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Airline Deregulation: Success of Failure

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**AIRLINE DEREGULATION:
SUCCESS OR FAILURE**

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An Abstract Presented to the Faculty of the Graduate School of Lindenwood College in Partial Fulfillment of the Requirements for the Degree of Master of Business Administration

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ABSTRACT

This thesis focused on the study of airline deregulation and the impact it made on the airlines and the consumers.

The history of the airline industry was reviewed, as well as the specific events which lead to the formation of the Airline Deregulation Act of 1978.

Following deregulation there were debates as to whether deregulation had achieved its original goals. These debates have continued up until today.

The hypothesis stated herein was that research would indicate that airline deregulation had benefited the industry as a whole and that if further deregulation and more adherence to policies under deregulation were followed, both the airlines and the consumer would benefit.

The studies of major authors and theorists, who have studied deregulation, were examined. The results of these studies supported the hypothesis and, therefore, it was accepted. These results indicated that airline deregulation had overall benefited both the airlines and the consumer. Deregulation had achieved what it originally set out to do and that was

to allow the common person to travel by air. Likewise, the full benefit of deregulation can be realized if more adherence to the rules of deregulation are followed.

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1997

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Dedicated to my girls,

Aimee and Amanda

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INTRODUCTION

Airline Deregulation

Tickets are cheaper, flights are more frequent, and competition between airline carriers has increased since 1978. Overall, American consumers seem to have benefited from airline deregulation. Yet, controversy regarding deregulation continues. Two articles are written, the same month, the same year and yet one paints a very rosy picture of the effects of deregulation and the other theorizes reregulation is needed.

Since 1978 a lot has changed in the airline industry. Even prior to 1978 airlines had been subjected to major changes in the way they conduct business.

The United States airline industry actually began to see growth after World War I. This growth was interrupted with the Great Depression and World War II. During World War II the United States aviation industry concentrated on needs relating to the war rather than on passenger transportation. In 1938, following World War II, Congress made its first attempt to design a regulatory structure to oversee the airline industry.

This came about with the Civil Aeronautics Act of 1938. This Act created the Civil Aeronautics Board (CAB). The Board was responsible for overseeing the safety and organizational aspects of the aviation industry. Their goal was to ensure adequate air travel was offered at reasonable charges (Wilson 111).

Over the next 20 years, the CAB regulated the airline industry. The CAB ensured no destructive competitive practices occurred so as to "protect the industry from domination by a few powerful companies" (111). The CAB was also responsible for approving or denying any mergers or reorganizations within the industry.

After two decades passed, the Federal Aviation Act of 1958 was passed and with it came the Reorganization of the Civil Aeronautics Board. This act did not gravely change anything within the airline industry pertaining to regulation by the CAB. However, fear of predatory competition which could drive some carriers out of business caused the CAB to look closely at foreign investments in United States carriers. Congress believed that "foreigners would be less concerned with U.S. public welfare than would U.S. companies" (112). Therefore, Congress set limits for foreign investment in U.S. carriers. "Foreign personal investments in U.S. carriers are limited to 25 percent, while foreign air carrier investment is limited to 10 percent" (114). By setting these limits, Congress felt they could maintain the control that was necessary over foreign investments.

Around this same time, the CAB initiated the Domestic Passenger Fare Investigation (DPFI). The DPFI utilized a fare formula based on cost of service and distance of flight to determine fare policies. The DPFI discouraged discount fares altogether. This kept fares at a higher level than most could afford and thereby kept leisure travel limited (115).

In October 1975, the Ford Administration announced the "Aviation Act of 1975." This Act proposed total deregulation of the airline industry. Problems associated with the airline industry were blamed on the strict regulation by the government. All fingers pointed to the CAB (Beneish 399).

Problems with Regulation

After the announcement by the Ford Administration analysts were called in to determine the nature of the problems associated with the airline industry. By the late 1970s airline industry analysts had reviewed the current aviation situation and had determined several problems as a result of regulation. These analysts outlined the four major problems as price, routing, ownership and collusion (Wilson 116).

The analysts felt that because the CAB controlled the routes airlines could fly and the fares they could charge, the normal fluctuation of price due to supply and demand was not occurring. "Airlines could only compete with one another by offering higher quality service than their rivals" (Bauer 1). Since the CAB was concerned with the financial health of the industry, they would raise fares when needed to cover higher operating costs. This left little incentive for the airlines to hold down operating costs. The result of CAB interference was higher prices and higher quality of service than the average traveler required. This resulted in low load factors since travel was not affordable to everyone.

In addition to the problems with pricing, the airline industry analysts found inefficient routing patterns as a result of regulation. The CAB controlled the routes airlines could fly. The Civil Aeronautics Board required airlines to "prove existence of public need before new routes would be approved" (Wilson 119). This hindered airlines from entering new markets and therefore limited competition in some major cities. From 1969 to 1974 the CAB rejected most applications for new routes by regulated carriers. "This period became known as the 'route moratorium period'" (Beneish 398).

Along with barring carriers from entering new markets, the CAB's control on route structure also prohibited some carriers from exiting failing markets. The CAB's goal was to satisfy public convenience and necessity. This meant that if the CAB felt the consumer needed certain flights, in certain markets, then by all means they would remain. Analysts criticized this route control and maintained this type of regulation destroyed any hopes of natural competition (Wilson 120).

The third problem airline analysts determined was restrictions on airline ownership. Firms desiring to enter the airline market had to apply for certification to the CAB. The CAB would in turn review the application and the financial status of the applicant. Comments from current carriers were solicited to provide them the opportunity to voice opposition. This procedure placed strong barriers on entry into the airline industry (121).

The final area of review was inefficiencies as a result of airline collusion. What today would be challenged under antitrust laws was permitted under the CAB. The CAB allowed cooperative plans between airlines which, in turn, adversely affected the consumer in terms of competition, price and service. Agreements included capacity reduction agreements, whereby competing carriers would contract to decrease their service on particular routes in order to increase their load factors. (123)

Each of these areas drew attention from the review board. After in depth study, the analysts determined that the "regulatory actions of the CAB distorted the natural equilibrium that results when allocative choices are made by market forces rather than by regulation" (124).

Airline Deregulation Act

From October 1976 to mid 1978 debates over possible deregulation of the airline industry continued. Finally, the criticisms of the CAB resulted in the reorganization of the industry in 1978. On October 24, 1978 the Airline Deregulation Act was signed by President Carter. This act bestowed decisions in the hands of the free market and over the next several years phased out the control by the CAB. The CAB was completely dissolved in 1984. Any function of the CAB which had not been eliminated was delegated to the Department of Transportation (DOT) (125).

Deregulation came about in phases with the first phase falling between 1978 and 1981. During this phase, deregulation affected the price of airline tickets and the route structure of the airlines. It also brought about changes in the competitiveness between carriers and eliminated the collusive agreements which existed during regulation (129).

Effects of Deregulation

Deregulation was completed in 1984. The four problem areas which were determined and studied by analysts prior to deregulation-price, route, ownership and collusion, were all influenced by deregulation. In addition, labor productivity and the financial situation of the airlines were also affected.

The first area that had been studied by analysts was price. Immediately after deregulation the price of airline tickets fell. "Average ticket revenue per passenger mile fell from 12.27 cents in 1978 to 9.79 cents in 1988 (Power and Bernstein 71). Suddenly flying was more affordable and the family who once drove from St. Louis to Minneapolis now considered flying. The result from lower fares was quickly realized. From 1978 to 1988 the number of passengers traveling grew from 250 million to 450 million (Labich 82). This carried out what the analysts had predicted during their pre-deregulation studies. They believed the CAB's interference was causing higher prices and higher quality service than the average traveler required and because of this many would choose to drive to their destination rather than fly.

Although flights were filling up and load factors were definitely climbing, the airlines were not reaping the financial benefits as would have been thought. At the same time load factors were climbing so were fuel prices and then the air traffic controllers went on strike. These and other problems would continue to hold down any increase in revenue by major carriers (Wilson 126).

The CAB's control of routes had also been a major concern to analysts. Following deregulation there was a surge of entry into new markets. This surge was not only done by existing carriers but by new carriers as well. This benefited the consumer in two ways. With the increase of competition in certain markets, fares also became more competitive and the consumer was able to pay much lower prices than they had previously paid in these routes. Likewise, airlines began entering new markets and soon service was offered by means of either non-stop or connections from smaller outlining cities that had previously not been serviced. This new competition and newly serviced cities offered strong advantages to both the business and leisure travelers (128).

In addition to its affect on price and routes, deregulation also affected ownership policies. After deregulation new carriers began to pop up everywhere. "In 1978 there were 30 airlines. By the early 1980s there were 200" (Power and Bernstein 72). These "upstart" carriers played a large part in the decline of airfares during the post-deregulation years. They would enter the market with new low fares to entice consumers to try their service. Many of these carriers were soon matched in route and price by a larger competitor and were soon out of business. However, upstart carriers continued to affect the industry then and today and impact the price consumers pay for certain flights.

In addition to new carriers, deregulation brought about a large number of buyouts and mergers:

Table 1

MAJOR CARRIERS AND WHAT THEY BOUGHT

AMERICAN	Air California (1987)
DELTA	Western (1986)
NORTHWEST	Republic (1986)
TEXAS AIR	Continental (1981)
	Eastern (1986)
	People Express (1986)
TWA	Ozark (1986)
UNITED	Pan Am's Pacific Routes (1985)
USAIR	Pacific Southwest (1987)
	Piedmont (1987)

SOURCE: Business Week. Exhibit from "The Frenzied Skies," by Christopher Power and Aaron Bernstein (1988).

Not all the results of these buyouts and mergers were positive and the impact of them are still being felt today by the consumer and the airlines.

The fourth area of study was collusion. Deregulation has eliminated nearly all forms of collusive agreements. What during regulation would have been considered legal behavior between airlines would now be subject to anti-trust hearings. This abolishment of any type of mutual agreements between carriers further assisted deregulation with its goals of offering natural competition (Wilson, 134).

For example, carriers can no longer have mutual aid agreements whereby they limit the number of flights in certain markets to assist one another with higher load factors. Because of this, carriers must now fight for themselves to fill their planes. They set out to accomplish this with frequent departures and lower fares; both of which benefit the consumer.

In addition to the impact deregulation had on these four major areas, deregulation also affected the productivity and the financial well-being of the airlines.

The impact deregulation had on productivity has been for the most part a positive one. "Since deregulation, the number of workers in the industry has increased only 48 percent, while the number of passengers flown has increased 86 percent and the number of miles flown has increased 109 percent" (Bauer 1). In short, labor productivity has increased greatly.

Although this increase in productivity can be seen as a positive result of deregulation, factored into this scenario are the results of mergers, buyouts and bankruptcy by airlines. In the early 1980s there were 200 carriers; by 1985 there were 125. Airlines have come and gone during the years post deregulation and with them many employees. The airlines that are still operating today have gone through numerous furloughs and layoffs. The financial situation of most carriers has been on a continual decline since the late 1980s. Only recently have some carriers begun to rebound (Power and Bernstein 72).

As seen, deregulation has affected the public and the industry in many different ways. Sixteen years after deregulation the debate over the success of deregulation continues. There are those who believe deregulation accomplished what it set out to do and there are others who feel it has caused more harm than good. Controversy over deregulation remains and many wonder if the airlines and consumers would benefit from a reregulated industry.

Alfred Kahn, the architect of the United States Airline deregulation says, "the primary purpose of deregulation was to stop protecting the industry from competition, bring to the flying public the benefits of competition, and make travel affordable for people of modest means" (Velocci 41). This it has done. However, analysts continue to debate whether the benefits will continue or if the upheaval in the airlines will cause problems for the consumers in the future.

Statement of Purpose

This thesis examines the history of the airline industry and the benefits and problems deregulation has caused to date. Research shows that deregulation has assisted consumers in their air travel, yet other studies continue to debate the necessity of reregulating the industry.

This thesis will also examine the direction the airline industry is headed and the changes that are needed to pull the airlines out of the red and at the same time ensure adequate air travel for the consumer.

Chapter II

LITERATURE REVIEW

The Deregulation Debate

United Airlines signs a contract with its employees granting them part ownership of the company in exchange for wage concessions, US Airways struggles to negotiate with its unions, American Airlines' pilots pose a potential strike, Trans World Airlines discontinues service between New York and Frankfurt, Germany. Every day a new story, every day a new headline. So much news about one industry, the airline industry.

The airline industry has had and continues to have articles written almost every day concerning one issue or another. Since 1978 and the deregulation of the airline industry, United States carriers have gone through many changes. Life as it was prior to deregulation has changed dramatically. Many articles debate the original goals of deregulation and the results of it nineteen years later.

Some analysts praise the results of deregulation while others contemplate whether the gains have been worth the losses. Some believe yes; others are not quite sure. But one thing is for certain, the topic of airline deregulation is as debatable today as it was nineteen years ago.

The Goals of Airline Deregulation

A speech was given by Samuel K. Skinner, United States Secretary of Transportation on January 23, 1991. He spoke about the accomplishments of deregulation and said, "It is time to declare the deregulation debate over and get on with the challenges of the 1990s" (Skinner 363). Skinner supported airline deregulation and all the changes that accompanied it. During his speech he quoted findings from an analysis performed by the Department of Transportation which confirmed that deregulation has provided major benefits for American travelers. "Every credible analysis of airline competition in the 1980s has declared deregulation a success" (363).

Many agree with Skinner, including Alfred Kahn. Kahn was called the "father of deregulation" because as the Chairman of the Civil Aeronautics Board, he was the architect of U.S. Airline Deregulation. Kahn argues that although there have been some hardships which have accompanied airline deregulation, it has done exactly what it set out to do (Velocci 41). He believed the purpose of deregulation was to enable the "common" person to travel by air and this it has accomplished.

Alfred Kahn did not set out to deregulate the airline industry when he joined the CAB. "His principal idea was to introduce more competition and make air travel more affordable. Once the process got going, it took on a momentum of its own" (41).

Jonathan B. Wilson's study provides the background to Airline Deregulation. His in-depth study emphasizes why in 1974 many believed change was needed within aviation. There was a desire for a naturally competitive industry amongst the air carriers. Consumers believed that if the airline industry could be run as government free as possible, supply and demand along with natural competitiveness would put the industry where it needed to be. It was assumed that from this competition, prices would be reduced to a level people could afford, thus enabling the "common" person to travel by air.

The original goal of airline deregulation was to do exactly that; enable the common person to travel by air. This has been accomplished and those who support airline deregulation declare it a success because it has made air travel more affordable. More people travel by air today than at any time prior to deregulation. As matter of fact, "The number of people who travel on scheduled airlines in the United States has increased 65 percent since deregulation"

(Skinner 363).

Although this goal of deregulation has been achieved, many continue to debate its success. For example, two-and-a-half years after Samuel Skinner's speech, "a Democratic administration appointed a National Commission to Ensure a Strong Competitive Airline Industry and the question it asked was: Is Deregulation Working?" (Poling 1).

This question was asked frequently in the years to follow. The reason for query was because, the original goal of airline deregulation had been two-fold. In addition to the desire to reduce prices and thereby increase consumer air travel, the main "incentives to deregulate the airline industry stemmed from the poor profit performance of the airlines from 1970 to 1974 coupled with fare increases of 35 percent in this period" (Beneish 398). Messod D. Beneish of Duke University studied the effect of regulatory changes in the airline industry. He "studied the effect of major events in the regulatory deliberation period on the expected profitability of airlines by analyzing the behavior of security prices at the time of those events" (396). His results indicate that regulatory changes in the airline industry had a negative impact on airlines stock return. Although deregulation made an immediate impact on fare levels, in the area of profit performance, the airlines were soon to enter their worst financial state of aviation history.

Articles written today continue to concentrate on the financial situation of the United States carriers. During the past nineteen years the financial situation of carriers has greatly declined and only recently have most carriers reported strong earnings and net revenues. It is mainly due to the airline's financial situation that the debate continues.

Those who debate the success of deregulation blame deregulation for the destruction of the airline industry. They concentrate on the number of airlines which have gone out of business since 1978 and focus on the number of employees who have lost their jobs due to liquidation, layoffs and furloughs. In addition, they believe the cycle may repeat itself.

Many would agree air travel has increased since deregulation and likewise would agree that the financial status of the airline industry has deteriorated. Therefore, the debate continues, not in regards to success or failure of a common theme but rather between the goals of deregulation. One failed and one succeeded.

The debate today is whether the success of increased air travel has been worth the decline of the industry. Furthermore, the debate continues as to what steps need to be taken to maintain the accessibility of air travel to the common person and yet stabilize the industry and continue to make it profitable.

This chapter will focus on outlining the successes of deregulation and theorists who support it, as well as the failures which have accompanied deregulation and conclude with defining a hypothesis for what needs to be done.

Success of Deregulation

The ultimate goal of deregulation was to enable the common person to travel by air. Those who favor deregulation and praise the results it has accomplished believe positive things have been delivered to the consumer.

Over the past nineteen years air travel has been an increasingly important form of transportation. Corporate and leisure travel have both continued to grow. From the comprehensive research of Jonathan B. Wilson, he concludes that deregulation has brought positive results to consumers. These positive results include a choice amongst airlines, more frequent service and less expensive tickets.

Prior to deregulation airlines flew regionally and they knew their bounds. A traveler flying from point A to point B usually did not have too many options as to which airline to fly. Following deregulation, existing carriers began to expand their domain and enter other cities. Likewise, upstart carriers began to arrive in city pairs where previously only one or two airlines had offered service.

This increase in service by existing carriers, as well as by new carriers, finally gave consumers a choice amongst airlines. This is best illustrated in the fact that "fewer than one quarter of United States air passengers had the option of three or more carriers on one route. Today more than half of all air passengers have three or more airline choices to get them to their particular destination" (Airline Deregulation Ticket 20). This was made possible by the change in the new entrant policy which had been so tightly controlled by the CAB. This change brought about quick action by the airlines and as the General Accounting Office (GAO) status report showed, "the number of city-pair authorizations increased from 24,000 prior to enactment of the Airline Deregulation Act in 1978 to 106,000 within eighteen months after passage" (Wilson 120).

In addition to a wider choice amongst carriers, more frequent service was soon available at most airports. Prior to deregulation some markets had only one or two flights a day with only one airline servicing a particular route. With an increase of city-pair authorizations came not only an increase in carriers but also an increase in the number of flights these carriers operated. John H. Anderson Jr., like Jonathan Wilson, draws much of his findings from General Accounting Office (GAO) reports. One such finding indicates that carriers increased their number of flights so much so that "Seventy-eight percent of the small-and medium-sized community airports have had an increase in the number of departures and every large community airport has more departures (since deregulation) (Anderson 31).

In some instances a particular carrier, attempting to maintain control of a certain route, would increase the number flights in this route to remain above the competition. This type of market dominance continues to occur today and has resulted in hourly shuttles in some markets. Hourly shuttles are flights departing every hour from one city to another during a particular span of time each day. For example, US Airways operates the hourly shuttle between New York's LaGuardia Airport and Washington National Airport in Washington, D.C. Likewise, United Airlines operates an hourly shuttle between San Francisco and Los Angeles. These hourly routes have increased the schedule options for travelers in these markets and have made these carriers the preferred airline amongst many corporate travelers because of flight frequency and the flexibility it offers them. Travelers benefit from this because they can plan their flights around their personal schedule rather than arrange their schedules around certain flights.

In addition to more frequent service after deregulation, some cities had their first taste of air travel and it was now available at their local airport. As a result of deregulation, airlines began servicing out-lying smaller cities with both jet and commuter operations. This became possible through hub and spoke systems. This is a system by which carriers create systems of routes centering around a particular airport called a "hub." This enables a carrier to capture a larger market share, thereby improving its average load factor (Wilson 128).

By utilizing such a system, airlines could utilize commuter service to transport individuals from smaller cities to large hubs, allowing them to connect to just about anywhere. For example, a traveler who once drove from Allentown, Pennsylvania could now fly from Allentown to Pittsburgh and take a connecting flight to their final destination. This concept opened up air travel to new markets of people who may in the past had chosen to drive.

The hub and spoke system has tended to improve both technical and allocative efficiency to the extent that carriers better utilize their resources and passengers enjoy lower fares and more convenient service (128).

Even Southwest Airlines, whose initial claim was point-to-point service, has begun to utilize key cities in its route structure through which it feeds the remainder of its flights. Overall, the hub and spoke system has benefited the carriers and the consumers they serve. Morrison and Winston studied the effect of hub and spoke networks and found the total benefits to passengers were on the order of $5.7 billion dollars a year in 1985 (Bauer 2).

Hub and spoke operations also caused an increase of service by carriers after deregulation. Prior to deregulation, aircraft were utilized in non-stop markets where businesses and the CAB dictated. After deregulation, carriers in one city could take passengers to multiple destinations via their hubs.

One aspect realized by the consumer from hub and spoke operations has been the reduction of nonstop flights from small community airports. The number of cities accessible via nonstop service declined seven percent since deregulation; however, the number of cities accessible via one-stop service had increased by about ten percent (Anderson 31).

For example a traveler desiring to travel between St. Louis and Tampa at one time had only one airline with two daily flights. After deregulation, as hub and spoke operations became popular, travelers were able to connect on virtually any carrier catering to these two cities by means of their hubs. For example, today a passenger can travel to Tampa, Florida from St. Louis, Missouri on US Airways through Charlotte, on Delta Airlines through Atlanta, on United Airlines through Chicago, on American Airlines through Nashville or on Trans World Airlines or Southwest Airlines non-stop. Furthermore, each of these carriers can run between one or more connections to Tampa each day via their hubs. With this type of accessibility, travelers can pick a desirable departure and arrival time and still have two or more carriers with flights available during these times. This was especially beneficial to business travelers who had to be at a certain city by a certain time. Once again, they could chose their flight according to their own schedule and no longer be as dependent on airline schedules.

The third benefit of airline deregulation was less expensive tickets. This was made possible through many factors. Prior to deregulation the only form of competition amongst carriers was with service. Now, with the removal of government control, service, availability, schedules and price played a part in offering a competitive product.

Service had been one of the key factors used to draw passengers prior to deregulation. Large investments were placed into catering and in-flight amenities. Although in-flight service continues to be a factor in airline marketing, service took on other forms after deregulation, including the start of today's frequent traveler programs.

Availability and schedules also played a part in airline competition. As illustrated earlier, this was mainly influenced by hub and spoke systems.

Although service, availability and schedules were all competitive issues between carriers, price was the main factor. Following deregulation prices immediately fell. Airlines needed to become more competitive and with control of prices no longer in government hands, airlines could offer low prices to entice travelers to fly their planes. And so the birth of today's "fare war" began.

Although in some cases the airlines initiated the lower prices as a marketing strategy, prices also fell due to the type of competition that had entered the industry. As with most industries, the more similar products on the shelf, the more likely prices are to fall. Following deregulation came the entrance of new low-cost carriers and likewise lower prices. Because of the style and service of these new low-cost carriers and because these carriers operated "high frequency between a limited number of city-pairs and few amenities, these airlines have operating costs that are about 30% lower than those of larger airlines, such as American and United" (Anderson 33). Due to their lower operating costs, these carriers are able to charge lower fares. When this occurs, in most cases, existing carriers are forced to match these fares. These lower prices not only assist current customers, it also enables carriers to draw from a new customer base. The results of one study suggest that due to such a drop in fares, deregulation has saved air passengers as much as $11 billion a year (Airline Deregulation Ticket 20).

The three main benefits of airline deregulation; increased choices amongst airlines, more frequent service and less expensive tickets all played a part in enabling the common person to travel by air. Whereas prior to deregulation flying was considered too expensive, it was now feasible and affordable. Deregulation had succeeded!

Failures of Deregulation

Since the deregulation of the airline industry in 1978 the airlines have struggled to make a profit. From 1990 to 1993 "United States carriers have lost $9.6 billion - more money than the industry has made in its entire history." (Grossmann 64). Only recently have carriers begun to see an upward trend in their "bottom line."

Today the "Big Three" - American, United and Delta rule the domestic industry as the leading carriers of corporate travelers. Southwest and America West have become the choice for many leisure travelers. The middle-men such as Northwest, US Airways and Continental have been left to find their niche in the industry and do what it takes to survive.

Deregulation has affected the carriers far differently than it has affected the consumer. The same factors which seemed to benefit the consumer, began to adversely affect the airlines. The lower fares, increase in the number of carriers and the increase in service all began to affect the profit performance of existing carriers.

Reduced fares have caused airlines to take a new look at their cost structures. Prior to deregulation carriers were protected by the government so as not to lose money on routes. Following deregulation they no longer had this type of protection. Cost analysis shows the older carriers had much higher fixed costs than the new start-up carriers. Airlines were already heavily laden with fixed costs. Variable costs did not play enough of a role to influence the cost structure based upon the number of travelers. Therefore, although they needed to match a competitors price to keep travelers on their airlines, in many cases they lost money. Because of this, operating costs had to come down. This became evident as the level of debt continued to increase. As one author noted, "To restore the balance sheets of the three largest carriers to financially respectable levels would require $10 to 15 billion of new equity" (Aviation Week and Space Technology 96). Some carriers have been able to do this, yet others continue to struggle.

In addition to reduced prices affecting the carriers cost structures, so did open markets. As deregulation allowed for airlines to move more freely into markets, they scrambled to make their way into more and more cities. Where carriers once understood each others regional boundaries, now the United States was theirs. As airlines increased their route structure, orders for additional aircraft grew. With the delivery of these planes, costs increased and so did capacity. Although the 1980s saw crowded planes, by the time the airlines had added new planes, the economy had slowed down. Over-capacity was the result. If the additional capacity could have been filled to make up for the cost difference this may have been a successful move. However, not only did supply begin to exceed demand, but the supply/demand curve did its trick and with the oversupply, prices continued to fall. In addition, operating costs skyrocketed. When Iraq invaded Kuwait in August, 1990 jet fuel increased astronomically. To illustrate how vulnerable the airlines are to outside conditions, consider "Each one cent increase in the cost of a gallon of jet fuel imposes an extra $164 billion on the industry" (Skinner 364). As with any industry, as overhead increases and prices decrease, the profit performance begins to wane.

To add to the predicament the airlines were already in, mergers and takeovers became the game of the 80s. The industry threw itself into such a frenzy that still today carriers struggle to figure out what went wrong. "The leveraged buyout craze of the 1980s saddled several major airlines with huge debt...and this is an industry above all others that should not carry great debt" (Weintraub 9).

Today, in addition to past expenses, airlines are faced with fares which are lower and costs which are higher. The airlines continue to be faced with "huge capital requirements to meet regulatory mandates, replace aging equipment and meet growing demand of $90 to $150 billion" (U.S. Airline Commission 96).

Although the initial years of deregulation seem to be profitable years for the airline industry, these memories have since been clouded by fallen carriers, layoffs, mergers and bankruptcies. From this view deregulation does not seem so successful.

As the senior editor of Travel Weekly, observes, "Competition eliminates some players, which results in fewer players, which results in less competition" (McDonald). In a round about way, this spells out the occurrences of the airline industry. Deregulation brought about more carriers which increased competition. Now the competition has eliminated some carriers which is leading once again to less competition. This has analysts pondering what is happening and wondering if the end result is going to be fewer carriers and increased prices.

Gerald Houseman with the Indiana University at Fort Wayne, seems to agree. He says "Airline deregulation, which was initiated during the Carter years, is a debacle, resulting in higher fares, less competition, fewer jobs, and a loss of American competitiveness" (56).

Individuals such as Houseman do not advocate airline deregulation based upon the state of the industry today. With the demise of Eastern, Pan Am, Ozark and numerous upstart carriers, these individuals believe deregulation is to be blamed for this and the financial situation of United States carriers.

By April 1993 the industry resembled the following:

Western, Braniff, National, Frontier, Allegheny, Hughes Airwest, North Central, Ozark, Piedmont, Southern and Texas International were all gone.

And yet at this same time it cost "$127 to fly from Memphis to Nashville and $204 to fly from Memphis to San Francisco! What a mess!" (Reno 46).

"There may be a silent majority out there who appreciate their improved access to air travel. If so, they are drowned out by the deafening complaints of passengers who think service has never been worse, and fares never been higher" (Kahan 22). Deregulation failed.

<u>Is Deregulation to Blame?</u>

Advocates of deregulation do not believe deregulation is to blame for the state of the airline industry today. They believe that instead of blaming deregulation for the financial problems one must look at the airline executives inability to conform with a changing market. (Skinner 363)

Even Alfred E. Kahn, the architect of airline deregulation admits "airlines are spiritually different from other enterprises" (Sheehan 82). He originally scoffed at those who defended the CAB. He believed those who supported the CAB felt that without it the airlines would rush into markets "pell-mell." He disagreed (82).

"I was wrong," says Kahn, "People went into the business without any regard to the size and strength of their competition" (82). Although Kahn was surprised by the behavior of the airlines following deregulation, many believe this behavior has continued into today and is largely responsible for the continued demise of some of the carriers within the industry.

This mismanagement includes the problems associated with over-capacity, uncontrolled operating costs, excessive debt and high labor costs. Even today, mismanagement continues at some of the airlines and some have been unable to bring labor costs under control. For example, pilots at some major carriers average five times what an American worker earns (Skinner 364). Alfred Kahn comments on this by saying, "Deregulation critics are largely people who are discommoded by competition, people who were in cushy positions earning six-figure incomes and who had second businesses on the side" (Velocci 42). This supports the fact that mismanagement has caused a lot of the internal problems with airlines and the results have driven down the financial status of the industry.

When deregulation was still in the thought process analysts just assumed airlines would be run as companies with profit and loss and stricter accountability. Unfortunately this did not occur and as Dick Jerris, Former Allegis Chairman said, "It (deregulation) was like a gold rush; everybody raced in with their wagons, but a lot of those guys didn't find gold, either" (Power 73).

The airlines are not alone in their controversy over deregulation. The deregulation debate continues within the auto industry, mass transit and savings and loans. Those who debate deregulation contend that government regulation is necessary to control these industries and keep them afloat. They believe the "laissez faire" doctrine will ruin these industries. As Robert Reno states, "face it, airline deregulation, like banking deregulation and to a certain extent, telephone deregulation, has been an unmitigated disaster. Basically, it has been a game that economists played and had a lot of fun with without concern for real world mathematics or real world results" (Reno 40).

Those who defend deregulation will declare that with time, within each industry, some will win and some will lose, but that all of this is a part of natural competitiveness.

Furthermore, most analysts who have studied the effects of deregulation and declare deregulation a success blame airlines for their own demise. They believe that the airlines who are succeeding today have made the changes that are needed to survive in a competitive environment. They also believe that what the surviving carriers need is more, not less, opportunity to fly unencumbered (Airline Deregulation 20). In other words, more deregulation instead of less. By this they believe the government needs to further lighten the burden of regulation by working towards opening slots at certain major airports and opening global markets and by making additional funds available to modernize the air traffic control system and for overdue airport construction (20). They believe these carriers have come full circle after deregulation and with less regulation they can continue to be truly successful.

Through all of this, some fear that as airlines go out of business and others consolidate to save money, the industry will be left with fewer carriers and once again fares will increase. However, Samuel Skinner and theorists such as Kenneth Labich disagree. Skinner believes that under a deregulated system of hub and spoke, carriers can continue to serve any market they want. Therefore, competition should thrive (364). Likewise, Labich declares:

> Everything we rightly demand from airlines, superlative safety, better service, reasonable fares, depends on their ability to refurbish their fleets with larger, more fuel-efficient planes. We will get what we pay for. And financial reality, not the bureaucratic imperatives that reregulation would create, should determine just how much we will pay. (90)

Conclusion

Consumers have benefited from airline deregulation with increased service and lower prices. Likewise, airlines have financially suffered due to the effects of deregulation.

However, overall airline deregulation has benefited both the airline industry and the consumer. This will be illustrated by reviewing some of the major airlines financial statements, the works of authors such as Wilson, Andersen, and Beneish as well as additional GAO Reports.

Statement of Hypothesis

Research will indicate that airline deregulation has benefited the industry as a whole and will show that if further deregulation and more adherence to policies under deregulation are followed, both the airlines and the consumers will benefit.

Chapter III

SELECTIVE REVIEW AND EVALUATION OF RESEARCH

The results of airline deregulation have been studied for over nineteen years. Research has been performed which measures the results deregulation has brought to the consumer and the airlines.

Jonathan Wilson's "The Lessons of Airline Deregulation and the Challenge of Foreign Ownership of U.S. Carriers" includes the history of the airline industry, the economic assumptions on which deregulation was based, and the results of deregulation through 1990.

Wilson's overview of the history of the airline industry and the elements of the CAB come from numerous sources including publications from the Federal Aviation Act of 1958, the Airline Deregulation Act of 1978 and statements made by the Department of Transportation as well as other supporting articles and studies. Throughout Wilson's writing he includes a variety of footnotes. Many of these footnotes are as informative as his actual writings. He uses these footnotes to further explain his quotations and also uses them to provide his personal opinions and criticisms on the writings he uses to perform his research.

One article Wilson refers to in his writing is "The Economic Effects of Airline Deregulation" by Steven A. Morrison and Clifford Winston (Wilson 104). Morrison and Winston studied the dynamics of airline pricing and competition. Their studies dispute previous findings which had indicated deregulation had caused an increase in fares (389). Morrison and Winston support the changes derived from deregulation and oppose a re-regulated industry. Their research included studying the trend in U.S. domestic fares since deregulation, the effects of competition on fares, and the effects deregulation has made on an airline's decision to provide direct service in certain markets. The results of their studies reinforced their original theory, that deregulation has aided, not inhibited the airline industry (389).

To study the trend in U.S. domestic fares, Morrison and Winston compared yields (revenue per passenger mile) from 1979 through 1989. They compared what yields would have been predicted to be in a regulated environment to actual yields (389). One problem with this study is that they only used those airlines that were included in the calculations under regulation for post-deregulation calculations. It seems that this would exclude the actual influences of post-deregulation competitors.

However, the study did show that yields would always be higher in a regulated environment, because on average deregulated fares are lower than regulated fares which in turn would decrease yields (392).

The authors admit that the effects of competition on fares is more difficult to study. The variable in this area of study was relative fare and not actual, but, as footnoted in this study, whether fares are influenced by competition or not, the appropriate variable would be relative fare and not actual fare. The conclusion arrived by Morrison and Winston was that competition does influence fares and that as airports became more concentrated, fares rose (390).

Their final study was the effects of deregulation on the entry and exit of carriers into new markets. This study concentrated on the entry of carriers into airports dominated by one carrier.

To perform this study, Morrison and Winston utilized the Service Segment data base and constructed a sample of quarterly entry decisions by thirteen airlines for the period 1979 through 1988. They categorized the influence of a carrier's decision into five areas: OWNNET, the maximum share of total enplanements at the origin and destination; COMPNET, the maximum share of any other carrier's total enplanements at the origin and destination airports;

RELFARE, the influence of fares on entry, which was defined as the yield on route in the previous quarter divided by the yield for routes of the same distance in previous quarter; POP, the effect of potential traffic volume on entry accounted for by the product of the origin and destination populations; and SLOT, the number of slot-constrained airports on the route. It was believed that OWNET and POP would have a positive effect on entry and that COMPNET and SLOTS would have a negative effect on the likelihood of entry and that RELFARE could go either way. They believed RELFARE would have a positive effect because higher fares overall attract entry; however, in some markets, higher fares may deter entry if they signal entry barriers or higher costs associated with them (391).

Models were carried out for each carrier during partial deregulation 1979-1982 and during full deregulation 1983-1988. The results were as expected for POP and SLOTS. POP had a positive effect on entry and SLOTS had a negative effect. The results of the COMPNET and OWNNET were not as straightforward. OWNNET had a significant impact on entry decisions for all carriers studied, although during the transition to full deregulation, the effect grew with some carriers and fell for others. Likewise, COMPNET deterred entry during partial deregulation, but no longer seemed to effect entry post-deregulation. This was thought to be due in part to the airlines practice post-deregulation of dictating entry according to their own strengths, not their competitors (392).

Morrison and Winston concluded that fares are higher on routes with greater carrier concentration at airports. This is especially apparent when one of the airports is an airline's hub. In addition, policies effecting airlines such as slot controlled airports, do in turn limit the competition in a market, thus limiting competition on fares (392).

Wilson's footnotes in regards to Morrison and Winston indicate that although most analysts who study the economic effect of deregulation rely upon data compiled by the CAB (prior to deregulation) and the DOT (following deregulation); they still use different modes of analyzing the data and therefore, come to adverse conclusions (104). This footnote signals that Wilson, although offering this information as subscript to his writing, has chosen data which supports his hypothesis.

John H. Anderson Jr. is Director of Transportation and Telecommunications Issues within the U.S. General Accounting Office. His article, "Travelers benefit from airline deregulation" in the Consumers' Research Magazine, illustrates how the Airline Deregulation Act of 1978 opened the air travel market to competition and thereby reduced fares.

Anderson showed how air fares had fallen not only at airports serving large communities but also at airports serving small- and medium-sized communities as well. This conclusion was based upon comparing full-year data for 1979 and 1994. Fares per passenger mile were adjusted for inflation. The results were fares of nine percent lower for small community airports, eleven percent lower for medium community airports and eight percent for large community airports (30).

Anderson's studies showed that although fares had fallen at seventy-three of the 112 airports he reviewed, fares at a select number of airports had risen substantially. These airports tend to be dominated by one or two high-cost airlines and fall within the small- to medium-sized communities in the Southeast and Appalachia (30).

He illustrates this point by comparing an airport in the Southeast to an airport in the West. In 1994 Delta accounted for nearly ninety percent of the passenger enplanements in Jackson, Mississippi and fares had risen in Jackson by over twenty-six percent since deregulation. In contrast, Reno, Nevada has seen three new entrant airlines since deregulation - America West, Reno Air and Southwest. These new airlines accounted for approximately sixty-six percent of the enplanements in 1994 and fares in Reno had fallen by twenty-one percent since deregulation (30).

This example mirrors Morrison and Winston's theory that the more highly concentrated an airport becomes, the higher the fares.

Along this line, Anderson also studied the effect deregulation had on the quality of air service. As he noted in his writing, quality of air service is more difficult to weigh and "developing a formula that combines the various factors to produce a single objective 'quality score' is problematic" (31). Therefore, Anderson measures this overall change by using a subjective weighting of the importance of several variables. For the purpose of his study, Anderson's variables include, 1)departures and available seat miles, 2)destinations served by nonstop flights, 3)destinations served by one-stop flight and the efficiency of the connecting service, and 4)jet departures compared with the number of turbo prop departures (31).

The findings from this study were difficult to quantify. Overall, seventy-eight percent of the small- and medium-sized community airports had an increase in the number of departures and every large community airport had more departures (31). In addition to large community airports having an increase in departures, they also had a twenty-five percent increase in the number of cities served by nonstop flights. This was mainly due to the role of hub and spoke networks. However, for small- and medium-sized airports, although the number of departures had increased due to hub and spoke, the number of nonstop flights since deregulation had declined by seven percent and the number of departures from these cities involving jet service had fallen from sixty-six percent in 1978 to thirty-nine percent in 1995 (31).

For example, Fayetteville, North Carolina had seen a decline from nine nonstop destinations in 1978 to two in 1995. However, these two airports are Charlotte, North Carolina and Atlanta, Georgia and both are major hubs. The result of this change has been an increase in destinations served from Fayetteville via one-stop service and a decrease in layover times (31). Hard to quantify, but overall a positive benefit to most consumers in Fayetteville.

Anderson does indicate that because he was interested in fare trends at individual airports, he limited the airports he examined to those that had a sufficient number of tickets to ensure the results were meaningful. By doing this, the airports serving the nations smallest communities were excluded. He notes that a study by the Department of Transportation on the nation's smallest airports (which accounts for approximately three percent of the total passenger enplanements in the United States) shows that some of these small airports in the Upper Midwest and Southeast are worse off today. These airports are found in "areas of the country that have had relatively slow economic growth over the last two decades" (32). Anderson goes on to say that the DOT's finding on fares and service at large community airports and at airports of all sizes in fast-growing communities were similar to what he observed.

Anderson concludes his findings by stressing the impact low-cost airlines have made on fares since deregulation. "In 1994, low cost airlines accounted for at least ten percent, and often much more, of the total enplanements at fourteen of the fifteen airports that experienced the largest decreases in fares" (33).

In the Journal of Law and Economics, Messod D. Beneish studies the effect of regulatory changes in the airline industry on shareholders' wealth. Beneish studies the impact of major events in the regulatory deliberation period on the expected profitability of airlines by analyzing the behavior of security prices at the time of those events.

Beneish indicates in his footnote that a similar study was performed by John J. Binder in "Measuring the Effects of Regulation with Stock Price Data". Binder had concluded that stock returns are not very useful in studying the effects of regulation. Beneish disagrees. He argues that Binder conducted his study using monthly returns and considering only dates of announcements relating to administrations and congressional actions exclusively. Beneish stresses that his study uses daily returns and analyzes the impact of announcements by the CAB in addition to those by administration and Congress (396).

To assess the effect of regulatory changes on airlines, Beneish used specific criteria to determine his sample. His final sample consisted of eighteen firms, including eleven trunk carriers, that according to the CAB classification are American, Braniff, Continental, Delta, Eastern, National, Northwest, Pan Am, TWA, United and Western. In addition, seven local and regional carriers were included in the sample (Table 2). Also listed on the following table is the market value of equity for each carrier. The market value of equity is calculated as price times shares outstanding for the month of January 1975. Sample firms' sizes range from six million dollars (Hawaiian) to $699 million (Delta).

Table 2

Sample Firms

Company Name	Market Value of Equity (1975 $ Millions)
American	626.1
Alaska	23.6
Braniff	99.5
Continental	228.1
Delta	699.2
Eastern	323.8
Frontier	108.9
Hawaiian	6.0
National	85.6
Northwest	103.5
Ozark	54.0
PSA	24.5
Pan Am	298.9
Southwest	15.8
TWA	132.9
United	523.2
USAir	151.4
Western	87.3
Mean	199.6
Standard Deviation	218.3
Median	106.2
Minimum	6.0
Maximum	699.2
N	18

SOURCE: Journal of Law and Economics. Exhibit from "The Effects of Regulatory Changes in the Airline Industry on Shareholders Wealth," by Messod D. Beneish (1991).

Beneish used a return-generating formula to calculate daily returns for these carriers from July 1974 to August 1979. The results indicated that for local and regional carriers, the results differed substantially. For these carriers, it was difficult to distinguish between changes in risk due to changes in economic conditions and changes due to the choice of estimation time frame. Beneish concludes, therefore, that the "profitability estimates adjusted for risk changes for locals and regionals appear unreliable" (403). However, overall his results indicate that regulatory changes in the airline industry had a negative impact on airline stock return.

This conclusion coincides with the overall belief that although consumers initially benefited from deregulation, the airlines did not.

In addition to these studies, the General Accounting Office issued a report on October 18, 1996 titled, "GAO Report, Airline Deregulation: Barriers to Entry Continue to Limit Competition in Several Key Markets". This report was compiled after the GAO studied the impact of airline deregulation on service to certain communities. The purpose of this study was to determine if barriers exist that prevent new carriers from servicing certain markets and if so, how do these barriers influence the fare and service of the established carriers in these markets.

This study was conducted from May through October 1996 "in accordance with generally accepted government auditing standards" (23). The GAO studied ten established (pre-deregulation) carriers as well as thirty-eight post-deregulation carriers. Of these carriers, senior management of all ten established airlines were interviewed as well as twenty-six of the thirty-eight airlines that started after deregulation. The findings by the GAO were similar to those of Anderson. The GAO determined that "federal limits on take-off and landing slots at certain major airports, long-term exclusive-use gate leases, and perimeter rules prohibiting flights of certain distances at New York's LaGuardia and Washington National airports continue to impede new airlines access to airports" (5).

The GAO believes mainly post-deregulation airlines are affected by these barriers because established carriers are the ones who hold the slots, as well as the exclusive gate leases and most have hubs nearby to qualify for flights into National and LaGuardia. Similar to Anderson's findings, the GAO discovered the airports most affected by these barriers were airports found in the upper Midwest and East. The GAO believes all three barriers effect competition, which in turn effects pricing (1).

The limit on take-off and landing slots was originally begun in 1969 by the FAA to reduce congestion at airports. At this time, the FAA allocated slots to carriers as prescribed under the CAB. After deregulation, in 1985 the DOT amended its rule and began to allow airlines to buy and sell slots to one another. When this rule became effective, the DOT allocated slots to the "holders of record" as of December 16, 1985. The DOT retained around five percent of the slots at O'Hare, National and LaGuardia and in 1986 they distributed them in lottery fashion to carriers who had few or no slots at those airports. However, by the early 1990s many of these carriers had either gone out of business or had merged with an established carrier. This enabled established carriers to gain more slots (Table 3).

Table 3

Percentage of Domestic Air Carrier Slots
Held by Selected Groups in 1986, 1991 and 1996

Airport/holding entity	1/1/86	1/1/91	6/17/96
O'Hare			
American and United	66	83	87
Other established airlines	28	13	9
Financial institutions	0	3	2
Post-deregulation airlines	6	1	1
Kennedy			
Shaw. Bank, American, Delta	43	60	75
Other established airlines	49	18	13
Other financial institutions	0	19	6
Post-deregulation airlines	9	3	7

LaGuardia			
American, Delta, and USAir	27	43	64
Other established airlines	58	39	14
Financial institutions	0	7	20
Post-deregulation airlines	15	12	2
National			
American, Delta, and USAir	25	43	59
Other established airlines	58	42	20
Financial institutions	0	7	19
Post-deregulation airlines	17	8	3

SOURCE: General Accounting Office. Exhibit from "Airline Deregulation: Barriers to Entry Continue to Limit Competition in Several Key Domestic Markets (1996).

Through their study the GAO learned that due to the demand for these slots, "the price now exceeds $2 million for a peak-period slot and $500,000 for an off-peak slot" (7). This cost is per slot and in most cases an airline needs six slots to be competitive. This cost alone may prohibit most post-deregulation carriers from entering these markets.

In addition to slot restructuring, the GAO found that gate leases have also hindered airline entry into some airports. In a survey performed by the GAO in 1990, they discovered "of the 66 largest U.S. airports, 85% of their gates were leased to established airlines under long-term exclusive-use leases". Because of these leases, it is very difficult for new airlines to gain entry into these airports. As long-term leases expire, some airports are trying to re-gain more control by signing short-term leases, but for many airports, these leases are not due to expire for several years (Table 4).

Table 4

Airports Where Post-Deregulation Airlines Reported Difficulty Gaining Competitive Access to Gates, and the Leasing Arrangements at Those Airports

Airport	Total number of jet gates	Gates under exclusive-use leases	Major lease holder and date of lease expirations
Charlotte	48	43	34 gates leased to USAir until 2007
Cincinnati	67	67	50 gates leased to Delta with 9 leases expiring in 2015 and 41 expiring in 2023
Detroit	86	76	64 gates leased to Northwest until the end of 2008, with all but 10 under exclusive-use terms
Minneapolis	65	65	49 gates leased to Northwest with 16 leases already having expired and now on month-to-month basis, and remainder expiring at various times ranging from the end of 1997 to 2015
Newark	94	79	43 gates leased to Continental until 2013, 36 gates leased to the other established airlines until 2018, and 15 gates reserved primarily for international use

Pittsburgh	75	66	50 gates leased to USAir until 2018

SOURCE: GAO Report. Exhibit from "Airline Deregulation: Barriers to Entry Continue to Limit Competition in Several Key Domestic Markets (1996).

Along with slot restrictions and exclusive-use lease agreements, entry in LaGuardia and National is restricted by special rules known as "perimeter rules". Under this rule, at LaGuardia, non-stop flights over 1,500 miles are prohibited and at National, non-stop flights over 1,250 miles are prohibited. This ruling has enabled all seven major carriers to serve both airports because they each have a hub within this limit; however carriers, such as America West whose hub is in Phoenix, are unable to serve either airport (12).

The study performed by the GAO discovered these three areas; slot restrictions, exclusive-use lease agreements, and the "perimeter rules" as major barriers to entry by carriers. The information gained up to this point of their study had been gathered through personal investigation and interviews. Following their investigation, the GAO analyzed the DOT's data on fares and service to determine how these barriers affected the domestic market. This analysis was performed by comparing the yields at each of the ten constrained airports with the overall yield for the remaining thirty-three airports. It is noted within the study that "because the data on fares are developed from DOT's statistical sample of tickets, they have a measurable precision or sampling error" (18). Along with this sampling error, it is noted within the GAO's conclusion that another study performed by DOT had obtained different results due to differences in airport calculations. This separate study combined data for Washington's National and Dulles airports; New York's Newark, LaGuardia and Kennedy airports and for Chicago's O'Hare and Midway airports(18). However, for the purpose of the GAO report, it seems appropriate these airports were calculated individually since they are separate airports although serving the same cities. Additionally, the barriers being studied affect these airports within the same cities differently.

The authors for these studies have used their own research and sampling techniques and each has drawn conclusions based on the data obtained. They have outlined the benefits from airline deregulation, as well as the areas where improvement is still needed.

Chapter IV

RESULTS

Airline Deregulation has been studied and the impact it has made on the airlines and the consumers has been measured. The results of these studies are varied, but the conclusions are similar.

Jonathan Wilson studied the results of deregulation through 1990. He concluded that the deregulation of the U.S. airline industry brought airlines out of government control. He determined that by accomplishing this, carriers "are now reaping the benefits of deregulation as they have developed technical efficiencies allowing them to produce more service at lower costs" (147). Wilson also concluded that the lesson of airline deregulation is that "markets function more efficiently and satisfy consumer desires more accurately when market forces compete in a manner which allows the cost of production to be borne by those with the greatest demand for the product" (147).

Wilson suggests that restraints on competition still exit and that if competition is controlled, certain markets will fail to achieve the goals deregulation set out to make. Wilson's study is supported by the findings of Steven A. Morrison and

Clifford Winston. Morrison and Winston conclude that deregulation has aided, not inhibited the airline industry (389).

In their studies of pricing and competition, Morrison and Winston compare yields from pre- and post-deregulation, the effects of competition on fares and the effects of the entry and exit of carriers into new markets. Morrison and Winston's findings indicate that deregulation has influenced all of these areas. They conclude that yields are higher in a regulated environment, that fares are influenced by competition, and that deregulation has impacted the entry and exit of carriers into new markets, especially in concentrated airports where airlines have built hub cities following deregulation (392).

Morrison and Winston's studies show that barriers to entry exist in hub cities, which in turn influences competition on fares in these cities. However, they conclude that hubs enable carriers to provide better service and therefore, state that it would be "inadvisable to deter the formation of new hubs or dismantle existing ones" (393). They believe that the higher fares associated with hubs should start to fall as airlines expand and that "ironically, abolishing hubs in the hope of promoting competition may achieve the opposite effect" (393).

John H. Anderson Jr. studied the effect of airline deregulation on travelers. He concentrated his studies on the competition that was derived from the opening of air travel markets after airline deregulation and how this competition influenced air fares. Anderson concludes from his many studies that the Airline Deregulation Act of 1978 "phased out the federal governments control over air fares and service, relying instead on competitive market forces to decide the price, quantity and quality of domestic air service" (29). Anderson's research indicates that overall air fares have decreased since airline deregulation and that passengers have benefited from the use of hub and spoke operations. Furthermore, his studies show that low cost airlines have greatly impacted fares. Anderson's findings reflect that of Morrison and Winston in that the more concentrated an airport is, the higher the fares in those airports (29).

Messod D. Beneish studied the effect of regulatory changes in the airline industry on shareholders wealth. The results of his studies cause Beneish to conclude that the regulatory changes in the airline industry had a negative impact on airline stock returns. Beneish believes this was largely due to the costs airlines incurred to adjust their routes during the years following deregulation. During these years, airlines went through route changes, merges and buyouts. Beneish concludes that "the airlines with higher ability to reorganize their operations around hubs, higher involvement in servicing first-class passengers, and higher borrowing ability are less adversely affected by deregulation" (397). He explains the effects these three criteria played in making carriers less vulnerable to the impact of deregulation. His research shows that:

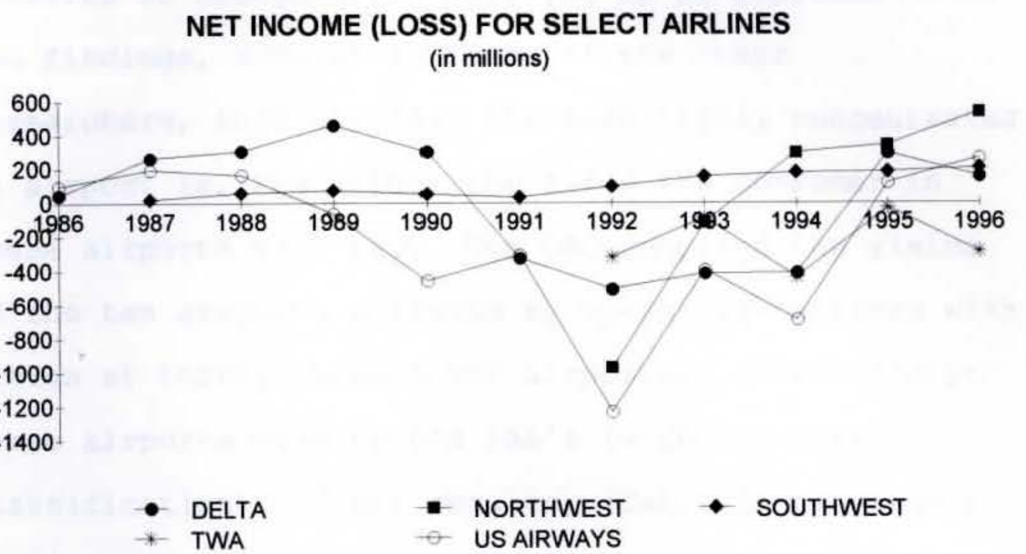
> hubbing has been shown to increase the efficiency of route networks as well as airlines' market power; the amount of first-class passengers has been shown to proxy for demand for quality air travel; and borrowing ability is a proxy for both the firm's ability to shift capital resources to reorganize its operations and the speed with which such adjustments are effected. (397)

Because the airlines with the ability to do the above, were less affected by deregulation, in most cases they were the first to rebound in the years following deregulation.

Details from selected carriers 1996 annual reports (Figure 1) illustrate the impact deregulation had on carriers net income in the years following deregulation and the rebounding most airlines have seen since 1994.

(Note: Northwest and Trans World Airlines annual reports cover only five years financial information, as compared to ten years for the others.)

Figure 1



SOURCE: 1996 Annual Reports from Delta Airlines, Northwest Airlines, Southwest Airlines, Trans World Airlines and US Airways (1996).

Likewise, the General Accounting Office (GAO) has performed many studies on the impact of airline deregulation on air travel. In the GAO Report "Airline Deregulation: Barriers to Entry Continue to Limit Competition in Several Key Markets", the GAO studies the barriers that influence service in certain markets and how these barriers impact the fares in these markets.

The GAO concludes that although the results of deregulation have brought an increase in competition in many domestic markets, which in turn has brought lower fares and better service for most consumers, the full benefits of deregulation have yet to be realized. The GAO findings, similar to those of the other researchers, indicate that the more highly concentrated an airport is, the higher the fares the consumer in these airports will pay. The GAO compared the yields at the ten airports affected by operating barriers with yields at thirty-three other airports. (These forty-three airports make up the FAA's large hub airport classification). Their results, (Table 5) illustrate the impact competition has on fares.

Table 5

Percentage Difference in Fares at Each of the 10 Constrained Airports Compared to Fares at the Other 33 Airports That Make UP FAA's Large Hub Classification, 1995

Constrained airport	Percentage difference in fares compared to other large airports, 1995	Sampling error at 95-percent confidence level (+ or -)
Charlotte	+87.81	1.43
Cincinnati	+84.47	1.60
Pittsburgh	+72.23	1.22
Washington National	+46.49	.77
Minneapolis	+45.32	.91
New York LaGuardia	+34.64	.68
Detroit	+26.56	.75
Newark	+24.26	.63
Chicago O'Hare	+23.76	.63
New York Kennedy	-4.08	.68

SOURCE: General Accounting Office. Exhibit from "Airline Deregulation: Barriers to Entry Continue to Limit Competition in Several Key Domestic Markets (1996).

The GAO recommends the Department of Transportation review the problems associated with access to certain markets, particularly in regards to restrictive gate-leasing arrangements and slot constraints. The GAO believes that only by doing this will the consumer ever realize the full benefit of airline deregulation.

The impact airline deregulation has made on the airlines and the consumers has been measured. The methods of research may differ from one analyst to the other, but the results are very similar: Airline Deregulation has benefited the airlines and the consumers, yet for both the airlines (start-up and established carriers) and the consumer to fully benefit, changes still need to be made.

Chapter V

DISCUSSION

Summary

This thesis covers the history of the airline industry from World War II until today. It describes the problems that were associated with airline regulation and the events which lead to the Airline Deregulation Act of 1978.

In addition, the incentives and goals that influenced deregulation are outlined. The specifics for each of these are discussed, and the impact deregulation had on them is reviewed.

Finally, the writings of major authors and theorists, who have studied deregulation, are examined. The works of each of these researchers are discussed, including the reason for their study, the methods of research they used to carry out their study, and the results and implications which were determined from each study.

This paper has contributed to the study of deregulation by way of its format and style. The difference in this thesis, as compared to similar writings, is that both sides of the deregulation debate are examined. The impact deregulation has had on both the airlines and the consumers are reviewed prior to drawing a conclusion.

In most articles, deregulation is viewed with either the consumer or the airline in mind. In these types of articles the results of deregulation are depicted quite differently. When studying the effects of deregulation on the airlines, the initial results are fairly negative; however, when studying the effects of deregulation on the consumer, the results are very positive. This thesis, therefore, takes into consideration the impact airline deregulation has had on both the airlines and the consumer. The pros and cons of deregulation are detailed and how they relate to both the airlines and the consumer are examined. By doing this, this thesis is able to illustrate why there has been such controversy over deregulation and why there are those who continue to debate whether deregulation should be considered a success or a failure.

By using the data and results of experienced researchers, these aspects of deregulation are reviewed. The successes and failures of deregulation are weighted and the final goal is to determine whether to reject or accept the hypothesis as it is stated in chapter two-Research will indicate that airline deregulation has benefited the industry as a whole and will show that if further deregulation and more adherence to policies under deregulation are followed, both the airlines and the consumer will benefit.

The research gathered herein supports this hypothesis and therefore it is accepted. Although the methods of study differ by researcher, their conclusions are similar. The researchers who have studied the results of airline deregulation have determined it to be an overall success for the airlines and the consumer.

The consumer has benefited since deregulation from lower fares, more competition and increased service and the consumer continues to benefit from each of these as competition continues to grow.

Likewise, the airlines have benefited from airline deregulation. Although most airlines have only recently begun to show profits, the positive results of deregulation are finally being realized. Deregulation meant a lot of adjustments for the airlines and those airlines that have made the necessary changes have survived. These carriers are now producing more service at lower costs and can finally enjoy the results of deregulation, including open skies, hub and spoke operations and healthy competition.

Yet, the full benefit of deregulation has yet to be realized. As long as there are markets that remain heavily concentrated, there will be markets that do not realize the full benefit of deregulation.

This point is illustrated by Jonathan Wilson and John Anderson. They both indicate, through their studies, that the more highly concentrated an airport is, the higher the fares in these same airports. The results of their studies support this claim. Likewise, the results of the research performed by the General Accounting Office show similar findings.

The problem that arises is that these highly concentrated airports are usually hubs. As much as these hubs, because of their airline concentration, have caused higher fares, they have also been beneficial to the cities they serve. These hubs provide numerous non-stop flights, high frequency in service and a source of accessible business travel for the companies located in these cities. In addition, the carriers that service these hubs are usually the ones that have made and continue to make vast investments in the development of the airports they reside in. For this reason, the solution is difficult. As Morrison and Winston state in the conclusion of their study, "ironically, abolishing hubs in the hope of promoting competition may achieve the opposite effect" (393).

The view from the General Accounting Office is not to abolish these hubs, but to at least remove the barriers from entry that prohibit other carriers from entering. By doing so, the new carriers would bring the competition necessary for lower fares and yet enable the incumbent carrier or carriers to remain.

The recommendation from the GAO mirrors the results of the other studies. The GAO states that there must be a continued increase in competition, barriers from entry must be removed, and post-deregulation carriers must have equal opportunities to service new markets for airline deregulation to be fully effective.

The research herein has reinforced the original hypothesis that if further deregulation and more adherence to policies under deregulation are followed, both the airlines and the consumers will benefit.

The results such changes can make are becoming apparent even since the original writing of this thesis. As low-cost carriers enter new markets, competition has increased, and subsequently fares have decreased. This has especially been seen as carriers, such as ValuJet, NationsAir and Southwest have entered the East Coast. Fares in select markets have dropped significantly since these carriers have started service.

For example, prior to Southwest Airlines' entry into Baltimore, Maryland, the average fare from St. Louis, Missouri to Baltimore was around $600. A similar published fare today would cost the consumer on average $178. The entry of Southwest has brought increased competition and decreased fares. Lower fares have become the standard in this and many other markets and not just on Southwest. Fares such as these from St. Louis to Baltimore soon became available on almost all other carriers who serve this market. This occurs because, after Southwest introduces a low fare, other carriers match their price to retain customers. Southwest has made it possible for the common person to travel by air; which was the main goal of deregulation.

For this reason, passengers are making their way from Washington National Airport and Washington Dulles Airport to Baltimore for these significant savings. This phenomena can be seen in other markets as well. For example, Southwest has also started service at Providence, Rhode Island. Providence Airport is now drawing customers from not only the immediate areas surrounding Providence, but also from areas within a 200 mile radius. For example, it is not unusual for a passenger who once originated in Boston, Massachusetts to drive or take the train to Providence for the cost savings available to them. For this reason, cities across the country are trying to draw Southwest Airlines and other start-up carriers into their airports. This is competition at its best.

The main incentive of deregulation was the airlines poor profit performance prior to deregulation. Following deregulation, some feared the low fares offered by low-cost carriers would cause major carriers to suffer financially. However, as long as carriers such as Southwest are able to offer air travel at low rates, the other carriers will work to keep their costs down so that they too can compete in these markets. Major carriers have also learned to make changes in operations to compete with these low-cost carriers. This can be seen with Delta's new Delta Express.

In addition to learning to compete with low-cost carriers, the major carriers, such as Delta, have revamped their marketing strategy for attracting business travelers. They continue to attract business travelers with reduced walk-up fares which offer lower restrictions, which the business traveler requires, at a somewhat higher price. Similar to the telephone company, where businesses pay premium for calls made between eight in the morning and five at night, airlines also charge premium for flights made between Mondays and Fridays. This, in addition to increased service and amenities, has allowed carriers to continue to attract the business traveler and likewise, the higher revenue.

Airlines are making many changes to actively compete. However, to continue to make this competition available, airports will also need to make some necessary changes. For example, as this is being printed, their are petitions being filed for slots to be opened to new entrant carriers at New York's LaGuardia Airport and Chicago O'Hare.

As these types of changes are made, competition will continue to grow within the airline industry. For the full benefit of deregulation to be experienced by all, there must be a naturally competitive market at work. Only then will airline deregulation deliver to the airlines and consumers what was originally intended by its goals and incentives.

Limitations

In the research process of this thesis, the material found that pertained to the topic of Airline Deregulation fell mainly into two categories. These categories where those who endorsed airline deregulation and those who were against it. Those who studied the effect of deregulation and found positive results were usually studying the effects of airline deregulation on the consumer. Those who studied the effects of deregulation and found negative results were usually studying the effects of airline deregulation on the airlines. The studies of the latter where dated prior to 1994 and yet this is the year most carriers started to rebound. It is unknown whether a study today on the results of airline deregulation on carriers would be so negative.

In addition, some literature, although full of good points, was excluded from this writing due to the personal biases of the author or parties involved. For example, one such article, written by the President of the Air Line Pilots Association, believed the re-regulation of the airline industry was essential. Although some good information was found, the foundation of the article was the loss of airlines and layoffs of airline employees, as well as the financial situation of the carriers. The author blames all of the problems on the deregulation of the industry, and yet the group of employees he stands for have been the benefactor of the over-priced fares the airlines had been allowed to set prior to deregulation. Because of the biases of such articles, they were excluded.

Suggestions for Future Research

Future research on the topic of airline deregulation should include a historical review of all major carriers, including their financial history from 1978 through present. This in-depth look at the specifics of each carrier will help shed some light on the influences on the airlines during this period. In addition, this type of information will enable the researcher to have a full look at the ups and downs of the industry as it pertains to airline deregulation.

Furthermore, any future research on this same topic would be best to include an in-depth look at other GAO reports over the past nineteen years, as well as the results of similar studies. It would be beneficial to see how the GAO's recommendations have changed over these nineteen years.

Along with "thesis-driven" expository studies, there are many empirical studies which could be derived from this topic and studied in the future. For example, any of the studies performed by the researchers cited herein could be replicated and the results compared.

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