# Oligopolies in The Commercial Airline Industry: A Historical Focus on American Airlines

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American Airlines, one of the leading service firms in airline travel, has thrived on its power as an oligopoly to help them be looked upon as one of the most powerful forces in the airline industry. Throughout the years of 1938 to 1978, the entire airline industry was under government regulation.[1] All fares were set by government officials which limited the ability of airline carriers to compete among each other. In 1978, however, Congress passed the Deregulation Act of 1978 which abolished all regulatory restrictions in the airline industry.[2] Free from controls, airline carriers were able to set forth prices in a manner which gave explicit recognition to the differences of customer preferences and their sensitivity to different prices. Thus, the year of 1978 marked the beginning of the airline oligopoly industry. Major carriers such as American Airlines, United, and Southwestern took advantage of deregulation and used different price settings and game strategies to compete with other carriers in the market. In this paper we will examine American Airlines as one of the largest oligopolies in the business. By looking at specific price settings, product differentiation techniques, and the responses of other carriers, we will be able to see how American Airlines and other carriers function as competitors in a market comprised of oligopolies. The key aspects which we will be focusing on are American Airlines' marketing strategy, consumer strategy, and competitor strategy.

The airline industry is what many economists call an undifferentiated oligopoly in that purchasers have no strong preferences among suppliers.[3] For example, if someone

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[1] Harvard Business School, The U.S. Airline Industry in 1995 (Boston, MA: Harvard Business School Publishing, 1995), 1.

[2] The U.S. Airline Industry in 1995, 4.

[3] Robert Dorfman, Prices and Markets (Englewood Cliffs, NJ: Prentice-Hall Inc., 1972), 158.



wanted to fly to a particular destination and there are five different carriers traveling to the same destination, the consumer is normally indifferent as to which airline he chooses. The only thing that seems to matter in airline preference is the price of a ticket and when the traveler will eventually arrive. Since airline carriers are providing such similar travel service, it is important for an oligopoly to differentiate themselves from other competitors. By differentiating, an airline carrier is able to separate its features from other carriers and hopefully entice consumers to form preferences as to which airline to fly. The process of differentiating is an example of marketing strategy in many oligopolies. The main component of travel which airlines try to differentiate is price setting. It is estimated that 75% of all travelers do not have preferences for any particular airlines.[4] Years of experience and lots of research, however, shows that customers prefer two things above all else when choosing a flight: first, low prices, and second, frequent service and lots of time-of-day choices. Thus, many carriers focus much of their marketing attention on low prices and predictable service.

American Airlines (American) is very good at differentiating themselves from other competitors. American and other major carriers specialize in specific air routes in order to attract a certain type of clientele. **Exhibit 1** illustrates which airlines focused on which routes. In many airline surveys, companies have noticed that the main consumer attraction comes from low fares.[5] Thus, American, as well as most other carriers, concentrates much of its marketing strategy on "low fare" advertising. Through advertising, American is able to display such differentiating characteristics as low fares, non-stop flights, and good service. Whichever carrier displays the best deal will end up receiving the most customers. **Exhibit 4** illustrates two examples of how American uses advertisement in order to

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[4] The U.S. Airline Industry in 1995, 5.

[5] The U.S. Airline Industry in 1995, 4.

differentiate their cheap fares and discounts. Other airlines, however, differentiate in other ways. One of the most bizarre cases is practiced by Southwest Airlines. Southwest differentiates their features both on the price level and on the service level. Such acts like sending Birthday cards to frequent fliers and personal response letters from customer letters were frequently practiced methods in displaying a sense of "care" and good service.[6] As we will further see, these methods of product differentiation play a major role in the amount of consumer business received by an oligopoly.

Consumer strategy is probably the most important part of game theory for airline carriers. Due to the nature of oligopolies in the airline industry, carriers are able to control their prices. In a competitive market, all firms are price taking firms and must sell at a price which is set by the consumer. Oligopolies, on the other hand, have the ability to set the price for the consumer and are hence recognized as price making firms. At American Airlines, the most important goal of pricing is "selling the right seats to the right customers at the right price."[7] This means that it is vital to sell a seat at the highest price that a traveler is willing to offer. With this goal in mind, American and other airline carriers came up with a way to distinguish two basic segments of an airlines' customer base. The customer base was divided into leisure travelers and business travelers. Leisure travelers are viewed as highly seasonal with travel peaking at holiday and vacation periods. The price elasticity of demand for a leisure traveler is fairly high in that if the price of a flight rises during vacation period, the leisure traveler can back out of the trip or take a cheaper flight. Thus, the percent change in quantity demanded is greater than the percent change in price. Only during vacation periods (where there is a positive shift in the demand curve) are airlines able to drastically raise prices for leisure travelers. **Figure 1** illustrates vacation time pricing do to a

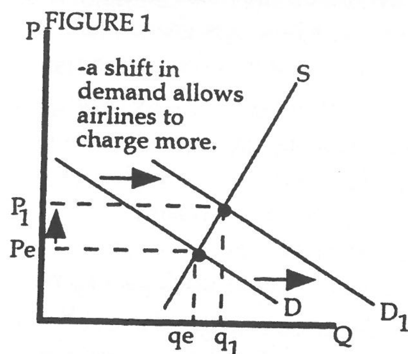
[6] The U.S. Airline Industry in 1995, 5.
[7] The U.S. Airline Industry in 1995, 9.



shift in the demand curve for leisure travelers. Moreover, airline carriers often use price discrimination techniques in that they know that vacation periods are times which permit higher prices. A business traveler, on the other hand, is less seasonal than leisure travelers. The business group has a shorter duration of time to travel and is less flexible in that their job forces them to travel on fixed schedules.[8] Thus, the price elasticity of demand for a business traveler is much less than that of a leisure traveler. The low price elasticity of demand is even more emphasized in that business travelers pay their tickets on behalf of their employers. Since the money is not coming out of their pockets, business men do not really care about the price change of a seat.[9] Due to the different price elasticities of different customers, an airline fixes prices for different types of clients. **Figure 2** illustrates how airlines create excess profit by separating different clients. Fixing prices shows a certain amount of market control which is typical of oligopolies. Some ways in which airlines have gone about setting prices are through their complex fare structures and restrictions. Fare structure, as defined by American Airlines, is formulated by deriving different classes of fares (first class, business class, coach), and setting the level of fares for each.[10] First class was formed to suit the highly "price inelastic" wealthy travelers, while business class was formed to suit the inelastic business travelers, and coach was formed to accommodate the elastic leisure travelers. The separation of passengers allows a carrier to charge the right prices to the

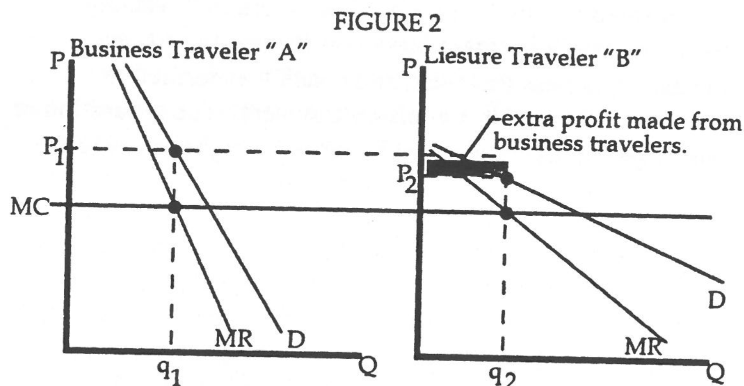
[8] The U.S. Airline Industry in 1995, 5.
[9] The U.S. Airline Industry in 1995, 11.
[10] The U.S. Airline Industry in 1995, 8.

right people. Those who can afford the most end up getting charged the most.




Delta is one of the major carriers which has really taken advantage of the separation of consumers. A few years ago Delta introduced the Business Express flight which now flies every hour on the hour to places like New York, Boston, and Washington DC. By focusing on routes to major cities and by marketing and labeling the aircraft "Business Express," Delta has been able to capture the business sector of clients in a way of their own. That is, until other airlines copied it.

FIGURE 2






Charging these high fares in both first class and in business class enabled many carriers to offer discounts below the "regular" coach fare. The below "regular" price provides incentives for leisure travelers to fly.[11] As nice as this may sound there is, of course, a catch. Along with discounts carriers launch purchasing restrictions such as advance purchasing requirements, cancellation penalties, minimum stay conditions, and schedule limitations. Such restrictions, especially the "Saturday night stay-over," intended to smooth and reduce unused capacity by separating price-sensitive discretionary travelers (leisure segment) from time-sensitive passengers (business segment).[12]

Along with the separation through fare structure is yield management. For American Airlines, the most important aspect of yield management during post-deregulation times was to establish an overbooking policy. Overbooking seats, or deliberately selling more seats on a flight than are available, was yet another way in which airline carriers controlled the passengers in order to maximize profits. According to American Airlines analysts, cancellations and no-shows averaged 50% of all flight reservations.[13] Thus, overbooking enables airline carriers to make up for the seating loss. This type of yield management saved American Airlines during deregulation times. It is said that yield management generated $1.4 billion in incremental revenue from 1985 to 1988 and was expected to generate at least $500 million annually for the foreseeable future.[14]

The airline industry involves an incredible amount of game theory among its competitors as well. When one carrier makes a significant move, other carriers respond

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[11] The U.S. Airline Industry in 1995, 8.

[12] The U.S. Airline Industry in 1995, 8.

[13] The U.S. Airline Industry in 1995, 9.

[14] The U.S. Airline Industry in 1995, 10.

instantly. In May of 1981, for example, American Airlines introduced the first frequent-flyer program ever.[15] It was called *AAdvantage* and stated that passengers who flew 12,000 miles or more in any given year received awards like discounts on fares, upgrades, and free tickets. Once the program was announced, other carriers downplayed it as a mere gimmick. Within two weeks of American's announcement of its *AAdvantage* program, United, American's largest competitor, established its own *Mileage Plus* frequent-flyer program in order to maintain a competitive relationship.[16] By the end of July, all major carriers except for Southwest Airlines had created a frequent-flyer program of their own.[17] Throughout the year of 1981, frequent-flyer programs held a special appeal to business travelers due to their consistent flying schedules. Estimates from a survey of travel agents indicate that approximately 80% of all business travelers picked airlines in order to be able to accumulate frequent-flyer credit on at least half of their trips.[18] American's *AAdvantage* proved to have immediate success with over 1 million members enrolled by years end.[19] By 1992 *AAdvantage* had more than 15 million members and *Mileage Plus* had nearly 4 million.[20] As the frequent-flyer success developed, many carriers branched out their frequent-flyer programs to different companies. For example, American Airlines hooked up with Hertz, Budget, and Western Hotels. The act of involving other companies in a particular program is known as a "tie-in" and it allows those corporate partners to

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[15] Harvard Business School, The Free Rider Problem: Airline Frequent-flyer Programs (Boston, MA: Harvard Business School Publishing, 1994), 1.

[16] The Free Rider Problem: Airline Frequent-flyer Programs, 1.

[17] The U.S. Airline Industry in 1995, 7.

[18] The U.S. Airline Industry in 1995, 7.

[19] The Free Rider Problem: Airline Frequent-flyer Programs, 1.

[20] The Free Rider Problem: Airline Frequent-flyer Programs, 2.



give customers frequent-flyer miles based on purchases.[21] "Tie-ins" are great programs in that they not only benefit the companies involved, but they also provide attractive incentives for consumers to participate in such deals. By 1991 it was estimated that only one third of all credited miles were from miles actually flown.[22]

The best example in which we recognize intense competitor game theory is in looking at a specific example of an initial price setting. On April 9, 1992, American Airlines offered a new fare proposal called "Value Pricing."[23] The new proposal set extremely low prices in attempt to entice leisure travelers. When the announcement was made, other major carriers went into a panic. If competitors failed to lower their fares to those of American's, then American would get all of the business and other firms would experience great economic loss. An airline analyst for a leading investment banking firm suggested that "Other carriers, and especially the financially week ones, will have to go along or go out of business."[24] Thus, almost 48 hours after the "Value Pricing" announcement, United Airlines announced over both television and radio of a new 4 tier pricing structure which offered prices low enough to compete with those of American's. The plan offered free tickets to anyone over the age of 12 when accompanied by a paying passenger between the ages of 2 and 7. Furthermore, on May 20th Northwest Airlines announced a free promotion called "Grownups Fly Free." Northwest stated that the program was launched in order to generate leisure travelers, however, it was quite obvious to industry observers that the program was launched in direct response to American's "Value

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[21] The Free Rider Problem: Airline Frequent-flyer Programs, 3.

[22] The Free Rider Problem: Airline Frequent-flyer Programs, 3.

[23] Harvard Business School, American Airlines' Value Pricing (B) (Boston, MA: Harvard Business School Publishing, 1993), 1.

[24] American Airlines' Value Pricing (B), 1.

Pricing."[25] Soon after Northwest's move, TWA responded with price changes that undercut American Airlines' coach fares by 10-20%.[26] Carl Icahn, TWA's chairman at the time, stated that "If the reason for [American] doing this fare is to get rid of a low-cost competitor, it's not going to work."[27] Within a months time, America West, Delta, Northwest, Continental, and USAir all had a pricing structure which offered low fares in order to maintain consumer competition. American's "Value Pricing" had sparked a chain reaction to the entire market. **Exhibit 2** illustrates the responsive action following American Airlines' announcement of "Value Pricing." As American Airlines watched other carriers compete with their low fares, it decided to lower the "Value Pricing" fares even more than what had originally been planned. **Exhibit 3** shows American Airlines' fare changes due to other competitors responses. By August, low fares were so enticing that American and United set the record for the highest number of revenue passenger miles ever flown by a US carrier in a single month![28]

However, due to such low prices carriers reported record losses at the end of the year. American Airlines, for example, lost $166 million; Delta lost $180.2 million; United lost $95.1 million.[29] The spark of these low fares, which was later blamed on American's "Value Pricing" program, caused many emerging firms to declare bankruptcy. American Airlines had controlled the market almost as a monopoly in that it prevented other firms from entering the market and caused great revenue losses for other carriers. Through extensive research, it was revealed

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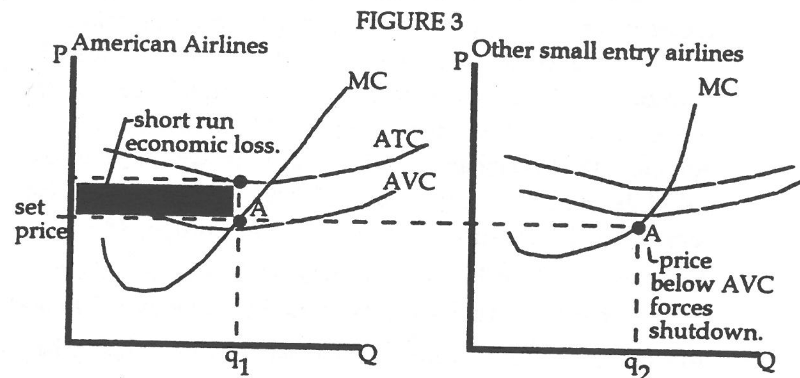
[25] Harvard Business School, American Airlines' Value Pricing (C) (Boston, MA: Harvard Business School Publishing, 1994), 1.
[26] American Airlines' Value Pricing (B), 2.
[27] American Airlines' Value Pricing (B), 2.
[28] American Airlines' Value Pricing (C), 1.
[29] American Airlines' Value Pricing (C), 2.



that American Airlines had set their "Value Pricing" fare to a price above their average variable cost (AVC) level but below their average total cost (ATC) level. **Figure 3** compares economic losses of weak airlines due to American's low fare price setting. This price setting caused great economic loss for American Airlines, however, since

FIGURE 3




American was such an enormous carrier, the short run economic loss did not effect the carrier as much as it did for other weaker carriers. In fact, such low fares were believed to have the potential to drive other weak competitors out of the market.[30] In 1992, due to its strategic price planning and game theory. American Airlines was recognized as the largest and most successful US carrier.

American Airlines'"Value Pricing" is an example of what economists call entry forestalling prices.[31] In order to avoid attracting formidable new competitors, oligopolies often strive to maintain prices that are profitable for them but are insufficiently profitable to attract outsiders. Such entry forestalling prices make it nearly impossible for other firms to enter such a market as the airline market. Another example of entry forestalling prices occurred in 1984 between United and Peoples Express. United fended off

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[30] American Airlines' Value Pricing (C), 5.
[31] Dorfman, 166.

Peoples Express's 1984 incursion into the Chicago-Newark market by advertising that it would match Peoples Express's unrestricted $79 fare. United matched the fare which meant dropping their original fare from $258 to $79. These low fares make entry hard because other firms cannot afford such economic loss in the short run.[32] Hence, Peoples Express was driven out of the Chicago-Newark market.

Due to incredible game theory and knowledge of the market, American Airlines rose as one of the largest carriers in the industry. In the beginning of 1992 American Airlines' fleet consisted of 622 jet aircraft which flew over 2,450 daily flights. By the end of 1992, American provided service to 182 locations in the US, 14 in Europe, 38 in Latin America, and 22 other destinations world wide.[33] As of today, American Airlines is estimated to have over 500,000 different fares for travel.[34] The entire airline industry has somewhere around 5 million fares![35] Each fare that has been formed is in some way related to game theory involving consumer strategy and/or competitor strategy. As time passes it will be interesting to see how the airline business will react to new technological substitutes such as video conferencing and teleconferencing. Such inventions will most likely cause the demand curve to shift to the left causing potential harm for many carriers' revenues. There is, however, one thing that we can be sure of. If one carrier proposes new fares as a response to new innovations, then there is a 100% chance that other competitors will take immediate action and attempt to match the new set fare. One reporter noted, "There's a joke in the airline industry

[32] Dorfman, 166.

[33] Harvard Business School, American Airlines' Value Pricing (A) (Boston, MA: Harvard Business School Publishing, 1993), 2.

[34] American Airlines' Value Pricing (A), 10.

[35] American Airlines' Value Pricing (A), 10.



these days that says fare wars are like city buses; if you miss one, there will be another in 15 minutes."[36]

[36] American Airlines' Value Pricing (C), 5.

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