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Factors Affecting Concentration in the Airline Industry

Statement of
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and Transportation
United States Senate

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Mr. Chairman and Members of the Committee:

We appreciate this opportunity to testify on our ongoing work studying changes in the airline industry since the wave of airline mergers began in 1985. As requested by the Chairman, our testimony will address

-- the possible barriers--economic and physical--to entry into the airline industry and individual markets;

-- the extent to which Federal policies have contributed to the trend towards increased airline concentration; and

-- the effects of airline concentration on airline fares and service.

At the request of several congressional committees, we have been studying the changes in the airline industry that have occurred since deregulation. Our work has proceeded along three lines of effort which parallel your request. Briefly summarized, the important observations from our work are:

-- Significant changes in the airline industry have made it more difficult for new or existing carriers to enter markets where other carriers are already dominant. Reduced competitive opportunities could eventually lead to higher fares for consumers.

-- The Department of Transportation (DOT) developed its merger policy based on outdated assumptions about the ease of entry into airline markets. It approved 26 mergers without reexamining the assumptions underlying its policy.

-- As a result of the mergers that occurred between 1985 and 1988, the airline industry, on a national basis, is more concentrated today than it was when the industry was deregulated in 1978. In 1978, the 5 largest carriers handled 69 percent of national air travel; today they handle 74 percent. At some airports, one airline handles more than 80 percent of all passenger boardings.

-- Regarding the effects of increased concentration, the evidence from the one case we have examined--the changes in fares and service levels at St. Louis following the Trans World Airlines' (TWA) merger with Ozark Air Lines--shows that while service levels were largely unaffected, consumers now have less choice among carriers and fares have risen. While we have not isolated what portion of the increase is due to the merger, TWA stated that the fare increases resulted from several factors that depressed fares in 1986, including intense competition with Ozark.

FUNDAMENTAL CHANGES IN THE AIRLINE INDUSTRY HINDER MARKET ENTRY

Deregulation allowed airlines to compete on the basis of fares, opened up the airline industry to new entrants, and allowed existing carriers to expand their operations. In the early years of deregulation, a number of low cost carriers entered the industry, and competition, on many routes, intensified. Since deregulation, the annual rate of return on investment for U.S. scheduled airlines has fluctuated between 2.1 and 9.9 percent.

The established carriers responded to the new competition and adopted a number of changes in their operating and marketing strategies. One of the most important changes in the airline industry was the shift away from point-to-point service to hub-and-spoke systems. Hub-and-spoke systems allow airlines to achieve operating efficiencies. By combining traffic from a number of spokes at a hub airport, airlines can better fill their planes, resulting in lower costs which, in turn, permit lower fares. Airlines with hub-and-spoke operations offer a large number of flights at the hub airport for passengers making connections to flights to and from spoke cities. On the other hand, hub-and-spoke systems typically result in only one or two carriers handling most of the boardings at a hub airport. Hub-and-spoke systems, to some extent, prevent new entry at the hub airport. Generally entry by other airlines that does occur is usually limited to service to and from another airline's hub.

In concert with the establishment of hub-and-spoke networks, other fundamental changes in the industry occurred, some of which reinforce an airline's market power at its hub airports. These include development of computerized reservations systems (CRS), establishment of frequent flyer programs, and reliance on travel agent commission overrides. These changes in how airlines market their services make it more difficult for new entrants to compete with the established airlines or for existing carriers to expand their operations to compete with another carrier at its hub airport. Physical barriers, such as gate availability and landing slot restrictions, can also limit entry.

Computerized Reservations Systems

On September 14, 1988, we testified before the Subcommittee on Aviation of the House Committee on Public Works and Transportation on the findings of a recent DOT report on CRSs prepared in response to a GAO recommendation.[1] We testified that the DOT report showed that airline-owned CRSs are earning profits exceeding those that could be reasonably expected in a competitive market and that these profits reduce competition in the air passenger market because they

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[1]Airline Competition: Impact of Computerized Reservation Systems (GAO/RCED-86-74, May 9, 1986).

artificially raise the costs of other participating carriers. We concluded that the evidence warrants remedial action by DOT.

Most travel agents use a CRS to sell tickets. There are five systems, all airline-owned. The two largest, American Airlines' SABRE and United Airlines' Apollo systems, control 75 percent of the CRS market. Two years ago, we reported on possible anticompetitive impacts of CRSs. We focused our attention on two issues--incremental revenues, the extent to which the airlines that own these systems are able to capture a disproportionate share of the air travel market because agents using CRSs tend to favor the flights of the CRS provider; and booking fees, the charges that airlines must pay to the CRS owner every time a flight segment is booked on its system.

Incremental revenues could potentially weaken the ability of rival airlines to compete effectively. Booking fees, if they exceed costs, could have anticompetitive effects when paid by one airline to a competing airline. At the time of our earlier report, we did not have sufficient information to determine whether incremental revenues persisted or whether booking fees exceeded costs. Accordingly, we recommended that DOT determine the size and persistence of incremental revenues and examine the potential anticompetitive effects of booking fees.

DOT issued its report in May 1988. Although it made no recommendations, DOT's analysis showed that the CRS-owning airlines continued to earn substantial incremental revenues from their systems. According to the report, for the two major CRSs, booking fees are about double the cost of providing the service, including the cost of capital and a 15-percent return on investment. The revenue transfers from non-CRS vendor airlines to CRS-vendor airlines have been substantial, and these result in lost income for the non-CRS owning airlines. Further, there is no competitive market to determine the level of booking fees. If an airline refused to pay the fee of one of the vendors, it would effectively forfeit any business from travel agents using that CRS. For example, in 1984 Continental Airlines declined to pay the fees of one of the smaller vendors for six weeks. Continental Airline officials told us that revenue losses were so great that they believed they had to resume paying the fees.

Airline-owned CRSs also make it more difficult for a new carrier to enter the industry or for an existing carrier to expand into the hub of an airline that owns the CRS used by most travel agents in that market. New carriers often try to enter the industry by offering fares below those of the incumbent airlines, However the booking fee charges they incur raise the new carrier's costs relative to those of CRS-owning established carriers and reduce the opportunities for profitable entry. Further, if a hub airline owns the CRS used by most agents in the market, any airline attempting to compete at that hub will find itself at a competitive disadvantage. Local travel agents will tend to favor the flights of the airline providing the CRS because of the airline's maintenance of supportive business relationships with its network of subscribers, the so-called halo effect. The potential competitor will also have higher costs because of the booking fees. Reduced access to air travelers and higher costs could combine to frustrate entry, even when the route that has been targeted for entry is highly profitable.

Frequent Flyer Programs

Every major carrier has a frequent flyer program which is designed to create brand loyalty. Because awards are earned only after certain mileage thresholds are reached, the traveler who has collected some, but not all, of the mileage needed to earn a bonus would be less likely to switch to another airline. Mileage accumulated on one airline is more valuable than the same mileage accumulated on several airlines. These programs have benefitted consumers, but they can also make it difficult for a new entrant to attract passengers away from an incumbent. Moreover, since frequent flyers are often business travelers whose fares are paid by their firms, they may be less responsive to the lower fares or improved service offered by carriers trying to enter the market. Finally, while a new entrant could offer its own frequent flyer program, it will find itself at a disadvantage at an incumbent's hub airport simply because the dominant carrier is likely to offer the greatest variety of business and vacation destinations making its frequent flyer program more attractive.

Travel Agent Commission Overrides

The airlines often pay commission overrides, which are paid in addition to the standard commission. These override commissions are incentives to travel agents to increase bookings on the flights of the sponsoring airline. Any airline can pay override commissions, but because they often apply to total agent sales, override commissions from an airline that dominates a hub airport are worth more than override commissions paid by other carriers. Override commissions tend to be less costly for a carrier that already dominates traffic at an airport, since to influence travel agent behavior, it need only pay overrides on a small share of its bookings or pay a lower override rate on total bookings. A smaller carrier with less presence in a city will often have to pay higher override rates or commissions on a larger share of its bookings. Thus, commission override arrangements also make it more difficult for new carriers to enter or for existing carriers to expand their operations to serve an airport where another carrier has established its hub or is otherwise dominant.

Physical Barriers

In some cases, there simply is no physical airport or airway capacity left for a new carrier to enter the market. At four airports, air traffic congestion has become so severe that landing rights (slots) can only be obtained by purchasing them from incumbents or at slot auctions. At other airports, additional operations can be accommodated, but gate space is insufficient. In addition, airports where carriers have established hubs often enter into long-term lease agreements with those carriers. For example, TWA has a long-term lease agreement that gives it exclusive use of 58 of the 81 gates at Lambert Airport in St. Louis. No other carrier controls more than three gates. The airport cannot build new gates without additional bonding authority from the voters. Moreover, majority-in-interest clauses in TWA's lease guarantee TWA a major voice in any decisions to expand or improve the airport that would require it to share the cost. There is evidence that hub airline control over airport access, such as TWA's at St. Louis, is not uncommon.

DOT OVERSIGHT OF MERGERS

When Congress deregulated the airlines, it directed the Civil Aeronautics Board (CAB) to analyze airline mergers in the same way that courts analyze unregulated industries. The Congress expected CAB to take into account competitive conditions. In the decade since deregulation, the industry has undergone significant changes, most of which were well underway when DOT inherited merger oversight responsibility from CAB on January 1, 1985.

CAB's Merger Policy

CAB believed airline merger analysis should focus on the role of potential competitors, rather than existing competitors, as the force that restrains an incumbent firm from charging monopoly prices in markets it dominates. In CAB's view, an analysis of whether a merger is anticompetitive should focus on barriers that make it difficult to enter a market.

CAB developed merger guidelines based on several assumptions about the nature of competition in the airline industry at the time the industry was deregulated. CAB believed that airline markets were relatively easy to enter largely because capital (i.e. the airplanes) was mobile and could readily be shifted from one market to another. Therefore, with the elimination of government regulation over market entry, CAB believed that airlines could shift resources to any markets where airlines, facing little competition, were charging high fares and earning monopoly profits. Even if there were only one airline in a market, the threat of competition from other airlines would keep the incumbent airline from raising fares.

In federal court, once merger opponents show a merger will result in a highly concentrated market, the proponents must demonstrate that the merger will not be anticompetitive. This places the burden of proof on the merging firms. CAB, as a regulatory agency, used a different standard based on its view that although airline markets are nearly always concentrated, the potential of new entry made concentration less important than in other industries. Consequently, in the airline industry, the opponent must bear the burden of proof, even when the merger results in highly concentrated markets.

CAB's perception of the ease of entry into airline markets may have been accurate for conditions at the time the industry was deregulated, but by 1985 when merger authority was transferred to DOT, changes in the airline operating environment made the presumption of easy entry less persuasive. These changes led former CAB officials, DOT economists, and airline industry analysts to challenge the assumption of easy entry.

DOT Adopted CAB's Assumptions

Since 1985, DOT reviewed and approved 26 merger applications. In implementing its merger policy, DOT assumed, as had CAB, that airline markets were easy to enter. According to the former Deputy Assistant Secretary for Policy and International Affairs, DOT did not examine the new developments in the airline industry despite concern by DOT analysts about the continuing validity of the assumptions. The only potential barriers to entry that DOT considered were physical barriers, such as the availability of gates and landing slots.

In the 1987 USAir-Piedmont case, the barriers-to-entry such as computerized reservations systems and frequent flyer programs, that had led many analysts to question continued reliance on the assumption of easy entry, were explored. In that case, the merger opponents showed that a significant correlation existed between airport concentration and airline fares, suggesting that airlines were not restrained by the threat of potential entry. After reviewing the evidence, the Administrative Law Judge found that these changes in the airline operating environment restricted entry, held the merger to be anticompetitive, and recommended against it.

DOT rejected the judge's recommendation and approved the merger. DOT did not look at how marketing tools, like frequent flyer programs, could keep competitors out of an airport dominated by an airline with a hub there, but looked instead at whether competitors could readily fly routes between cities. New marketing techniques, in DOT's view, did not preclude entry into individual routes.

While we did not evaluate the correctness of individual merger decisions, we believe that merger analysis should include the full range of factors affecting entry in the airline industry, such as computerized reservation systems and frequent flyer programs. Under the CAB Sunset Act, the Department of Justice will assume responsibility for airline mergers in January 1989. The Department of Justice, in opposing several of the mergers, expressed the view that many airline markets could not be easily entered because of barriers to entry.

EFFECTS OF MERGERS ON FARES AND SERVICE AT HUB AIRPORTS

As a result of the 26 mergers since 1985 concentration in the airline industry increased dramatically, making the airline industry more concentrated today than before deregulation. In 1978, the 5 largest carriers controlled 69 percent of the nation's air travel market. By 1985, their market share had fallen to about

57 percent as many new firms entered the industry. However, as of June 1988, the five largest carriers controlled 74 percent of the market. Several economic studies have shown that, when individual routes are highly concentrated, fares are higher. Furthermore, several airports have become highly concentrated as a result of mergers. For example, after Northwest Airlines merged with Republic Airlines, Northwest accounted for more than 80 percent of passenger boardings at the Memphis and Minneapolis-St. Paul airports.

We are currently evaluating fare and service changes following mergers at a number of major airports affected by mergers. In response to a request from Senator John C. Danforth, we recently analyzed the changes in average fares and services at Lambert-St. Louis International Airport following the acquisition of Ozark Air Lines by TWA in late 1986. While service levels were largely unchanged, travelers now have less choice among competing airlines in many markets and TWA's fares increased.

At the time of the merger, TWA handled almost 57 percent of the passengers enplaning at Lambert, while Ozark handled 26 percent. No other carrier had as much as 3 percent of the market. The merger left TWA with 82 percent of the enplanements and Lambert rose from the tenth to the fifth most concentrated of the nation's 50 busiest airports.

The merger did not have much impact on the level of service available to St. Louis air travellers. What did change was the amount of competition on many St. Louis routes. The number of direct routes served by only a single carrier (usually TWA) increased 42 percent from 60 to 85. At the same time, the number of routes served by two or more carriers fell from 64 to 36, and those served by four or more airlines fell from 15 to 7.

With respect to fares, we compared TWA and Ozark's average round trip fares during three quarters of 1986 with TWA's fares for corresponding periods in 1987. We found that TWA's fares on 67 major St. Louis routes rose 13 to 18 percent. Fares of other carriers competing on the same routes rose a little more than half as much. By comparison the airline fares component of the Consumer Price Index increased 5 to 6 percent during this period.

According to TWA officials, the relatively large average fare increases in 1987 reflect depressed fares in 1986. In March 1986, TWA's flight attendants went on strike and TWA was forced to reduce service offerings, such as hot meal service. To win back passengers, TWA offered discount coupons worth 20 to 30 percent off the regular fare. TWA also fell victim to a widely publicized hijacking, and TWA officials believe that this probably affected some of its high yield traffic. Finally, according to the officials, TWA was in the midst of a competitive struggle with Ozark in 1986. In 1987, following the merger, these factors depressing fares abated and, in addition, TWA average fares rose as it began offering first class service in markets where Ozark had offered only coach service.

We did not separate the various influences on TWA's fare increases to determine the proportion of TWA's fare increases at St. Louis that was due to the merger. However, TWA officials acknowledge that part of the reason why fares were low in 1986 was that TWA was competing vigorously with Ozark before the merger, and that fares had fallen to levels that were not sustainable. The merger eliminated that competition and its effect on fares.

When our studies of other mergers are complete, we hope to be able to provide a more definitive answer on merger impacts.

CONCLUSIONS

Deregulation was predicated on the assumption that competition in the airline industry would be healthy and would result in benefits for the consumer. Many of the benefits expected from airline deregulation, such as lower fares in well traveled markets, have been realized. However, as evidenced by the growing concentration in the industry and by DOT's study on CRSs, fundamental changes in the airline industry threaten the benefits of deregulation.

We believe the evidence on CRSs is sufficient to warrant DOT opening a rulemaking proceeding to evaluate and adopt appropriate solutions to the problems posed by the revenue transfers from non-CRS-owning airlines to CRS-owning airlines. With respect to merger oversight, we anticipate that the Justice Department will take into account how changes in the airline operating environment affect the ability of firms to enter airline markets. If substantial barriers to entry exist at many of the nation's hub airports, the dominant carriers may be able to raise fares and earn monopoly profits without fear of potential competitors entering the market.

With respect to other barriers to entry, we are not yet in a position to recommend what actions, if any, will be either necessary or appropriate to preserve the competitiveness of the industry. As a general observation, however, we believe that our studies, both completed and ongoing, indicate the importance of monitoring the effects of recent changes in the industry to ensure that the nation's airline industry remains fundamentally competitive.

Mr. Chairman, that concludes my statement. I would be happy to answer any questions you might have.