STRATEGIC CONSIDERATIONS FOR LOW-COST AIRLINES SERVING THE US-MEXICAN MARKET.

by

Rodolfo Salgado

Pilot Captain
Escuela de Aviacion "5 de Mayo", 1985

B.A., Labor Law & Social Security
Instituto Tecnologico Autonomo de Mexico, 1990

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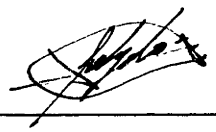
Signature of author 

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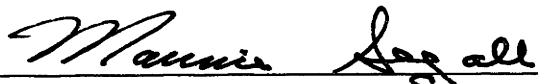
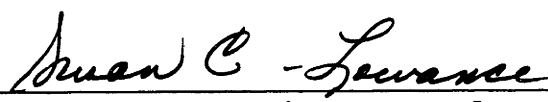
Certified by 
Maurice Segall, Senior Lecturer, Sloan School of Management
Thesis Supervisor

Accepted by 
Susan C. Lowance, Director, Sloan Fellows Program

STRATEGIC CONSIDERATIONS FOR THE ESTABLISHMENT OF A LOW-COST AIRLINE IN MEXICO

by

Rodolfo Salgado

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ABSTRACT

The relevant factors which have to be taken into account as the central focus for strategic thinking when considering the services of a low cost airline, are enumerated and described. Given the dynamic changes of the environment a recent industry outlook is included.

In the thesis major issues affecting the airline industry's competitiveness are analyzed in an orderly process, which attempts to capture the structural factors that define long-term profitability prospects of the industry. It is also intended to identify and characterize the behavior of the most significant competitors.

In addition a final assessment is performed in order to determine the likelihood of establishing a low-cost carrier serving the U.S.-Mexican market. Some of the carriers special characteristics that this carrier may have are also described.

Thesis Supervisor: Maurice Segall
Title: Senior Lecturer, Sloan School of Management

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First of all I would like to thank my wife, Ana Mary for her infinite support and love in this odyssey. It was her constant love and affection that gave me the energy and motivation to complete this dream.

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To God who has always permitted me undertake my dreams and make them come true.

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Chapter 1 General Overview of the US Airline Industry

The objective of this chapter is to familiarize the reader with a panoramic view of the U.S. airline industry, the major players, and the perspective of the new entrants. It is very interesting to have a conceptual notion of the structure of an industry that has less than twenty years since it deregulated and has faced all imaginable kinds of opportunities and threats. Furthermore, due to the nature of its sophisticated asset composition - aircraft, computerized reservation systems, maintenance facilities, etc.- , heavy loads of financial requirements have been absorbed by the industry without finding adequate returns on the investments made.

Since the beginning of this decade U.S. carriers have lost $13 billion[1] and more than 70,000 airline employees have lost their jobs[2]. The magnitude of this happenings have an important impact not only within the airline industry, but to the U.S. economy as well. Hundred of thousands of people are employed to companies directly or indirectly related to aviation.

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[1] Air Transport, "Annual Report of the U.S. Scheduled Airline Industry, 1995, pp. 1.
[2] American Airlines, "The U.S. Airline Industry", 1993, pp.1.

1.1 Deregulation Impact

Prior to the Airline Deregulation Act (ADA)[3] signed by former President James Carter, the U.S. was a regulated system with more than a dozen airlines providing the bulk of domestic service. The Civil Aeronautics Board (CAB) governed the economic regulation of airlines. All airlines served specific markets (city-pairs) under a previous authorization of CAB. These process raised strict barriers to entry to the markets that were "sufficiently served" under CAB's criteria.

Profits at that time were generally assured as long as the expenses were similar to those of the competition. If the expenses were raised by some reason, they were passed to the consumer in the form of higher airfares requested by the airlines and approved by CAB.

After deregulation the rules of the game varied significantly. Basically all the airlines were authorized to serve the markets they thought they could best compete in and also price its tickets without any restrictions at all. This was

[3] The Airline Deregulation Act is found in the United States Code, Chapter 49 Sections 1301-1542 (1982).

intended to become effective five years after the ADA was signed but in reality it was only three years latter that airlines were competing face to face.

As it was expected many small and large carriers perished in the new journey but on the other hand major carriers like American Airlines and United benefited from deregulation. Before the ADA American and United captured 12% and 15% market share respectively. By 1991 their relative market shares increased to 19% and 18% respectively[4]. This fact demonstrated that not only threats, but opportunities were also created by the new environment and only the most adequately fit to serve the market were the ones that capitalized these new opportunities.

In many cases changes were seen almost immediately. For carriers like Braniff, their life lasted only few years after the deregulation of the markets. By 1981 under a severe attack performed by archirival Southwest Airlines, Braniff perished after decades of serving the U.S. market.

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[4] R.W.Mann & T.J.Johnson, 1992, "AMR Relative strength in a sea of weakness, pp.3.

This was not the case of Pan Am that managed to resist the pressure until it finally ceased operations in 1991, thirteen years after the ADA.

1.2 Current Industry Structure and Major Players

The airline industry consists of eleven classes of carriers[5]:

- Domestic trunk-line carriers
- Local service carriers
- International & Domestic carriers
- Hawaiian air carriers
- Alaskan air carriers
- All-cargo carriers
- Supplemental air carriers
- Commuter carriers
- Indirect air carriers
- Helicopter air carriers.

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[5] W.C.Hoffman, "Critical Success Factors for Airline Management", 1978, pp.19.

In general, the remainder of this thesis will contemplate the scheduled air carriers that are included within the first five categories.

The following tables present the top 10 airlines -scheduled service- in 1994 based upon the number of passengers carried, revenue passenger miles[6], and total operating revenues.

1994 by Number of passengers[7]:

	Passengers (000)
1.- Delta	88,922
2.- American	81,082
3.- United	74,070
4.- USAir	59,494
5.- Northwest	45,496
6.- Southwest	44,238
7.- Continental	39,947
8.- TWA	20,880
9.- America West	15,629

[6] This measure computes the output actually sold. It is the number of passengers that pay a fair, multiplied by the total number of miles flow.

[7] Air Transport, "Annual Report of the U.S. Scheduled Airline Industry, 1995, pp.5.

10.- Alaska 8,885

1994 by Revenue Passenger Miles[8]:

	RPM's (000)
1.- United	107,968,110
2.- American	98,735,550
3.- Delta	86,298,231
4.- Northwest	57,851,349
5.- USAir	37,940,181
6.- Continental	37,509,894
7.- TWA	24,692,395
8.- Southwest	19,789,354
9.- America West	12,198,793
10.- Alaska	7,529,006

1994 by Total Operating Revenues, excluding cargo carriers[9]:

	Total Operating Revenues ($000)
1.- American	14,951,125
2.- United	13,887,154
3.- Delta	12,345,784
4.- Northwest	8,929,316
5.- USAir	6,578,593

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[8] IDEM
[9] IDEM

6.- Continental	4,798,183
7.- TWA	3,349,515
8.- Southwest	2,416,563
9.- America West	1,414,317
10.- Alaska	1,079,318

As we can clearly see there is absolute dominance of the industry - measured by any indicator - by the so called "Big Three Airlines" namely American, United, and Delta. All their performance indicators vary among a narrow differential gap which in turn is significantly higher than that airline occupying the fourth place.

1.3 Emergence of low cost competitors.

A new paradigm emerged in the airline industry after the 1978 deregulation. This new paradigm began taking form since the conception of Southwest back in June of 1971.

Low cost competitors are typically small start up airlines with no frills and short haul sector operations -markets within less than 750 miles apart. No frills service typically means no

meals, no baggage transfer to other airlines, no frequent flyer programs, ticketless travel, and nonrefundable tickets. Many of these low cost airlines start with one or two aircraft - aircraft dumped by major carriers - and two or three routes.

Twenty two airlines were started in the U.S. in 1992 through 1995. Six of these are no longer in service - which in turn means a 73% success rate for startups -, either because of bankruptcy or due to acquisition by other airlines. There are five additional startups that have been approved by DOT but have not yet started operation.

As an example of recent startup carriers we can mention Kiwi International, Midway Airlines and Valuejet. Valuejet is a low cost no frills airline. Kiwi International is a low cost full service airline and Midway Airlines is a medium cost & full service airline.

We shall also bear in mind another kind of low cost competitors which are major airlines under the protection of chapter 11 bankruptcy regulations. Among this airlines are well known carriers like Continental, TWA and America West. Their

strategy is to use their low cost advantage as a result of bankruptcy reorganization. These rivals have made some progress but there is still no clear indication of their long term success or survival.

Nevertheless Southwest Airlines is the role model for all low cost, no frills airlines. It is the largest airline in this segment with revenues of $2.4 billion, transporting more than 44 million passengers in 1994. Its operations are characterized by high human resources productivity and high asset turnovers. Employee morale is high and they count with attractive profit sharing programs.

Nowadays it serves more than 45 cities, mainly in the west and mid-south regions. It counts with a single type of aircraft fleet of two hundred 737's. Southwest is among the most profitable airlines in the industry and is among the few - if not the only one - that has made a profit in each of the last 22 years[10]. Its operating revenues have nearly quadrupled from the 1983-1992 period.

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[10] R.H. Hallowell, "Southwest Airlines", Harvard Business School,1993, Exhibit 2.

Southwest's model has imposed a major threat to big companies like American and Delta and is setting the standards for the whole airline industry in the 1990's.

Chapter 2 U.S. Airline Industry Assessment

"In order to select the desired competitive position of a business, it is necessary to begin with the assessment of the industry to which it belongs[11]". In the spirit of performing a comprehensive analysis for the airline industry it has been chosen to utilize Michael E. Porter's five-forces model.

According to Porter the essence of strategy formulation is to cope with competition. The basis for competitive strategy in Porter's terms, is the competitive analysis that includes both the characteristics of the industry as a whole and the analysis of the most relevant competitors. "It is required to identify the basic underlying characteristics of an industry rooted in its economics and technology that shape the arena in which competitive strategy must be set".[12] Porter's framework consists on the following five competitive forces:

1. Intensity of rivalry among existing firms;
2. Threat of New entrants;

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[11] A.C. Hax & N.S. Majluf, "The strategy concept and process",1991, pp. 37.
[12] M.E. Porter, Competitive Strategy: Techniques for analyzing Industries and competitors, 1980, pp. 6.

3. Threat of substitute services or products;

4. Bargaining power of buyers;

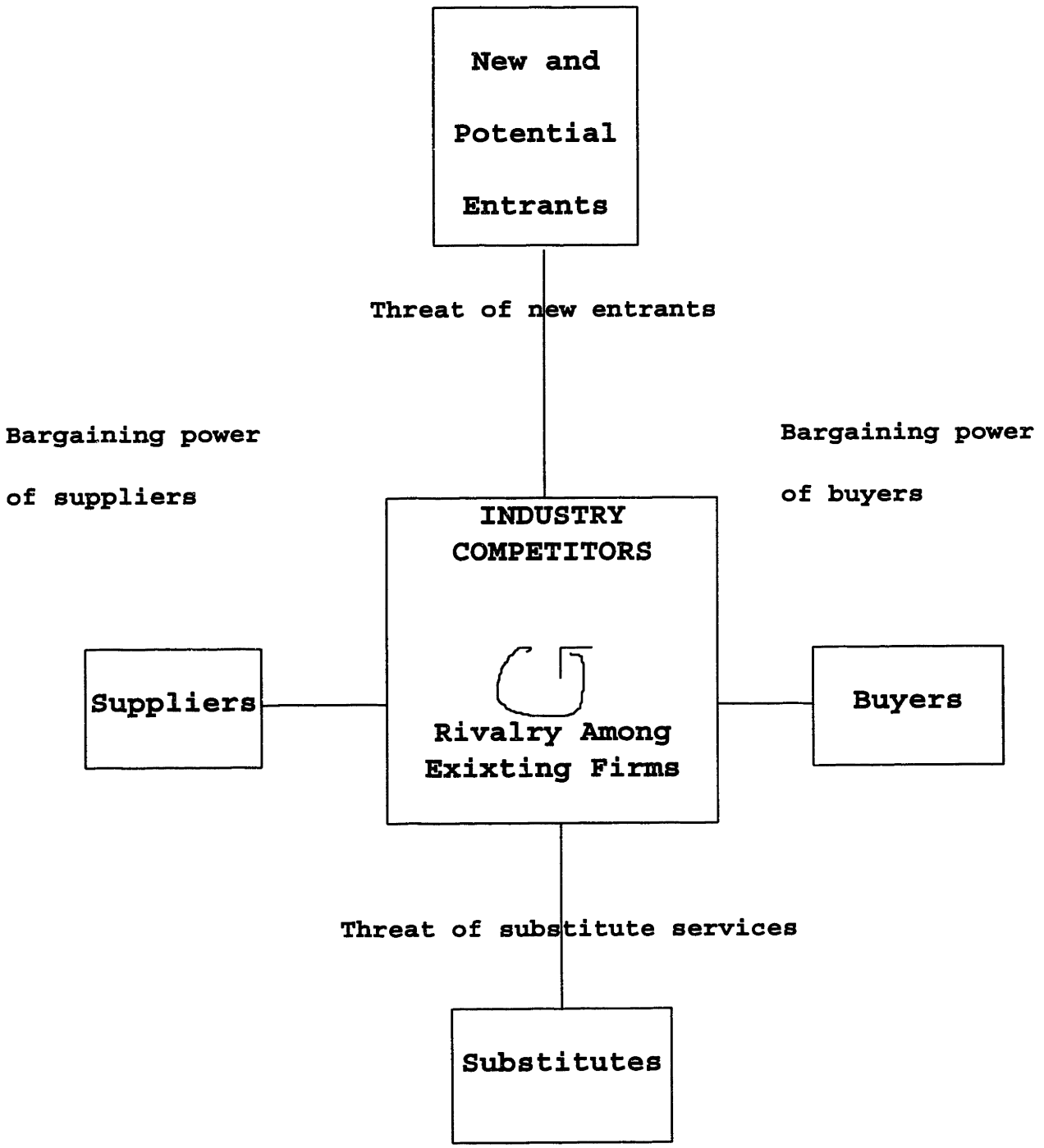
5. Bargaining power of suppliers.

The resulting analysis of an industry analysis provides the roots to determine the strength of competitive forces and as a consequence the basis of the industry's profitability. It will be the ability of the firm to adapt to the industry's threats and to capitalize the opportunities, the underlying factor for its future success.

Figure 1 illustrates that the generic structure of the airline industry is represented by its main players (competitors, buyers, suppliers, substitutes, and new entrants), their interrelationship (the five forces), and the factors behind those forces that help to account for industry attractiveness.

The collective strength of these forces determines the ultimate profit potential in the industry, where profit potential is measured in terms of long run return on invested capital.

Figure 1. Elements of the Airline Industry Structure: Porter's Five-Forces Model.[13]



[13] Adapted from M.E. Porter, Competitive Advantage, New York, The free press, 1985.

" A pure competitive industry consists of many competitors offering the same product and service (stock market, commodity market). Since there is no basis for differentiation, competitors' prices will be the same. No competitor will advertise unless advertising can create psychological differentiation (cigarettes, beer); in this case it would be more proper to describe the industry as monopolistically competitive. Sellers will enjoy different profit rates only to the extent that they achieve lower costs of production or distribution".

The main reasoning of this theory was that in the airline industry if a particular route ended being monopolized, if the profits were attractive, a series of new entrants would compete for those profits and would bring prices down to the levels of competition contemplated in the former pure market definition.

Unfortunately the result was not as the econocrats expected. Many underlying factors were not taken into account. As a top airline executive once said "the industry is led by its dumbest competitor".[14]He probably meant that the airlines could increase

[14] Fortune magazine, October 20, 1980, pp. 27.

its profits if they would stop cutting prices in vain attempts to increase market share.

One of the facts that has impeded the contestability model in the airline industry are a series of "sticky factors"[15] that prevent the airlines to abandon or change its strategy because of the commitment they have to, for example, operate a specific route, or to fly a specific type of aircraft.

To illustrate this we can mention the case of many airlines that spend large sums of money to enter and serve a new market. After this commitment has been made it certainly is not easy to exit that new market. The employees, the assets bought by the company (ground equipment, airport slots, offices, etc.), and sometimes the agreements arranged with local governments impose at least a medium term possibility of exit. On the other hand many of the new entrants outsource most of its requirements and have an exit flexibility that the "committed" participants lack.

[15] P. Ghemawat, "Commitment", 1991, pp. 28.

The former difference between the "committed" participant and the "uncommitted" impose a different competitive dynamic among the competitors of an specific market.

2.1 Barriers To Entry

This barriers substantially reduces or increases the threat of new entrants into an industry. In the case of the airline industry "strictly speaking there are few barriers to entry - planes can be easily acquired or leased, most domestic airports can be accessed, and skilled labor (pilots, mechanics, and flight attendants) is typically available.

The ease of entry contrasts with the difficulty of staying in business once established. Since deregulation, about 100 airlines in the United States have either gone out of business or been acquired in financial distress. Though the vast majority of failed carriers were small start ups, the list includes such long term industry giants as Eastern and Pan Am."[16]

In addition as we have mentioned earlier, a very important barrier to entry that exists in other industries - government

[16] J.P. Morgan, "The U.S. Airline Industry", 1993, pp. 3.

regulation - is virtually inexistent in the airline industry. Except for strict maintenance and safety standards, which can be relatively easy to comply with today's technology, "almost everyone with a hankering to start an airline is suddenly preparing for take off".[17]

Furthermore, access to distribution channels such as CRS (Computerized Reservation Systems) are affordable and easily accessible.[18] Booking fees paid by airlines which participate in SABRE (American Airlines CRS) are only $2.25 per segment, an amount far below transaction charges levied for similar reservation and ticketing services in other industries.

The overall assessment of the barriers to entry recalls for low industry attractiveness.

2.2 Barriers To Exit

In reverse of barriers to entry, low barriers to exit are highly desirable. If its not easy for a troubled firm to exit its business, the industry will be plagued with competitors lowering

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[17] Time magazine, "You too can Run an Airline", 1993, pp.54.
[18] American Airlines, "The U.S. Airline Industry" 1993, pp.12.

their prices to the point they contribute to cover their variable costs - and probably fixed also - without the hope of making a profits. This in turn will erode the competitor's and industry profitability.

In the specific case of the airline industry an important barrier to exit has emerged with the protection offered by bankruptcy laws to companies in financial distress. As analysts would report " ...the Chapter 11 carriers have clung tenaciously to life".[19]

Bankrupt carriers have a distinct cost advantage because they do not have to pay interest on a large part of their debt and often force renegotiations on lease payments. However they lack liquidity to withstand sharp declines in often volatile cash flow.

Short term cash flow is generated by this airlines by discounting fares to attract price sensitive traffic, which other carriers are obliged to match. This in turn imposes destabilizing influences to the industry's pricing structure.

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[19] J.P. Morgan, "United Airlines Corporation", 1993, pp.32.

Figure 2 reflects the combined impact of exit and entry barriers on the profitability of an industry.

Given the nature and characteristics previously described of the airline industry in the 1990's, airlines locate somewhere in the second quadrant - low barriers to entry, low barriers to exit - with the resulting low and risky returns.

The overall assessment of the barriers to exit recalls for a mildly low industry attractiveness.

2.3 Rivalry Among Competitors

The rivalry among the competitors in the airline industry is determined by one or more competitors that either feel the pressure for improving its performance or by other airlines that see the opportunity to improve their relative position. In this factors are included all new entrants also.

Competitive moves in the airline industry have been traditionally moves directed to alter the pricing structure between different markets. It has been observed that between 1976

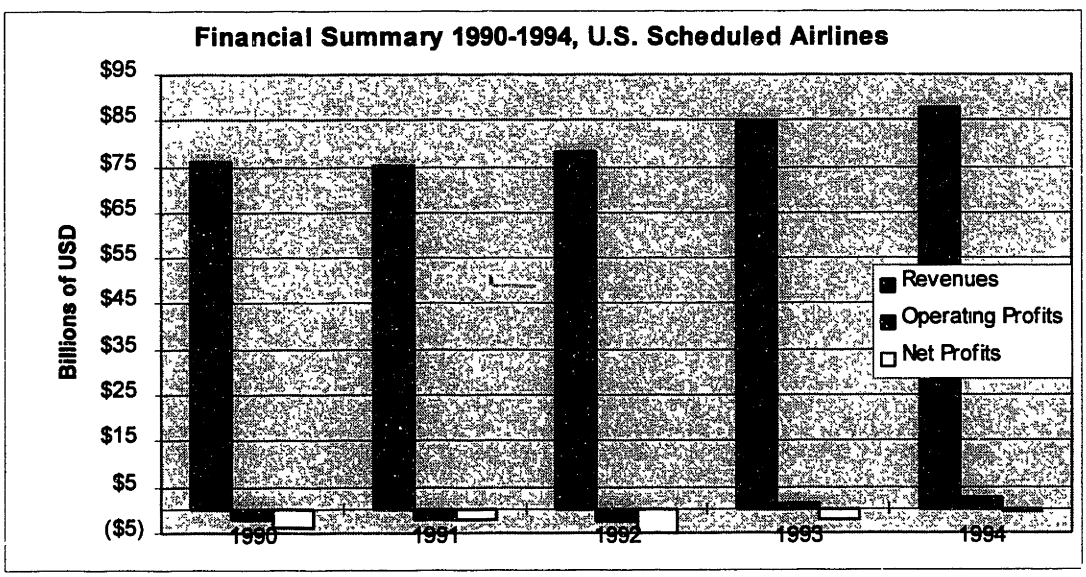
Figure 2 Barriers and Profitability[20]

Entry Barriers	Exit Barriers: Low	Exit Barriers: High
Low	**Low Stable Returns**	**Low, Risky Returns**
High	**High Stable Returns**	**High Risky Returns**

[20] Michael Porter, "Competitive Strategy; Techniques for Analyzing Industries and Competitors", 1980, pp. 22.

and 1993 there has been a substantial price reduction in real terms of airline tickets. Prices have moved downwards as efficiencies and costs have improved.[21] Nevertheless, costs have increased more rapidly in real terms reducing the actual yield for the industry.

The following graphs present the 1984-1994 financial summary for the U.S. scheduled airlines[22]:



[21] L.H. Roller, R.C. Sickless,"Competition, Market Niches, and Efficiency: A Structural Model of the European Airline Industry", 1993, pp.3.

[22] Air Transport, "The Annual Report of the Scheduled Airline Industry", 1995, pp.3.

As we can see during the 1990-1994 period, total revenue growth for the industry was approximately 15%. This was a modest growth when compared to the 1985-1989 period reaching 48%.

Operating profits for the 1990-1994 period was (1%) while for the former five year period was 3.6%. As mentioned earlier, in the past five years the losses have offset all the profits. In fact, the U.S. airline industry accounts for a $10 billion loss from the 1985-1994 period.

We may well translate the former financial results in an intensified rivalry between airlines during the last decade. The lack of growth and the "commodity syndrome" have resulted in price wars very difficult to stop. Once an airline has cut its fairs, almost all of the others have aggressively reacted and matched or further undercut the prices. This behavior has been devastating to the industry's profitability.

The overall assessment of intensity of rivalry among competitors recalls for a low industry attractiveness.

2.4 Availability of Substitutes

Substitutes for the airline services are all means of transportation that may offer an alternative to fulfill their demand. As known the actual and most popular means of transportation in the U.S. are:[23]

- **Surface Transportation**: Car, Bus, Railroad, High Speed Rail - under development;
- **Water transportation:** Cruises, Ferries, etc.;
- **Air Transportation.**

It is important to underline that water transportation virtually is not used for domestic travel, leaving only surface transportation as the contestant for air travel.

The main differentiating factor between air and surface travel is speed. For example traveling from New York to Los Angeles may take between five to six hours utilizing air transportation while it may take a couple of days to complete the

[23] U.S. Department of Commerce,"Statistical Abstract of the United States", 1995, pp. 662-665.

trip traveling by surface. This time difference impacts leisure travelers who have to choose from the time to travel-cost equation to decide which mean to pick. Nevertheless empirically it seems that whenever a traveler can afford air transportation it will choose it -in the case of long haul routes - above surface transportation.

This is not the case for trips shorter than approximately 500 miles. In this case total traveling time by air -including boarding, trip, baggage pick up, and time to/from the airport - may add up to 3-4 hours while surface transportation - specially by car - may be 8-10 hours. Here we find a smaller time differential above which the customer has to decide depending on the price-benefit relation.

Since short-distance travelers have different priorities, "...they are prepared to use ground-based transportation in far more situations...".[24] Airlines like extinct People Express saw a tremendous opportunity by competing against surface transportation.

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[24] Harvard Business Case, "People Express", 1984, pp. 2.

Other airlines also base their competitive strategy on low fares that "...enable business and leisure travelers who might have otherwise driven the distance between the majority of its short-haul city pairs (departure and destination points) to fly instead...".[25] Collen Barret, Southwest's executive vice-president with responsibility for customers usually commented: "We've always seen our competition as the car. We've got to offer better, more convenient service at a price that makes it worthwhile to leave your car at home and fly us instead".[26]

Furthermore new means of surface transportation are being developed, such as the high speed rail, which impose a threat to the airlines operating on high-traffic short haul routes. As reported by the Federal Aviation Administration (FAA) " high speed trains have been recommended for use in several densely populated inter-city transportation corridors, for example:

- Washington - Philadelphia - New York - Boston in the Northeast;

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[25] Harvard Business Case, "Southwest Airlines", 1993, pp. 2.
[26] I D E M.

- Portland - Seattle - Vancouver in the Pacific Northwest;
- and Dallas - Fort Worth - Houston - San Antonio in Texas.

...High-speed rail appears to be a reasonable transportation alternative, especially for densely populate urban corridors and distances of less than 450 miles, that would serve to reduce airport congestion at many delay-problem airports.

...On the other hand, High-speed rail represents another competitive force for short-haul air traffic and can be seen as a threat to air carrier markets for trips shorter than 500 miles...".[27]

" Will the burgeoning high-speed rail system undercut regional airlines? "[28]

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[27] Federal Aviation Administration, " Aviation Capacity Enhancement Plan ", 1994, Chapter 6 pp. 17-19.
[28] A.J. Slywotzky, " Value Migration ", 1996, The Harvard Business School Press, pp.133.

After evaluating all factors involved in this point, the overall assessment of threat of substitutes recalls for a neutral to mildly attractive industry.

2.5 Bargaining Power of Suppliers and Buyers

Buyers - customers - and suppliers can impose their bargaining power to the airline industry and alter its fundamental structure and characteristics. Of course this may be true in the opposite way redirecting the forces to impose pressure to the customers or the suppliers of the industry. This forces will be delimited by the relative bargaining power that each actor has at one point in time.

Since the 1978 Airline Deregulation Act which allowed free competition and free pricing policies to all domestic airlines, the bargaining power of the customers has dramatically increased. With many airlines now competing in the same markets, the customers have a wide array of options from which to select its carrier. Given the behavior of the economy - specially with the former recession periods -, price and convenient schedules have become some of the most important factors influencing the

customers choice. This in turn have dramatically driven down the ticket prices.

Nowadays the consumer imposes heavy pressure to the carriers which in turn have had to face major restructuring - and sometimes bankruptcy - in order to serve their clients' needs. As an example of this it has been observed that since 1984 the percentage of passengers traveling with some kind of discount fare has increased 11.7%, from 80.7% in 1984 to 92.4% in 1994.[29]

Furthermore, the average discount from the full fare price that the former customers have received has increased 13.1% from 51.5% to 64.6% respectively.[30] In other words this means that in 1994 about 92.4% of air travelers utilizing scheduled domestic airline services paid, on average, only 45.4% of the full fare price of their tickets.

From this data it can be clearly derived that the customers have been immensely benefited by the deregulation of the

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[29] Aviation Daily, "The Aviation & Aerospace Almanac", 1996, pp. 26.
[30] I D E M

industry, and at the same time have exercised an immense pressure on air carriers, forcing them to drive their prices down.

Speaking about the airline industry suppliers', they have been dramatically affected by the industry's change in relative bargaining power. Among the suppliers that have been more affected are aircraft manufacturers and labor.

Hundreds of aircraft orders have been either canceled or postponed by virtually all major air carriers. With the immense losses suffered by the industry it has become prohibitive to spend $50-150 million dollars to replace an aircraft. Of the 1,445 aircraft on order -Air Transport Association airlines - only 38% are firm orders and the remaining 62% - 887 aircraft - are options to be confirmed.[31]

This situation has substantially weakened the bargaining power of the aircraft and engine manufacturers.

On the labor side many dramatic changes have occurred. Tens of thousands of jobs have been lost either because of bankrupt

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[31] Air Transport, " The Annual Report of the U.S. Scheduled Airline industry ", 1995, pp. 15.

carriers or by airlines' restructuring efforts. Many labor intensive functions have been replaced by technological advancements and by improved productivity schemes. Because of the overflowed offer of labor services in the airline industry, salaries have been substantially reduced or contained during the last years. The bargaining power of labor has been substantially reduced by all this happenings. This holds true except for the pilot's unions who have imposed abnormal pressure among the major carriers. It may well be said that this unions are the only ones with high bargaining power among the labor sector.

Nevertheless other carriers have found alternative ways of unionized and non-unionized structures that have proven adequate and rewarding for both parties through the use of innovative profit-sharing and stock options programs.

After evaluating all factors involved in this point, the overall assessment of bargaining power of buyers recalls for an un-attractive industry.

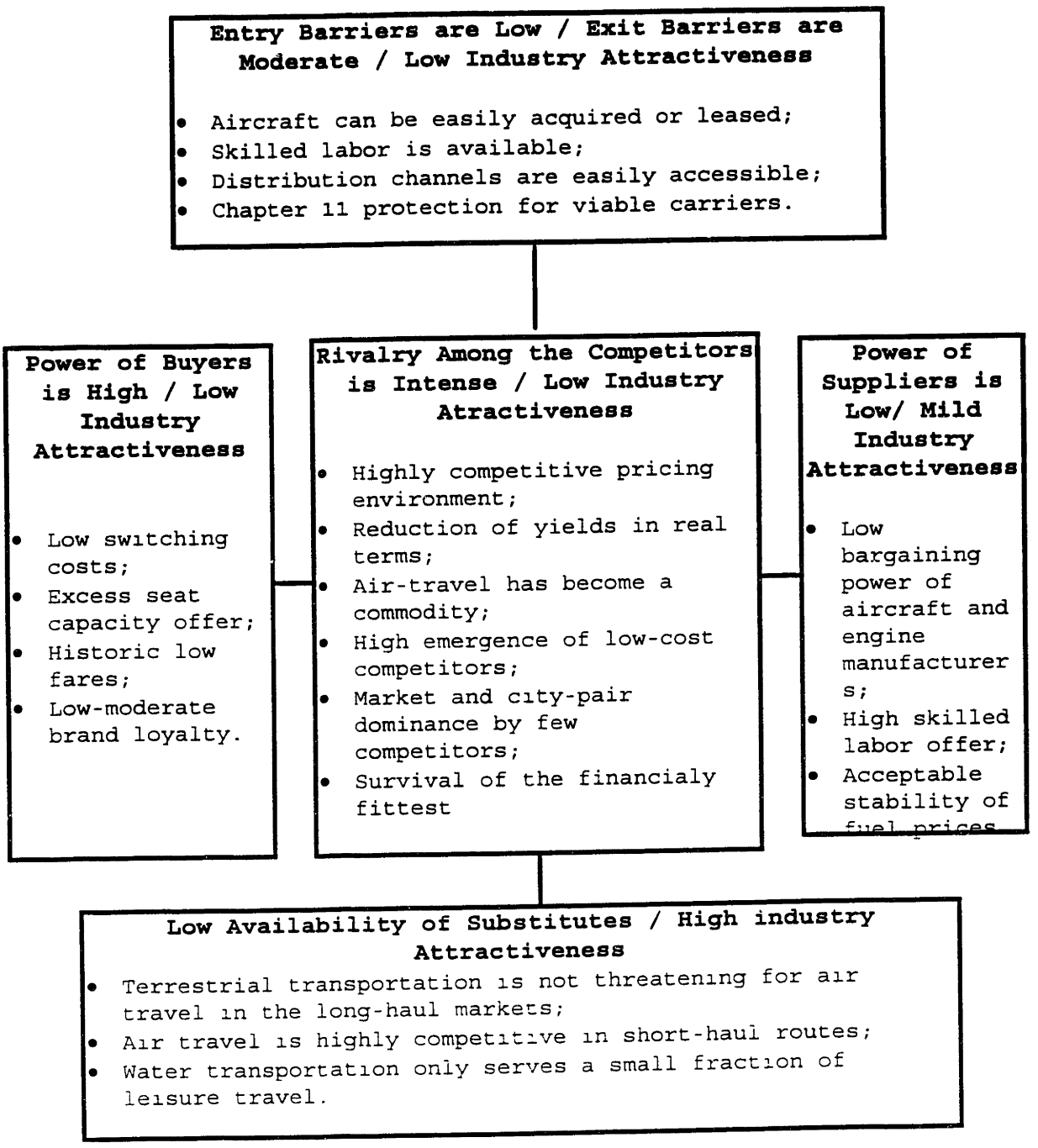
On the other hand the bargaining power of the suppliers of the airline industry - which include the ones formerly analyzed

and others - recalls for a mildly to highly industry attractiveness.

2.6 Overall Industry Assesment (Porters Model)

The following section intends to sumarize the previous factors and elemnts affecting the airline industry. By utilizing Michael Porter's ideogram we will depict these relevant factors in a siple and orderly way (see figure 3).

Figure 3 Porter's Model - Airline Industry



Chapter 3 Major Current Trends of Strategic Importance

Major current trends of strategic importance have radically changed for the airline industry. Most of the managerial paradigms in respect to the airline business have been challenged by innovative competitors who are challenging the major airlines' formulas and are even pushing "the big ones" out of traditional and profitable markets. Furthermore these competitors have done so even earning a profit while "the war" is going on. The most intense value migration from the major carriers to the newer carriers began with the industry's deregulation.

Basically after deregulation air travel became a commodity. The basic airline structure compounded with high fixed costs and limited flexibility began to reflect the dynamic pressures of competition. Figure 3 shows the patterns of value migration for the airline industry.[32] In order to respond to the new environment, the major airlines re-formulated their strategies and developed a series of actions that gave them momentarily new space to breath.

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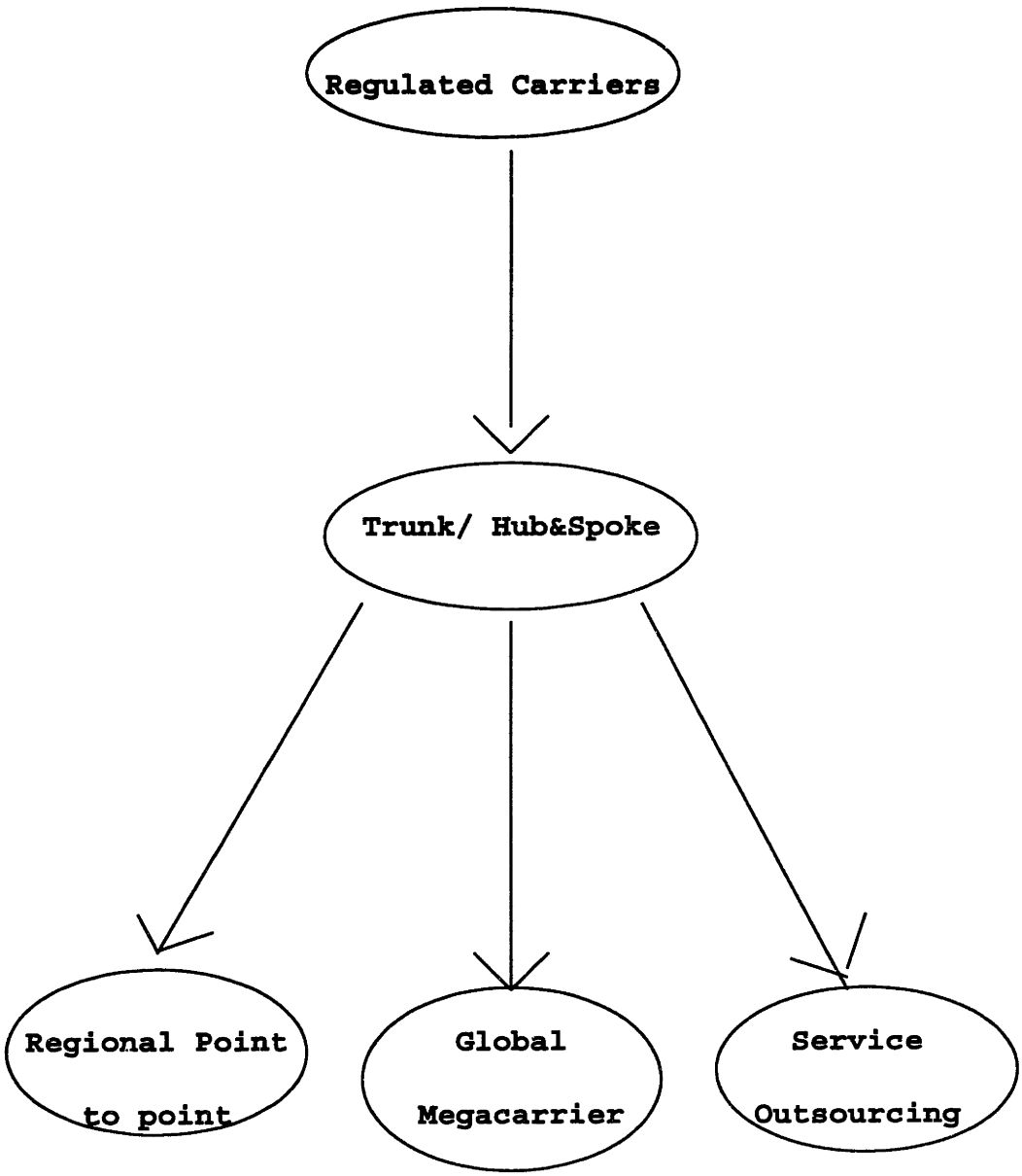
[32] A.J. Slywotzky, " Value Migration ", 1996, The Harvard Business Press, pp. 113-114.

Figure 4 Airline Value Migration[33]



[33] I D E M.

Among the new actions implemented, after deregulation, by the major carriers to regain their lost competitiveness we may find the following:

- The development of hub-and-spoke destinations where traffic was concentrated by feeder flights in order to re-direct customers to their final destinations, achieving higher load factors;
- The establishment of yield management systems which are computer assisted control of the number of discount fares available on each flight, with the objective of maximizing revenues for each flight.[34]
- Development of large capacity Computer Reservation Systems (CRS) as one of the most important marketing tools. The airline's CRS serve as a link with their most important distribution channel, the travel agent.[35]

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[34] W.E. O'Connor, " An Introduction to Airline Economics ", 1995, pp. 125.
[35] J.C. Martin, " U.S. Airlines in International Competition: Fleet structure Optimization and Strategy ", MIT Thesis, 1991, pp. 16-18.

- In addition, all the major carriers began their fleet renewal programs in order to achieve more fuel efficient operations and serve their customers with younger aircraft.

The former actions proved to be effective for a period of time but again these paradigms were defied by innovative competitors. Despite their growth and their size, the majors had not achieved commensurate profits. With no ability to compete on price, airlines had but one way to differentiate themselves: service.

Meanwhile, several small airlines defined their competitive strategy offering a low cost service and supported by an adequate business design that would deliver the value requested by the changing customers. In this way the small airlines were able to pass all the savings to the consumers. Air travel began to compete with surface travel and a new segment of customers began to emerge as a driving force for the airline industry.

In 1983 51% of the air travelers were on a business trip. By 1992 business trips reached its lowest point at 37%, while

pleasure trips accounted for the remaining 63%.[36] This new scenario of the changing customer is represented in figure 4.

As the rivalry for profits intensified in the 90's, major carriers had to maneuver out of the crises. Drastic decisions had to be taken in order to face an unchanging world. The pressure exerted by the low cost carriers and by the changing consumer preferences was so intense that the Chairman and CEO of American Airlines, Robert L. Crandall declared "Unless the world changes, we will never buy another airplane...When all the airplanes are worn out, the company simply won't be here anymore."[37]

On their attempt to revitalize their airlines, Crandall's American and most of the major carriers began on the 90's major strategic changes to resist the low cost carriers stampede. American engaged in their own called "Transition Plan" which contemplates major restructuring with the objective, among others, of reducing its costs by $1 billion. Delta Airlines now navigates through their "Leadership 7.5"

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[36] Gallup/ATA Survey, " The Annual Report of the U.S. Scheduled Airline Industry ", 1995, pp. 10.
[37] Stephen Solomon, " The Bully of the Skies Cries Uncle,", New York Times Magazine, September 5, 1993.

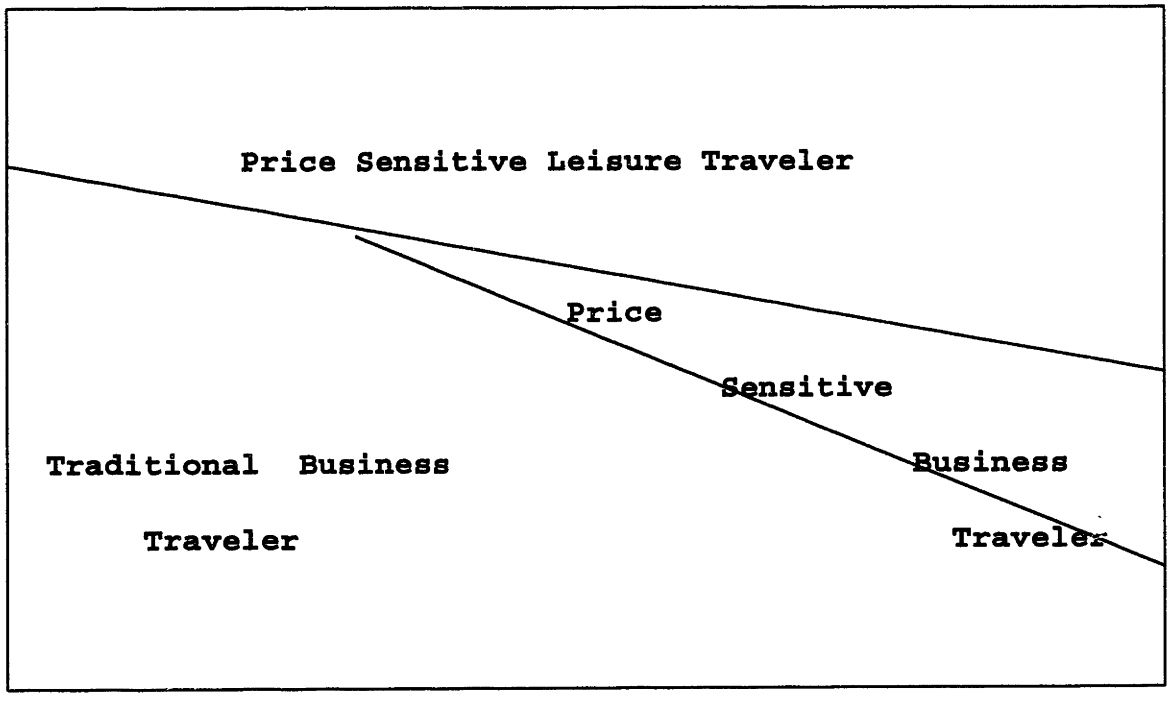
plan which attempts to reduce their costs to 7.5 cents per available seat mile. United Airlines is testing a radically different strategy with their new employee ownership while many of the other major carriers are under the protection of Chapter 11 bankruptcy laws - e.g. Northwest Airlines, TWA, America West, Continental etc.-.

Among the most important trends for the late 90's we can observe the following:

3.1 Retiring from short haul routes

Major carriers have taken different steps to face low cost carriers competition. Among this actions are the withdrawal of some short haul markets were the "Big Ones" were sure they were not able to compete. The objective is to avoid predatory pricing and fare wars with no dead end. As the Chairman and CEO of American stated " ...After careful study, American Airlines decided to strengthen its hub-and-spoke network. We do not believe it is financially sensible to put assets into markets where the additional product features

Figure 5 The Changing Customer[38]



The massive inflow of price-sensitive travelers transformed air travel into a price-dominated commodity market.

[38] Adapted from A.J. Slywotzky's, " Value Migration ", 1996, The Harvard Business School Press, pp.123.

offered by a long-haul carriers have little or no value,...we are focusing our resources where we believe we can compete successfully, reducing our commitment to markets where our products are not appropriately valued. Therefore, we have continued to follow the basic strategy laid out by our Transition Plan."[39]

This appears to be a sensible strategy specially if we remember how Braniff Intentional engaged in a predatory fare war with Southwest back in 1973, and despite enormous efforts to attack and counter attack Southwest, Braniff International finally perished in 1981.

3.2.-Restructuring of Fortress Hubs

The traditional role of hubs has been and still is to offer frequent service to a wide range of communities and protect the airline's competitive position. Furthermore the hub system produces a huge revenue premium versus the point-to-point carriers. Nevertheless hubs must comply with certain set of criteria to be successful. For example: Hubs must be located in markets with strong market demand and be close to strategic

[39] American Corporation, " 1994 Annual Report ", pp. 14-15.

end markets. The flights performed in the hub should offer a wide choice of departure and arrival times as a competitive tool of differentiation.[40] The net result of the benefits and the investment needed to run a hub have resulted in big airlines scaling back hub-airport systems to curb rising costs. By eliminating hubs the carriers attempt to: wring out excess capacity; shrink costs; raise average ticket prices; and re-deploy their assets to more profitable markets.[41] In this effort American Airlines has canceled its hub operations at San Juan, P.R., San Jose, Nashville, and Raleigh Durham. USAir eliminated its money-loosing hub at Dayton and Delta its struggling hard to defend and restructure its New York hub, and United is fighting at its hubs against its low cost rivals with its own low cost carrier U-2.

3.2 Reduction of excess industry capacity

Excess capacity has been a problem for the airline industry due to 1) the economic recessions, 2) after-effects of expansion by the major carriers in the late 1980's, and 3) the tenacity with which bankrupt major carriers have clung to life.

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[40] J.P. Morgan, " The U.S. Airline Industry ", 1993, pp.3, 5-8.
[41] J.S. Hirsh, " The Wall Street Journal ", January 13,1993.

In a high fixed cost, price sensitive, commodity type business such as this, excess capacity has devastating effect because it motivates carriers to fill aircraft by cutting prices. Other carriers are forced to match, and fare wars erupt.[42] The actual reaction of the major carriers to this problem has been by downsizing. " All the Big Three have announced capacity reductions for 1994 through delivery deferrals, aircraft grounding, and accelerated retirements. This capacity reduction is focused on domestic markets, with international capacity for these carriers flat to up slightly. While some of the capacity taken out will find its way to smaller airlines and start-ups, we expect overall industry capacity to be flat."[43]

American had the most aggressive industry reduction for 1994 at 5.4%. Delta's capacity remained flat and United scarcely grew its capacity by 1%.[44] On a macro basis, total U.S. domestic capacity is expected to increase only 2.6% in 1996 and 2.0% in 1997. On the other hand demand for air travel is projected to increase 3%-4% on an annual basis over the next three years.[45]

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[42] J.P. Morgan, " The U.S. Airline Industry ", 1993, pp.15.
[43] J.P. Morgan, " The Big Three Airlines ", 1994, pp.7.
[44] American, United & Delta Airlines 1994 Annual Reports.
[45] Merrill Lynch, " The 1996 Airline Almanac ", 1996, pp. 1.

3.4 Employee Stock Ownership Plans (ESOPS)

" On July 12,1994, the stockholders of United Airlines Corporation voted overwhelmingly to make history by creating the largest corporation with a majority of its stock owned by its employees."[46] This act marked a new tendency clearly defined in the airline industry for the 1990's. ESOP's have become a substantial part of the agreements between most of the major carriers and unions. The enormous pressure to drive costs down and to improve productivity have led to this new kind of agreements. Indeed, most of the major carriers have instituted ESOPs as a way to share the risk with the employees and also the potential success.

Among the important ESOPs in the airline industry are[47]: Northwest Airlines - an ESOP was a last minute compromise to stave of bankruptcy in 1993 - employees swapped 15% cuts for 30% of the company; TWA - ESOP has been key in keeping the airline alive - during its second visit to Chapter 11 bankruptcy last year, employees agreed to forgo scheduled wage hikes and slice their equity stake from 45% to 30%; Delta

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[46] United Airlines Corporation, " Annual Report ", 1994.
[47] E. Kashi, " United We Own ", Business Week Magazine, March 18,1996.

Airlines - employees traded 2% pay cuts for a nonvoting board seat and stock options on 19% of the company. In addition, USAir Inc. Unions have been pushing for ownership, too.

Within this employee ownership a new spirit of cooperation and flexibility has been achieved between management and employees. Virtually millions of dollars have been saved by revitalized and newly institutionalized employee suggestion programs.

The major challenges are yet to come when the good times give way to the inevitable next round of fare wars and probable further cuts will be requested. The grip to cooperative spirit and labor's entrepreneurialship will be tested under such an environment. New and innovative ways to combat under such a scenario must be developed since it must be kept in mind that ESOPs established in the 1980's - e.g. defunct Eastern Air Lines - vanished when fare wars hit.

3.5 Airlines' Information Technology Services:

Information technology services have played a very important role in the distribution of airlines services. At its

beginning stages, information technology in the form of Computerized Reservation Systems (CRS), became the most important competitive marketing tool for the airlines who had effectively developed them. American Airlines developed a CRS network called SABRE SYSTEM and United Airlines developed its own version called APOLLO. In 1984 eleven domestic airlines filled an anti-trust suit against American and United on the basis of monopoly in the CRS market.[48] These types of pressures have apparently driven the CRS businesses away from being competitive advantages for air services to competing for travel agent subscriptions by offering better CRS features.[49]

Nowadays CRS systems are an important source of revenue to its owners, specially American's SABRE SYSTEM. As American's Chairman & President R.L. Crandall stated " The SABRE GROUP had a very good year in 1995 - posting pretax earnings of over $370 million, a fifteen percent increase from 1994...To maintain our position in the direct to consumer market we are building a product called Travelocity to be rolled out in March (1996)...which will allow consumers far better direct access -

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[48] D.C. Copeland & J.L. McKenney, " Airline Reservation Systems: Lessons from History ", MIS Quarterly, September 1988, pp. 364.

[49] J.M. Feldman, " Will CRS revolutionize air travel? ", Air Transport World, August 1988, pp. 42.

via Internet or On-line services - to travel and entertainment information from suppliers around the world."[50]

These new market capabilities combined with its performance and the actual array of services offered by SABRE, represent it in the eyes of the airline analysts "significant untapped shareholder value". This is why an enormous pressure has been exerted for the divestment and final separation of American Airline and SABRE. In this respect R.L. Crandall commented "We are continuing to study the possible advantages of more explicitly separating the activities of the airline group and the SABRE group...in the best interest of AMR shareholders."[51] The risks of not doing such a move are noted by industry's analysts saying "Without its own market value SABRE will, in our opinion, eventually suffer both a cost of capital penalty and difficulty in attracting the best programming/managerial talent. We think it makes commercial sense for AMR to create a stand alone value for SABRE...which could be worth 58% of the current AMR market price."[52]

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[50] Remarks of R.L. Crandall at the Lehman Brothers 1996 Transportation Seminar, February 2, 1996.
[51] I D E M.
[52] M.J. Linenberg, C. Anderson, C. Browning, " The 1996 Airline Almanac ", Merrill Lynch, January 3, 1996.

A major change trend is likely to occur in the near future, given the circumstances previously described. From the economic point of view it is highly probable that we will see independent entities serving the actual travel distribution industry with, of course, strong links with their parent companies.

Nevertheless it is also important to take into account that unions are threatening to strike if such a move is done. This would be devastating for the airline group which has marginal profitability and difficult financial situation due to the former years billionaire losses. Only the combination of all the forces influencing the final decision will give the final result of this important new trend within the airline industry.

3.6 New Entrants, Emergence of low-cost carriers:

In the brief period from 1992 to the spring of 1995, airlines ranked as low-cost carriers grew from representing a

fraction of total domestic capacity to more than 10% of all domestic operations.[53]

This important gain share of low-cost carriers has been more dramatic in short-haul markets. According to the flight schedules for the June quarter of 1995, the share of short haul capacity operated by the larger low-cost carriers has grown 14.6% since last year and now accounts for about one third of scheduled short haul capacity (less than 750 miles).[54]

United's Shuttle, Southwest, America West, ValueJet, Reno, American Trans Air, and Kiwi all increased short-haul capacity in the June quarter versus last year. Among high-cost carriers, the biggest change was American's 22.4% decline in short-haul capacity, which was largely redeployed to longer-haul markets.

It is expected that the low-cost carriers will continue developing in the near future. They will basically be operating with the same model: direct point-to point route structure, focusing in short-haul markets. Low fares will prevail given

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[53] James Ott & Raymond E. Neidl, " Airline Odyssey ", Mc Graw Hill, 1995, pp. 94.
[54] Jeffrey Long & Jill K. Evans, " Short-Haul Competitive Update, JP Morgan, 1995, pp. 1.

their low-cost structures. They will present a hard combination to beat, particularly when the work forces are highly motivated and there is no adversarial relationship between unions and management.

On an interview performed by James Ott, a distinguished writer and reporter for aviation week, Raymond E. Neidl, the managing director and research analyst of Furman Selz Inc. -an investment and brokerage house specializing in airlines and transportation - described his vision of the future airline industry as follows:

" I expect that the airline business will develop into a multitier system. The majors will serve the international markets and the heavily traveled domestic arteries, using their hubs to transfer passengers. Small carriers will develop and have regional niches and provide feed for the broader systems, and there will be carriers serving point-to-point markets.

Few of the newcomers will take on the big airlines directly. Those that survive will remain niche carriers, stepping in where opportunities or vacuums emerge. In time, the larger airlines may decide that they would rather work with

those new carriers than to fight them. That's where I see an expansion of inter-line agreements, or even the turning over of hubs to up-and-coming niche operators."[55]

[55] James Ott & Raymond E. Neidl, " Airline Odyssey ", Mc Graw Hill, 1995, pp. 195.

Chapter 4 The US-Mexican Air Travel Market[56]; Characteristics and Major opportunities

For decades millions of Mexican and American travelers have chosen air travel as their mean of transportation between the two neighbor countries. Except for the neighbor border cities, most of the most commonly visited cities in the US and Mexico are too far apart to enable alternative ways of transportation to be fast and comfortable enough. This is why air travel plays an enormously important role in communicating both countries.

The purpose of the traveler's visits range from vacations, business, visits to friends and relatives and others. On 1992 approximately 41% of air travelers between the US and Mexico declared that their purpose of the trip was a vacation. Another 25% of the air travelers declared to be visiting friends and/or relatives. Business travel accounted a 23% of the total and the

[56] All the quantitative information contained in this chapter - unless otherwise specified- derives from: 1) US International Air Travel Statistics, US Department of Transportation 1992-1994 or; 2) Traffic by Flight Stage, International Civil Aviation Organization,1992-1994.

remaining 11% were categorized in other - study, attend convention, etc.[57]

4.1 Market Size and Characteristics 1992-1994

The 1992-1994 period is an interesting point of departure since during that time the governments of the US and Mexico consolidated important economic and commercial agreements.

The most dramatic exemplification of this bi-lateral agreements is the North American Free Trade Agreements (NAFTA), which was signed by the governments of the US, Mexico, and Canada in 1993. By January 1994 NAFTA was practically implemented.

With this agreements in place the respective airline industries expected an increase in air travel specially in the business segment.

The air travel flow between the US and Mexico during 1992, 1993, and 1994 has progressed as follows:

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[57] In-Flight Survey of Individual Air Travelers, U.S. Travel and Tourism Administration, Department of Commerce, 1992.

Year	No. Of Passengers traveling between the US & Mexico	Incr/decr from previous yr.
1994	9,746,883	+ 12.3%
1993	8,679,478	- 0.03%
1992	8,701,409	n.a.

As it can be seen a large increase of air travelers took place in 1994 accounting for nearly 1.1 million passengers more than in 1993. Grossly speaking the US-Mexican air travel market is at 10 million passengers per year.

Out of those 10 million passengers half of them traveled to the US from Mexico and the other 50% traveled to Mexico from the US. On average the maximum difference of passengers traveling to/from the US & Mexico hardly reaches five percentage points (5%) or 500,000 people.

On 1994, 86% of the passenger arrivals to the US (flights originated in Mexico) were on board scheduled flights and the remaining 14% was on charter flights.

On the same year 95% of passenger arrivals to Mexico (flights originated in the U.S.) did so on board of scheduled flights. We can see that basically air travel between the two neighbor countries is dominated by scheduled flights with a slight difference of those passengers arriving to the US in charter flights. The figures read as follows:

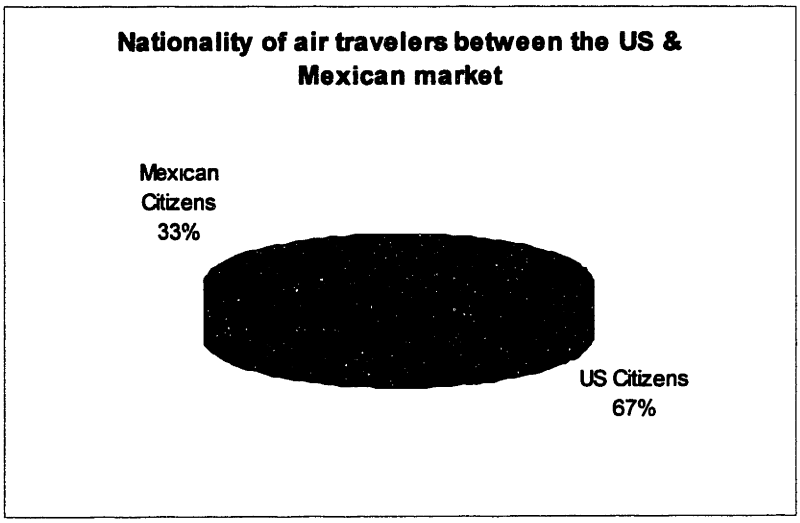
		From US	To US		
Year	**No. Of passgrs*.**	**To Mexico**	**From Mexico**		**(%)**
1994	4,400,000	Yes		Scheduled	95%
1994	240,000	Yes		Charter	5%
1994	4,400,000		Yes	Schdld.	86%
1994	700,000		Yes	Chrtr.	14%

* Rounded Numbers.

It is important to note that roughly two thirds of the air travelers flying between the US and Mexico are American citizens on differently purposed trips (See figure 6).

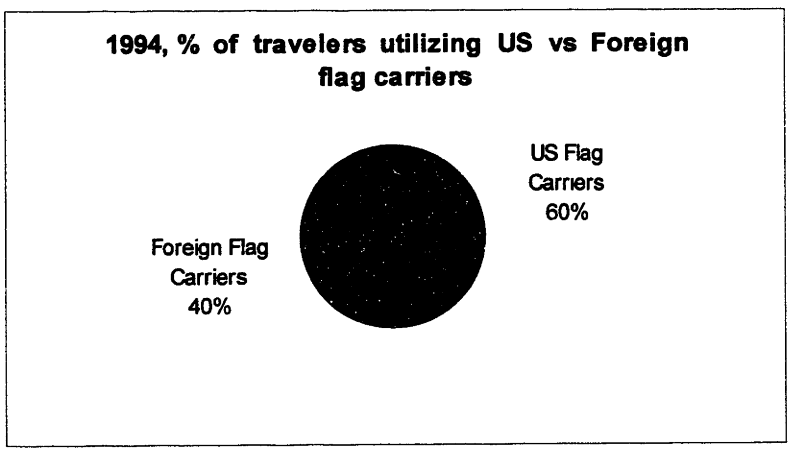
As a last but not least characteristic of the US & Mexican market we will refer to the distribution by American or foreign carriers transporting passengers.

Figure 6.



On 1994, 60% of the total passengers traveling between the two neighbor countries selected a US carrier as their choice over foreign carriers (See figure 6). Approximately 68% of such travelers were American citizens favoring its national airlines.

Figure 7



4.2 Main Destinations in the US-Mexican market.

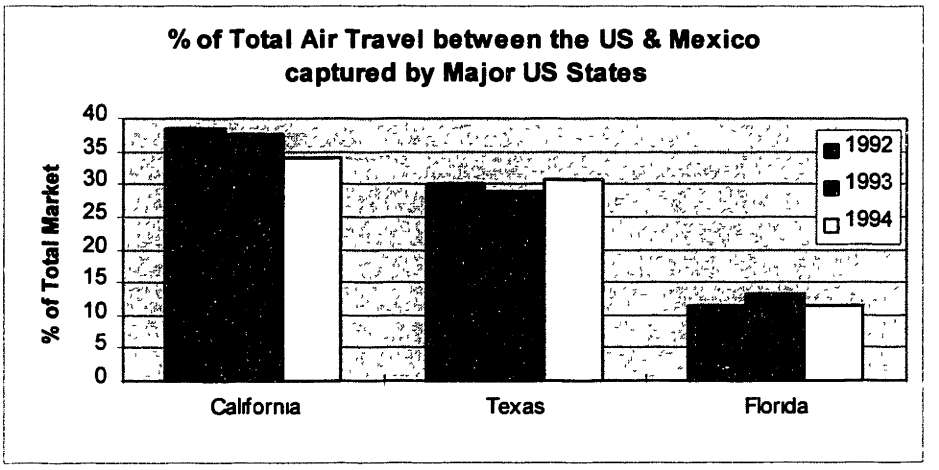
The US-Mexican market is comprised by more than 100 city-pairs on which air carriers serve the major cities and states of the two nations.

Although many different states and cities are being served by the industry's airlines, a very interesting clustering phenomena may be observed. In other words a high proportion of air traffic concentrates between specific states and furthermore between specific cities, and city pairs.

Between 1992-1994 three US states captured almost three quarters of total arrivals and departures between the US & Mexico. These states are: California, Texas, and Florida (see figure 7).

As we can derive from figure 7 these three states captured altogether 80%, 79.8%, and 75.8% of the total air travel respectively in 1992, 1993, and 1994. Although we can observe a 4% market share decrease for the three states in the former period - greatly captured by the state of Illinois with an important 8% market share in 1994 - no other state with the

Figure 8.



exemption of Illinois has a participation larger than 2%.

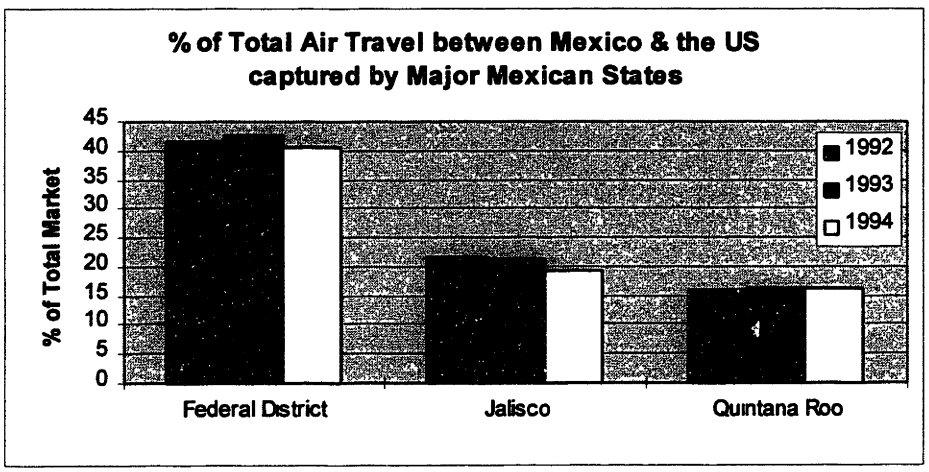
In terms of market activity, volume, and attractiveness these states practically captures and determines the trends of air travel to and from Mexico.

Within the Mexican states the same clustering phenomena can be observed. Basically 3 out of the 32 states that conform the Mexican Republic capture about three quarters of the total air traffic arriving from and departing to the US.

In the 1992-1994 period the states of Jalisco, Quintana Roo and the Federal District (D.F.) altogether captured 79.4%,

80.1%, and 76.4% of the total US-Mexico air traveler market (see figure 8).

Figure 9.



A small 3% decreasing trend may be perceived in the total share of these three states but given the magnitude of market share they capture nowadays, no important effect is expected in the near future.

Except for two states - Nuevo Leon and Baja California - that together account roughly for 8-9% of total market -, the

remaining share is pulverized through other major Mexican states.

4.3 Major cities of the US-Mexican market.

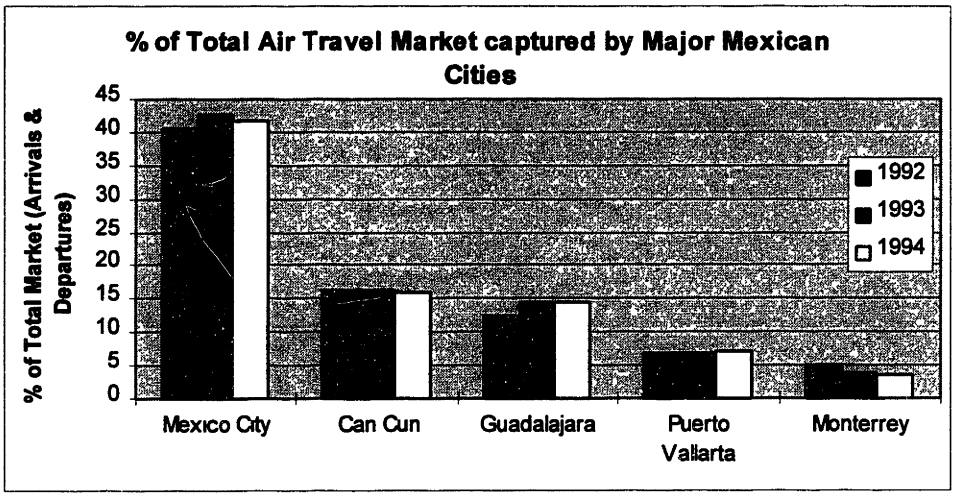
Now that is clear how the air travel market is concentrated by states lets proceed to identify the major cities in each state that captures the majority of air travel.

In Mexico except for the case of Jalisco state that has two cities that capture an important share of air travel, all the remaining states count with only one major city capturing a significant share of the market.

As we can clearly see in figure 9, the five most visited cities by air travelers account for more than 80% of the total market share of travelers arriving and departing from those cities to the US.

Remembering that the size of the markets consists of approximately 10 million passengers, approximately 8 million people will fly in and out of those cities.

Figure 10.



Mexico City by itself has consistently captured more than 40% of the US-Mexican air travel market - approximately 4 million passengers. This is clearly explained by the fact that most of the important industries, economic activity, Governmental departments and even historical monuments are located in or within the vicinities of the mega-city.

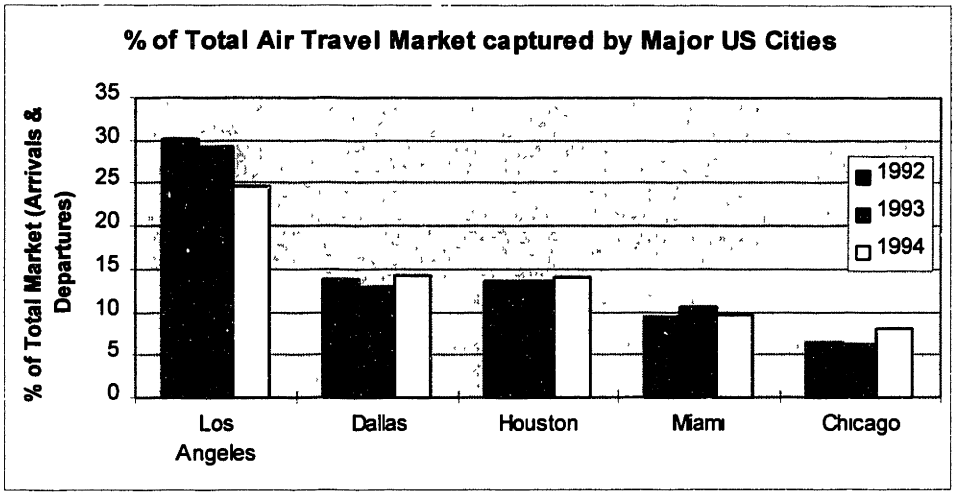
The closest competitor to Mexico City is Can Cun - the world famous renown beach - capturing approximately 2.5 times less market share than the megalopolis - 1.6 million passengers approximately. It may be derived from this fact the strategic importance that Mexico City has for any airline seriously considering to fly to the Mexican Republic from abroad.

As for the case of the US major cities capturing significant shares of the air travel market the result turns out to be less dramatic than for the case of the Mexico City. Nevertheless the same clustering phenomena may be observed.

The US cities where more arrivals and departures occurred from and to Mexico in the 1992-1994 period are: Los Angeles, Dallas, Houston, Miami, and Chicago.

These five states together captured 73.6%, 72.4%, and 70.6% respectively of the total market share in the aftermentioned period. In figure 10 we can observe the individual share for each city.

Figure 11.



The most significant fact derived from this chart is that Los Angeles by itself captures one quarter of the total market - 2.4 million passengers approximately. In the last three years it has suffered a decline in relative terms equivalent to 6% but still maintains a 70% advantage over its closest competitor.

As the same case of Mexico City, any airline thinking to serve the US market from Mexico should carefully consider the possibility of flying into or out of Los Angeles.

4.4 Major city-pairs of the US-Mexican market.

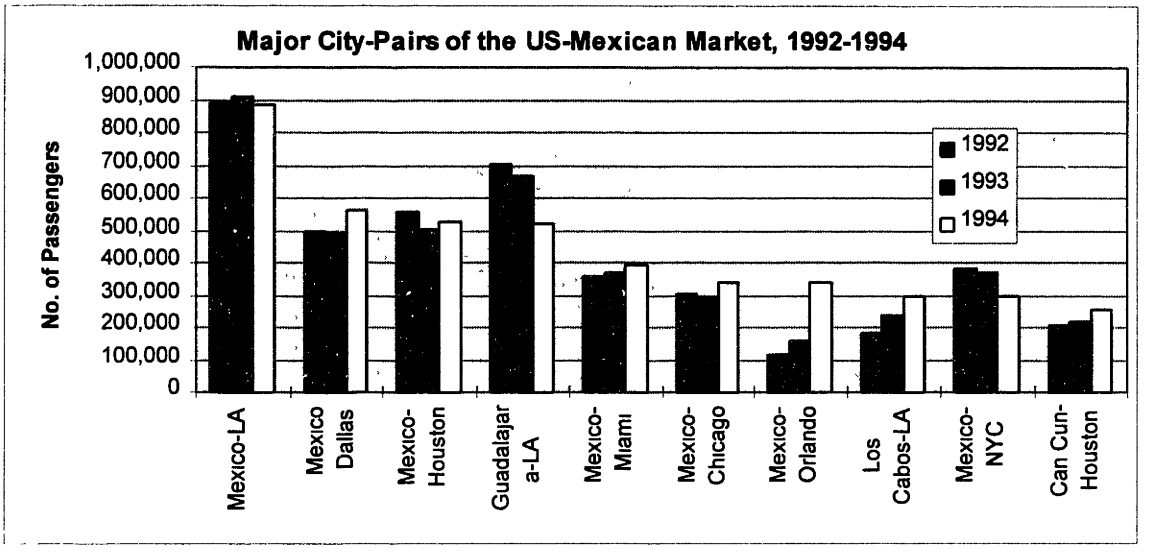
Finally it becomes vital to know which city pairs capture and have the highest density of air travelers in volume terms. This information is extremely valuable to any airline seriously considering the possibility of serving the US-Mexican market.

The aftermentioned market consists of a route structure serving more than 100 city-pairs that basically link the most important cities and state capitals of the US and Mexico.

An important characteristic - as it can be appreciated in figure 11 - is that only 4 cities have volumes between the 500,000-1,000,000 passengers per year.

Approximately 10 out of the hundred city pairs have a traffic flow ranging from 200,000-400,000 passengers per year and thereafter the market begins to fragment among the remaining 85% of the air system's city-pairs.

Figure 12.



Mexico-Los Angeles has been by far the city-pair with more traffic affluence through the years. It has had approximately 900 thousand passengers per year in the 1992-1994 period. This alone accounts for 9-10% of the total air traffic between the US and Mexico and is 57% higher than the closest city-pair - Mexico-Dallas with 564 thousand passengers -.

We can deduce from this fact that the Mexico-Los Angeles market is a very attractive option for any airline that wants to have the possibility of serving the vastest market in the US-Mexican market.

Altogether the ten most important city-pairs in volume terms have accounted for 51%, 50%, and 45% respectively of the total air traffic between the US and Mexico in the 1992-1994 period - approximately 4.4 million passengers per year -. An important fact that can also be observed from figure 11 is that 7 out of the 10 city-pairs have Mexico City as its common denominator. In other words Mexico City is by far the most important hub that any airline analyzing strategic choices, may consider among the most viable alternatives of Mexican destinations in volume terms.

4.5 Competitive Analysis of the Three Main City-Pairs.

In the spirit of understanding the dynamics of the market of the major city-pairs of the US-Mexican markets a competitive analysis would be performed in order to answer the following questions for the 1992-1994 period:

- What was the available offer for those routes?
- What was the service demand in those routes?
- What where the load factors attained for each route?

- Who were the main players in each route?
- How frequently did each player served each route?
- What type of aircraft did they chose to serve them?

4.5.1 The Mexico-Los Angeles Market

Many factors make this market an interesting point of departure for our study. First as we have mentioned before it is by far the biggest market of the US-Mexican route system. It connects the two most populated cities by Mexican citizens in the world. After Mexico City with a population of 22 million, Los Angeles and its surroundings have an estimated population of 5 million Mexican citizens. This in turn explains much of the traffic flowing in both directions in that market. The most relevant data for the city-pair is presented in the following tables:

1) City-Pair*: **Mexico - Los Angeles (1550 miles).**

*** Includes all passengers traveling in both directions.**

2) Market Size of City-Pair:

1994: 882,188 passengers.

1993: 909,905 passengers.

1992: 889,837 passengers.

1992-1994 Average: 893,977 passengers.

3) Total Service offer and Service demand:

Year	Offer(seats)	Demand(pasgrs.)	Load factor
1994	1,545,216	882,188	57.1%
1993	1,701,563	909,905	53.5%
1992	1,608,871	889,837	55.3%

1992-1994 Average No. Of seats offered: 1,618,000

Year	Offer(ASM's) '000	Demand(RPM's) '000
1994	2,318	1,323
1993	2,552	1,365
1992	2,413	1,335

4) Airlines Serving the Market and Their Relative Position

1994 Airline	% of Total Seats Offered	% of Total Pass Captured	Load Factor
A. Argentinas	5.1%	4.0%	45.0%
Aeromexico	13.5%	13.5%	57.5%
Aeroperu	0.3%	0.08%	15.5%
Delta	20.8%	19.5%	53.5%
Malaysia	5.4%	4.4%	46.0%
Mexicana	28.6%	28.0%	55.5%
Saeta	1.7%	1.1%	36.0%
United	24.5%	28.3%	65.5%

5) Types of Aircraft Used and Number of Flights by Airline

1994	Types of Aircraft	# of Flights
A.Argentinas	B-747	99

Average No. Of flights per week: 1.9		
Aeromexico	B757-767,DC10,MD82-83-87-88	724
Average No. Of flights per week: 13.9		
Aeroperu	B-757	21
Average No. Of flights per week: 0.4		
Delta	B-727-737-757	1,972
Average No. Of flights per week: 38		
Malaysia	B-747	208
Average No. Of flights per week: 4		
Mexicana	B-727,A-320,DC-10	2,854
Average No. Of flights per week: 55		
Saeta	A-310	118
Average No. Of flights per week: 2.3		
United	B-737-757	2,797
Average No. Of flights per week: 54		

6) General Comments

The Mexico-Los Angeles market is a route that has had on average 900 thousand passengers per year on the 1992-1994 period. The average no. of seats offered in the same period was 1.6 million from which an overall 56% load factor was attained by the route.

Competition was intense and the market was served by eight different competitors. Three of them were from South America (A.Argentinas, Saeta, and Aeroperu), two were from Mexico (Mexicana, and Aeromexico), two from the US (Delta, and United), and one from Asia (Malaysia).

The strongest competitors were Mexicana and United with a 28% and 28.3% market share respectively. United's 65.5% load factor performed better than Mexicana's at 55.5%. This could be partially explained by the fact that United utilized the lower capacity B-737 on 86% of their flights while Mexicana utilized higher capacity B-727's and A-320's on all of their flights.

In general the most widely used aircraft by all the airlines in the Mexico-Los Angeles market were:

- Boeing-737 with 31% of the total flights;
- Airbus-320 with 20% of the total flights;
- Boeing-757 with 19% of the total flights;
- Boeing-727 with 11% of the total flights;
- MD-80 with 9% of the total flights.

The remaining 10% of the flights were performed with other types of aircraft.

4.5.2 The Mexico-Dallas Market

Many factors combined make this route the second biggest market of the US-Mexican route system. It connects one of the highest income per capita cities of the US with Mexico's capital city. Many Dallas based businesses have their affiliate offices in Mexico City. This in turn explains much of the traffic flowing in both directions in that market. The most relevant data for the city-pair is presented in the following tables:

1) City-Pair*: **Mexico - Dallas (926 miles).**

*** Includes all passengers traveling in both directions.**

2) Market Size of City-Pair:

1994: 564,713 passengers.

1993: 488,708 passengers.

1992: 496,858 passengers.

1992-1994 Average: 516,759 passengers.

3) Total Service offer and Service demand:

Year	Offer(seats)	Demand(pasgrs.)	Load factor
1994	920,976	564,713	61.3%
1993	811,361	488,708	60.2%
1992	824,087	496,858	60.3%

1992-1994 Average No. Of seats offered: 852,141

Year	Offer(ASM's) '000	Demand(RPM's) '000
1994	853	524
1993	751	453
1992	763	460

4) Airlines Serving the Market and Their Relative Position

1994	% of Total	% of Total	
Airline	Seats Offered	Pass Captured	Load Factor
Aeromexico	7.1%	3.6%	31.5%
American	77.2%	78.5%	63.0%
Delta	15.5%	11.5%	45.5%

5) Types of Aircraft Used and Number of Flights by Airline

1994	Types of Aircraft	# of Flights
Aeromexico	MD82-83-87-88	884

Average No. Of flights per week: 17.0

American B-727-757-767,F-100,MD-80,DC10 4,707

Average No. Of flights per week: 90.5

Delta B-727-737-757 988

Average No. Of flights per week: 19

6) General Comments

The Mexico-Dallas market is a route that has had on average 516 thousand passengers per year on the 1992-1994 period. The average no. of seats offered in the same period was 852 thousand from which an overall 60.6% load factor was attained by the route.

Competition was dominated by American and the market was served by three different competitors. Two of them were from the US (American and Delta), and the remaining from Mexico (Aeromexico).

The strongest competitor was American with a 78.5% market share. American's 63.0% load factor performed better than Delta's at 45.5%. This could be partially explained by the fact that American averaged 95 passengers per flight and utilized MD-80's on 76% of their flights combined with higher capacity B-757's on the remaining flights, offering the right balance and seat availability during seasonal occupation changes.

In general the most widely used aircraft by all the airlines in the Mexico-Dallas market were:

- MD-80's with 55% of the total flights;
- Boeing-757 with 18% of the total flights;
- Boeing-727 with 15% of the total flights;

The remaining 12% of the flights were performed with other types of aircraft.

4.5.3 The Mexico-Houston Market

Certain factors make this market a strong one. We have mentioned before that it is the third biggest market of the US-Mexican route system. As the same case of Dallas, there are many economic interests between Houston's and Mexico City's businessmen. Specially in the oil industry, the strongest Houston based oil companies have agreements with the Mexican state owned oil Co. Pemex. Also many suppliers for the industry travel back and forth in the route. This in turn explains much of the traffic flowing in both directions in that market. The most relevant data for the city-pair is presented in the following tables:

1) City-Pair*: **Mexico - Houston (753 miles).**

*** Includes all passengers traveling in both directions.**

2) Market Size of City-Pair:

1994: 525,462 passengers.

1993: 502,904 passengers.

1992: 557,080 passengers.

1992-1994 Average: 528,482 passengers.

3) Total Service offer and Service demand:

Year	Offer(seats)	Demand(pasgrs.)	Load factor
1994	969,934	525,462	54.1%
1993	858,136	502,904	58.6%
1992	1,030,181	557,080	54.1%

1992-1994 Average No. Of seats offered: 952,750

Year	Offer(ASM's) '000	Demand(RPM's) '000
1994	730	396
1993	646	379
1992	776	419

4) Airlines Serving the Market and Their Relative Position

1994 Airline	% of Total Seats Offered	% of Total Pass Captured	Load Factor
Aeromexico	22.5%	21.6%	55.0%
Air France	10.1%	10.2%	57.0%
Continental	67.0%	68.2%	58.0%

5) Types of Aircraft Used and Number of Flights by Airline

1994	Types of Aircraft	# of Flights
Aeromexico	DC-9,MD82-87-88	2,131
Average No. Of flights per week: 41		
Air France	B-747,A-340	393
Average No. Of flights per week: 7.5		
Continental	B-727-737-757,MD-80,DC-9	4,451
Average No. Of flights per week: 87.5		

6) General Comments

The Mexico-Houston market is a route that has had on average 528 thousand passengers per year on the 1992-1994 period. The average no. of seats offered in the same period was 953 thousand from which an overall 55.6% load factor was attained by the route.

There was some sort of competition and the market was served by three different competitors. One of them was from the US (Continental), one was from Mexico (Aeromexico), and one from Europe (Air France).

The strongest competitors was by far Continental with 68% of the market. Its closest rival was Aeromexico with only 21.6% of the total market share. Continental's 58% load factor performed almost evenly compared to Air France and slightly better than Aeromexico's 55%. Despite its clear market dominance Continental could not out perform its rivals in terms of load factor. This could be partially explained by the fact that Continental utilized on 88% of its flights aircraft with

seating capacity of 150 passengers or more (MD-80, B-727-757) while it only attained 84 passengers on average per flight.

In general the most widely used aircraft by all the airlines in the Mexico-Houston market were:

- MD-80 with 42% of the total flights;
- DC-9 with 30% of the total flights;
- Boeing-727 with 11% of the total flights;
- Boeing-737 with 8% of the total flights.

The remaining 9% of the flights were performed with other types of aircraft.

4.6 Relevant Characteristics of the US-Mexican Market

By analyzing the three most important markets of the US-Mexican air travel system we have accomplished a snapshot of what major issues an airline faces when competing within the system.

For airlines planning to enter the market a long list of issues awaits them to be answered in order to accomplish a sound strategic plan that addresses the most significant factors required for long-term success. In the following list we will present the coincidences encountered in the former analysis as a way of providing some useful highlights of how the major airlines have resolved to confront competition given the results - previously presented - that the airline managers have achieved through their strategic decisions.

4.6.1- Stage Lengths

If we take as a sample the 12 most important city-pairs - which account in volume terms for more than 50% of total passengers - of the US-Mexican market, we may claim that on average the stage length is 1,300 miles. The duration of such a trip is covered by a commercial aircraft in roughly two and a half hours. Two thirds of the sampled markets actually are within a range of 1,300 miles apart.

4.6.2- Competition

On average 3.1 competitors serve the 12 most important city-pairs in the US-Mexican market. In addition, 42% of those 12 city-pairs are served by three competitors, 34% are served by four competitors and the remaining 33% will vary in range.

Furthermore, on average one airline within each market dominates and captures more than 64% of total air travelers for that market. In other words we found in our sample that two out of three city-pairs have one major airline capturing at least 60% of the total market share. The remaining city-pairs in our sample - except for Los Angeles - were dominated by a single carrier capturing between 44%-56% of the total market share.

We may conclude this segment by saying that there seems to be no extreme competition in terms of market share given that 91% of the city-pairs sampled had one single carrier capturing at least 44% of the total market.

4.6.3- Load Factors

Basically the typical range for load factors varied between 57% to 61% on average. This pattern consistently repeated for all the airlines regardless the share of the market they were attaining.

Even in the most extreme case when we found a single scheduled carrier serving one city-pair (Can Cun-Dallas), we found that its end of the year load factor reached only 74% of the total seats offered in that route.

4.6.4- Type of Aircraft and Average No. Of Passengers

To our surprise we found that still the most widely used aircraft within our sample was by far the immortal Boeing-727. In two out of three of the markets sampled the B-727 was serving the city-pairs and furthermore, in one out of three of our sampled city-pairs the B-727 was the aircraft carrying more passengers along the route.

Following in the list was the MD-80 which was also the airplane carrying more passengers in one out of three city-pairs sampled although it was not as widely used as the B-727.

The next place was for the Boeing-737 which was the aircraft most widely used after the B-727 although it ranked third when measured by the number of passengers carried.

The most widely used aircraft with up-graded capacity was the Boeing-757. Apparently this aircraft was used in times of seasonal over-demand and also in the cases where the continuing flight required a medium-to-long range aircraft.

From the former affirmations we may derive that there is a marked tendency of the airlines serving the US-Mexican market to use short-to-medium range aircraft give the city-pairs distances and also we can observe that the most popular aircraft setting ranges from 120 to 150 seats which are the

most popular configurations that the major airlines have for the aftermentioned airplanes.

The typical number of passengers per flight found in our sample ranged from 84 to 95. The average was 89 passengers per flight.

4.7- Air Fares and Ticket Pricing:

"Pricing is crucial for airline management. It is the mechanism whereby the demand for air services is matched with the supply. The airline's primary aim must be to sell the capacity it is prepared and able to offer at prices which will generate sufficient demand to ensure a adequate level of profit.

Broadly speaking, two alternative strategies are open to airlines. The first is to relate each tariff to the costs incurred in providing the services used by those paying that

tariff. This is cost of service pricing, more frequently referred as cost-related pricing.

The alternative is to base tariffs for different categories of service not on costs but on what consumers are willing to pay. This is market pricing or demand-related pricing."[58]

In the case of the U.S.-Mexican market since most of the main routes have been served for at least more than 20 years ago, it is our belief that the actual prices reflect not only the airline's costs but all the possible effects that prices could affect in aggregate demand.

A study was performed in order to assess the market's behavior for the aftermentioned countries. Since virtually thousands of possible combinations of fares are available every day depending on the route, carrier, day of the week, schedule, high or low season, and many other variables we chose to

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[58] R. Douganis, "Flying Off Course: The Economics of International Airlines",1995, pp. 283-285.

perform a random sample on the Los Angeles-Mexico City market based on the following criteria:

- It is the oldest air market served between the U.S. and Mexico (1931 by Mexicana Airlines). In fact LA airport acquired its status of "International Airport" because of the first international flight that arrived from Mexico City;
- It is and has been for many years the largest market between the US and Mexico;
- It contains the largest number of carriers competing in one route of this market (Eight in 1994) and carriers with different flags (Mexico, US, Asia, South America);
- It includes passengers of all the different segments of the market (Business, Leisure, and Travelers visiting family and/or friends);
- It may be a very attractive market in which a low-cost carrier may initiate its operations.

The former arguments convert L.A.-Mexico route in a representative sample of other markets. This sample contains one hundred fares selected for different dates, days of the week, carriers, class, etc. between the months of June and December 1996. It is important to mention that for some specific dates some of the prices offered by different carriers were the same, that is, they offered practically the same pricing options to its customers. This explains why in our table (see figure 13) we only find thirty different prices and not 100.

These sample contains "real" fares that already apply for the second semester of 1996 for the LA-Mexico city-pair.[59] We found that on this specific route a wider array of prices and options -50% more approximately- was available for travelers purchasing a one way tickets than for those purchasing a round trip.

[59] Air Transport Association, " Official Airline Guide with Fares", 1996, Internet.

Figure 13

Mex-Lax Pricing Jun-Dec 1996
Random Sample

1 Way	Airline	Class
$ 187	UA	Q
$ 202	CO	M
$ 204	DL,MX,LR,UA	M
$ 250	UA	Q
$ 308	UA,MX,AA	Q
$ 326	LR	Y
$ 349	MX	Y
$ 349	DL,MX,LR	Y
$ 369	UA	Y
$ 371	UA	Y
$ 432	DL	F
$ 440	AA,CO	Y
$ 474	UA	F
$ 476	UA	F
$ 483	AA	Y
$ 496	CO	F
$ 496	AA	F
$ 544	AA	F

Average	**$**	**375**	
Median	**$**	**370**	
Mode	**$**	**204**	
Highest	**$**	**544**	**American**
Lowest	**$**	**187**	**United**
Range	**$**	**357**	

Rnd Trip	Airline	Class
$ 298	CO	V
$ 318	UA	M
$ 358	UA	Q
$ 368	UA	Q
$ 375	DL,MX,LR	M
$ 396	CO	Q
$ 464	UA	M
$ 475	MX,DL,AA,CO,UA	M
$ 570	MX	M
$ 627	MX	Y
$ 729	AA,UA	Y
$ 795	AA,DL	Y

Average	**$**	**481**	
Median	**$**	**434**	
Mode	**$**	**475**	
Highest	**$**	**795**	**American, Delta**
Lowest	**$**	**298**	**Continental**
Range	**$**	**497**	

Source: 1996 Official Airline Guide

Eighteen different options of prices are available on average to passengers purchasing one way tickets while only twelve different options are available in the round trip category. In addition we found five different categories in which airlines categorize their fares. This categorization corresponds to the actual price offered for each flight and also for a certain number of seats depending on the historical demand and the airline's predictions. The range progresses as follows: V (Victor), M (Metro), Q (Quebec), Y (Yankee), and F (First Class) being cheapest the Victor category and increasing in prices until First Class which is the most expensive category. The Yankee category is the one known as "full fare" or the fare with no discounts. Victor, Metro and Quebec categories will have attractive discounts over the Yankee fares.

Basically the same in-flight service and seats are offered for the first four categories -Victor, Metro, Quebec, and Yankee. The difference in prices depends basically on the following factors:

- **Cancellation Penalty:** If the passenger does not cancel its reservation within a specified number of days before its intended departure, the airline may charge a specified fee or charge as a percentage of the tickets price;

- **Advance Purchase:** Significant differences in prices may derive if the ticket is purchased with anticipation. A ticket purchased with less than 3 days of anticipation prior to the intended flight departure would pay a full fare applicable for the route. A ticket purchased with at least 21 days of anticipation would receive the maximum discount available. Other important yard-sticks are 3 and 7 days anticipated purchases.

- **Minimum Stay:** Some fares are conditioned with the requisite of staying or not leaving from the destination on a flight "x" number of days after the arrival to that place, that is, if the passenger embarks on a returning flight before the specified number of days, she will have to pay a premium to do so.

- **Number of Seats Available for each Category:** On each flight a fixed number of seats -which varies from flight to flight- is assigned to each price categories. This may result in a case where a passenger purchasing her ticket with more than 21 days of anticipation will not receive the lowest fare for that flight given that the Victor category had been completely sold out prior to her request.

If a passenger is capable of handing all this restrictions, he or she may be able to obtain the lowest fares available for its specific flight.

The lowest available fare on a 1 way flight between LA-Mexico was offered by United Airlines at $187 US dollars and was coded in the Quebec category. The most expensive flight offered with similar standard service was $483 offered by American Airlines. As we can see making a last minute decision may cost a passenger 2.6 times more than if the trip was planned with anticipation and almost 3 times as much if the

traveler is planning to travel with the first class special features.

The average fare on this route was $375 dollars or twice when compared to the lower fare and the median was $370. The range between the highest and lowest fare reached $357 USD which basically accounts for an average fare price.

Another interesting fact appeared when observing the fare offered by the largest number of carriers. As we may have suspected this was among the lowest fares. At the $204 USD fare we found that four rivals included this Metro category fare in its list of possible choices. This price is slightly 10% higher than the lowest and is offered by Delta, Mexicana, A.Argentinas and United Airlines again. It appears that rivalry is fierce and that all competitors are willing to take care and offer their services to the price sensitive travelers.

When analyzing the round trip offer between LA and Mexico City a similar pricing pattern is observed with the exception

that only twelve different fare options are offered instead of the 18 as in the case of one way flights. The lowest price is offered by Continental Airlines with a $298 round trip fare in the Victor -the cheapest- category. Continental is closely followed by United who offers the three cheapest options after its rival with $318, $358, and $368 fares.

Again when comparing the most expensive fares American Airlines occupies the first place sharing it with Delta with a $795 USD round trip fare in the Yankee -Full fare- category. Interestingly this fare is also 2.6 times higher when compared to the lowest offering exactly the same service -except for restrictions.

The average fare was $481 and the median $434. The range between the highest and the lowest fare was $497 USD which as the same as in the one way fare, it accounts roughly for the average fare.

The wide range of prices offered in both cases reflects the fact that all the airlines are attempting to capture as much market share as possible, composed from all the different passenger segments that are traveling in the LA-Mexico route. It can be derived then that a very standardized service is offered on each flight intended to satisfy from the price-sensitive traveler all across to the passenger who is paying 3 times as much for his flight without getting any premium in the service he or she receives.

Chapter 5 Feasibility and Description of a New Airline Serving the US-Mexican Market

In this chapter we intend to pull together the previous information recopilated and analyzed in Chapters 1-4 in order to emit our own verdict of the feasibility of a new carrier serving the US-Mexican market.

In addition, if such venture is found feasible we will theorize about some of the special characteristics that the proposed airline may contain, in the light of the lessons learned throughout the preparation of this thesis.

Lets begin by reviewing the major issues regarding the airline industry. When analyzing the industry's performance with Porter's five-forces framework in Chapter 2, we found the following results:

1.- Low Entry Barriers and Moderate Exit barriers resulting : **Low industry attractiveness.**

2.- Intense Rivalry among Competitors resulting: **Low industry attractiveness.**

3.- High Power of Buyers (air travelers) resulting: **Low industry attractiveness.**

4.- Low Power of Suppliers resulting: **Mild industry attractiveness.**

5.- Low Availability of Substitutes resulting: **High industry attractiveness.**

Basically the opportunities that the former analysis contemplates derive in two forms. The first is the fact that air travel will remain the most important -and sometimes the only- mean of transportation for passengers traveling on long-haul routes, and an important alternative of transportation for passengers traveling on short-haul routes as long as the economies of flying keep close to those of surface travel transportation.

The second opportunity captured in the former analysis describes that the actual state of the industry is propitious for the initiation of air services given the availability in favorable conditions of essential factors of production in the airline industry: labor and aircraft.

The remaining three forces raise several red flags that must be carefully taken into account by any entity considering the initiation of air services between the US and Mexico.

The picture described by these forces contemplates an extremely competitive industry with new players emerging every year and all of them willing to fight ferociously for their last inch of market share in order to maintain its position. Evidence demonstrates that during price wars competitors' retaliation was predatory and destructive.

Since the product offered -a seat on a specific flight- is so perishable, airlines are willing to give away the

remaining seats they have available, given the industry's excess capacity, at marginal cost. As we mentioned previously, "The industry is lead by its dumbest competitor".

Finally to make the picture worse, there is little loyalty from the buyers (passengers) that with almost no switching costs, are deciding their carrier preferences based on price. Although airlines have made strong efforts and investments to gain loyalty from their customers -e.g. Frequent Flyer Programs- , these have less specific weight in the scale of the new and more price-sensitive air travelers.

Nevertheless its important to mention that despite the unfavorable industry's conditions some carriers have been able to successfully compete and have adequate financial returns for their shareholders.

Two examples of such affirmation are Southwest Airlines and recent start-up carrier Valuejet. Southwest has operated in black for the last 22 years even well before the Airline

Deregulation Act was signed by President Jimmy Carter. On the other hand Valuejet has been financially sound since its inception in 1993 and furthermore has been able to perform a successful I.P.O., convincing the minds of the most reluctant Wall Street analysts.

Another important issue that must be mentioned is that while this thesis is being written, brighter times are shining for major carriers. Financially speaking, it is possible that unless some unexpected event occurs during this year, 1996 may be among the best years of the decade for major carriers like American, Northwest, and United among others. Although we can not sing victory, the reader must be cautious and observe the new industry outlook to detect further opportunities.

In the spirit of positivism and partly influenced by the author's passion for the airline industry we will signal a green light for the possibility of new carriers serving the aftermentioned market. At this point we will proceed to describe and theorize about how can a successful new venture may be inserted in the market.

To continue with a more descriptive picture of the intended airline in mind we will proceed to select a name for the carrier.

Many passenger surveys have showed repeatedly that among the primary concerns of people utilizing air transport services are the following:

- The carriers safety records and standards;
- On-time performance;
- Price;
- Dependability n the carrier;
- Employee courtesy;
- Convenient schedules;
- Efficient baggage handling;
- Level of service in relation to price;

- Others (Frequent Flyer Programs, Baggage transfers, etc.).

For the reasons mentioned above we feel the name of the company has to provoke an assuring and confident sensation to the customers. We believe (apart from conducing the appropriate marketing tests), that the corporate name that best suits the venture's objectives is: " **Reliance Airlines** ".

5.1 Mission Statement of the Airline

The company's Mission Statement reads a follows:

" In Reliance Airlines our mission is to provide our clients with DEPENDABLE and CONSISTENT LOW-COST air transportation service in accordance to their NEEDS, and for the ultimate WELL-BEING of the company's STAKEHOLDERS."

In this spirit the company's management and employees will be COMMITTED to give their best efforts to satisfy the diverse

needs and interests that an airline business has to achieve in order to SUCCEED in the dynamic and highly competitive airline industry.

5.2 Positioning of the Proposed Airline

We will begin by defining "market positioning" as the act of establishing and communicating the products' key distinctive benefits in the market.[60] The critical requirement is to generate a unique competitive advantage.

For the success of Reliance Airlines we have previously detected that one the most important critical success factors is to achieve low-cost operations. In one of the forthcoming sections we will describe how can Reliance presumably achieve a low-cost operation, so for now we will take it for granted.

Given the former assumptions we can now mention that Reliance Airlines will position itself in the market place with a highly flexible mix of scheduled and charter services at a

[60] P. Kottler, " Marketing Management", 1995, pp.265.

very low cost combined with high quality level of operations. By high quality level of operations it is meant a safe, convenient, and on-time operating performance.

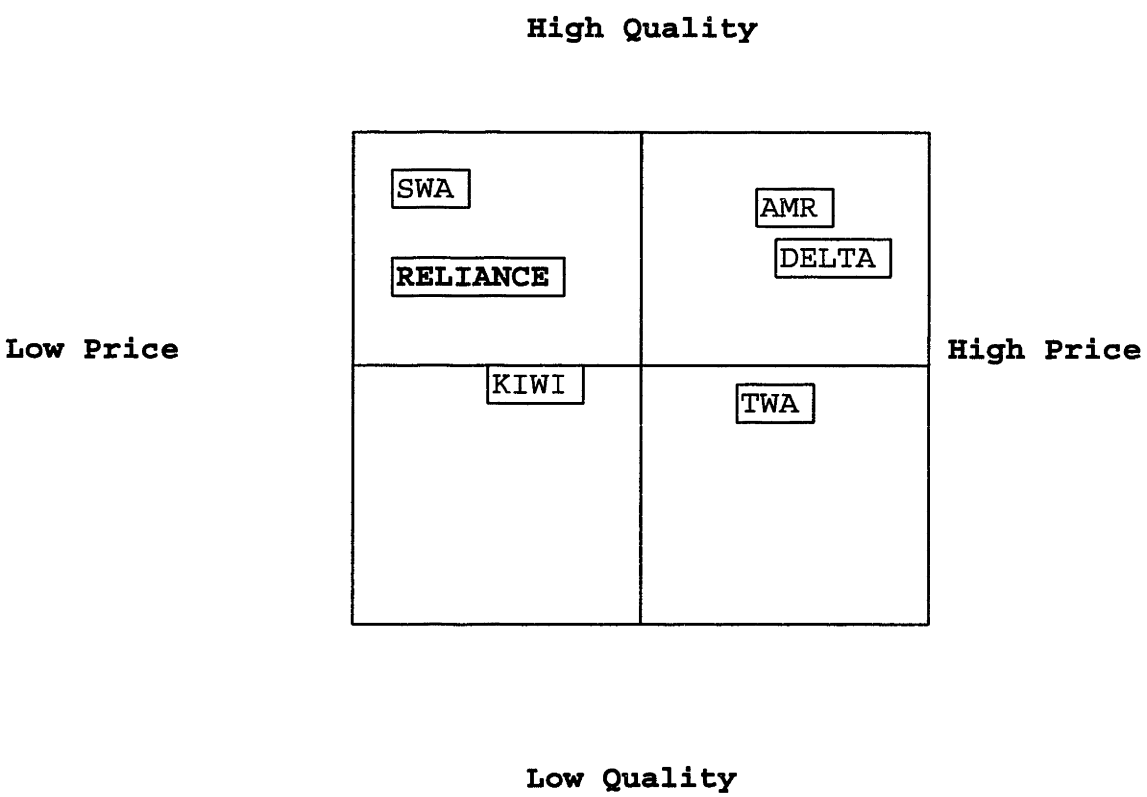
Having considered the intense dynamics in the airline industry, we came to the conclusion that unless the company had very deep pockets to withstand a possible retaliatory attack from a major airline, it will not be a sensible strategy to compete head-to-head with a major expecting to win the battle.

Instead a more rational approach to us was the consideration that views the possibility of maintaining financially attractive but non-threatening market shares for a low scale operator in many different market niches.

We will speculate that with small scale operations targeting no more than 3-4% of total market share per market, major airlines will not initiate disruptive price wars that will affect the bulk of the remaining market. If operations are initiated with a discrete entrance and making sure that the

company's communications and public relations departments let know Reliance's intentions in advance we expect that no major disruptions will occur. Reliance's position within a Product-Positioning Map would be the following:

Figure 14.



5.3 Company's Ownership

The company's ownership plan is one of the crucial designs for the success of the venture. Reliance Airlines' ownership would be conformed of the following shareholders:

- A major travel agency with presence in the U.S. and Mexico;
- A major hotel chain or group of hotel investors with facilities in at least one major Mexican destination;
- Employees and management in the form of ESOP's.

The rationale of selecting such group is that these entities are the three most important actors in a traveler's trip. These actors have one common denominator which is that they all depend on the travelers' preferences for the success of their businesses. By aligning synergies without losing focus of their specific business a very important alliance would be

held without compromising the interests of the specific businesses.

To avoid the repentance of former failures of similar intents -e.g. United's Allegis- the company would be independently managed by an "outside management team" which in turn would decide the most lucrative businesses for the company. The shareholders would compromise to outsource services which will contribute to the airlines financial success and will expect adequate returns in exchange. When feasible, business alliances will be promoted in conjunction in order to maximize revenues for the parties involved, but in case of lack of agreement Reliance management will count with autonomy to decide upon its most convenient future with the only compromise of maximizing shareholders value.

5.4 Marketing Strategy

Reliance services will include a combination of charter and scheduled operations. If we take out 6 weeks a year in

total that an aircraft is grounded for maintenance and crew training purposes, we are left with roughly 46 weeks a year of aircraft usage for business purposes.

Scheduled operations will be held during the high seasons throughout the year. If we add up summer, winter and other "long-lasting" vacation periods of at least two weeks of duration, we will account for approximately 16 weeks a year. Reliance Airlines will perform during this 16 weeks yearly scheduled operations to the most lucrative destinations in the US-Mexican market previously identified on Chapter 4.

Given the market size the three most likely routes in which initiate operations are: Los Angeles-Mexico; Houston-Mexico; and Dallas-Mexico. In addition to the size of the market another important factor that makes this routes attractive is the fact that many different types of passengers fly on this routes such as: business travelers; leisure travelers; and passengers visiting family and/or friends. This market characteristic guarantees a constant flow of travelers

throughout the year in order to adjust the offer and seek for break-even operations.

The products distribution and selling would be on the hands of the shareholders - Travel Agency(ies) and Hotel Chain(s) who have the necessary expertise and technology to perform this task. The objective of this strategy is to lower costs and lock-in synergies that will give Reliance Airlines a competitive advantage over its competitors, and at the same time will provide a certain amount of revenues that will be taken away from the travel agencies & hotel operators with the actual availability of on-line services offered by the major carriers.

As mentioned in the positioning segment, a 3-4% maximum market share target on each market is intended in order to avoid to the maximum extent a head-to-head confrontation with the "Big Ones". Since Reliance is not performing a year round operation we will translate the 3% market share target on average weakly terms that read as follows:

- Los Angeles-Mexico City market = 513 passengers per week;
- Dallas-Mexico City market = 326 passengers per week;
- Houston-Mexico City market = 303 passengers per week.

Adding up these numbers a total of 1,142 passengers must be transported by Reliance Airlines every week from these three destinations. To achieve the target, 163 passengers will fly every day using the airline's services. If we expect that a Reliance's aircraft will be able to complete four segments per day (LA to Mexico one way accounts for one segment) then on average 41 passengers will be on-board of every flight.

At this pace after the plane completes the thirty weeks destined for scheduled flight, about 18,300 passengers will have been transported by Reliance Airlines.

On the remaining 30 weeks the marketing strategy would consist of the following. The airline's marketing team will

approach US and Mexican local town's authorities and/or industrial groups interested in "Owning an Airline" through the year, for any number of "blocks" consisting of at least one week in order to provide air travel service between their home town and other town in the other side of the border.

The basic idea is that local governments and/or industrial groups would be able to promote local festivities such as fairs, local celebrations, business fairs & conventions, etc., with low-cost point-to-point air services and generate an additional flow of visitors from abroad with the consequent economic benefits and prestige for the town and/or industry.

Except for few operational and maintenance restrictions the customers would have complete flexibility to design the most convenient routes and itineraries to fit their needs at a very low cost air service.

The benefit for Reliance Airlines is obvious given that it will operate at a profit or break-even in the worst case all along the low season periods during which most of the full year scheduled airlines loose money.

5.4 Planning and Financial Advantages

To transform this project into a successful one Reliance Airlines main financial objective -as stated in the Corporate Mission- is to perform and attain the required levels of profitability suitable for such a venture.

In the spirit of having a sensible estimate of the operating costs that the company must achieve in order to be viable, an estimation of the costs of one of the most significant competitors in the LA-Mexico market was performed.

It is mentioned by the way that this is not an exhaustive analysis proper of a business plan and neither it is intended as a factor for decision making. Such an analysis would be proper of a study which could easily cover another master's thesis.

As our point of departure we chose Mexicana Airlines as our benchmark for several reasons such as: It has the largest market share of the specific route; its a good point of

comparison since it is an airline based on costs utilizing Mexican labor; it is the carrier with most experience in the route (more than 65 years).

As described in figure 14, the calculation was based on the following assumptions:

- Route: Los Angeles-Mexico City (One way Flight);
- Type of aircraft used: Airbus-320 with 150 seat configuration;
- Available seat-miles per flight: 232,500;
- Revenue Passenger Miles: 139,500;
- Load factor for the flight: 60%;
- Break-Even load factor at specified yield: 60%;
- Number of seats sold: 90;
- Tariffs were based on three price categories: Metro (M), Quebec (Q), and Yankee (Y);

As we can see in figure 14, three different scenarios were performed in order to obtain the correspondent Revenues Per Passenger Miles that based on our assumptions would be also the Costs Per Available Seat Miles.

Figure 15

Mexicana Airlines Lax-Mex Flight (One Way)

Type of Aircraft:	Airbus-320
No. of Seats Available:	150
Distance:	1550 Miles
Available Seat Miles:	232,500
Load Factor:	60%
Revenue Passenger Miles:	139,500
Break Even Load Factor:	60%
Seats Sold:	90

Assumption: Cost Per Seat-Mile = Revenue Passenger Mile

Scenario 1: High Revenues per Passenger Mile

Yield:	% of Tot. Capacity	# Seats	Price	Total Revenues
Class M	0%	0	$ 204	$ -
Class Q	60%	54	$ 308	$ 16,632
Class Y	40%	36	$ 349	$ 12,564
Total		90		$ 29,196

Cost Per Available Seat-Mile: $

	0.126

Scenario 2: Low Revenues per Passenger Mile

Yield:	% of Tot. Capacity	# Seats	Price	Total Revenues
Class M	80%	72	$ 204	$ 14,688
Class Q	20%	18	$ 308	$ 5,544
Class Y	0%	0	$ 349	$ -
Total		90		$ 20,232

Cost Per Available Seat-Mile:	$ 0.087

Scenario 3: Moderate Revenues per Passenger Mile

Yield:	% of Tot. Capacity	# Seats	Price	Total Revenues
Class M	40%	36	$ 204	$ 7,344
Class Q	50%	45	$ 308	$ 13,860
Class Y	10%	9	$ 349	$ 3,141
Total		90		$ 24,345

Cost Per Available Seat-Mile:	$ 0.105

Average Cost Per Available Seat-Mile:	**$ 0.106**

On Scenario 1 the prevailing assumption was that a high number of passengers would fly paying either full fare (Class Y - 40% of the total = 36 passengers) or the following fare speaking in price terms (Class Q - 60% of the total = 54 passengers).

Total revenues for that flight add up to $29,196 USD that divided by 232,500 available seat miles result in a cost per seat mile of 12.6 cents for the high yield scenario.

On Scenario 2 the prevailing assumption was that a high number of passengers would fly paying the lowest fare available (Class M - 80% of the total = 72 passengers) or the following fare speaking in price terms (Class Q - 20% of the total = 18 passengers).

Total revenues for that flight add up to $20,232 USD that divided by 232,500 available seat miles result in a cost per seat mile of 8.7 cents for the low yield scenario.

On Scenario 3 the prevailing assumption was that a moderate number of passengers would fly utilizing all the fares available (Class M - 40% of the total = 36 passengers) or the following fare speaking in price terms (Class Q - 50% of the total = 45 passengers), and also an adequate number of passenger paying full fare (Class Y - 10% of the total = 9 passengers).

Total revenues for that flight add up to $24,345 USD that divided by 232,500 available seat miles result in a cost per seat mile of 10.5 cents for the moderate yield scenario.

In this exercise the costs per ASM varied from 8.7 cents for the lowest yield to 12.6 cents for the highest yield. The moderate yield gave a cost of 10.5 cents per ASM having as the overall average cost per seat mile 10.6 cents.

From here we may conclude that for the Los Angeles-Mexico City one way market, Reliance Airlines must perform costs lower than 8.7 cents per ASM taking into account that this was the

lowest scenario contemplated and that perhaps some flexible margin may apply.

Now we will switch gears in order to analyze the round trip cost behavior (see figure 15) in the same aftermentioned market. For this analysis our assumptions will read as follows:

- Route: Los Angeles-Mexico City (Round Trip Flight);
- Type of aircraft used: Airbus-320 with 150 seat configuration;
- Available seat-miles per flight: 465,000;
- Revenue Passenger Miles: 558,000;
- Load factor for the flight: 60%;
- Break-Even load factor at specified yield: 60%;
- Number of seats sold: 180;
- Tariffs were based on three price categories: Metro (M), Quebec (Q), and Yankee (Y);

Figure 16

Mexicana Airlines Lax-Mex Flight (Round Trip)

Type of Aircraft:	Airbus-320
No. of Seats Available:	300
Distance:	3100 Miles
Available Seat Miles:	465,000
Load Factor:	60%
Revenue Passenger Miles:	279,000
Break Even Load Factor:	60%
Seats Sold:	180

Assumption: Cost Per Seat-Mile = Revenue Passenger Mile

Scenario 1: High Revenues per Passenger Mile

Yield:	% of Tot. Capacity	# Seats	Price	Total Revenues
Class M	0%	0	$ 375	$ -
Class Q	60%	108	$ 475	$ 51,300
Class Y	40%	72	$ 627	$ 45,144
Total		180		$ 96,444

Cost Per Available Seat-Mile:	$ 0.104

Scenario 2: Low Revenues per Passenger Mile

Yield:	% of Tot. Capacity	# Seats	Price	Total Revenues
Class M	80%	144	$ 375	$ 54,000
Class Q	20%	36	$ 475	$ 17,100
Class Y	0%	0	$ 627	$ -

Total		180			$ 71,100
	Cost Per Available Seat-Mile:				$ 0.076

Scenario 3: Moderate Revenues per Passenger Mile

Yield:	% of Tot. Capacity	# Seats	Price	Total Revenues
Class M	40%	72	$ 375	$ 27,000
Class Q	50%	90	$ 475	$ 42,750
Class Y	10%	18	$ 627	$ 11,286
Total		180		$ 81,036
	Cost Per Available Seat-Mile:			$ 0.087
Average Cost Per Available Seat-Mile:				**$ 0.089**

On Scenario 1 the prevailing assumption was that a high number of passengers would fly paying either full fare (Class Y - 40% of the total = 72 passengers) or the following fare speaking in price terms (Class Q - 60% of the total = 108 passengers).

Total revenues for that flight add up to $96,444 USD that divided by 465,000 available seat miles result in a cost per seat mile of 10.4 cents for the high yield scenario.

On Scenario 2 the prevailing assumption was that a high number of passengers would fly paying the lowest fare available (Class M - 80% of the total = 144 passengers) or the following fare speaking in price terms (Class Q - 20% of the total = 36 passengers).

Total revenues for that flight add up to $71,100 USD that divided by 465,000 available seat miles result in a cost per seat mile of 7.6 cents for the low yield scenario.

On Scenario 3 the prevailing assumption was that a moderate number of passengers would fly utilizing all the fares available (Class M - 40% of the total = 72 passengers) or the following fare speaking in price terms (Class Q - 50% of the total = 90 passengers), and also an adequate number of

passenger paying full fare (Class Y - 10% of the total = 18 passengers).

Total revenues for that flight add up to $81,036 USD that divided by 465,000 available seat miles result in a cost per seat mile of 8.7 cents for the moderate yield scenario.

In this exercise the costs per ASM varied from 7.6 cents for the lowest yield to 10.4 cents for the highest yield. The moderate yield gave a cost of 8.7 cents per ASM having as the overall average cost per seat mile 8.9 cents.

From here we may conclude that for the Los Angeles-Mexico City Round Trip market, Reliance Airlines must perform costs lower than 7.6 cents per ASM taking into account that this was the lowest scenario contemplated and that perhaps some flexible margin may apply.

It is our belief that the 8.7 cent cost per ASM for one way trips and the 7.6 cent cost per ASM, reflect a very close reality to the actual performance and dynamics in the Los Angeles-Mexico City market for major carriers. For that reason we may now proceed to make an estimation of Reliance's revenues with such yield.

Figure 17

Route: Los Angeles - Mexico

Type of aircraft: Canadair Regional Jet RJ-100

Aircraft seating configuration: 70 passengers

# of Segments: Two (Round Trip Flight)

Lowest Fare offered in the route: $298 USD (Continental)

Reliance Airlines fare: $254 USD (15% lower than the lowest fare available with no restrictions).

# of seats offered: 140

Estimated # of Passengers to be Carried: 82

Load factor: 60% approximately

Break-Even load factor: 60%

Available Seat Miles: 434,000

Total Revenues per round trip: 82 x $254 = $20,830

Total Revenues per Month per Aircraft: 2(Round Trips per Day) x 7 (Days per week in high season) x 16 (High season weeks per year) x $20,830 (Round trip revenues for the LA-Mexico route) = $4,700,000 Dollars per 16 month a year-high season period-per aircraft.

Cost per Available Seat Mile = 4.8 cents.

Total monthly revenues for break even in high season: $4,700 / 4 operating months (16 weeks) = $1,175,000 USD.

From figure 17 we conclude that our monthly expenditures in order to sustain an aircraft flying 2 round trips per day during high season are $1,175,000. In this case we captured only 3% of the total market and our operation sustained at break even.

By capturing an additional 1% of the market an additional 54 passengers would add up to our daily count. For this case the numbers would behave as follows:

Figure 18

Route: Los Angeles - Mexico

Type of aircraft: Canadair Regional Jet RJ-100

Aircraft seating configuration: 70 passengers

# of Segments: Two (Round Trip Flight)

Lowest Fare offered in the route: $298 USD (Continental)

Reliance Airlines fare: $254 USD (15% lower than the lowest fare available with no restrictions).

# of seats offered: 140

Estimated # of Passengers to be Carried: 109

Load factor: 78% approximately

Break-Even load factor: 60%

Available Seat Miles: 434,000

Total Revenues per round trip: 109 x $254 = $27,686

Total Revenues per Month per Aircraft: 2(Round Trips per Day) x 7 (Days per week in high season) x 16 (High season weeks per year) x $27,686 (Round trip revenues for the LA-Mexico route) = $6,200,000 Dollars per 16 month a year-high season period-per aircraft.

Cost per Available Seat Mile = 6.0 cents ($26,040 per flight).

Total monthly revenues for break even in high season:
$4,700,000 / 4 operating months (16 weeks) = $1,450,000 USD.

Actual monthly revenues: $1,550,000 ($6,200,000/ 4 months)

PROFITS: $100,000 PER MONTH ($1,550,000-$1,450,000).

RETURN ON INVESTMENT: 7% APROX.

As we may derive from figure 18 an adequate 7% Return on investment is achieved if Reliance Airlines captures 4% of the total market between LA-Mexico City during the 16 high season weeks. This holds true for costs per ASM of 6 cents and for fares 15% lower than the lowest already available in the

market. Virtually dozens of combinations more could be performed in order to improve the company's profitability but our objective was only to introduce the reader into what may be necessary to initiate operations between the US and the Mexican market.

Summary and Conclusions

Most of the major strategic considerations and trends within the airline industry were revised and evaluated in order to obtain a fair platform to assess the possibility of starting the operations of a low-cost carrier serving the US-Mexican market.

The current situation in the airline industry shows a long desired recovery and brighter future prospects at least in the short run. The most financially successful carriers today are those that have identified specific market niches and have arranged their operations to meet the demand with high levels of productivity.

Furthermore, in almost all of the cases in which the companies accomplished healthy financial performance, the employees participation was key for the development of a sound strategic approach. In many cases this employee involvement was rewarded with a certain level of company's stock.

It is our belief that new formulas are awaiting to be created in order to serve the air travel market in a more efficient and economical way. We conclude from our industry and market assessment that new approaches like the one proposed for Reliance Airlines are feasible within the US-Mexican market. This can be achieved by imaginative mangers willing to design the new paradigms of the 21st century and having the privilege of putting them into action in the most glamorous and exciting of all industries: The Airline Industry.

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▶NAME SALGADO, Rodolfo

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