

US DOMESTIC AIRLINE INDUSTRY

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Table of contents

1. INTRODUCTION	3
1.1 SCOPE OF RESEARCH	3
1.2 HISTORY	3
1.3 INDUSTRY SIZE AND GROWTH TRENDS	3
1.4. MARKET STRUCTURE	4
1.5. KEY CHALLENGEING ISSUE	4
2. INDUSTRY OVERVIEW	6
2.1 PEST ANALYSIS	6
2.2 FACTORS AFFECTING TRENDS IN DEMAND & SUPPLY GRWOTH	7
3. INDUSTRY ANALYSIS – FIVE FORCES	8
4. SWOT ANALYSIS	11
5. CONCLUSION	12
6. REFERENCES	13

1. INTRODUCTION

1.1 SCOPE OF RESEARCH

The research focuses on the US Domestic Airlines industry, with both its strong and weak points,

and how it meets challenges concerning service competition, and economic difficulties. For the

United States, air flights are a vital part of the transportation system, connecting the country

internally. The paper analyses how corporates adjust to the purchasing power of customers while

having the extremely high start-up and operating costs and how the Domestic Airlines industry

advances technologically to provide its clients with the best possible service.

1.2. HISTORY

The US domestic airline industry is quite competitive and requires huge amounts of money and

hard work to break even. The industry had evolved greatly since the beginning of the 20th

century when airplanes were unreliable and uncomfortable (Cook). Since the introduction of

twin-engine airplanes, all this changed and the flow of passengers started to rise. After the world

war II, many new local service airlines were subsidized and within the next 20 years, the flow of

passengers increased tenfold. In 1978 the Congress passed the Airline Deregulation Act (ADA),

which eliminated control of the Government over the industry. The most important innovation

was the hub-and-spoke route system that allowed passengers to combine routes to reach their

destination and keep a high traffic load. In conditions of a high demand for air flights, the system

of computer booking was introduced. In short, the US Domestic Airline industry started back

1903 and had grown over the years with improvements courtesy of technological revolution.

1.3 INDUSTRY SIZE AND GROWTH TRENDS

Revenue: \$132.3 bn

Annual Growth 12-17: 1.5%

Profit: \$9.5 bn

Expected Annual Growth 17-22: 2.7%

The major competitors of domestic airlines industry in the United States are American Airlines

(23.1%), Delta Airlines(21.2%), United Continental(16.6%), Southwest Airlines(14.6%).

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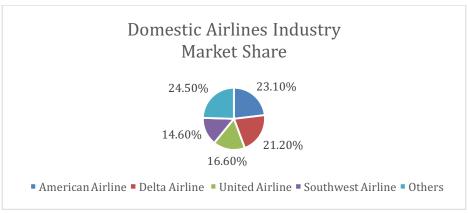


Image 1. Domestic Airlines Industry Market Share

1.4 MARKET STRUCTURE

After calculation, the CR4=79.0%, HHI>1472. Classified by the industry classification rule of DOJ, Domestic Airlines industry is in the market structure of **Oligopoly.**

The airlines industry has changed from *Effective competition* in 1970s to *Oligopoly* after 2010. The Airline Deregulation Act was introduced in 1978. Its effect was to increase competition, with fare prices decreasing in the twenty years following its introduction. Meanwhile, the number of fares increased from 207.5 million in 1974 to 721.1 million in 2010. However, after extensive consolidation in the industry and the failure of many smaller airlines, prices have begun to rise sharply as the market has become an oligopoly. There is not a single airline founded during the 21st century that has even 2% market share.

Another important reason is that after the terrorist attack in 9/11, FAA stepped up its management of airlines. More stringent access and security checks are applied. Many small airlines relied on non-compliance with safety codes, reducing pilot training time and extending aircraft maintenance intervals to maintain low costs against major corporations were gradually cleared out of the market.

1.5 KEY CHALLENGING ISSUES

First serious issue which domestic Airline industry is facing these years is the servicing section.

The most notorious scandal is the passenger dragging incident by United Airlines. In this incident, a "randomly chosen" passenger, David Dao has dragged off the plane forcibly with

electric shock because of the overbooked seats. This incident arouses worldwide attention due to David Dao's Asian identity and the public's joint dissatisfaction toward the servicing section of the whole industry, no mention severe violation involved. This extreme incident pressure The Domestic Airlines industry so much that it intensified the service competition between operators. Foreseeable higher training and PR expense may constrain the profit margin of The Domestic Airlines industry. According to International Civil Aviation Organization (ICAO), training and PR expenses, which belong to serving expense and overhead expense respectively, compose 29% and 13% of the total operating cost.

What's more, the maturity of low-cost carriers is making the competition in The Domestic Airlines industry even more intense. Those low-cost carriers featured by low price preferred by an increasing number of price-sensitive customers is shocking the industry. Low-cost carriers could make the profit by surcharging luggage, seat selection among the same class or other ancillary services, which traditional carriers don't usually charge. Under the pressure of price match, sometimes traditional carriers have no choice but lower the quality of their service. The majority of the industry tends to apply "cost advantage" strategy, which could gradually undermine the existing service standard of the current industry and eventually result to the dissatisfaction of the audience.

Airline industry revenue growth has been constrained during the five-year period by sudden declines in the world price of crude oil, from 105.01/barrel in 2012 to 43.26/barrel in 2016, which caused the market price of jet fuel to decline as well, limiting the ability of operators to generate revenue through fuel surcharges. One embarrassed plight is that due to the price war, once the world price of crude oil increases, they can hardly increase the fuel surcharges by that much. While the world price of crude oil decreases, they have to react to the lower oil price promptly by lower their fuel surcharges or otherwise, they would be questioned by their passengers.

2. INDUSTRY OVERVIEW

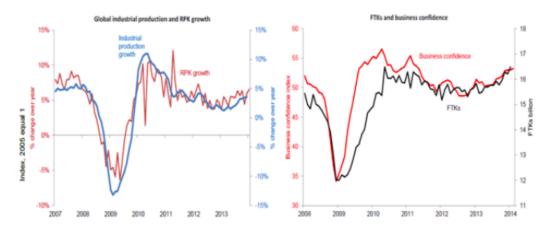
2.1 PEST ANALYSIS

Domestic Airline industry is very sensitive to changes happening into external environment. Although these factors are not in control of airline companies but they can alter their business strategy if they have sound knowledge of trends and economic life cycle.

POLITICAL

US domestic airline industry operates in a highly political environment which is highly regulated and restricted. This industry is affected by some serious issues such as terrorism, an outbreak of diseases—such as Ebola. There are two major incidents happened in past which had a huge impact on the airline industry. First is 9/11 terrorist attack, due to which industry revenue had decreased from \$130.2 billion in 2000 to \$107.1 billion in 2002. Second is Airline deregulation act of 1978, which removed the regulations related to airfare and travel routes. As a result of this, many other companies also entered into the industry which lowered the air traveling fares.

ECONOMIC



The domestic airline industry has strong relation with US economic cycle's peaks and troughs. This can be clearly understood by above mentioned 2 graphs [5]. The left side graph shows the relation between RPK (Revenue passenger kilometers-measuring volume of passengers carried by airline) & Industrial growth. The right side graph shows the relation between FTK (Freight

Ton Kilometers- the metric ton of revenue load carried one kilometer) & Business Confidence level. The economic downturn and increased fuel prices in the past had forced the airline companies to continuously work on productivity and cost saving.

SOCIAL

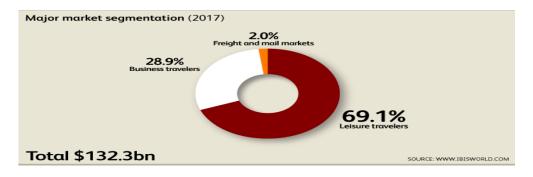
With growing income of middle class and increasing globalization, the consumers are getting more inclined towards leisure travels. As a result airlines industry in experiencing the increased demand. The average population of US is getting older and this is working as a positive sign for US airline industry because older people generally prefer taking air travel for their comfort.

TECHNOLOGICAL

Technology is continually improving and constantly upgrading towards forward direction. Mobile Apps are becoming the trend among consumers to buy tickets, instead of going to airline counter and kiosks. Latest cellphones are having the mobile wallet option, this feature has attracted the airline companies to bring the paperless ticket concept. Airline companies are using social media channels and online blogs to give the best possible online offers to attract the travelers. For this work they have a dedicated team working on it.

2.2 FACTORS AFFECTING TRENDS IN DEMAND & SUPPLY GRWOTH

Corporate profit: The business traveler contributes 28.9% in the total number of domestic fliers [1] which is a significant number to decide the demand. Corporates increase the number of employee trips during growth periods and they pay for travel charges. Also, corporate travelers are more likely to purchase first class tickets. Hence, profits of the companies is a key factor to decide the demand of overall domestic airline industry. Corporate profit is expected to rise at 1.7% annualized rate in coming five years[1] so this forecast is surely going to create a pull in the air travel.



Per capita disposable income: 69.1% of the revenue earned in this industry comes from leisure travelers[1]. People start spending on vacation and other air trips when their per capita disposable income increases. Therefore this is an important factor that affects demand trends in the airline industry. During the recession, demand for air-travel fell down because of low per capita disposable income of US population.

Crude oil prices: The fluctuation of crude oil prices does have a great impact on the industry, as it contributes to almost 30% of the change in operating revenues of airline companies. According to the disclosed data, crude oil prices in the international market in 2015 were 47.2% lower than last year. Despite the volatile trend in crude oil prices, most airline companies still choose to bear the costs by themselves: it is reported that price changes in crude oil should be the most critical causes in bankruptcies and acquisition events in the industry from the year 2010. Therefore, from the supply side, the crude oil price is a significant factor.

Other factors impacting on supply may include prices of aircrafts and maintenance fees.

3. INDUSTRY ANALYSIS – FIVE FORCES

3.1 INDUSTRY RIVALRY

The level of competition inside the domestic airline industry is high and the trend is increasing.

- The Domestic Airlines industry is highly competitive. Airlines compete for customers on price, flight scheduling, route offerings, VIP programs, promotions, availability and customer services.
- The number of competitors is not changing rapidly in both short run and the long run as the

industry is in the mature stage. The fixed costs are extremely high in this industry which makes exit barriers very high as airline companies are always running with heavy pressure on long-term debt in order to stay in business. High-tech factors involved in their products also heightens the competition.

3.2 THREAT OF NEW ENTRANTS

The threat of new entrants is extremely low for airline industry.

The barriers to entry in the airline industry are remarkably high. Start-up costs, which include initial expenses on hangar and airfield space, skilled pilots and workers, high-tech machinery

High
High
Mature
Medium
High
Heavy
High

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and compliance to stict safety requirements, are extremely high for airlines. The operating costs are massive, and the government regulations a company must obey are numerous and significantly complex. There is not a single airline founded during the 21st century that has even 2% market share.

• Additionally, once a new company enters the industry, it will likely encounter significant barriers to success. Major competitors may already have associations, a wide network of industry contacts, a proven safety record the evidenced ability to run their flights on time and the economies of scale. As a result, new entrants could struggle to compete with mature airlines even after massive initial capital outlays.

3.3 BARGANING POWER OF BUYERS

The bargaining power of buyers are high in domestic airline industry.

• There are many competitors in the same segment (havi ng flights from and to the same places) so that potential consumers have plenty choices which makes the bargaining power of buyers relatively high. Additionally, more and more airlines now offer "first-time

discount" to compete for regular customers who have the VIP discount of other airlines which significant decreased the switching cost of the buyers inside the industry, increasing the bargaining power.

• The emergence and raging popularity of third-party trip-booking websites, and smartphone apps, exacerbates this issue for the airlines. Most travelers access sites or apps that compare prices of all airlines so that they can choose the most suitable one much easier than before.

3.4. BARGANING POWER OF SUPPLIERS

The Bargaining power of suppliers is high in domestic airlines industry.

- The airlines are dependent on two major airplane and maintenance suppliers Airbus and Boeing and compete heavily for limited capacity. Similarly, the fuel suppliers control the price as airlines cannot function without them as the airlines' inventory of fuel is always in a low status for economic reason.
- But when the economy is in downstream, as it is no longer a supplier's market, the bargaining power of suppliers will significantly decrease. In times of economic weakness, as airlines reduce flights, seldom need to buy new aircraft, it is difficult for Boeing and Airbus to sell a sufficient number of aircraft, which is their core business, to recover their cash flow and support their continued growth. The bargaining power of suppliers would be very low during tough hours.

5. THE THREAT OF SUBSTITUTES

The threat of substitutes is moderate in domestic airlines industry.

- For Business travelers, who account for about 29% of all airplane travelers, they are not likely to choose other transportation for their trips. Time is the key factor. The travelling time of train and bus is way too much for business passengers to select. So, the threat of substitutes for them is low.
- For leisure travelers, who account for 69% of all airplane travelers, they are more likes to

have the potential to choose other transportation for their trips. The switching cost is low for them and they will consider the high cost they have to pay to airlines. Until a new technology comes along that supplants air travel as the fastest and most convenient way to travel long distances, the threat of substitutes is moderate in domestic airlines industry.

4. SWOT ANALYSIS

STRENGTHS

One of the biggest strengths of Delta Airlines is that it made a very practical choice to invest in an oil refinery when the economic crisis hit the country. When fuel prices skyrocketing, Delta Airlines was able to cover the cost by producing its own fuel source. Another major strength of the airline was that it did not invest heavily in buying new airlines, which kept its costs low to be better able to compete with other airlines. Delta Airlines has also taken measures in the form of marketing alliances to become cost effective and provide its customers with more access. It uses ventures such as code sharing, reciprocal access to airport lounges, to increase its profits. It has partnered with strategic major airlines such as Air China, Air France, BLM, etc. which allow it to spread its reach.

WEAKNESS

Delta Airlines is highly dependent on the North American market for revenue and profits. This becomes a weakness for them since if there are any discrepancies in the American market, they can potentially lose out on a lot of profit and even go bankrupt. Delta Airlines also has financial issues in terms of debt which could make this company plummet. This airline has not managed its resources well enough to pay off debts and secure the airlines. Both these factors make Delta Airlines an easier target for competitors to work against and eventually leave behind.

OPPORTUNITY

Since Delta Airlines buys old planes it recognized that the maintenance costs might bring much savings; hence, to stay on top of competitors Delta Airlines opened their own maintenance

division which resulted in tens of thousands of jobs as well as potential revenue. They did not miss this opportunity for making profits as the airplane maintenance industry is worth a solid \$55.3 billion dollars' revenue generation. Delta Airlines also showed adaptability when they had a successful merger with Northwest Airlines, and together they fared better from other competitors. As a result of this very successful merger, Delta Airlines could now function in 66 countries all over the world and open a variety of new market opportunities for itself. Together the companies manage to severe around 200 million customers worldwide on a yearly basis.

THREATS

There is a steady increase in competition for Delta Airlines which makes it harder for the airlines to stay competitive in the market. Airlines such as Southwest airlines, United Continental Holdings, and American Airlines are increasingly making innovative steps to increase their customer service which threatens Delta Airlines whose main market is on North America. International security risks like terrorism makes the customers fear for their safety and opt for secure flights, especially government officials. Other risks like diseases can also make customers scared to fly since airplanes have a controlled environment where it is easier to catch diseases.

5. CONCLUSION

After conducting the research on US domestic Airline industry, we can conclude that, to achieve the superior competitive position in the industry, Delta Airlines need to constantly optimize its internal management structure. Also they have to conduct market research along with leveraging available resources to optimize route allocation. Delta Airlines also need to work closely with Boeing and Airbus to secure the supply of new aircraft. At the same time, Delta Airlines should also look at further financing, to provide funds for further expansion in new development area.

6. REFERENCES

- 1. Brian Sayler (2017) IBISWorld Industry Report 48111b: Domestic Airlines in the US, Retrieved from IBISWorld database.
- 2. T. Stalnaker, "AIRLINE ECONOMIC ANALYSIS," Oliver Wyman, 2015–2016.
- 3. [online] Available: http://marketrealist.com/2014/09/why-political-and-legal-factors-impact-airline-industry/ Accessed: 4 December 2017.
- 4. [online] Available: http://marketrealist.com/2014/09/why-economic-factors-support-airline-industry-growth/ Accessed: 4 December 2017.
- 5. Franke, Markus, and Florian John. "What comes Next After Recession? Airline Industry Scenarios and Potential End Games." *Journal of Air Transport Management* 17.1 (2011): 19-26
- 6. Mallikarjun, Sreekanth. "Efficiency of US Airlines: A Strategic Operating Model." *Journal of Air Transport Management* 43 (2015): 46-56
- 7. Cook, G. (1996). "A Review of History, Structure, and Competition in the U.S. Airline Industry." *Journal of Aviation/Aerospace Education & Research*, [online] 7(1), pp.33-42.