta had no single airline carrying more than 60 percent of all passengers.

Sources: U.S. Government Accounting Office and Federal Aviation Administration

ST. LOUIS ENJOYS HUB STATUS WITH LOWER FARES

Percent above the national average fare for trips of the same distance



Northwest passengers in the Twin Cities pay a higher premium for hub service than TWA travelers from St. Louis, where Southwest Airlines competes with TWA's hub operations. Both airports are similar in size, both are located in the central United States and both serve as major airline hubs.

Source: Severin Borenstein, 1996 testimony to Minnesota Legislature

MINNEAPOLIS-ST. PAUL AIRPORT IS ONE OF WORLD'S BUSIEST

	Worldwide rank	U.S. rank
Passenger traffic	19th	13th
Takeoffs and landings	10th	10th
Cargo tonnage	39th	21th

Source: U.S. Department of Transportation, 1997

Northwest and its allied regional carriers offer nonstop service to 109 cities. All together, the airlines serving Minneapolis-St. Paul offer nonstop service to 129 cities, including 17 international destinations — nine Canadian, three Asian, three European and two Caribbean cities. The Twin Cities enjoys much better connections to major markets than other large Midwestern cities without a hub airport. Only 36 cities can be reached on nonstop jet service from Kansas City. Milwaukee's Mitchell Field offers same-plane service to only 90 cities.

The majority of nonstop flights to and from Minneapolis-St. Paul are offered by Northwest. Many serve "spoke" cities that might not have direct connections with the Twin Cities were it not for Northwest Airlines' hub operation.

The availability of more flights, often nonstop, at convenient times can save business travelers several hundred dollars a day. In addition to the loss of productive work time, direct costs can include additional lodging, meal and parking expenses. Missed connections or delayed baggage can make an entire business trip a lost opportunity.

MINNEAPOLIS-ST. PAUL HAS HEAVY TRAFFIC FOR ITS POPULATION

	Airline passengers per capita in 1996
Atlanta	9.4
Denver-Boulder-Greeley	6.6
St. Louis	5.3
Minneapolis-St. Paul	**4.5**
Pittsburgh	4.0
Cincinnati-Hamilton	3.8
Seattle-Tacoma-Bremerton	3.4
New Orleans	3.2
Portland-Salem	2.9
Kansas City	2.8
Detroit-Ann Arbor	2.6
Indianapolis	2.2
Cleveland-Akron	1.8

Notes: This list excludes cities with more than one major airport and cities with high levels of seasonal or tourist travel. Consolidated Metropolitan Statistical Area population used for Cincinnati, Cleveland, Denver, Detroit, Milwaukee, Portland and Seattle regions. Metropolitan Statistical Area population used for other cities.

Sources: Minnesota Planning calculations; U.S. Bureau of the Census population estimates; U.S. Department of Transportation enplanement statistics

NONSTOP FLIGHTS SAVE TIME AND MONEY

Employee earning $60,000 a year

	Nonstop round trip	Connecting round trip, including layover
Travel time each way	2 hrs.	4 hrs.
Cost of time	$120	$240
Hotel	—	100
Meals	—	30
Parking	12	20
Total	**$132**	**$390**

Executive earning $140,000 a year

	Nonstop round trip	Connecting round trip, including layover
Travel time each way	2 hrs.	4 hrs.
Cost of time	$280	$560
Hotel	—	100
Meals	—	30
Parking	12	20
Total	**$292**	**$710**

This hypothetical example shows the potential cost for business travelers to fly nonstop versus connecting round trips.

Notes: All travel time is assumed to be nonproductive work time. Only those costs affected by travel time are included.

Source: Minnesota Planning

Hubs give airlines clout in airport operations and pricing

The hub-and-spoke route systems favored by major airlines today require many closely clustered arrivals and departures several times a day, making it necessary for the airline to control many gates or concourses. As major tenants, hub airlines also have negotiated favorable accommodations at their host airports. By 1996, Northwest had "exclusive-use leases" for three-quarters of the gates at both Detroit and Minneapolis-St. Paul airports. Because airlines with major hub operations are such an important source of revenue for airport authorities such as the Metropolitan Airports Commission, the dominant airline at an airport can often negotiate long-term gate leases in exchange for strong input in airport investment decisions that would require airline financial contributions.

Northwest controls 53 of 70 gates at the airport. Since 1991, Northwest has gained control of four of five new gates that became available and has subleased two of another carrier's four gates. The executive director of the airports commission has stated that the commission has never denied access to any carrier wishing to serve the Twin Cities market and does not use gate policy to discriminate against new entrants.

As concern grew about consolidation of the airline industry, critics began to contend that airlines like Northwest operated "fortress hubs," dominating traffic to the point that other airlines are reluctant or unable to compete. By 1988, the U.S. General Accounting Office identified Minneapolis-St. Paul as one of 15 airports dominated by one or two airlines. Minneapolis-St. Paul remained on the list of 14 in a 1992 study.

In a more recent study, the U.S. General Accounting Office identified 10 airports where competition was constrained by either limited availability of gates or federally imposed controls on the number of takeoffs and landings, known as "slot controls." Minneapolis-St. Paul, Detroit, Cincinnati, Charlotte, Pittsburgh and Newark each had gate constraints.

Airport is a major economic engine

The Minneapolis-St. Paul airport is a major contributor to the local economy. Air service at Minneapolis-St. Paul links Minnesota businesses with customers and suppliers around the world, moving corporate executives, salespeople and freight. Outstanding air connections also enhance the state's ability to attract tourists and conventioneers who boost the state's hospitality and retail economy.

Because the nature of an airline hub is to collect passengers in the Twin Cities for connections to other cities, Northwest's hub operation almost certainly makes Minneapolis-St. Paul a busier airport than it otherwise would be. In addition, the region benefits from having Northwest's corporate headquarters in Eagan, Minnesota.

The airport and directly related businesses generated the equivalent of 27,500 full-time jobs in 1997. This includes only a portion of the employees at Northwest's corporate headquarters in Eagan. Thousands more hold indirectly related jobs in the tourism and export industries.

- These jobs paid an average salary of about $38,000, compared to an overall average salary of just under $32,000 in the metropolitan area, according to the Metropolitan Airports Commission.
- In 1997, Northwest Airlines spent more than $2.1 billion in Minnesota, including $870 million on items such as fuel, food catering and taxes.
- Northwest paid $1.2 billion in wages and salaries to about 20,000 Minnesota employees in 1997.
- The Department of Trade and Economic Development estimates that Northwest Airlines' 1997 expenditures indirectly supported more than 17,000 jobs among suppliers.

The Department of Trade and Economic Development has argued that much of the growth in airport operations this decade has come from Northwest's hub operation. The number of passengers boarding in Minneapolis-St. Paul increased 49 percent between 1989 and 1996. Cargo volume grew 55 percent. Since both of these far outpaced the Twin Cities area's 16 percent employment growth during the same period, the department concludes that a good share of the air traffic growth was probably due to Northwest hub operations rather than increased demand by area businesses. It is also possible that discount fares have encouraged more leisure travel.

The airport may be even more important to the region's businesses for shipping freight than for passenger travel.

- Air service can make a critical difference in business location decisions when other factors such as labor quality and costs are equal.
- Air access to the global market is a big reason more than 40 major companies have located their headquarters in the Twin Cities area, according to a 1992 commentary by former Metropolitan Airports Commission Chairman Ray Glumack.
- High-tech industries rely particularly on air shipping. Without the connections offered by a major hub, more high-value and time-sensitive cargo would first be trucked to Chicago for air transport, causing delays, increased risk of damage and higher insurance costs.
- Minnesota manufacturers exported goods valued at $4.6 billion to international destinations by air in 1997 — some 48 percent of all manufactured exports. This reliance on air transportation for export is greater than the national rate of 32 percent.

MINNEAPOLIS-ST. PAUL AIRPORT GENERATED 27,500 DIRECT JOBS IN 1997

Passenger airlines	19,728
Passenger ground transportation	2,014
Freight transportation	1,467
Government agencies	1,002
Concessions	987
Construction / consulting	751
Catering	591
Skycaps, parking, security, janitorial services	577
Aircraft services	355

Note: Full-time equivalent jobs; includes some employees from Northwest Airlines corporate headquarters.

Source: Martin Associates for the Metropolitan Airports Commission

CARGO LEAVING MINNEAPOLIS-ST. PAUL IN 1997

Company	Percent of freight
Federal Express	35%
Northwest	24
United Parcel	22
Kitty Hawk	6
Emory Worldwide	6
Others	7
TOTAL	100%

Note: Cargo measured in weight; does not include mail.

Source: U.S. Department of Transportation

Data on air-based tourism travel to Minnesota is sketchy. The Office of Tourism estimates that 3.4 million domestic visitors arrived in Minnesota by air in 1996 and spent $991 million. A 1995 air travel survey by the U.S. Department of Transportation found that 6 percent of leisure trips nationally are for shopping, with Texas and Minnesota mentioned most frequently as destinations.

Northwest Airlines has on occasion marketed bargain fares to bring shoppers to the Mall of America in Bloomington for one-day shopping excursions. For example, in December 1998, Northwest offered one-day round-trip fares to Minnesota ranging from $59 to $99 from such cities as Milwaukee, Winnipeg and Los Angeles.

Origins of Northwest's dominance

Northwest Airlines has no competition on many routes

The findings from studies of fares at U.S. airports strongly suggest that airlines are able to charge higher fares in markets where competition is weak. Northwest clearly has little competitive pressure to lower fares on many heavily traveled routes. Analysis of published fares in September 1998 showed that Northwest had no nonstop competition on 12 of its busiest routes:

- Los Angeles (three airports)
- San Francisco
- Washington, D.C. (three airports)
- Boston
- Orlando
- Detroit
- Seattle
- San Diego
- Miami
- Milwaukee
- Indianapolis
- New York (La Guardia)

Twin Cities passengers can reach most of these destinations on other airlines but only with stops enroute or, in most cases, plane changes at the other airline's hub. For example, United passengers can reach Los Angeles with a stop in Denver and Delta and TWA passengers can fly to Orlando with transfers in Atlanta and St. Louis, respectively.

Northwest has at least some competition on another half-dozen routes, but it still offers more than half the nonstop flights to:

- Newark (Continental)
- Phoenix (America West)
- Philadelphia (US Airways)
- Kansas City (Vanguard)
- Salt Lake City (Delta)
- Cleveland (Continental)

Continental's service to nearby Newark provides some competition for Northwest flights to New York's LaGuardia airport. No airline offers service from the Twin Cities to New York's Kennedy Airport.

Northwest faces heavier competition on six routes, offering half or fewer of the weekday nonstop flights to:

- Chicago (United, American, Vanguard)
- Denver (United, Frontier)
- Atlanta (Delta)
- St. Louis (TWA)
- Dallas-Fort Worth (American)
- Houston (Continental)

On some of these routes, competition may be less vigorous than it appears. For example, Northwest, United and American each offer at least 10 flights a day to Chicago from the Twin Cities. However, the three airlines may not be vying for the same customers. Many business travelers originating in Minneapolis-St. Paul choose Northwest because of its frequent flier benefits, while Chicago-based travelers more often choose United or American for the same reason.

Northwest also dominates international service from the Minneapolis-St. Paul airport, with nonstop flights to London, Amsterdam, Japan and Asia. Before the 1997 entry of Icelandair into the Minneapolis-St. Paul market, Northwest provided the only direct service to destinations outside North America. Other airlines offer international connections but with plane changes in cities such as Chicago, New York and Houston.

Icelandair service to Europe appears to have resulted in price competition. When Icelandair offered low introductory fares in 1997, Northwest matched them. Shortly after settlement of the Northwest pilots' strike in September 1998, both airlines offered $328 round-trip fares to Amsterdam. Trips on Icelandair to continental Europe or the British Isles, however, require plane changes in Iceland, giving Northwest an edge in convenience.

Deregulation and merger helped Northwest gain dominance

Several factors have contributed to Northwest's leading position in the Minnesota market.

- As a homegrown airline, Northwest has had a strong presence for many decades.
- Deregulation of the airline industry opened the door to hub-and-spoke route systems and aggressive marketing tactics such as airline alliances and frequent flier promotions.
- Through its 1986 purchase of Republic Airlines, Northwest jumped from 43 percent of Minneapolis-St. Paul passengers in 1985 to 79 percent in 1987.

Northwest began operations in 1926 and initiated Twin Cities passenger service in 1927. In 1945 it became the fourth airline providing transcontinental services between the East and West Coasts. Northwest began flying from the Twin Cities to Asia in 1947. From that point on, it grew hand-in-hand with the Twin Cities.

By 1975, on the eve of deregulation, Northwest accounted for 45 percent of the 3.3 million passengers who boarded planes at Minneapolis-St. Paul airport. Western Airlines and Minnesota-based North Central (which soon merged with Southern to form Republic) each accounted for 15 percent of Twin Cities traffic.

At that time, the federal Civil Aeronautics Board still regulated airline routes and prices, as well as entry by new airlines. After 1978, deregulation freed airlines to choose their own routes and set their own prices. In doing so, it created a new competitive environment in which airlines such as Northwest could aggressively manage routes and fares to maximize profits. A prominent industry strategy was to build route systems centered on major hubs.

Deregulation unleashed a flurry of competition between established airlines and newcomers. Many airlines, including Northwest, looked to mergers to solidify their positions. Northwest's merger with Republic allowed it to strengthen its market position in places like the Twin Cities where both airlines operated, as well as gain a presence in new markets. Northwest used the merger, together with the scheduling freedom of deregulation, to build strong hubs in Detroit, Memphis and Minneapolis-St. Paul.

In the Twin Cities and many other cities, airlines gained dominant market shares at their hub airports. Today, Northwest accounts for about 80 percent of passenger boardings in both Detroit and Minneapolis-St. Paul.

Airlines often dominate traffic statistics at their hub airports because they channel connecting passengers into the hub. Connecting traffic passing through Minneapolis-St. Paul grew in importance after the airport became a hub for Northwest. Before 1980, connecting passengers accounted for about a third of all boardings at the airport; by 1985, they were 45 percent, and by 1997, they were more than 55 percent. Of the 30 million passengers who pass through the airport each year, half are making connections. The other half either begin or end in Minneapolis-St. Paul. Many of the connecting passengers would not pass through Minneapolis-St. Paul if it were not a hub for Northwest.

State helped Northwest survive deregulation and become a major world airline

The early 1980s were a turbulent time in the airline industry, as established airlines jostled for advantage and newcomers used low fares to challenge major carriers. Total air travel mushroomed, but many new airlines and some established ones lost their survival bids. Northwest held its own and then strengthened its position with the merger with Republic, but it needed financial assistance from the state and wage concessions from its unions to keep up with the leaders.

Deregulation was intended to improve prices and service. It had that effect, particularly in the early years. In an October 1998 *Minneapolis Star Tribune* opinion piece, Northwest Airlines asserted that overall, U.S. fares have decreased 40 percent in real terms since deregulation while the number of passengers has doubled.

Initially, competition flourished under deregulation, with many new airlines taking to the skies. This initial proliferation of airlines, however, was replaced by growing consolidation. Some airlines failed, while survivors often merged to improve their edge. Northwest survived and in 1986 acquired Republic. Governor Rudy Perpich and Metropolitan Airports Commission Chairman Ray Glumack publicly promoted the merger, fearing the

NORTHWEST COMMANDS MOST OF MINNEAPOLIS-ST. PAUL PASSENGER MARKET SHARE

	1992-1994	1997-1998
Northwest	77%	78%
United	5	4
American	3	3
Delta	3	3
US Airways	2	1
Other scheduled carriers	10	12

Notes: Market share is based on passenger facility charges paid to the Metropolitan Airports Commission. Totals may not equal 100 percent due to rounding.

Source: Metropolitan Airports Commission

hometown carriers would become takeover targets and thousands of Minnesota jobs would be lost. Although the U.S. Department of Justice opposed the merger as anticompetitive, the U.S. Department of Transportation approved the merger.

By the early 1990s, high fuel prices and airline price wars pushed Northwest near bankruptcy. Financial rescue came from several directions. In 1992 Northwest management negotiated a $400 million investment by KLM Royal Dutch Airlines. In addition, the Minnesota Legislature approved a $270 million working capital loan to the company, along with further financing, in exchange for Northwest commitments to build additional facilities in Minnesota. Subsequently, Northwest secured a $250 million emergency loan from Bankers Trust, linked to another $50 million from KLM. These cash infusions, coupled with $870 million in wage concessions from six unions, helped Northwest return to profitability.

Northwest reported net income of $597 million and operating income of almost $1.2 billion for 1997 — the fourth consecutive year of strong profit growth for the company. Revenues rose from nearly $9.9 billion in 1996 to more than $10 billion in 1997. In that same year, the carrier's passenger load factor — a measure of how full its planes are — was 74 percent, higher than any other major U.S. airline.

Airlines forge alliances to build world markets

As antitrust fears put a damper on further full-scale mergers, airlines have turned to marketing alliances to guarantee their survival in an increasingly global industry. American airlines, with Northwest fifth, were the seven largest in the world in 1997. Through their hub-and-spoke route systems, U.S. airlines have established and defended domestic market turfs and must increasingly look to world markets for growth.

NORTHWEST RANKS AMONG TOP 10 WORLD AIRLINES

	Millions of passengers in 1997
1. Delta	103
2. United	84
3. American	81
4. US Airways	59
5. Northwest	55
6. Southwest	50
7. Continental	41
8. All Nippon	41
9. British Airways	34
10. Lufthansa	33

Source: *Air Transport World,* July 1998, direct airline reports, revenue passengers.

American airlines have cemented alliances with European and Asian airlines to create around-the-world seamless ticketing, but also they are moving to form alliances with their own U.S. competitors.

Northwest developed the first international alliance when it entered into a code-sharing and marketing alliance with KLM. The arrangement linked KLM's European hub at Amsterdam with Northwest hubs at Memphis, Detroit and Minneapolis-St. Paul.

As part of the Northwest-KLM arrangement, the two airlines agreed in principle to a long-term, far-reaching alliance. Each appointed a top executive to the other's board of directors. KLM divested its Northwest holdings in 1997, but at the same time, the two airlines announced a 10-year mutual marketing agreement. This marketing alliance gave Northwest the opportunity to become a worldwide competitor.

Fully developed alliances among two or more airlines feature joint selling of each other's flights, code-sharing, the ability to redeem frequent flier credits across airlines and shared access to airport clubs. Code-sharing provides a single reservation and ticket for connecting flights of two or more airlines, offering seamless travel from small regional airports to hubs and from hubs to international cities. It is now possible for passengers in India to fly on one ticket from Delhi to any U.S. city served by Northwest.

The proposed "Star Alliance" would link United, Lufthansa, Air Canada, SAS and Thai Airlines. The proposed "One World" alliance would include American, British Airways, Cathay Pacific, Canadian Air and Qantas. These alliances are still under review by U.S. and foreign governments. Not all are likely to be approved as originally proposed. European governments, in particular, are concerned about weakened competition across the Atlantic.

Proposed major domestic alliances involve six of the eight largest U.S. airlines: Delta-United, American-US Airways and Northwest-Continental. Most other U.S. airlines of all sizes are also engaged in developing alliances. Among the major carriers, only Southwest and TWA have stayed out of the movement.

Alliances face opposition on antitrust grounds

Opposition to full-fledged alliances by federal agencies and others is slowing development. So far, the Delta-United and American-US Airways alliances have not gone beyond sharing frequent flier programs. Delta pilots blocked plans for joint marketing of flights.

In testimony to Congress in June 1998, the U.S. General Accounting Office warned that proposed domestic alliances of major airlines could reduce competition and consumer choice. Alliance partners could avoid directly competing with each other on routes where they had in the past or might in the future, the officials noted. The number of independent competitors could decline on more than one-third of the 5,000 busiest routes, counting each direction as a separate route.

The Northwest-Continental alliance has come under special scrutiny. The two airlines originally proposed what has been termed a "virtual merger." Northwest would own a controlling share of Continental. Flight schedules and marketing would be integrated, but the airlines' management, fleets and employees would remain separate.

Northwest and Continental began code-sharing on international flights in late December and in early January initiated code sharing on domestic flights in cities where one, but not both, currently operate. The Justice Department has ordered the two airlines to not implement code-sharing in cities where they presently compete.

Northwest and Continental are seeking through this alliance to ensure their survival as a world competitor. Merger would elevate them to a scale comparable to the larger Delta, United and American Airlines, whose market shares, of course, would grow even larger if their own alliances are successful. The Northwest-Continental alliance would control about 15 percent of all passengers nationally, still only half of the 31 percent of the proposed Delta-United partnership. Northwest states that the merger would ultimately benefit consumers by creating a fourth viable contender against the three largest U.S. airlines: United, American and Delta.

On October 23, 1998, the U.S. Department of Justice, exercising its antitrust powers, filed suit to block the alliance, labeling it as anticompetitive. Focusing on domestic markets, the lawsuit states: "As a result of Northwest's acquisition of control of Continental, consumers likely will pay higher prices and receive lower quality service for scheduled airline passenger service in the markets dominated by Northwest and Continental, and lose the benefit of new, competitive entry by Continental against Northwest." The suit cites seven major routes from Minneapolis-St. Paul, Detroit and Houston where the two airlines would have a monopoly of 87 to 100 percent of 3.6 million annual passengers in total. The two carriers would control 100 percent of flights from Minneapolis-St. Paul to New York, Houston and Cleveland.

Northwest Airlines responded that it would fight the lawsuit and move ahead quickly with the stock purchase. The proposal calls for Northwest to acquire 14 percent of Continental common stock, carrying a 51 percent voting majority, but with the proviso that the Northwest-held stock be put in a voting trust for 10 years. In late November, a corporate affiliate of Northwest acquired 8,661,224 shares of Continental stock from Air Partners Investors, as well as a limited proxy to vote 854,000 shares retained by Air Partners. Northwest would retain the right to block any merger of Continental with another airline, a provision to which the Justice Department objected. The department also demanded that Northwest limit its voting share to 14 percent.

The Justice Department also is weighing whether to take action against the proposed marketing alliance between Northwest and Continental, which it is considering separately.

Obstacles to competition

Realizing the goal of increasing consumer choice and price competition at the Minneapolis-St. Paul airport faces several obstacles, including airport space constraints, airline marketing practices and the structure of the U.S. airline industry. In a deregulated market, airlines are free to add service at Minneapolis-St. Paul, but airlines are businesses and will only fly here if doing so makes good business sense.

Limited access to gates is a big barrier

Proponents of deregulation believed that airline markets were "contestable," that is, new carriers could easily enter markets because airlines' key resources — airplanes — are highly mobile. As it turns out, however, other equipment and facilities needed to serve a route — especially gate space — can be difficult and costly to obtain. Facilities may also be limited for ticketing, baggage handling, operations and maintenance.

The U.S. General Accounting Office found in 1996 that long-term, exclusive-use gate leases seriously limit competition at six major airports, including Minneapolis-St. Paul. The chief executive officer of Southwest Airlines told federal researchers that poor gate access was one of the reasons Southwest decided not to serve Minnesota. After talking with Southwest, Metropolitan Airports Commission officials do not believe gate access is a major reason that carrier has not entered the Twin Cities market.

Long-term exclusive-use gate leases force new entrants to sublease gates, which usually results in gate access at less desirable times and higher cost. In addition, sublessees are often required to use the leasing airline's ground personnel, something many carriers prefer not to do. Airlines typically prefer to use their own check-in computers and facilities for passengers, though some small airlines with few flights may prefer to lease gate facilities and services.

Most established air carriers prefer to lease facilities for a term long enough to justify setting up customized equipment and service arrangements for different types of planes. Exclusive-use leases give a single airline all rights to a gate, unless the airline chooses to sublease it or the Metropolitan Airports Commission determines that the gate is underused and needed by another carrier.

In 1986, just before the Northwest-Republic merger, Northwest had 31 gates at Minneapolis-St. Paul, Republic had 16, and other carriers had the remaining 14. By 1998, Northwest had 53 while others had 17. With the merger, Northwest gained control of 71 percent of the gates at the airport; today Northwest has 76 percent. Since 1991, Northwest has acquired five new gates. America West has acquired one; none of the six other major carriers has increased its number of gates.

Long-term exclusive-use leases make it easier to satisfy bondholders' need for stability and guaranteed rents. Lease revenue is used to repay airport bonds. Of Northwest's 53 gates, 22 on the Gold Concourse are leased through the year 2015. Long-term leases on the Blue, Green and Red concourses expired in 1996. While new leases are being negotiated, gates on these concourses are being leased from month to month.

The airports commission sold revenue bonds for the first time in 1996 to build a dozen new gates, and it received a favorable bond rating, even though the leases had not yet been negotiated. The commission believes that the strength of the Twin Cities air service market, rather than the length of leases, determines the market response to its bond offerings.

GOVERNMENT AGENCIES HELP SHAPE COMPETITION

Metropolitan Airports Commission: The commission owns and operates the Minneapolis-St. Paul airport and six general aviation "reliever" airports. The commission and the Metropolitan Council are responsible for aviation and airport planning in the seven-county metropolitan area. The commission leases gate space to carriers. It projects $124 million in total expenditures in 1998, up from $106 million in 1997. Operating revenues contributed almost 92 percent of its annual budget, with airline fees and charges — most of which came from Northwest — accounting for 40 percent of these revenues and concessions (including fees from parking, auto rentals, food and other services) for nearly 50 percent. The commission issues revenue bonds to finance building or improving gates, as well as other facilities. It has — but has not exercised since 1969 — the authority to levy a metropolitan-area property tax for airport operating and maintenance expenses or to pay debt service on bonds. The Governor appoints 13 of the commission's 15 members.

Metropolitan Council: The council plans the aviation system for the metropolitan area, as well as reviews and approves plans for metropolitan airports and large capital projects. The council consists of 17 board members appointed by the Governor.

Minnesota Legislature: The Legislature created the Metropolitan Airports Commission to own and manage airports in the Twin Cities metropolitan area. The Legislature provides oversight and retains ultimate authority for major investment decisions. An example was the Legislature's 1996 decision to expand the existing airport rather than build a new airport at a different location. It directed the airports commission to expand the current facility from 65 to 83 gates for major carriers by the year 2020.

Federal Aviation Administration: This arm of the U.S. Department of Transportation directly oversees nearly all aspects of airport operation, taking action on safety, air traffic, airway facilities, flight standards and security. It approves any changes to airport layout plans.

U.S. Department of Transportation: The department has statutory authority to prohibit "unfair methods of competition." In addition, its secretary must approve any project that could affect publicly owned land, such as the proposed north-south runway that uses airspace over the Minnesota River Valley National Wildlife Refuge.

U.S. Department of Justice: This department has general authority to maintain competition and guard against industry concentration or excessive market dominance. It reviews and approves domestic airline mergers and alliances. It can prohibit unfair, anti-competitive actions by suing to block any mergers it believes are anti-competitive or by negotiating a consent decree to restructure proposed airline transactions that it believes will harm competition.

Distribution of new gates is critical

The comprehensive plan for the airport calls for the addition of a dozen more gates by the year 2010. The distribution of these gates will shape future competition and customer choice at the Minneapolis-St. Paul airport. Several airlines, including Frontier, Vanguard and America Transair, have indicated interest in new gates; Northwest has signaled it wants nine. Bonds have been issued for construction of four gates, which will be ready in 2000. By about mid-1999, the Metropolitan Airports Commission will decide who will get these gates.

Other key decisions are in process. New long-term leases for gates on the Blue, Red and Green concourses are being negotiated. These leases may run through 2010. However, the airports commission indicates that when the 12 new gates open, it will be able to free up 10 other gates for short-term leases, making them more available to new carriers.

The executive director of the commission has stated that some low-fare carriers may not be financially strong enough to make gate commitments. He also has expressed reluctance to ask Northwest, for decades the airport's major tenant, to alter its schedule so that other competitors can use gates during prime times.

Marketing practices tend to squelch competition

Large, established airlines have marketing advantages over new entrants. Most have frequent flier plans that reinforce customer loyalty. Airlines also offer incentives to travel agents to book with them, and they set up code-sharing arrangements with regional carriers.

Code-sharing tends to funnel passengers coming into a hub from regional or international flights to transfer to a particular allied carrier. The flights of the allied carriers are listed together on travel agents' screens. Flights of nonaffiliated carriers are farther down the list, where they may not be noticed by travel agents. According to the *Wall Street Journal*, the eight major U.S. airlines have gained effective control over about 50 regional carriers, mostly through such code-sharing agreements.

Travel agents and corporate travel managers can serve as gatekeepers for business travel choices. Nationally, 39 percent of business travelers report using travel agents, 31 percent use company travel departments and 25 percent book directly with airlines. Travel agents shop for fares within the computerized reservation systems to which they have access. Reservations systems are owned by airlines or groups of airlines. The more heavily an airline dominates a reservation system, the more deeply other airlines' flights are buried in the listings when a travel agent queries the system.

Airlines also try to influence booking patterns through the use of "overrides," bonuses for agencies that book a high percentage of tickets with the airline. The Justice Department in 1996 dropped an antitrust suit over this practice after it concluded that overrides do not disadvantage smaller carriers or prevent new entrants. Even so, the General Accounting Office maintains that the practice discourages, if not prevents, new carriers from entering markets.

Larger airlines have been accused of engaging in "predatory" behavior when new carriers enter markets, such as when Reno Airlines entered the Twin Cities market. These behaviors include cutting fares to match or undercut the competitor's prices and adding capacity through new or larger planes. Vanguard Airlines head Robert Spane told a U.S. Senate antitrust subcommittee on April 2, 1998, that because of such aggressive actions, Vanguard has adopted a policy of not "antagonizing" major airlines by starting low-fare routes in major markets, even though demand presents an opportunity. At the same hearing, the chief of ProAir asserted that such aggressive responses by major carriers depresses the amount of capital available for start-up airlines.

In response to this problem, the U.S. Department of Transportation in April 1998 proposed guidelines about unfair and exclusionary practices toward new market entrants. Practices that would trigger an investigation would include price or capacity strategies that cause the major carrier to forgo more revenue than all of the new entrants' capacity could have diverted from the major carrier. Other such practices would include those that result in substantially lower operating profits or greater operating losses in the short run than the major airline would sustain by competing with the new entrants.

The practice of established carriers matching fares of challengers like Reno, Kiwi or Sun Country is evidence that airlines do compete on price when they face competition. Northwest's Executive Vice President Michael Levine argues in a company publication that increasing service and matching fares to keep newcomers from winning over Northwest passengers is simply good business, asserting that Northwest does so "only when such actions — as determined by a consistently employed analytical process — are indicated to be the most profitable or least costly alternative." He notes than no case of predation has ever been legally documented and that it would be very difficult for the government to design a rule against such practices without suppressing healthy and publicly beneficial competition.

Some industry factors work against competition

Analyses by business and airline industry experts point to at least four factors that may hinder expanding competition at the Minneapolis-St. Paul airport and elsewhere: a focus on international traffic, growing alliances, lack of hub challenges to each other by major airlines and the financial vulnerability of small airlines.

Financially weak, smaller airlines have been thwarted in head-to-head competition. Most small and start-up carriers lack the strength to challenge major carriers' fortress hubs, unless federal regulators act on proposals to shield start-up airlines from predatory competition. Standard & Poor's concludes, "Start-up carriers are inadequately capitalized; ambitious growth plans are accompanied by dangerously high debt levels; and weak managers fail to rein in labor costs before they spiral out of control, or lose their customer base due to unreliable services." The financial analysis firm forecasts more bankruptcies and mergers among small carriers. Nevertheless, some well-managed medium-sized and smaller carriers have the potential to expand competition in some markets.

Standard & Poor's found that "once a carrier controls more than 50 percent of the enplanements at a given airport, start-up airlines are unable to match the dominant line's frequency of flights. They have trouble getting gate space except at off-peak hours, which forces them to offer flights in unpopular night slots."

Alliances reduce the likelihood of competition. Airline alliances often make partners out of former competitors. Increasing competition on a partner's route would appear counterproductive.

Commenting on the October 1998 federal lawsuit against the "virtual merger" of Northwest and Continental, Assistant U.S. Attorney General Joel Klein said, "If owned by Northwest, Continental would be less likely to pursue competitive strategies that benefit consumers but would be adverse to Northwest." In negotiations over the proposed alliance, the Justice Department forced the two airlines to forgo code-sharing from their hub airports.

The national Business Travel Coalition warned that if approved by federal regulators, the three proposed domestic alliances "will set up the entire U.S. to become one massive fortress hub where consumers and businesses will pay superpremium prices to cross-subsidize competition on international routes," reported *Air Transport World* in June 1998. Also arguing against approval of the code-sharing alliances, the Woodside Travel Trust, a coalition of 132 travel agencies, told the U.S. Secretary of Transportation that "without swift and decisive action … all semblance of airline competition will evaporate."

Major airlines are protecting their main markets, not challenging each other. According to Standard & Poor's 1998 analysis of the industry, "The battle to dominate hub airports … has given way to détente. Carriers now respect the hegemony each enjoys in at least three to four hubs. This cozy peace has improved load factors, stabilized airfares, and contributed to the industry's fattest profit margins in decades." In effect, "stabilized airfares" means avoidance of financially draining price competition. The same analysis states, "The big airlines, which are now less inclined to battle each other, have mounted fierce competitive assaults against fledgling carriers."

According to *Air Transport World*'s 1997 industry report, the U.S. airline industry is enjoying "a period of sustained prosperity" and high earnings in part because the carriers "were not squandering their cost-containment efforts in ruinous fare wars." In other words, they have been enjoying the fruits of avoiding large-scale aggressive price competition on major routes. For example, major airlines such as United and American that have the financial capacity to mount heavy competition on additional prime routes out of Minneapolis-St. Paul have not done so. A downturn in the economy, however, could produce more empty seats on planes and intensify competition for routes and passengers.

Major airlines are instead focusing on growing international traffic. Rather than competing aggressively for the domestic market, major U.S. carriers are concentrating on creating international hub systems and forging alliances with air carriers around the world. These alliances are an easier expansion tactic than mergers. U.S. air carriers control about 40 percent of the world market. Northwest has 43 percent of its passenger miles in international flights, a higher share than any other major U.S. airline.

Deregulation of international air service is underway, following deregulation in the United States 20 years ago. Since 1992, the United States has signed 30 "open skies" agreements with other nations. These agreements allow greater freedom to establish international routes and set international fares. Some observers expect heated international competition comparable to that which followed deregulation of the U.S. market.

Efforts to increase competition

Views differ on efforts to recruit new carriers

The Metropolitan Airports Commission has come under criticism for allowing a single airline to achieve dominance in the Twin Cities market. Although one low-fare airline, Vanguard, offers a handful of flights from the Twin Cities, the commission has not been able to attract the nation's most prominent low-fare carrier, Southwest.

In response to these criticisms, Airports Commission officials say that in the past three years staff members have contacted or personally met with 30 domestic and international airlines to attract them to the Twin Cities. The commission also employs an air service development officer whose job it is to promote new air service. In the early 1990s, the commission helped create the Twin Cities Airport Task Force, a group of business and community leaders to assist with recruiting new airlines. According to a commission spokesperson, the task force worked over two years to bring Icelandair to Minneapolis-St. Paul and has recently tried to interest Air China in providing service from the Twin Cities to Beijing.

In a December 31, 1998, letter to the U.S. Department of Transportation, the commission reports that it has met with Southwest Airlines twice each year for six years. Based on these efforts, the commission concludes that airlines do not enter the Twin Cities market because of a host of competitive factors — not because of the commission's gate allocation or user charges.

Several recent commission actions reflect sensitivity to the criticisms. When 50 gate leases came up for renegotiation, the commission notified 66 airlines. The new leases will allow the commission to reallocate gates based on use. When the dozen new gates are added, the commission plans to make 10 other gates available for short-term leasing.

At a December 21 meeting of the commission, the executive director reported that staff had made pitches to three new airlines and talked with existing airlines about increasing service. The commission points out that Northwest's frequent flier program discourages travelers from buying tickets on competing airlines. To improve the climate for new carriers, the commission plans to organize task forces of business and community leaders to bring low-cost carriers to the Twin Cities. The commission also will study air service quality and gaps, as well as the feasibility of an incentive program for enticing new carriers.

Other cities have aggressively mobilized major corporations to support new air service. In Des Moines, eight local businesses have pledged $10 million to support start-up Access Air, which will provide new nonstop service to the East and West coasts. Similarly, two of Detroit's Big Three automakers have committed to using Pro Air, increasing its chance of survival. Business leaders in Portland, Oregon have helped raise capital for Coast Airlines, which will offer nonstop transcontinental service, eliminating the need for plane changes in Chicago or the Twin Cities.

New competitors have come and gone

Since deregulation, numerous carriers have attempted to enter or expand in the Minneapolis-St. Paul market.

Reno Airlines came into the Minneapolis-St. Paul airport with low-cost flights to Western cities in 1992. It lasted only five months after Northwest revived its own abandoned service to Reno, matched the smaller carrier's fares and created a minor hub in Reno, duplicating much of the small carrier's network.

In 1996, Sun Country, founded as a charter airline, tried offering daily flights at low fares on some of Northwest's most popular routes. Northwest matched those fares until Sun Country finally reduced the competing flights. Sun Country is poised for another foray into regularly scheduled passenger service from the Twin Cities. It will offer low-fare, no-frills service to 10 cities already served by Northwest, including New York, Orlando, Seattle and Los Angeles. It also will initiate a frequent flier award program in an attempt to neutralize Northwest's lure to frequent fliers. A Northwest spokesperson said the carrier will "compete with Sun Country for passengers just as we compete with every other airline in every market we serve."

In September 1998, Kiwi abandoned a two-week attempt to enter the Minneapolis-St. Paul market during the Northwest pilots' strike. During the strike, it offered a $138 round-trip fare to Newark (its home), Chicago and Detroit, scaling back to Chicago after Northwest resumed service and matched Kiwi's fares. Kiwi's reaction to Northwest parallels its cautious approach in Delta's hub, Atlanta. Kiwi's CEO told *Airline Business* in 1998, "I'm very fearful of Delta's ability to squash anyone they want to squash." Kiwi was the nation's 18th-largest scheduled carrier in 1995.

Prospects for specific airlines to enter or expand

Some airlines may not want to enter the Twin Cities market, and some may not be a good fit. Several factors may affect the desirability of specific air carriers and their interest in expansion at the Minneapolis-St. Paul airport:

- The airline's market strategy and priorities for expansion
- Its presence in nearby cities
- Its emphasis on business passengers
- Its past experience in the Twin Cities
- Current or potential alliances
- The airline's size and financial strength

Carriers targeting business travelers include Midwest Express, TWA and America West. Midwest Express, TWA and Frontier promote high levels of customer service with competitive or low fares. Midwest Express, Frontier and Southwest are all engaging in steady, controlled expansion of markets or flights while maintaining fiscal stability. The potential of foreign carriers to enter the market deserves more examination, though the interest of some will be colored by their alliances with U.S. carriers already in the market.

Some smaller airlines operating in the Midwest have shown interest in expanding at the Minneapolis-St. Paul airport:

Frontier Airlines: This is an aggressively growing carrier, respected among financial analysts. It subleases one gate and has four flights per day at the Minneapolis-St. Paul airport and has expressed interested in leasing its own gate.

Vanguard Airlines: This discount airline also subleases gate space at the Minneapolis-St. Paul airport and is negotiating to lease one of the new gates. It offers about five flights per day.

Sun Country: This Minnesota-based charter airline announced plans once again to offer regularly scheduled service on routes served by Northwest. Sun Country has expressed some interest in leasing one of the new gates being built at the main terminal.

American Trans Air: This company has expressed interest in one of the new gates at Minneapolis-St. Paul.

Midwest Express: This expanding, financially sound, luxury-service airline caters to business travelers. Based in Milwaukee, it is not serving the Twin Cities. Midwest Express targets underserved markets and has avoided head-to-head competition with large carriers.

All the major U.S. carriers except Southwest Airlines lease from one to four gates at the Minneapolis-St. Paul airport. None has demonstrated serious interest in expanding here.

Southwest Airlines: Despite overtures from the Metropolitan Airports Commission, Southwest does not serve Minnesota or any adjoining state. This low-fare, low-overhead carrier has had unique success in expanding from a small to a major carrier. It offers point-to-point service rather than a hub route system. The no-frills service may not appeal to all business travelers.

TWA: Under new management, TWA is modernizing its fleet and shifting its focus to business travelers and customer service. Along with Southwest, it is the only major U.S. airline that is not a part of a major domestic or international alliance. Hence, it might have fewer constraints from partners in expanding service in markets like Minneapolis-St. Paul, where it now leases four gates, the same number it held in 1986.

America West: This expanding, low-cost, full-service airline aims to attract more business customers. It has one gate and four flights a day at Minneapolis-St. Paul, but its partnerships with Northwest and Continental could affect its views on expanding here.

American Airlines: The nation's second-largest air carrier leases three gates at Minneapolis-St. Paul, up from two in 1986. It is focusing on building alliances with US Airways and international carriers.

US Airways: This major carrier, based in Pittsburgh, has leased one gate at Minneapolis-St. Paul for the last 12 years. US Airways is allied with American Airlines and several smaller carriers.

United Airlines: This airline leases three gates, up from two in 1986. United already dominates one-half to two-thirds of the market at its Chicago-O'Hare, Washington-Dulles, San Francisco and Denver hubs. If an alliance with Delta is approved, the two would control 31 percent of U.S. passengers.

Delta Airlines: Based in Atlanta, Delta is the world's largest carrier, as measured by number of passengers. Delta leases three gates at Minneapolis-St. Paul.

Continental Airlines: Continental leases two gates at Minneapolis-St. Paul. The airline is expanding its domestic capacity, but its future likely will be influenced by its partnership with Northwest Airlines.

Time is ripe for action

Minnesota has benefited from Northwest Airlines' presence at Minneapolis-St. Paul International Airport, and the Northwest hub provides vital service to dozens of cities. Efforts to increase competition at the airport should not aim to diminish Northwest's position but supplement it with new carriers.

Efforts to foster competition at the Minneapolis-St. Paul airport have been relatively unsuccessful. Northwest Airlines' domination of the market in terms of passengers and gates has grown during the 1990s. It is clear that Minnesota leaders must act much more aggressively than in the past if they want more competition and downward pressure on fares.

The timing is opportune for action, and it should begin soon, for several reasons:

- The Metropolitan Airports Commission is renegotiating its standard gate lease agreement with airlines, determining how exclusive and how long the leases will be.
- A dozen new gates will be constructed at the airport over the next several years. Beginning this year, the commission will decide which airlines have access to those gates.
- The federal government is considering new rules to protect emerging airlines from predatory competitive actions by major carriers.

The evidence strongly indicates that greater competition on air travel routes reduces fares. New carriers also might stimulate greater competition in customer service. On the other hand, increased competition resulting in lower air fares at the Minneapolis-St. Paul airport would be likely to reduce the revenue that Northwest gains from its home-hub operation, weakening its economic impact here.

Three strategies for boosting competition

If more competition is desired by Minnesotans, three main strategies could be considered. The three are interdependent; pursuing one without the others might have little effect.

Strategy 1: Guarantee ongoing open access to new and existing airport gates for new or expanding carriers. The airport is a public facility, and public officials have a duty to promote free and fair commerce. Among the many ways this option could be achieved, here are four examples:

- The airports commission could reserve two-thirds of the 12 new gates for new or expanding carriers other than Northwest.
- The commission could limit the number of long-term contracts in the leases being negotiated now for the Blue, Red and Green concourses; the terms of these leases are expected to be as long as 12 years.
- The commission or the Legislature could prohibit any one airline from holding long-term leases on more than half (or some other percentage) of all gates or guarantee that a percentage of gates would be available to new entrants and expanding carriers.
- The commission, which approves all subleases, could limit gate subleasing practices that restrict competition, such as the requirement that a sublessee use the ground services and other services of the leasing airline.

Strategy 2: Assemble public and private leaders and incentives to aggressively recruit new or expanding airlines. New players and new tools would improve the chance of success in recruitment. The activities suggested here are used routinely by public officials to encourage other types of industries to expand in Minnesota.

- Enlist business leaders or organizations and top state and local elected officials to join the airports commission in a concerted recruitment effort to attract selected domestic or international airlines to enter or expand in the market, as has been done in other cities.
- Consider loans or grants for facilities or reduced-cost gates or fees to attract new carriers that would commit to operating at the airport for a specific term.
- Consider other incentives for new entrants, such as free consulting services and other tools used by airport authorities in other cities.
- Determine whether any tax incentives could stimulate new carriers to offer service.

Strategy 3: Support some form of federal restriction on predatory actions against small and midsize airlines entering new markets. Such restrictions are now being considered by the U.S. Department of Transportation. A task force of public and private leaders and citizens could seek consensus on what federal restrictions might be effective and fair to major airlines. It is questionable whether major expansion can be expected from small and midsize airlines at Minneapolis-St. Paul without some federal action to shield them from the aggressive responses that have driven them out in the past.

Other options for action

Additional actions are worth considering. This report brings them forward as ideas to stimulate discussion, not as recommendations. Each involves both advantages and disadvantages. Among the downsides might be added costs to passengers or state taxpayers. Additional evaluation of feasibility and legality is necessary.

■ **Set goals for competition.** To encourage competition, the Metropolitan Airports Commission or the Legislature might adopt a results-based policy: setting a five-year goal for the number of airlines serving major destinations from the Minneapolis-St. Paul airport. Such a policy also might provide for annual fare surveys comparing the Twin Cities with similar cities.

■ **Tie funding incentives to results.** State incentive funding for the airports commission could be based on results such as improved competition and consumer choice. Results-based funding incentives are proving successful with Metro Transit, where incentive funds based on ridership have stimulated aggressive new strategies and a turnaround in passenger counts.

■ **Reduce airport dependence on airline fees and capital investments.** More than 40 percent of the airport's operating budget comes from fees paid by airlines. In addition, the airports commission relies on commitments from airlines to secure bonds for major improvements, including terminal and gate expansions. Because airlines pay a large share of the costs of developing and operating the airport, they understandably want a say in major decisions. The airports commission might be better positioned to promote competition if it were less dependent on contributions from airlines. Two ways of reducing this dependence would be to increase revenues from airport users or from state general fund appropriations.

■ **Regulate incentive arrangements (overrides) between airlines and travel agencies.** Federal action probably would be necessary to do this. Consideration also could be given to requiring travel agencies to regularly disclose to customers the average commissions and bonuses they receive from each airline.

The goal of nurturing Minnesota's hometown airline should continue, but many Minnesotans now support a second goal: increasing consumer choice in order to moderate fares. In a growing region with increasing air travel and low airport-overhead costs for carriers, the two goals need not be in opposition.

The Metropolitan Airports Commission has worked hard to be responsive to the needs of airlines in the Twin Cities, and some carriers have invested heavily in improving the airport. Now may be the time for the commission to step back and focus on the long-term needs of its other key set of customers — passengers. If necessary, the Governor and the Legislature could intervene by setting forth a new, balanced policy that includes concrete goals for increased competition.