RESEARCH TOOLS USED TO FORMULATE SUSTAINABLE DEVELOPMENT STRATEGY FOR AIRLINES

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Abstract. The airlines play a significant role in transportation system of the regions. The development of recently invented techniques shaped the airline industry by stimulating a competition. This paper examines the approaches which can be used in order to define the competitive advantage of airlines regarding the external environment of companies. It observes specifically the strategic management tools as Political, Economic, Social, Technological, Environmental and Legal factors’ (PESTEL) and competitive forces’ analysis on the example of Ukrainian International Airlines (UIA).

Keywords: strategic management, airline, competitive advantage, PESTEL analysis, competitive forces analysis, Ukrainian International Airlines, external environment.

Introduction

The demand for air transportation is increasing. It is forecasted that the global air passenger traffic will grow at an average rate of 4.0% each year over the next 20 years (International Air Transport Association (IATA), 2015). It is due to different factors, such as rise of living standards, population growth, demographic changes and drop of air fares. In addition, aviation plays an important role in the economic development, therefore governments encourage its expansion. Air transport is a cyclical sector – the demand is connected with economic cycles (Hätty, Hollmeir 2003) – with significant fixed cost linked to a high level of aircraft ownership, thus the price of air ticket often remains unaffordable to a large proportion of population.

In order to cause the air transport evolution, it was implemented the liberalization of services. Airline industry changed its traditional system with extensive state control, which included anti-competitive practices by ceasing restrictions in the extent of market entry, capacity and pricing (Halpern, Graham 2013). The period of deregulation lasted from 1978 in US to 1997 in Europe, while it is in an active progress in other regions now. Liberalization and deregulation became the main reasons which encouraged air transport’s advancement and stimulated markets to much greater competition, that are the positive tools for development. Accordingly, changes in management and regulatory systems and market integration emboldened expansion of the new strategic airline models, for example low cost carriers (LCCs). The success of LCCs is due to the direct answer to above mentioned elements by creating a new business model and offering lower prices.

Due to the fact that the competition became more intense, the airlines need to formulate their strategies by studying external environment. The difficulty is that the aviation market became global and there is a competition spread across the world. To date, Ukrainian International Airlines cannot compete with carriers such as Lufthansa, AirFrance and KLM in Europe, for instance. It is important to consider the global situation in the aviation market in order to fit further strategy in accordance with trends and tendencies. The objective of the article is to analyse air transportation market and to reveal the main threats and opportunities for Ukrainian International Airlines. It can be used several approaches of strategic management, as PESTEL and competitive forces analysis.

PESTEL Analysis

Better understanding of an enterprise guarantees better choice of strategy for its growth. In order to define the marketing plan or more specified development program it is important to analyse several layers of the business environment. The airline’s macro-environment should be examined by six factors according to PESTEL Analysis (Table 1). Whereas this standard can contain particular
issues, for an aviation market it is still a particularly useful model (Shaw 2007).

**Table 1. PESTEL analysis framework**
(Source: compiled by author)

**POLITICAL**
- Regulatory decisions by governments;
- Political tensions in a region;
- Aviation policy in a region;
- Passengers’ safety is paramount: tight regulations of operations.

**ECONOMIC**
- Growing demand;
- Air fares dropped significantly due to deregulation of an industry and more efficient operations;
- Impact of fuel costs increase on variable costs.

**SOCIAL**
- The demand / profile of passengers has changed;
- Sociocultural globalization;
- The population is becoming more environmentally friendly.

**TECHNOLOGICAL**
- Advanced information technologies: self-service, mobile service and social network services;
- Business Intelligence solutions;
- Robotized safety management applications.

**ENVIRONMENTAL**
- Passengers are more environmentally conscious – “green flying”;
- CO$_2$ emissions: need to comply to environmental regulations;
- Future run out of oil.

**LEGAL**
- Lawsuits against airlines and airports.

**Political Factors**
A country’s political system will define the manner in which its industry is organized (Bennett 1999). These include all governmental policies and associated regulations, laws and conventions. General issues such as political stability, ideology, specific policies and motivation should be considered to assess effect on the organization. In particular, airlines contain a lot of legal elements which cannot be studied in isolation from other parts of the aviation industry, while the market is interrelated and has international nature.

The global political situation directly influence on both the demand and supply of services. While there is unstable political situation in some regions, it can be a threat of terrorist attacks, war or internal conflicts. All these factors can influence on how passengers perceive air travel and their airline experience, and their ability to fully take advantage of the commercial facilities at the airport (Halpern, Graham 2013). Whereas air transport is the safest mode of transport, the accidents that occur (Malaysia Airlines Flight MH370/MAS370, Malaysia Airlines Flight MH17, Germanwings Flight 9525) can bring a strong impact on industry itself. Furthermore, political instability and tensions in region will hurt the growth in a region. Regarding the situation within Ukraine as a whole, there is the growth of strategic distrust due to territorial and border disputes between neighbouring countries.

**Economic Factors**
Economics factors include both national and global trends that can influence on the demand. Demand for air transportation services has always very closely interconnected with income growth (Halpern, Graham 2013). While income or gross domestic product (GDP) rises, passenger and cargo traffic increases and inverse. IHS Economics is forecasting GDP to grow at 3.1 percent over the next 20 years. Regional variations are prevalent, with emerging regions growing above world trend and more mature economies growing below world trend (Fig. 1).

Based on the expected growth in GDP, airline passenger traffic is projected to grow at 6.5 percent and air cargo traffic at 4.4 percent (Fig. 2–3). As with the economy, world traffic varies by market (Fig. 4). Over the next two decades, fast growth in China’s domestic market will make it the largest domestic market in the world and traffic within Asia is set to become the largest travel market (Fig. 5) (International Civil Aviation Organisation (ICAO) report 2013).

Other important economic factors which influence the airline’s ability to operate efficiently and passenger’s ability to afford travel are cost factors. These include air fares which dropped significantly due to deregulation of an industry and more efficient operations. One of the main components of air fare is a fuel, the price of which is remaining uncertain (Fig. 6) and will rise significantly in coming years (Fig. 7) (Air Transport Department, Cranfield University report).

![Fig. 1. Emerging markets are driving growth (Source: Boeing’s traffic and market outlook)](image_url)
Fig. 2. Passenger-kilometres performed (PKP) annual growth rate (ICAO’s forecasts of scheduled passenger and freight traffic)

Fig. 3. Freight tonne-kilometres performed (FTK) annual growth rate (Source: ICAO’s forecasts of scheduled passenger and freight traffic)

Fig. 4. World traffic varies by market (Source: Boeing’s traffic and market outlook)
In addition, another key cost factor is government passenger taxes, which are commonly defined as environmental or eco-taxes (Halpern, Graham 2013).

**Socio-cultural Factors**

Trends in social factors will have widespread consequences for airline marketing, such as population and demography (age, household, occupation) and cultural factors (attitudes, preferences, values, beliefs, religion and lifestyle) (Shaw 2007).

- **Demand**

  Air transportation is becoming more affordable and safer mode of transport.
Lifestyle
Passengers demanding enhanced travel experience: faster, more efficient and seamless service, both at the airport and beyond it;

The ageing population
The product that is offered by airports should evolve with more provision being made for disabled passengers and those needing help at airport, medical care services. In addition, advertisement should not be primarily focused on fun-loving young people.

Changing family structures
There are very important sub-segments to the market (singles, gays, one-parent families) whose particular requirement should be taken into account.

The number of female business travellers increases.

Shifting labour flows and a weakening of links related to historic emigration patterns.

Passenger travel preferences.
The passengers, particularly those who travel a lot, are becoming more demanding in relation to service.

The population is becoming more environmentally friendly.
The airlines should make a special ecological programs, while the construction of a new airport can be banned due to pollution constrains. At the same time, the residents of near-airport area can complain because of noise and pollution, which can be a threat for an airport.

Technological Factors
The technologies are the fastest changing features of the macro-environment.

In order to handle passengers and to increase the quality of service, aviation industry should focus on the use of advanced information technologies designed to simplify the work of employees of airlines and airports, make the service faster and less expensive.

It can be created competent infrastructure by applying the latest IT technologies at the airport and airline: from automated surveillance systems that allow dispatchers to monitor the airspace to the baggage control systems that make suitcases delivered to the right destination points (Jarach 2005).

Self-registration via the Internet along with general use self-registration kiosks gives an opportunity to reduce airport congestion and increase the satisfaction of passengers from traveling. These technologies facilitate the passage of passengers at the airport’s formal procedures and relieve the stress associated with queues, which is now extremely important as there is a tendency of constant increase in passenger traffic. In addition, Société Internationale de Télécommunications Aéronautiques (SITA) passenger self-service survey demonstrates the high levels of demand among the passenger (Fig. 8).

Investments in the development of information technology in airports across the globe in 2015 will be about $6 billion, according to a research made by SITA. According to the 10th annual review of the company SITA, conducted with the support of the Airports Council International and the magazine Airline Business, technology development of passenger service is a top priority for airports worldwide. Airports also invest in technology in the field of passenger transportation organization and in the sphere of information services.

By 2016, about 95% of airports plan to invest in mobile applications which provide information about the status of flights and can guide passengers in airport. In addition, by 2016 75% of airports will offer their services through social networks to passengers, in turn today it is only 56% of airports. Furthermore, by 2016 universal distribution system will receive automatic acceptance of baggage. They will be installed more than in 80% of airports worldwide. Using them passenger can hand over independently baggage and print baggage receipts.

Fig. 8. Passenger demand for more self-service (Source: IATA’s Fast Travel Program guide)
SITA’s review also identified the growing importance of Business Intelligence (BI), which allows organizing received volumes of data and providing at the output all useful and actionable information in a convenient format. In order to optimize revenues and effective management of the organization by 2016 about 80% of airports are planning to invest funds in new BI-solutions. Business intelligence is also demanded when it is a question of flight operations, traffic flow monitoring and resource management of the airport.

Advanced information technologies are becoming a major competitive advantage for airlines and airports serving major transportation hubs. They enable to manage resources more effectively, improve the quality and reduce the time of service, provide an acceptable level of expenses and with their help to establish and maintain standards in civil aviation.

Environmental Factors
Environmental factors have always been a key feature of the marketing macro-environment but have received a greater profile recently as nowadays government and companies have paid more attention to environmental sustainability, to a factors as global warming, pollution control, waste disposal and conservation of energy and other scarce and natural resources (Halpern, Graham 2013).

Airport operations involve a range of activities that affect the environment, including
- The operation of aircraft;
- The operation of airport and passenger vehicles, and airport ground service equipment (GSE);
- Cleaning and maintenance of aircraft, GSE, and motor vehicles;
- De-icing and anti-icing of aircraft and airfields;
- Fuelling and fuel storage of aircraft and vehicles;
- Airport facility operations and maintenance;
- Construction.

The aviation industry recommends that, as part of a comprehensive approach to address air transport’s climate impacts, a single global market-based measure (MBM) be agreed (Fig. 9). This must be seen as part of a broader package of measures including new technology, more efficient operations and better use of infrastructure. The industry believes that a simple carbon offsetting scheme would be the quickest to implement, the easiest to administer and the most cost-efficient. The industry will have to demonstrate that it is investing as heavily as it can in the technological development which will increase the efficiency of aircraft and airports (Shaw 2007).

Legal Factors
Nowadays, the number of lawsuits against airlines and airports from both customers and workers has increased. In addition, the regulators are being stricter with airports, while they are becoming increasingly careful with their strategies, and update them only after they are fully convinced that they are not violating any laws.

The analysis so far leads to the conclusion that the global airline industry is now in a phase where there are an increasing demand and expected passenger and cargo traffic. The air transport became more deregulated and new technologies are implemented in industry. The society is changing, as well as environmental programs are implementing. Therefore, the services in the airport should correspond to the global trends and the strategy has to be built according to the market tendencies.

After having analysed the PESTEL framework, the following analysis will show another model that will allow Ukrainian International Airlines to understanding the dynamics of competitors within this industry and help them differentiate itself from the other companies that offer the same range of services in order to make the right strategic decisions.

Competitive forces analysis
The following analysis is based on Michael Porter 5 Forces Model (Porter 2004) that gives a more precise idea of the positioning in the airline worldwide, where Ukraine International Airlines can defend itself against or influence competitive forces (Fig. 10).

Competitive Rivalry: High
High barriers to entry prevent potential new competitors from entering the market. In addition, strong competition is depending on the catchment area.
Lufthansa, KLM, British Airways and other traditional carriers are a great challenge for the air transport market, as the UIA target the same market segment. Low cost airlines might become competitors in the light of future expansion plans.

Therefore it can be stated that existing, new entrants, foreign competitors are very active in airlines market.

As aforementioned, governments play an important role and it is thus understandable that the Ukraine’s state is in the capital structure of the airport and national carrier and thus, state has an interest to develop and promote the air transport activity by investing costs in it. Generally, competition does not exist on the national market but is very present outside.

A high degree of rivalry will usually compromise the potential profitability of an industry and will typically result in innovation, which stimulates consumer demand for the products of the industry.

**Threat of new entrants – Low**

The airline industry is a capital-intensive utilizing enormous range of expensive equipment and facilities. In order to set up an airline companies need to have either good credit rating to lease some planes or the capital to buy them. So the initial cost of entry is high. Additionally, a potential entrant also needs working capital to absorb several months or years of losses and the cost of a launch campaign.

In addition, there are high barriers to entry, as the government, citizens and support stakeholders have to be involved in a designing process, which is complex task. To be noted, existing UIA is a mature and stable market; hence, the entry of new entrants is unlikely to occur.

First of all, there is a legislation and government action barrier as they both prefer to develop already existing airline. Such barriers can take the form of tariffs or regulation of markets. Moreover, the UIA has important opportunities of economies of scale, making it expensive for new entrants to try and reach such levels of service that would require both money and time due to the effects of the experience curve.

**Threat of substitutes – Medium**

This threat is rather medium with other transportation alternatives not having the same speed, convenience and flexibility as air travel. If we compare the price/performance ratio between a civil aircraft and a train, it is so that the train is cheaper even if it has a lower speed performance. Therefore other transportation modes and other substitutes remain interconnected and complementary.

**Bargaining power of customers – Medium**

All passengers have access to a large variety of airlines to choose the most money-efficient alternative. Therefore, the switching costs are low in this market, thus bargaining power of customers is high.

Although, the airlines drive the passenger and cargo traffic, therefore they have the most powerful bargaining power. (Jarach, D. 2005).

The high-level political intervention also has an important impact on the maintenance and service operations. Different buyers’ decisions of spending huge amount of money rely partly on political matters given the support and interference of government. For example, there will be more favourable conditions for flag-carrier airline expressed in lower fares and taxes.

**Bargaining power of suppliers – Low**

Suppliers provide the airlines with services and goods which relate to the attractiveness to target market. Airlines can outsource service providers basing on their financial activity, which will directly influence on the price and quality of service. The services provided in the airports by suppliers are mainly: passenger search, hold baggage, access control, trolley circulation, fire service, air traffic control, car park operations, direct retailing, cleaning, passenger handling, baggage handling, freight handling, fuel supply (Halpern, Graham 2013). Therefore, it can be estimated that the suppliers in the airport are vital, but they are price takers.

Upon completing the analysis of UIA, we can compile them into a chart that sums up the power of the five forces on five axes. The power diminishes as points go further on the axes (Fig. 11).

**Fig. 11. Comparative industry structure analysis**

(Source: compiled by author)

Rivalry is high for UIA, even though the threat of new entrants is relatively low. As said previously, competition is severe on a global scale as more and more governments aim at developing ambitious projects that will generate high return of investments. The threat of substitute is medium as they provide primarily interconnected and complementary service. The supplier power is qualified as low because there is diversified portfolio of suppliers, which are vital but just a price oriented.
Regarding the entry threat, due to the investment and time, the expected retaliation barriers together with the legislation action are so important that they dissuade new entrants.

Conclusions

The PESTEL and competitive forces analysis are the effective tools which are used in all the industries worldwide. Their application can be possible in airline industry as well. Regarding the external analysis of the airline market it should be stated that the Ukrainian International airline should focus its strategy according to the changing environment. The strategy of UIA cannot be based on the research applied to external environment. It is crucial to understand the airline’s resources, strength and weaknesses and to determine the positioning of company for formulating its business model in the future. According to analysis, there are favourable conditions for development of air transport worldwide, while the standards of living will increase and the travel became more affordable.

Meanwhile, the situation in Ukraine is different and it is complicated for future growth. It is predominantly connected with political, economic, technological and legal factors. As Ukrainian International Airlines is the national carrier of state, company should closely work with governmental structures in order to obtain the most favourable conditions for operations.

At the same time, competitive forces analysis showed that UIA should focus on the customer of the services, while they affect in large scale the productivity of the airline. It should be provided quality service and flexible tariffs. As it was noted before, passengers have possibility to compare the fare for ticket and the service of all the airlines due to the expansion of informational technologies in the industry. Therefore, UIA should consider its fares and quality issues with the main competitors on the existing routes and to perform a benchmarking study in order to propose better product.

To conclude, the above presented research can be applied to any aviation company, while the market is fully globalized worldwide.

References


