
Model of Polish Market of Passenger Air Services in the Conditions of EU Standards

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Abstract:

Purpose: The aim of the conducted research was to systematize the interdependencies existing on the market of air services and to identify the stimulators concerning models of sustainable development on this basis. .

Design/Methodology/Approach: Research on the determinants governing the choice of the air travel segment is based on available literature, analysis and statistical documentation of the air transport market for the years 2003-2017. The following hypothesis was adopted: possibility of survival and development of passenger air transport companies on the market, in the conditions of globalization, is attributed only to those entities that are able to construct an effective strategy of competing and improving economic efficiency.

Findings: The search for effective solutions to this problem on the passenger air transport markets required active participation in complex structures of mutual connections as a result of dynamic variability of relations between its participants.

Practical Implications: The anticipated effect of this process will be creation of a new transport segment, in which the most effective and the most attractive elements of consumer service, which was defined as the central segment, will be developed. Increasing intensity of market competition leads to the intensification of the process of mutual adaptation of innovations and the best solutions existing on the market by some entities, as a result of which the differences in consumer service and changes in the structure of the sector are evened out.

Originality/Value: This work includes the analysis of the process of creating and strengthening the market advantage in conditions of changes in the structure and functioning of the European air transport market after enlargement of the European Union. The model of the dependence of demand preferences on the price and comfort of services as well as evolution of airline operation models, was presented.

Keywords: low cost model, low cost airlines, airport, Poland.

JEL code: R19, R40, R49.

Paper type: Study research.

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1. Introduction

The transformation process of the global economy, including the air transport, resulted in a dynamic intensification of competitive behavior. It became one of the main sources of this sector development, which resulted in the creation of an effective market selection mechanisms (Berman, 2006). Market of passenger air services, which is characterized by significant mobility, is subject to changes resulting to a large extent from a global economic growth, which determines the development of strong economic centers of the world in all its regions (Kangis and O'Reilly, 2003). Changes in the air transport services sector usually took place in an evolutionary way (Cheng-Jui, 2002). Growing dynamics of this process is the consequence of the progressive liberalization of markets (Yean *et al.*, 2018), preceded by their de-monopolization and de-regulation, changes in the ownership structure and strengthening the position of regional economic communities, which results in passenger transport operating under strong competitive pressure (Chang, Hung, 2013). Its sources lie in the development of international contacts, including within the European Union as well as intense rivalry associated with access to both traditional and new markets (Collison and Boberg, 1987).

Analysis of the character of market changes enabled a detailed presentation of reasons and consequences of its development, which were of multi-directional nature, including the most spectacular - creation of low-cost carriers – LCC (Cheng-Jui, 2002). Their offer was a response to the existing demand from both consumers and representatives of the administration of many smaller regions or more distant from the economic centers (Dobruszkes, 2009a, Hawlena, 2011). Striving to identify the nature of emerging relations and consequences related to development of the aforementioned processes required the analysis of both available scientific achievements and empirical studies.

2. Purpose of Research

The aim of the conducted research was to systematize the interdependencies existing on the market of air services and to identify the stimulators concerning models of sustainable development on this basis. Based on the analysis of the research material, the following hypothesis was adopted: possibility of survival and development of passenger air transport companies on the market, in the conditions of globalization, is attributed only to those entities that are able to construct an effective strategy of competing and improving economic efficiency.

3. Results

Shortly after enlargement of the European Union, significant changes took place in the continental passenger transport market (Hawlena, 2012a). Traffic dynamics significantly increased, which was reflected in both the number of passengers transported (Doganis, 2002) and improvement in the load factor. Intensive

Total	5741.9	32.19	4633.0	28.71	5075.2	29.23	5607.4	30.14	6440.8	30.35	
Foreign	Traditional	3417.0	19.15	3168.8	19.63	3323.1	19.15	3952.6	21.24	4540.8	21.40
	Low-cost	8679.6	48.66	8338.2	51.66	8961.7	51.62	9046.9	48.62	10239.8	48.25
	Total	12096.6	67.81	11507.0	71.29	12284.8	70.77	12999.5	69.86	14780.6	69.65
Overall	Traditional	8419.7	47.26	7757.3	48.20	8398.3	48.38	9560.0	51.38	10981.6	51.75
	Low-cost	9397.2	52.74	8338.2	51.80	8961.7	51.62	9046.9	48.62	10239.8	48.25
	Total	17816.9	100.00	16095.5	100.00	17360.0	100.00	18606.9	100.00	21221.4	100.00
	2013		2014		2015		2016		2017		
Polish	Traditional	6092.0	27.71	5794.4	24.79	5519.0	20.66	6814.9	22.38	8480.5	23.63
	Low-cost	-	-	-	-	-	-	-	-	-	-
	Total	6092.0	27.71	5794.4	24.79	5519.0	20.66	6814.9	22.38	8480.5	23.63
Foreign	Traditional	3581.1	16.29	3995.7	19.72	4604.0	17.23	5222.2	17.15	6175.1	17.21
	Low-cost	12310.8	56.00	13583.8	55.48	16594.0	62.11	18410.0	60.47	21236.7	59.16
	Total	15891.9	72.29	17579.5	75.20	21198.0	79.32	23632.2	77.62	27411.8	76.37
Overall	Traditional	9673.1	44.00	9790.1	44.51	10123.0	37.89	12037.1	39.53	14655.6	40.84
	Low-cost	12310.8	56.00	13583.8	55.48	16594.0	62.11	18410.0	60.47	21236.7	59.16
	Total	21983.9	100.00	23373.9	100.00	26716.0	100.00	30447.1	100.00	35892.3	100.00

Source: Statistics and analysis of the air transport market for the years 2003-2017.

Analysis of presented data shows that the total transport volume showed a steady upward trend, except from 2009, when the economic crisis prevailed. The comparative analysis shows that the growth rate in the low-cost segment revealed much higher dynamics than in the segment of traditional carriers. Particularly noteworthy are two time intervals: the years 2007-2010 and 2013-2017. In the first period, there was a significant economic downturn in the market of traditional passenger air transport services, against which the efficiency and flexibility of low-cost carriers operating in the area of potential demand development is clearly visible. Since 2011, dynamics of this process have accelerated considerably, which meant that the transports performed in the Polish low-cost segment are more and more clearly exceeding the level of implementation in the segment of traditional carriers. Subsequent years also showed a growing intensity of intra-segment competition, which causes that Polish asymmetry of the market share of strong and weaker representatives of these services segment is increasing (Hawlena, 2002b).

Necessity to meet the essential range of requirements in Polish conditions has certainly resulted in the reduction of the initiative of domestic operators, who in the existing economic situation in Poland, could not obtain the necessary financial support from the state, especially in the initial period after joining the European Union. As a result, Polish LCC market was dominated by foreign entities, as it was difficult to compete with a strong rival with low competitiveness potential. In addition, after a significant consolidation of foreign low-cost operators on the Polish market, undertaking this activity by the national operator would require exceptionally high expenditure, and the time of their return and the level of possible profit was difficult to determine. Under current conditions, there is a need to consolidate the low-cost passenger transport segment. It requires concentration of activities in areas with the highest economic efficiency and further reduction of

operating costs, leading to market success. Lack of effectiveness in meeting these requirements means that companies with lower potential will be eliminated or taken over by stronger entities. However, this does not change the current trend of the increasing share of low-cost carriers in the global scale of Polish passenger transport.

Other determinants caused the development of traditional carriers, who have been able to quickly reach distant markets through the extension of the flight network. The main stimulator of development on the global market of air services has become transnational corporations and global alliances, establishing rules and patterns of behavior (Whitelegg, 2003). Their activity in the conditions of increasing accessibility to air services and growing wealth of societies creates the process of market development and increasing consumer activity.

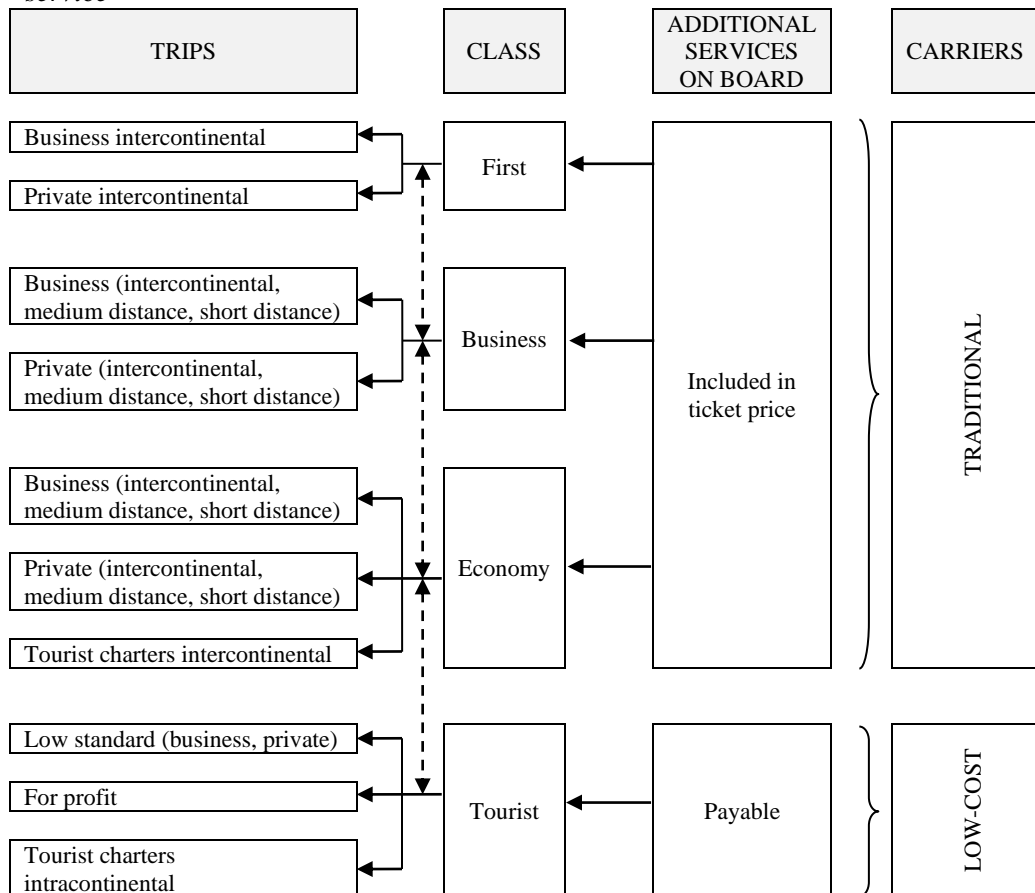
The rapid pace of economic changes in the global dimension means that some countries and regions significantly increase their economic potential, which requires a wider use of air services (Hawlena, 2012b). This process is particularly important in the Asia-Pacific, Central and Eastern Europe, South America, Africa and South-West Asia regions, where the largest providers of passenger services are focusing. A clear competition can be observed between the strongest aviation companies on the European internal market and between Europe and the USA (Wang *et al.*, 2017).

Traditional lines offer three classes of travel on intercontinental routes - economic, business and first. The effects of global competition mean that despite the attractive proposals that make it possible to diversify the travel variant, the choice of class still depends to a large extent on the range of prices for proposed offers and the income of consumers or the economic situation of the company posting the employee. In the first and second decade of the 21st century, both the increase and decrease in demand for services in the business class can be noticed. The downward trend occurs on intra-continental flights, during which passengers are increasingly traveling in economy class (Hawlena, 2012a). The reason is increasing flexibility and changing the structure of tariffs, while an increasing number of customers choose the business and first class on intercontinental routes.

As part of the existing global market, new realities are still emerging and airlines have to adapt their strategies to them, often making derogations from the chosen model of functioning. This creates a system, in which airline companies increasingly combine the most-expected features of LCCs and traditional carriers, and the phenomena of globalization and competition result in a clear separation of space between the two mentioned business models.

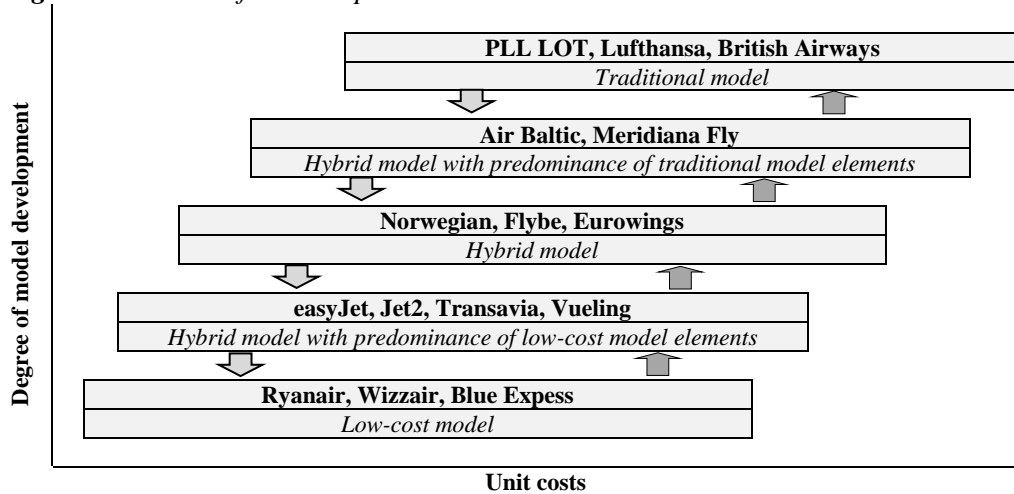
It begins to be developed by airlines operating under different business model, which in turn leads to the emergence of a new segment of air transport (central segment).

Figure 1. Dependency model of demand preferences on the price and comfort of air service



Source: Own study.

It combines the most attractive features of both models of market activity within the proposed range of supply, which results in evolutionary changes that affect the creation of hybrid entities, which are an important factor in the development of passenger air transport structure. The most attractive features of passenger service will be used in it, meeting the widest and most advantageous range of their expectations, implemented as part of the offer of entities from this segment. It is not an easy task to determine the features that should characterize the air hybrid enterprises. Their number is growing, and features are subject to continuous modification depending on the development of the global market situation and consumer preferences (Morrell, 2008). Trends of changes in individual market segments are likely to cause that some carriers will gradually change the nature of their aviation activities, which will result in a model that is characterized by mutual penetration of the most advantageous features of currently competing low-cost and traditional carriers. This will be allowed by a significant scope for takeover of global demand.

Figure 2. *Process of airline operation models evolution*

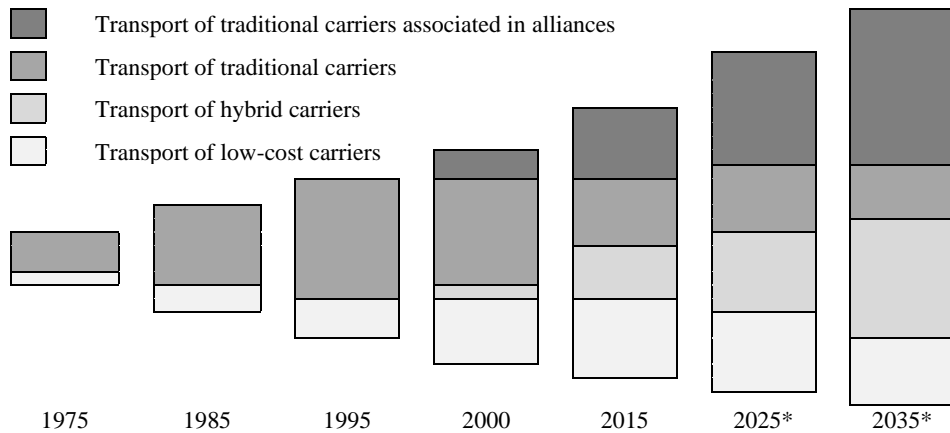
Source: Own study.

The analysis of the pace and direction of these changes can lead to the conclusion that the process of rebuilding the segment structure will be activated in the near future leading to an increase in the central segment in global transport. The anticipated process can be described as a “new deregulation”, the main catalyst of which is growing global competition. This leads to seeking a market advantage and gradual extension of the offer in this segment, at the expense of traditional and low-cost carriers. It can be assumed that in the future, entities operating in the central segment may master a significant part of the market, but the condition is to meet the expectations of customers.

This process will be beneficial for these carriers if extraordinary circumstances do not arise, as was the case with the emergence of lines operating in the low-cost sector. It is also very likely that traditional lines associated in alliances will cover an increasing part of the global market in place of non-affiliated operators. Development of the process of structural changes anticipated in this way is included in the model presented in Figure 3.

Despite offering a wide range of attractive features of airlines included in the central sector, entities operating in the low-cost formula and traditional carriers will continue to develop, although this process will proceed with reduced dynamics. Regardless of the economic situation, there is a need for a cheap air service, which will stimulate the price formation in the central segment and segment of traditional carriers. Probability of the process of separating the central segment should encourage air traffic organizers to increase their interest in these changes, because in a situation of favorable circumstances, the pace of implementation of policy principles within the new market segment and effects related to the re-evaluation of the current rules of carriers in the global market may be accelerated.

Figure 3. Model of changes in the segment structure in passenger aviation of the world (*forecasted amounts)



Source: Own study.

The business model of long-distance lines operating in the low-cost formula, which did not give chances for success in this sector, was in a similar range, however, the last years have been the period of increase in the activity of carriers operating under this business model. While on short-haul continental flights, budget carriers could save between 25 and 50 percent of their costs over traditional carriers by reducing the cost levels and increasing efficiency, significant fixed costs characteristic of long routes, such as high fuel prices caused that the cost advantage has decreased to about 12 percent at best.

With such a small difference, traditional carriers had a better position on long routes, because like the low-cost carriers, they could increase the number of seats in the economy class, bringing the seats closer, and additionally they could profit from selling tickets in the premium and business classes as well as cargo space sale. For this reason, it was possible to reduce the economy class ticket prices, despite serving free meals and providing an on-board entertainment system. Lines operating in the low-cost sector are the optimal carrier offering transport within the continent, while trips to more distant places usually last longer and are much more onerous. The result is that while in short distances, LCCs are able to create the demand for travel, they cannot do it over long distances.

Carriers operating in this formula were the Asian low-cost airlines Air Asia, which operated in the London-Kuala Lumpur relation, but shortly, because the flights were quickly suspended. Currently, the line offers transports from Asia to Australia, as well as the Australian Jetstar line, but the largest increase in long-distance transport was noted in 2013 due to the Norwegian Air Shuttle, that inaugurated their long-haul flights from Europe to New York, Orlando, Los Angeles, Oakland, Puerto Rico and Bangkok. The line has 11 Boeing 787 and placed orders for 31 another Dreamliners.

Long-haul connections are made by a separate Norwegian Long Haul branch. Recently, the carrier announced that it is considering direct flights to Argentina and is planning to open a base there to offer connections in the region.

For a long time it seemed that the Irish carrier Ryanair would become the leader of transatlantic budget flights. Michael O'Leary spoke about the possibility of handling transatlantic connections when Norwegian planned such flights. Flights were planned on routes between American airports in New York, Boston, Chicago and Miami, and airports of London Stansted, Dublin and Berlin in Europe. These plans have not been implemented to this day. Michael O'Leary presented the view that giving up the transatlantic plans is caused by the lack of available aircraft with the appropriate range on the market. The decision was also influenced by the fact that planes characterized by the possibility of intercontinental transports are too expensive, hence the carrier concentrates on the European business model, in which it is successful.

Following the example of its regional branches or other regional low-cost carriers, long-haul carriers generate income by offering numerous additional services, such as insurance, hotel rental and rent-a-car offers. They also include the priority of boarding, booking a numbered seat and reserving a seat with increased legroom at emergency exits. Traditional lines, which have been decreasing the level of services in the economy class and modifying loyalty programs to the detriment of people traveling in this class, also change their model of market activity, which causes differences between carriers operating in both models to blur.

An important factor in the development of low-cost lines in long-haul destinations will be the entry into service of narrow-aisle Boeing 737 MAX 8 and airbus A321LR. These planes will enable non-stop travel from Western Europe to the Middle East or east coast of the USA. As the manufacturers assure, these planes equipped with light armchairs will take on board from 160 to 210 passengers and will enable traveling in passenger-friendly conditions lasting up to eight hours. Many factors indicate that long-distance budget lines will develop and more carriers will operate in this formula, which will change the market of long-haul connections, just as LCCs have changed the market of connections within Europe. This fact may affect the drop in ticket prices, although this is accompanied by a decrease in the quality of the on-board product in the economy class. Undoubtedly, however, the popularization of this business model will give passengers greater choice and flexibility in planning both tourist and business trips. The effects of global competition mean that despite the attractive proposals that make it possible to differentiate the travel variant, the choice of a class depends to a large extent on the financial level of the offer.

In the first and second decade of the 21st century, both the increase and decrease in demand for services in the business class can be noticed. The downward trend is found on intra-continental flights, during which passengers are increasingly traveling

in the economy class. The downward trend occurs on intra-European flights, during which employees of companies increasingly travel in the economy class. The reason is the change in the tariff structure (increasing its flexibility), while an increasing number of customers choose the business class on intercontinental routes. Polish passengers are also more interested in choosing higher classes on intercontinental journeys. A significant share of this market part is taken over by Lufthansa, the global strategy of market expansion of which leads to the successive opening of new connections with Poland and adaptation to international distribution, so that Polish airports can be reached to any point in the world with the shortest possible waiting period during stopover in German airports.

4. Conclusions

The analysis of the issue focused on determinants of the passenger air transport sector functioning as part of the globalization and competition process intensification. Presented considerations show that the development of air transport cannot be considered in an isolated way, because it is heavily influenced by demographic and economic processes that are closely related to each other. Market of international air transport, unlike other modes of transport, underwent significant processes of de-monopolization, de-regulation and liberalization. Growing dynamics of these processes resulted in an unprecedented increase in the intensity of competition.

The strong position of strategic alliances and central segment entities in the global market will result in further consolidation within the sector. On the other hand, economic stratification of enterprises operating on the air services market enables some entities to gradually increase their share in the intercontinental transport sector and to activate in the process of mergers and takeovers. Outlining trends in individual segments show that in the following years, some carriers will gradually change the nature of their aviation activities, creating a model resulting from the mutual penetration of the most advantageous features of currently competing carriers of all segments and enabling the widest scope of taking over global demand.

A significant achievement of the optimal level of economic efficiency is characteristic of aviation services entities, that shape the mechanism enabling both the acquisition of the largest part of global demand and taking over passengers on new attractive markets. It also causes the giving up the current business model and adapting it to new needs by some carriers of each segment. Globalization and competition intensify the process of mutual penetration of innovations changing the model of the operational structure of activity in a specific group of aviation entities. The anticipated effect of this process will be creation of a new transport segment, in which the most effective and the most attractive elements of consumer service, which was defined as the central segment, will be developed. Increasing intensity of market competition leads to the intensification of the process of mutual adaptation of innovations and the best solutions existing on the market by some entities, as a result

of which the differences in consumer service and changes in the structure of the sector are evened out.

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