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# The Effects of The Airline Business Models to The Airline Industry

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**Abstract**

The civil aviation industry which began to develop in the deregulation period in 1978 became the dominant mode of air transport in the early 1990's, with the use of hub (centre airport of a flag carrier airline) and spoke (connection destinations from flag carrier airlines' centre airport) concepts. With this development phase, low cost transportation strategy has been effective and airlines that implement the traditional transportation strategy have accelerated. In the 9/11 Twin Tower Attack, confidence for the civil aviation industry has declined and there has been a 7% depreciation across the globe. In the same period, numerous small and large scale airlines had to finish their activities. At the beginning of the 1990's low cost carrier airlines which played a major role in the growth of the civil aviation industry dropped ticket prices, allowing people from all trips about the stages to embark on the aircraft, taking the industry out of luxury transportation and thus these carriers ended the loss of confidence process. This research examines airline business models that provide industry growth in the 21st century, apart from the main trend of low cost transportation in the 1990's.

***Keywords:*** Push factors, Pull factors, Key performance indicators, Basic factors affecting demand, Airline business model

## 1. Introduction

In the early 1990's, the demand for the civil aviation sector showed great improvement and that improvement has continued to increase in the last few years. According to ICAO's study in January of 2017, when the revenue for passenger kilometers (RPK – Passenger Kilometer per Revenue) stated as abortion traffic is calculated, 35 million flights were made with the revenue of 7,015 billion dollars in 2016 [1]. According to the data from the Air Transport Bureau, it was confirmed that the growth and impressive expansion in the sector between 2015 and 2016 has continued with a growth of 7.66% per annum on the basis of RPK data [2].

It is also reported that global gross domestic product (GDP) growth was estimated about 2.4% in 2016. More than half of global tourism traffic and more than 35% of world trade are made by air transport. On the contrary, the global cargo traffic market has an intensive and active market not just passenger transport depending on the current production and processing capacity of the industry,

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while monitoring an alternative profile besides passenger transport. While air cargo transport is less prominent than passenger transport, it has grown by 3.8% yearly according to the Freight Tonne Kilometer (FTK) statistics at the end of 2016 [3].

The rates in the first half of 2016 and 2017 are analyzed. There is a good year end performance of the air cargo industry with an economic stagnation of world trade. The development of new generation platforms has made the sector an even bigger market, especially in the development of the civil aviation industry with the growing demand for passenger and cargo flights in the growing market, as well as manufacturing sector, cost efficiency, travel comfort and delivery targets. Airbus's 2016-2035 Global Market Forecast report estimated that the growth in air traffic would result in an annual increase of %4,5 with 33,000 new aircraft requests approaching US $ 5.2 trillion over the next two decades [4].

It was also noticed that the same report is a reservoir of over 13,000 airplanes with an equivalent value of 200 billion pound which is thought to be a large area for UK civil aviation sector growth [5]. Current state shows that airlines continue to make profits not only because of good route choices but also because of increased productivity in factors such as; aircraft load, right business models and other internal activities. This economic situation leads airlines to renew their fleets which results in aircraft manufacturers of aircraft making innovations. The aim of this research is to understand the various factors that influence the growth of the industry through the definition of the controlling production demand of "push and pull" factors.

## 2. Theoric Method

### 2.1. Introduction to Push and Pull Factors

To understand and create the various factors that contribute to the growth of the industry, it is necessary to define them as "push and pull" factors. Push factors drive the industry to internal factors to adapt and consume products. These factors are intrinsic and depend on socioeconomic conditions for intangible demographic and market data. The pull factors are related with external forces that attract the industry about the consumption of same product [6].

These "pull" factors; are dependent metrics related with innovative technological features that heavily dependent on the needs and behaviors of the consumer including; price, quality, entertainment, convenience and accessibility. In the context of this commitment, two key performance indicators are used. These are:

- Social Factors
- Economical Factors

Many of these factors are both "pushy and appealing" and some of these factors are primarily foreground. Only the socioeconomic factors are taken into account in the aim of this development. These factors are usually classified according to the rate of influence from pushing and pulling properties.

### 2.2. Basic Factors Affecting Demand

Permanency and flexibility are two of the best defining topics for air transport in the past few years. The huge increase of 6.4% in the passenger traffic in 2015 shows the highest growth rate (6.6%) since 2010. In addition, 2010 represented the period when the great recession was over. As a matter of fact despite the slight decline of 3.1% in economic growth in 2015, the growth in passenger traffic has approached the pre-recession growth levels between 2004 and 2007 [7, 8].

The adverse impact of international tourism in particular regions of the world, especially in Eastern Europe and the Middle East could not be avoided even if the ongoing geopolitical risks were taken into account in 2015. These risks have been reduced with discounts for international passengers. For this reason be able to evaluate various factors, the two KPIs are used in detail for the following subsections.

### 2.3. Social Factors

The dimension of social factors indicates that demand trends for aircrafts differ between the continents and the regions. However, demand models are strongly influenced by economic and

demographic factors, it is difficult to recognize the social factors playing an important role in demand models. Considering Boeing [7] and Airbus's market analysis [4, 9], factors that consider to be able to make future demand forecasts are in the context of social factors. Variables related to a range of economy, performance and productivity can be considered within the notions of "travel propensity" (pull) and "environmental awareness" (push) factors only on the social scene. Both factors are not independent of economic trends, but are not considered as the main factors. If the social dimension traditionally includes economic awareness, none of the above mentioned dimensions; including technological similarities, cultural characteristics, traditions, contracts, habits, behaviors (eg. saving behavior) as well as the population, demographic conditions and needs of an country are accounted for market analysis. "Second-class" factors have been taken into account in market analysis for major airlines and/or civil aviation companies.

#### 2.3.1. Travel Trend

Travel passion; related with Gross Domestic Products in the civil aviation industry and the willingness of the passengers are take part in the strong dominant side. According to the global market forecast of Airbus, European and American citizens are the most enthusiastic travelers in the civil aviation industry and a large majority of the current level is thought to be formed by these communities for estimate this trend will be increased by 25% in the coming years. It is also estimated that the total population to travel by air in 2035 will correspond to approximately 75% of the population of developing countries [4], which is given by the Airports Council International (ACI) which places Atlanta, Beijing and Dubai in the top three ranks. The world is clearly visible in the traffic order of the airport.

ACI has reported worldwide growth of the civil aviation industry with 1.4 billion passengers passing through 1,179 airports and 14 largest passengers from 20 largest airports making up 18% of global passenger traffic [10]. These figures confirm the behavioral characteristics of the passengers and it is determined that there are various criteria to support the growth factor of the social factor that constitutes the social factor in this direction as the "pulling" effect.

#### 2.3.2. Environment Awareness

Reducing noise and fuel consumption in terms of reducing CO2 emissions will continue to be a priority target and provided through the development of commercial aviation technologies. Innovative materials, latest aerodynamic designs and intelligent use will keep the development of motor technologies sustainable. Among other scientific groups and typical examples will continue to be developed in which weight reduction will significantly reduce fuel consumption. Specific technologies such as; advanced wing designs contribute to better fuel efficiency (eg, using composites) within production techniques that will be driven by intensive investment in research and innovation. All these applications are contribute to further reductions in emissions [7].

Much of this progress improves the economy of aircraft operations which directly impacts the profitability of airlines. This situation also provides the industry as a transition to a more sustainable scenario in which environmental impacts have been significantly improved. Compared to the 1960's, Boeing reported a significant reduction in both the noise of 90% and the emission of 70% from the jet engines production in the late 2000s [4, 7].

Thus, technology has been constantly monitored and improved through global regulations aimed at reducing emissions and controlling noise levels and environmentally friendly jet engines have been introduced under the "push" strategy to the industry to save fuel. In addition, advanced technology route map systems such as; Flightpath 2050 predicts that noise and emission levels should be respectively reduced by 65% and 70% [11].

#### 2.3.3. Summary

Published reports and literature reviews show that the trend to travel over the next 20 years will continue to be a major "pullback" factor. However, civil aviation products are manufactured in order to achieve targets that exert pressure as a factor of "pushing" the sector in order to provide

environmental awareness must be kept under control.

### 2.4. Economical Factors

In any sector the economy plays an important role for covering the overall growth of the industry and the whole of civil aviation, so constantly increasing demand is no exception. When we look at the big picture according to the Airbus GMF 2016 report, there are more than 33,000 aircraft with 20 years demand for new passenger and cargo. The same report estimates that the civil aviation industry is worth US $5.2 trillion highlighting the impact of market growth [4].

At the end of 2015, the report also showed an increase of 5.6% in revenue per kilometer (RPK) in emerging markets and 3.7% in developed markets. This is mainly influenced by the significantly changing economic factors among the regions. Some of the economic factors have an unpredictable future depending on regional local behavior and decisions. Other economic factors vary depending on the strategic decisions adopted by the companies. In order to be fully assessed, economic factors have been gathered in four categories as explained in the following subsections.

#### 2.4.1. Major Economic Indicators

In civil aviation economic development is a strong indicator for market demand. The development of developing and developed regions is a scenario in which current producers are trying to address. Because the Gross Domestic Product (GDP) is a common indicator and it is very important to understand the real market demand. While GDP remains an important driving force for air transport, the relationship with the growth of civil aviation has developed overtime. This situation is evident at the global level and also it is based on service at the regional or country level. Airbus reported in the second quarter of 2016 that world traffic is below 2.6% of world GDP with an increase of 54% in passenger traffic and with an increase between 54 developing and 32 developed markets [4]. It is clear that GDP is not the only factor driving air traffic growth. Factors such as; private consumption, international trade, tourism, crude oil prices, airline profits and productivity gains contribute to economic factors [12].

#### 2.4.2. Liberalization

International air transport is governed by a dual system that set of approxiamately 60 year rules. A different system was designed to improve passenger and freight movement freely. There are restrictions on the number of airlines and the frequency of service on many international routes where many countries have airline ownership and restrictions on the control of foreign nationals with the Bilateral Air Service Agreements. Airlines have established a more secure, accessible and efficient industry than ever before. However it is necessary for countries' civilian aviation authorities to bring in potentially suitable policies to the airlines, the future success of the industry is based on a system that greater commercial freedom and serves business to existing markets [13]. Liberalization can be achieved in different ways. For example; agreements between bilateral agreements or trade blocs (ASEAN) constitute the appropriate environment for the liberalization of international air transport. The liberalization of operational and property constraints is neither an easy process nor a great benefit if it can be implemented. Experiences from other industries show positive effects that both consumers and producers can have. A modern, commercial and global airline industry requires modern, commercial and global rules.

#### 2.4.3. The Financial Status of Airline Business Model

Low cost carriers (LCCs) have revolutionized the short haul market and have expanded consumer choice of air transport at the lowest cost. This has enabled them to achieve cost effectiveness and innovation in a leading position even in a challenging market. However as industry dynamics change, LCCs' business strategies have also changed. In order to compete for cost conscious and short haul passengers, many traditional full service airlines have re-engineered and accelerated their processes by designing new products. In addition costs have been lowered more aggressively, many routes have been priced under the criteria of proximity and tourist attraction. As a result, LCCs'

have to change or improve their business models except for the low ticket price strategy [14].

Today airline business models continue to evolve. While there has never been a clear distinction between low cost and charter carriers, todays' airlines that use low-cost and short-haul modes of transportation are very different. Charter carriers that have implemented low cost carriers and unloading strategies which provide business route times, services and cheap prices multi passenger version strategies have differentiated the clear distinction in the past. LCCs' have even begun long haul transport services by competing with traditional network carrier airlines in end to end rovers. Boeing predicted that the LCC models would account for 26% of the global share, but this ratio would continue to rise to 30%, 32% in 2025 and 2035 respectively [15].

#### 2.4.4. External Shocks

Although the air transport industry is occasionally exposed to instant market shocks, the demands of the industry are flexible and services often seen as essential. Optional leisure activities for holiday activities have an important share in the industry. Over the past 30 years, the civil aviation industry has suffered economic crises linked to oil prices, along with stagnation caused by pandemic war and security threats. Air traffic has continued to grow at an annual average rate of %5, despite all these adverse conditions. Changes in the structure of the country's economy can also lead to short term effects in the industry. For example, although China's slowdown in GDP growth did not draw much attention in the media, air travel continued to perform well. This is because the sectoral structures that make up the travel behavior remain strong. The heavy industrial production and fixed investments are independently affected by the structure of rising demand industry [4].

#### 2.4.5. Summary

In summary, the development of the industry shows the importance characterization of economic factors. While key economic indicators contribute to "pull" factors, liberalization and the airline business model can be viewed as internal "pushing" factors that cause the industry to adapt to ever changing geo-economic variations. Over the years, there have been significant changes in the factors of pull and push in terms of technological and business models. These changes are shown as external shocks due to multiple events presented as both "push" and "pull" factors.

## 3. Findings and Discussions

In this research two findings which named as social and economical parameters are examined with push and pull factors with airline business models in the civil aviation industry. Besides external forces that attract the industry to influence the consumption of the same product as pull factors, socioeconomic conditions for tangible demographics and market data as push factors are examined too. In terms of the evaluation of pushing and pulling factors, basic key performance indicators constitute social and economic criteria which are taken into consideration from the factors about determining the passenger demand. The social factors are defined within the self travel tendency as environmental awareness and summary of both criteria about economic factors are defined such as; major economic indicators, liberalization, airline business model, external shocks and four criteria together. The concept of airline business model which is included in the economic factors, has been examined in the whole study together with the LCCs and it has been evaluated as one of the main elements of the 21st century civil aviation industry models by adding other concepts.

## 4. Results

In today's civil aviation industry, push and pull factors are significant for evaluating key performance indicators which named social and economical factors. Social factors indirectly affected economical factors and it has importance about brand image of an airline. Brand image is not a measurable and an economical parameter but it determines an airlines' level of location which shows the preferability of an airline by the customers. Furthermore, economical factors has an effect related with financial status of an airline. So, key performance indicators directly affected an airlines' business models for development. In this article, it is examined push and pull factors with

airline business models in the civil aviation industry.

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**References**

[1] ICAO, "Traffic growth and airline profitability were highlights of air transport in 2016," 2017.

[2] ICAO, "JAN 2017 : Air Transport Monthly Monitor," 2017.

[3] IATA, "Air Cargo Ends 2016 on a Positive Note," 2017. [Online]. Available: http://www.iata.org/pressroom/pr/Pages/2017-02-01-01.aspx. [Date of Access: 15.06.2018].

[4] Airbus, "Global Market Forecast - Mapping Demand 2016-2035," 2016.

[5] Aerospace Growth Partnership, "Means of Ascent: The Aerospace Growth Partnership's Industrial Strategy for UK Aerospace 2016," 44, 2016.

[6] S. Baloglu and M. Uysal, "Market segments of push and pull motivations: A canonical correlation approach," Int. J. Contemp. Hosp. Manag., 8(3), 32-38, 1996.

[7] Boeing, "Current Market Outlook 2014-2033," 2015.

[8] Boston Consulting Group, "Understanding the Demand for Air Travel: How to Compete More Effectively," 2006.

[9] Airbus GMF, "Global Market Forecast 2015," 2015.

[10] Airports Council International, "ACI Media Release," 2017. [Online]. Available: http://www.aci.aero/News/Releases/Most-Recent/2017/04/19/ACI-releases-preliminary-2016-world-airport-traffic-rankingsRobust-gains-in-passenger-traffic-at-hub-airports-serving-transPacific-and-East-Asian-routes. [Date of Access: 16.06.2017].

[11] M. Darecki et al., "Flightpath 2050," Flightpath 2050 Eur. Vis. Aviat., 28, 2011.

[12] International Air Transport Association (IATA), "Economic Performance of the Airline Industry," 1-6, 2016.

[13] M. Smyth and B. Pearce, "Airline Liberalisation: Lessons from other industries on the impact of removing operational, ownership and control restrictions," 2007.

[14] Sabre Airline Solutions, "The Evolution Of The Airline Business Model -Technology and business solutions that give low-cost carriers the freedom to grow their businesses as they choose," 2010.

[15] Boeing Commercial Airplanes Market Analysis, "Current Market Outlook 2016-2035," 2016.