
Integration Processes in Air Transport

Submitted 08/09/24, 1st revision 20/10/24, 2nd revision 06/11/24, accepted 05/12/24

Joanna Hawlena¹, Grażyna Kowalska², Rafał Rowiński³, Anna Mazurek-Kusiak⁴, Agata Kobyłka⁵

Abstract:

Purpose: The aim of the article is to demonstrate the need for continuous search for new forms of cooperation between carriers and coordination of relations in the process of liberalization and globalization of air transport. In this area of activity, special attention should be paid to the emergence of multilateral alliances, bilateral aviation agreements, and mergers and acquisitions, which are important mechanisms enabling increasing the benefits resulting from the implementation of partnership cooperation.

Design/Methodology/Approach: Analysis of integration processes in air transport based on information contained in available literature, which discusses the basic factors of market process regulation that affect the growth of competition intensity in the market. By synthesizing multi-threaded information that provides a basis for drawing conclusions about the processes of aviation market development, it is possible to state the emergence of new trends and conditions within the sector, but also in its broadly understood environment.

Findings: The optimal implementation of partnership forms often leads to cooperation between companies from different industries, which results in the joint development and implementation of comprehensive solutions that are beneficial to customers. This also results in an advantage in conditions of growing internal and inter-sector competition..

Practical Implications: The key factor determining competitive advantage in the air transport market is not only price and improved service quality, but also adapting the route network to the needs of passengers. In the case of guides participating in partnerships, unfavourable features of the service are eliminated already in the design phase. This causes a decrease in the outflow of loyal passengers to competitors and an increase in the number of new ones for whom the current conditions are more favourable.

Originality/Value: Research into the effectiveness of new forms of cooperation between aviation services market participants brings about beneficial changes throughout the entire passenger service chain, enabling more favourable demand management.

Keywords: Air transport, code sharing, air alliances.

¹University of Life Sciences in Lublin, Faculty of Agrobioengineering, Department of Tourism and Recreation, Poland, e-mail: hawlana@interia.pl;

²The same as in 1, grazyna.kowalska@up.lublin.pl;

³The same as in 1, e-mail: rafal.rowinski@up.lublin.pl;

⁴The same as in 1, e-mail: Mazurek-Kusiak@up.lublin.pl;

⁵The same as in 1, e-mail: Agata-Kobylka@up.lublin.pl;

JEL code: L15, R19, R40, R41, R49.

Paper type: Study research.

1. Introduction

The market of passenger air services is subject to continuous, intensive organizational, technical, technological and economic changes. This causes a change in the relations resulting from global economic growth, including in particular the development of modern, strong economic centers of the world. The growing dynamics of this process results from the progressive liberalization of markets and the strengthening of regional economic communities and the development of international contacts, including within the European Union (Graham and Shaw 2008).

This shaping reality causes an increase in the intensity of competition, which is a basic factor in the regulation of market processes. It activates the most important and interdependent processes of the development of modern civilization, in which without air transport the process of globalization would be slower, and without globalization there would be no dynamic development of air transport (Gustafson, 2012).

2. Operation of Air Transport

Almost from the beginning of the development of air transport, the process of searching for a competitive advantage in the passenger transport market became visible. This forced increasingly active participation in multidirectional processes caused by dynamic changes in the relations between its participants. Gradually, the pace and direction of development of this transport sector were determined by the intensification of two main processes: competition and globalization (Hawlena *et al.*, 2019).

In the first quarter of the 21st century, a previously unknown power and effectiveness of competition can be observed, which, by adopting a global character, has become both the initiator and the effect of globalization. The mechanism of its impact generates two very important market processes. On the one hand, it increases activity aimed at gaining an advantage and dominance in the competitive environment, on the other, by creating an effective mechanism of elimination, it limits and in some conditions drives weaker entities out of the market.

These processes cause a profound reevaluation of the rules and dynamics of changes in the micro- and macro-environment, creating the requirement for a new approach

to defining the role of competition as an important instrument of the modern economy, occurring in the conditions of globalization of passenger air transport (Wang *et al.*, 2017).

The functioning of passenger air transport in the 21st century takes place in conditions of strong competition and the development of the process of globalization of economic activity. Diagnosing changes, determining the causes and effects of development and the possibilities of their effective use requires searching for effective ways to reduce the failure of the market mechanism in the air transport sector, operating in an international, competitive environment (Hawlana and Mazurek-Kusiak 2020).

The transformation of this branch of the economy took place through demonopolization, transformation of the ownership structure of entities, deregulation and liberalization of markets, changing the relations in the sector and areas of conducted activity. As a result of these changes, there was a gradual limitation of state interference in the real sphere of the market, causing a reduction in the scope of regulatory restrictions in favor of an increase in the importance of market behaviors of competitive entities operating in liberalized, global markets (Gustafson, 2012).

The natural features of air transport have resulted in faster overcoming of obstacles in the process of implementing the market mechanism in the international regional and global space. Its dynamics constitute a specific phenomenon of effective development of companies providing aviation services, the most important advantages of which are: broad market expansion, technical and technological innovation, dynamic transformations of functional and organizational systems and increased activity of marketing activities and structural transformations, in comparison with other branches of transport.

The system of economic relations in this sector has been subject to cyclical fluctuations, however, in the long-term perspective, a growth trend has been noted in the scope of passenger air transport, which is mainly the result of the development of the globalization process and intensification of competition.

They have caused significant macro- and microeconomic effects in the form of the lasting ability of airlines to achieve economic equilibrium, development, improvement of the level of quality of services provided and dynamic expansion into new markets (Han, 2013).

Such an approach to processes and behaviors covers the fundamental scope of issues related to the functioning of the passenger air transport market, in which competition and globalization create the basic conditions for shaping the nature of customer service.

3. Strategic Alliances in the Air Transport Sector

The process of liberalization and globalization of air transport is associated with the need for continuous search for new forms of cooperation between carriers and coordination of market relations. In this scope of activity, multilateral alliances, bilateral aviation agreements, and mergers and acquisitions deserve special attention as they are important mechanisms enabling increasing the benefits resulting from the implementation of partnership cooperation (Chang and Hung 2013).

The scope of these agreements in air transport mainly covers the coordination of transport, because the inflow of financial resources to all aviation organizations understood as carriers, ports and cooperating entities, which include - freight forwarders, travel agencies, tourist agencies and companies producing for the needs of the aviation sector, takes place basically through one stream of income generated by the transport market.

Experience in the field of partnership cooperation indicates that cyclically occurring periods of economic recession accelerate the process of deregulation and liberalization, as well as the integration of airlines (Olowoporoku *et al.*, 2012). The best way to survive the crisis is to participate in alliances that allow for increasing the share in the global passenger transport market. Cooperation allows for increasing profits thanks to the optimal coordination of the connection network, planning a flexible pricing policy, using a common service base, financing system and frequent flyer programs as well as code-share agreements (Han, 2013)

For these reasons, among others, alliances in air transport are still gaining many new carriers, thanks to which they create global networks of connections of key market importance in a dynamically changing competitive environment.

The strong market position of international partner blocks results from the level of their resources and the effective use of the impact of growing competition on the dynamics of taking over the share in intercontinental markets of the world's airspace by associated carriers. The strength of expansion of strategic alliances results from the potential related to the number of members, candidates, passengers served, the number of aircraft owned and the scope of cooperation with many countries and destination airports (Hawlena *et al.*, 2019).

Cooperation within an alliance significantly changes the competitive position in relation to external entities, as well as in relation to those cooperating within the agreement, where the intensity of confrontational forces is weaker, especially in strategic alliances operating within one sector. Optimal implementation of these intentions often leads to the creation of the most advanced organizational and legal form, which is a joint venture. This process often ends with a merger or takeover, i.e., full integration of the allies (Hull, 2008).

The nature of alliances indicates that the forms and manner of their functioning depend on the degree of competition intensity, which in the market of aviation services is the main factor determining their entity structure, form and manner of conducting business and the strategy of building advantage on the global market.

This has a significant impact on the growth of the market significance of strategic alliances, resulting from the benefits obtained from the cooperation of the partners of the agreement, while maintaining a significant scope of identity and specific competitive advantages. As a consequence, the members of the alliance gain an increase in trade potential resulting from the synergy of resources and skills at the price of weakening internal competition (Akamavi *et al.*, 2015)

Partnership agreements always include voluntary undertakings of a diverse scope - from the simplest to the very extensive. There are many reasons for creating alliance agreements, the most important of which in the aviation sector are international expansion and entering the world's intercontinental markets. This is also achieved by agreements whose primary goal is to obtain access to modern technologies, distribution channels and legal permits in the markets of future partners (Mazurek-Kusiak *et al.*, 2022).

Agreements on obtaining benefits from the scale of the conducted activity, sharing risks, limiting competition and barriers imposed by governments are of significant importance. Coordination of all such activities is only possible in the structures of the largest alliances: Star Alliance, Oneworld and Sky Team.

The creation of large strategic alliances is justified by the contemporary conditions of the development of the global air transport market. Strong alliances have instruments that enable a quick and multi-variant assessment of the expected fluctuations in the economic situation in the sector and economy, the competitive behavior of other entities and the possibility of easier adaptation to the changing conditions of the market environment. Their advantage is the high-profit traffic in the business segment and the possibility of creating a market offer with a high quality standard on medium and long-haul lines (Mohan *et al.*, 2024).

The increasing number of alliances in air transport is a natural feature of this sector, and due to its qualitative advantages, it has become an essential element of globalization. Striving for a goal, based on the strategic process of expanding the market base and reducing risk, is a strong stimulant for creating alliances, facilitating the operation of signatories in the competitive market of air passenger transport. Due to their effectiveness, they play the role of the "driving wheel" of globalization (Mazurek-Kusiak *et al.*, 2022).

They are the most frequently and most willingly used tool for constructing a global strategy, and they are becoming indispensable on the air services market. However, it may happen that a new group of carriers will emerge from the existing segments,

using unique forms of customer service, which in favorable circumstances may lead to the creation of a new transport segment. Such predictions are a very important premise regarding the construction of development strategies for modern carriers, which, due to their slow adaptation to dynamically changing market conditions, may find themselves outside the mainstream of the process of consolidating global partnership agreements.

According to OECD forecasts, the coming years will be characterized by a significant increase in both tourist and business transport. This will require intensive actions by all participants of the global market, which will be aimed at expanding existing and acquiring new areas of demand and the hub airports serving them (Olowoporoku *et al.*, 2012).

The growing importance of hubs, which determine the strengthening of market advantage based on the ability to service modern rolling stock, with a significant reduction in the number of slots and limiting the phenomenon of transport congestion despite carrying a larger number of passengers, can already be seen.

In an extreme situation, actions aimed at obtaining a monopoly in the use of a specific hub by a narrow group of carriers cannot be ruled out. In the case of lack of or limited access to hubs, the largest global carriers will strive to exclusively purchase slots in a specific time period and operate during the most advantageous operating hours of selected airports (Mohan *et al.*, 2024).

4. Code Share Agreements as a Tool for the Development of the Air Transport Market

The rational development of the air services market should take place on the basis of the free and unlimited possibility of exploiting international airspace and the merger of airlines into alliance partnerships. A significant number of airlines, which for various reasons could not participate in the process of integration with stronger alliances, had to develop a different form of cooperation. In such conditions, the most rational solution turned out to be bilateral code-share agreements, recognized as a basic tool for cooperation and market expansion and conducting joint marketing strategies (Chen *et al.*, 2024).

Cooperation of airlines based on these agreements is a special type of commercial agreement, within the framework of which the partners serve specific destinations covered by the agreement under their own or combined code and flight number. Under such an agreement, each carrier obtains the right to sell seats on the plane to all customers for a specific flight, even though it often does not serve it itself.

However, the condition is that the sold seats are marked with a code agreed in the agreement and confirmed by IATA. Code share agreements can operate on many markets at the same time, which means that they have become an attractive form of

cooperation for air carriers in market expansion. The scope and effectiveness of their use enables the implementation of a strategy based on combining global activities with local conditions, which significantly expands the possibility of influencing the level of airline competitiveness.

As an important tool for building global networks of connections and competition in the market and sector, they have become the dominant instrument of international cooperation (Mazurek-Kusiak *et al.*, 2022). Their widespread use results from the high flexibility of the form and scope of impact, thanks to which it is easier to adapt the terms of the agreement to the individual requirements of potential and real users and the capabilities of carriers aiming to build global networks of connections (Jin-Long and Chih-Wen, 2022).

An important role in the transport process is played by airports, whose developing network and individual elements of point infrastructure largely determine the pace, spatial expansion and improvement of the efficiency of the air traffic development process. From such an approach to the entire passenger service, it follows that only the ability to effectively use the advantages of the development of the route network and airports will increasingly determine the division of the aviation market between individual providers and the level of industry efficiency in the future (Alderighi *et al.*, 2015).

As a result of observations of the global aviation market, it can be noticed that alliances and code-share agreements are developing as substitutes for capital links. The possibility of competing on the basis of an attractive offer is much greater in a stronger group than individually. Within an alliance, it is easier to reduce negatively affecting cost factors, offer the customer a lower price and guarantee a higher level of service quality.

Large aviation corporations are also beginning to appreciate companies with lower commercial potential, but operating in countries with a high level of economic growth and operating in peripheral regions of the world. This is a mutually beneficial phenomenon, as evidenced by the acceptance of Asian, Eastern European and South American carriers into alliance structures.

Thanks to such actions, strong entities gain free access to new, absorbent markets, while weaker carriers gain significant benefits resulting from cooperation with companies with a strong and well-known brand, high reputation and access to demand segments previously unavailable to these entities (Hawlena, 2012).

In the passenger transport process, there is a problem related to bidirectionality. Difficulties related to full use of seats on the return flight result in the loss of a certain part of the profit and a decrease in operational efficiency. Carriers, striving to reduce losses, must make a precise analysis of the resources and possibilities of the market they serve in terms of reducing the risk of unused seats.

The most useful instrument leading to improvement in this area of activities are code-share agreements, thanks to which the possibility of greater filling of seats increases. They are also a very useful marketing instrument of globalization, in the case when a lesser known carrier provides services using aircraft of a company with a well-known and respected brand. In such agreements, this is a common situation, because the connections of a foreign carrier are offered to customers as their own.

However, partners cooperating in this system must remain highly active in searching for effective ways of integrating harmonious cooperation and reconciling and directing divergent expectations. Consequently, the benefits resulting from such an arrangement are mutual. Each carrier gains access to a network of connections with third markets, and all benefit from the distribution of the costs of the serviced line among individual partners (Jin-Long and Chih-Wen, 2022).

The amount of income of all entities participating in this system is, among others, the result of the effectiveness of the marketing mechanism used to build global connection networks by expanding the range and densifying. This system significantly contributes to improving the comfort of travel, mainly in connections with stopovers. Partners then also offer the customer comprehensive care at the transit airport (Hawlena, 2012).

Expanding the scope of service is therefore a significant convenience for passengers, which makes the development of code-share agreements the most desirable, because it increases the benefits resulting from the expansion and densification of the network of connections. This allows partners to increase the number of markets served in which they can offer their services, increasing the availability causing Airports also derive significant benefits from code-share agreements.

Their revenues increase thanks to better coordination of the network of connections without additional increase of own costs (Alderighi *et al.*, 2015). As a result, the cooperation system based on these agreements is definitely heading towards globalization of markets. This is facilitated by the possibility of new companies to appear on them even without engaging their own fleet, but only using the partner's rolling stock. Obtaining rights to serve specific lines, connections and markets is therefore a strategic action, allowing to bypass regulatory barriers. As a result, the obstacles on the way to building a global network of passenger air services are weakening (Chen *et al.*, 2024).

4. Mergers and Acquisitions as the Final Integration of Entities Operating in the Aviation Market

The primary goal of these transactions is to effectively integrate individual forms of activity in order to strengthen the competitive potential of the emerging entity in relation to other market competitors. In most cases, the goal is not to achieve short-term speculative benefits, but to implement an active development strategy that

allows control over the entire market served. The assessment of this process shows that its implementation results from many reasons, but the most important are those that strengthen the foundations of the strategy and policy pursued by the entity making the acquisition (Jin-Long and Chih-Wen, 2022).

A new organization, created as a result of a merger or acquisition, is a type of enterprise operating on the principles of a uniform system, thanks to which it gains a sudden increase in potential upon its creation. Its source is the concentration of ownership and capital, as well as the form of cooperation with competitors and often also with suppliers. This scope of activity, regardless of the concentration of resources of the merging companies, most often leads to the stabilization of the sector and the market position of the entities participating in it (Gustafson, 2012).

The pandemic period has intensified the importance of this process for the survival of companies in a market characterized by a high degree of uncertainty. It has also deepened the risk of making a transaction with an entity with a threatened or undisclosed economic status.

Regardless of these threats, the scope of mergers and acquisitions is expanding, because competitive pressure in various sectors of the economy is increasing, and the revenues of many companies have already compensated for a significant part of the losses caused by the crisis. An example of such a developing process is the dynamic development of mergers of air carriers taking place in various areas of the global aviation market (Hull, 2008).

Strong corporations are usually guided by transaction logic (merging companies in the same industry in order to achieve benefits resulting from the scale effect) and competitive logic, thanks to which they can operate in new and more attractive market segments, obtaining a wider range of supply of selected services, increased demand, as well as access to modern technology, databases, information and distribution channels and joint development research.

Some European traditional carriers operate in such conditions in relations with carriers from Central Asia. Their system of operation is more complicated, because building new alliances in this area through mergers and acquisitions requires the consent of the European Commission and the Council of Europe. However, it should be emphasized that in the era of globalization, mergers and acquisitions are an increasingly common form of capital allocation and an effective mechanism for the development of global alliances (Hawlana, 2012).

The expected efficiency of the transaction is not always fully realized. The cause of failures is most often incorrect formulation of expectations, excessive capital involvement and poor management of acquired companies. As a result, a significant number of mergers and acquisitions can be classified as unsuccessful transactions (Huderek-Glapska, 2011).

Most often, the reason for missed opportunities is the inability to integrate the structure of the acquired company with the existing one. As a result, instead of harmonious development, expected cost reduction and synergy effect, problems and disintegration of the relationship grow.

Apart from the impact of this process on the entities participating in it, it should be noted that mergers and acquisitions are becoming an increasingly strong incentive leading to the concentration of the sector and strengthening the position of corporations operating in it.

However, due to the high risk of the transaction, the basic requirement for its effective conclusion and smooth functioning is the detailed elaboration of the prerequisites. Even the smallest deficiencies in the preparatory process can determine the durability of the new entity, often leading to the destabilization of companies and even the market served (Hawlena *et al.*, 2019)

5. Conclusions

The air transport market, unlike other branches of transport, has been subject to deep processes of demonopolization, deregulation and liberalization. This has caused companies in this sector, which have been participating in the mainstream of the globalization process for a long time, to become both its subject and tool, to a large extent determining the global development of the passenger air transport market, its environment and the world economy.

The result of the growing dynamics of this process is an unprecedented increase in the intensity of competition, which in the global dimension creates the most effective system of competition, which is a source of improvement of civilizational, economic and innovative processes and improvement of economic efficiency. It also creates a specific elimination mechanism generating a certain range of negative effects, including bankruptcy of weaker entities and perpetuation of polarization of the diversified share in the benefits resulting from global economic growth.

The conducted analysis confirms the advantage of generating positive effects of globalization and global competition and their beneficial impact on the development of the passenger air transport sector and market. The strong impact of air transport on the dynamization of the globalization process of many areas of economic, commercial and tourist activity is also undeniable.

Properly functioning air transport, combined with efficient service at airports and modern infrastructure in the regions, determines the degree of economic competitiveness of countries and thus creates the basis for building advantages that increase the share in the structure of distribution of benefits resulting from European integration and the process of globalization of the world market.

References:

- Akamavi, R.K., Mohamed, E., Pellmann, K., Xu Y. 2015. Key determinants of passenger loyalty in the low-cost airline business. *Tourism Management*, 6, 528.
- Alderighi, M., Gaggero, A.A. Piga, C.A. 2015. The effect of code-share agreements on the temporal profile of airline fares. *Transportation Research Part A: Policy and Practice*, 79, 42-54.
- Chang, L.Y., Hung, S.C. 2013. Adoption and loyalty toward low-cost carriers: the case of Taipei-Singapore passengers. *Transportation Research Part E: Logistics and Transportation Review*, 50(1), 29-36.
- Chen, K., Thaivalappil, N.M., Nadirsha, T.N.M., Lilith, N., Alam, S., Svensson, A. 2024. Tangible digital twin with shared visualization for collaborative air traffic management operations. *Transportation Research Part C: Emerging Technologies*, 161, 104546.
- Graham, B., Shaw, J. 2008. Low-cost airlines in Europe: reconciling liberalization and sustainability. *Geoforum*, 39(3), 1439-1451.
- Gustafson, P. 2012. Managing business travel: developments and dilemmas in corporate travel management. *Tourism Management*, 33, 276-284.
- Han, H. 2013. Effects of in-flight ambience and space/function on air travelers' decision to select a low-cost airline. *Tourism Management*, 37(1), 125-134.
- Hawlana, J., Mazurek-Kusiak, A., Kobyłka, A. 2019. Main Determinants of Shaping the Quality of Air Transport Services. *European Research Studies Journal*, 22(3), 168-185.
- Hawlana, J. 2012. Konkurencja na rynku lotniczych przewozów pasażerskich w warunkach globalizacji. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, 47-56.
- Hawlana, J., Mazurek-Kusiak, A. 2020. Determinants of Price Formation for Air Transport Services. *European Research Studies Journal*, 23(2), 445-455.
- Huderek-Głapska S. 2011. Wpływ portu lotniczego na rozwój gospodarki regionu. Poznań: Wydawnictwo Naukowe Uniwersytetu Ekonomicznego w Poznaniu, 114-131.
- Hull, A. 2008. Policy integration: What will it take to achieve more sustainable transport solutions in cities? *Transport Policy*, 15(2), 91-103.
- Jin-Long, L., Chih-Wen, Y. 2022. Good or bad? Passenger feelings regarding code-share alliances among airlines. *Journal of Air Transport Management*, 103, 102252.
- Mazurek-Kusiak, A., Hawlena, J., Kobyłka A. 2022. Low-cost Transport Selection Model on the Polish Airline Services Market. *European Research Studies Journal*, XXV(2B), 3-13.
- Mohan, A., Cheng, F., Luo H., Greig, C., Larson, E., Jenkins, J.D. 2024. Direct air capture integration with low-carbon heat: Process engineering and power system analysis. *Energy Conversion and Management*, 322, 119136.
- Olowoporoku, D., Hayes, E., Longhurst, J., Parkhurst, G. 2012. The rhetoric and realities of integrating air quality into the local transport planning process in English local authorities. *Journal of Environmental Management*, 101, 23-32.
- Wang, K., Tsui, K.W.H., Liang, L., Fu, X. 2017. Entry patterns of low-cost carriers in Hong Kong and implications to the regional market. *Journal of Air Transport Management*, 654, 101-112.