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Effects of Airline Entry Barriers on Fares

Statement of
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Before the
Subcommittee on Aviation
Committee on Commerce, Science,
and Transportation
United States Senate

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify on the work we are doing at your request on the effects of airline market concentration and barriers to entry on airline fares. We testified before this Committee last June on our analysis of the effects of airport concentration an airline fares.[1] We testified again last September on the extent of barriers to entry in the airline industry.[2] Since that time, the Department of Transportation has issued its report of the Secretary's Task Force on Competition in the U.S. Domestic Airline Industry. Our testimony today will (1) update our June 1989 analysis of airline pricing and compare our results to those of the Secretary's Task Force, (2) report on the preliminary results of our econometric analysis of the effect of barriers to entry on airline fares, and (3) discuss the implications of our findings for policymaking.

Last June, we testified that airline yields, or fares per passenger-mile, at 15 concentrated airports in 1988 were 27 percent higher than at 38 unconcentrated airports.[3] We have updated our data through the second quarter of 1989, and find that the gap persists. It is now 26 percent. The DOT report reached conclusions very similar to ours. After adjusting for differences in flight distance between concentrated and unconcentrated airports, both studies found yields at concentrated airports around 20 percent higher than at other airports (DOT's estimate was 18.4 percent; ours was 21.0 percent). The Task Force also reviewed a number of the entry barriers that we discussed in our September

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[1]Air Fares and Service at Concentrated Airports (GAO/T-RCED-89-37, June 7, 1989).

[2]Barriers to Competition in the Airline Industry (GAO/T-RCED-89-65, Sept. 20, 1989).

[3]GAO considered an airport market concentrated if one airline handled 60 percent of the enplanements or if two airlines handled 85 percent.

testimony and found, as we had, that several of them have the potential to significantly limit entry into airline markets.

We are currently estimating the relationships between fares and the various operating and marketing practices that may discourage entry. Our analysis to date indicates that many of the airline operating and marketing practices we have discussed are in fact related in a statistically significant way to higher airline fares. Our results suggest that no single factor is responsible for higher fares at concentrated airports, but that it is the interaction of a number of barriers that allows carriers at these airports to charge higher fares.

We recognize that various solutions have been proposed for dealing with the factors that limit competition in the airline industry, including limiting concentrated hub airports and increasing airport capacity. We have reservations about presuming all concentrated hubs to be anticompetitive. We agree that increasing capacity would be helpful, but we are concerned that increasing capacity will take too long, and that increases in capacity alone will not solve all the problems of competitiveness that we have identified. Along with initiatives to enhance airport capacity, we believe that a broad range of policy options to reduce the anticompetitive effects of various industry operating and marketing practices, such as those we have discussed in our previous testimony, should be considered.

FARES AT CONCENTRATED AIRPORTS

Yields at the 15 concentrated airports rose in 1989, from 18.5 cents per passenger-mile in 1988 to 21.0 cents in the first two quarters of 1989. Yields at the 38 unconcentrated airports also rose, from 14.5 cents to 16.7 cents, leaving a gap between the yields at concentrated and unconcentrated airports of 26.4 percent. The dominant airline's yields rose particularly rapidly at Detroit,

Raleigh-Durham, Greensboro, Pittsburgh, Syracuse, and Denver. When compared to the yields at 22 unconcentrated airports where average trip distance was about the same as at the concentrated airports, yields at concentrated airports were 20.7 percent higher in the first half of 1989. Airline travel from the 15 concentrated airports represents 21.8 percent of all airline revenue passenger miles. Concentrated airports that did not meet other criteria of our study accounted for another 9.5 percent of airline traffic.[4]

In February, the Secretary of Transportation released the report of his Task Force on Competition in the U.S. Domestic Airline Industry. The report discussed changes in market structure, pricing, and barriers to entry since the airline industry was deregulated in 1978. The report concluded that air fares (in constant dollars) have fallen since 1979 but that, as our work has shown, air fares are higher at concentrated airports than at unconcentrated airports.

Our analysis of the higher yields at concentrated airports and the Task Force's analysis are similar. The Task Force found that fares at the 15 concentrated airports, after adjustment for variations in flight distance, were 18.4 percent higher than at airports generally. We found, after also adjusting for flight distance, that yields at the concentrated airports were 21.0 percent higher than at unconcentrated airports. The remaining difference may be due to the fact that DOT's study examined passengers both originating and terminating their trips at the concentrated airport, while we looked only at passengers originating there.

The Task Force also came to conclusions similar to ours concerning a number of the entry barriers we have examined. The

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[4]One of these airports was outside the 48 contiguous states; the others were in cities with multiple airports.

Task Force found that new entrants are likely to pay higher lease rates at airports with exclusive-use leases, where the entrant must sublease space from incumbent carriers. The Task Force also found that majority-in-interest and other clauses that limit expansion at airports may discourage new entry.[5] It did not find that slots are, by themselves, an entry barrier.[6] However, it concluded that there is the potential for the exercise of market power in the market for slots, and therefore that the slot rule had the potential to result in an entry barrier. The Task Force concluded that noise restrictions are not now a major barrier to entry, but that they could become a barrier if noise restrictions proliferate.

In reviewing airline marketing strategies, the Task Force found that frequent flyer plans may make it more difficult for smaller air carriers to compete successfully in some markets; that computerized reservation systems (CRSs) may transfer $2 billion to $3 billion in gross revenues to CRS vendors; that travel agent commission overrides weaken the competitive position of smaller carriers; and that new entrants have difficulty competing with code-sharing regional airlines on hub-to-spoke routes.[7]

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[5]A majority-in-interest clause (MII) in an airport use agreement gives the carriers performing a majority of the operations at the airport authority to disapprove expansions of the airport that would be paid for through fees charged to those airlines.

[6]The Federal Aviation Administration restricts landings and take-offs at four congested airports (Washington National, New York LaGuardia and Kennedy, and Chicago O'Hare). Carriers wishing to serve these airports must secure a reservation, or "slot," at the airport to use the airport regularly at a particular hour each day.

[7]Code-sharing agreements are agreements between jet airlines and commuter airlines in which the commuter airline agrees to share the two-letter designator code of the jet airline, so that both airline's flights are booked as if they were the same airline. The commuter airline also generally paints its planes in the colors of the jet airline and coordinates schedules so as to enhance the convenience of connections.

ANALYSIS OF RELATIONSHIP BETWEEN AIRLINE OPERATING AND MARKETING PRACTICES AND FARES

Part of our investigation has been an effort to estimate the relationship between each of these airline operating and marketing practices and airline fares, using an econometric model of airline industry pricing. We would expect that factors that discourage entry would generally tend to raise fares. We wanted to find out which factors were related to higher fares, either directly or through their effect on market share. An econometric model uses statistical techniques to analyze the relationships between airline fares and a large number of other factors. These techniques allow us to measure the effects on fares of changes in one variable when other variables are held constant.

Our model incorporates various factors that influence fares, including cost factors such as flight distance and traffic volume; demand factors, such as income levels and consumer preferences for different airlines; market structure factors, such as market share and concentration indexes; as well as several factors representing airline operating and marketing practices that may function as entry barriers. We analyzed 1988 DOT data on airline fares, traffic levels, and enplanements for over 1600 routes. We also gathered original survey data on airport gates, leasing agreements, noise restrictions, and expansion plans for the 183 airports covered by the analysis. Our analysis thus covers the effects of entry barriers at both concentrated and unconcentrated airports. We analyzed the effects of these factors on both fares and market shares.

While our findings are preliminary and subject to change, and while an econometric model cannot prove that a factor causes higher prices, we believe that the model allows us to make system-wide observations of the relationships between various airline operating and marketing practices and airline fares and market shares.

Our analysis to date indicates that many of the airline operating and marketing practices we have discussed are in fact related in a statistically significant way to airline fares. In particular, our results indicate the following:

-- The larger the share of gates a carrier leased at an airport, especially if those gates were on long-term exclusive-use leases, the higher its fares were at that airport (for example, a doubling of a carrier's gate share is associated with an increase in fares on a route of, on average, 3.5 percent).

-- Flights at airports where a majority-in-interest clause might reduce the ability of the airport to expand had, on average, about 3 percent higher air fares.

-- Flights at airports where entry was limited by slot controls had, on average, about 7 percent higher air fares.

-- If the runway capacity of the airport is congested, and expansion is limited by the presence of a majority-in-interest clause or other problems, fares are, on average, about 3 percent higher.

-- noise restrictions were not consistently related to higher fares at airports where they were in effect;

-- the larger an airline's share of the computerized reservation system market in a metropolitan area, the larger its market share on routes from airports in that area, though the amount of the increase varied with different versions of the model;

-- The more travel agents to whom a carrier paid commission

overrides in a metropolitan area, the higher the carrier's fares tended to be on service in that area, though the size of this effect also varied with different versions of the model.

-- Carriers with a code-sharing agreement at one of the airports on a route charged fares almost 8 percent higher than carriers did on routes on which they did not have code-sharing agreements.

Though these magnitudes represent our best estimates to date, these results are preliminary, and the relative effects of some specific industry practices may change somewhat as our analysis is completed. We were not able to develop any measure of the impact of frequent flyer plans on airline fares in particular markets because the data needed to measure the impact of frequent flyer programs on a particular route are proprietary. However, we have recently completed a survey of 522 travel agents and found that the business customers of more than 80 percent of travel agents nationally choose their flights on the basis of frequent flyer plans at least half the time.[8] Our analysis of the structure of frequent flyer plans indicates that the dominant carrier in a market will have a powerful advantage in attracting airline passengers to use its plan.

POLICY IMPLICATIONS

There are several approaches to dealing with problems of competition in the airline industry. One approach is to focus directly on the high shares of enplanements that carriers have at some airports, which we found were associated with higher fares. For example, the Congress could limit the number of airports at

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[8]The 95-percent confidence interval on this percentage is ± approximately 4 percent.

which enplanements exceed a particular level. We have reservations about this approach, however. The actual market power that a carrier wields depends not just on its share of enplanements, but on the number of gates the carrier controls, the terms on which it controls those gates, and the extent to which expansion of the airport is limited by majority-in-interest clauses or other factors. We found in our airport survey that 85 percent of all gates at the 66 large and medium airports are leased on an exclusive-use basis. The market power of a dominant airline is also affected by its use of various marketing strategies, such as CRSs and frequent flyer plans. In general, we believe that it is more effective to address these sources of market power than to assume that any particular level of enplanements is anticompetitive.

A second approach is to expand the capacity of existing airports and to build new ones. We certainly agree that, in the long run, expansion of capacity is the best way to ensure that carriers can easily establish service at any airport. We included in our model a variable to measure airport congestion, and found that it was significantly related to higher fares. However, there are two significant problems with relying exclusively on this approach. First, our model makes clear that other factors were significantly related to fares as well, such as shares of gates leased. Second, airport expansion takes time. Disagreements about where airports should be located and how they should be financed can be expected to continue to delay airport expansion. If airport expansion cannot be achieved in the near term, and if two or three more carriers go bankrupt, competition could be reduced to the point that it would be much more difficult and complex to inject new competition in the industry. Already there are suggestions that fare caps be imposed. In our view, these proposals are premature; it would be more consistent with relying on market competition to take the comparatively modest steps required now to preserve competition where it is already vigorous and reverse the

erosion of competitive markets that has already occurred.

A third approach would focus on adopting a wide range of policy options to address airline competition problems related to specific entry barriers. Our econometric work suggests that a wide range of factors appear to interact to produce the higher fares we have observed, so the policy response to market power at concentrated airports should be broad-based, addressing several factors at once. We have suggested in our previous testimony a number of policy options for the Congress to consider. Several of these options are incorporated in S. 1741.

For example, policies that would make it easier for carriers to obtain access to gates at airports, perhaps by requiring the use of use-or-lose clauses or preferential-use leases, should be considered. Also, some method of re-allocating airport take-off and landing slots would help to open the four slot-controlled airports up to more competition from low-cost airlines. Our analysis found that fares tend to be lower in markets where low-cost airlines are competing. We have also suggested various ways of reducing the incremental airline revenues and excessive booking fees earned by CRS vendors.

This concludes my statement. I would be happy to answer any questions you may have.