

2. Practical Aspects of Aviation Law: Challenges of the Globalization of the World Air Transportation Market

Dmytro Bugayko

Acting Director International Cooperation and Education Institute,

Instructor of ICAO Institute,

PhD, Associate Professor National Aviation University, Kiev, Ukraine

2.1 THE MAIN TRENDS IN GLOBALIZATION AND ECONOMIC LIBERALIZATION

The present international civil aviation regulatory system is based on the Chicago Convention, which imposes upon Contracting States the responsibility for compliance with standards, practices and procedures adopted by International Civil Aviation Organization (ICAO), unless differences are notified. Under this system, a clear linkage is established between an operator and the State in which it has its principal place of business and clear lines of responsibility may be identified between the parties involved for the regulatory oversight of international air transport. This mechanism has been working well over the past fifty years and more, and has contributed to the safe and orderly growth of civil aviation.

However, globalization and economic liberalization recently have brought about fundamental changes in the structure and operating environment of the air transport industry. Globalization is the process of making and transforming things or phenomena into global ones. Worldwide economic globalization develops integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, technology progress and, of course, international air transportations. In this conditions world aviation transport is thus one that increasingly operates within a liberal market context. Among the trends in globalization and economic liberalization which have safety and security implications are:

- the changes of multilateral and bilateral regulations philosophy
- the liberalization of airlines designation, national ownership and control provisions;
- the development of airline alliances, code-sharing agreements and franchising;
- the development of modern airline business models;
- the outsourcing of ground handling, aircraft repair and maintenance;
- the globalization and commercialization of airports and air navigation service providers;
- the significant growth of air cargo and logistics transportations;
- the changes of international airline fares regulations in conditions of air market globalization and liberalization

2.2 THE CHANGES OF MULTILATERAL AND BILATERAL REGULATIONS PHILOSOPHY

History of multilateral and bilateral regulation of international air transport business represents constant struggle between two basic conceptions - strict commercial regulation and the philosophy of deregulation.

The advantages of strict regulation are regulatory protection of their own air transportation markets and, respectively, airlines from foreign airlines competition. The negative component is limiting the access to foreign air transportation markets. The advantages of deregulation include the development of free competition and, consequently, the development a flexible, customer-oriented aviation business. The treats are in the refusal of the national airlines state protection and, sometimes, the actual prohibition of its state support.

For more than 50 years the philosophy of strict regulation dominated in inter-governmental relationships. Most international agreements used items of Bermuda – 1 and Bermuda- 2 typical agreements. Strict commercial regulation, as a rule, includes passenger and cargo fares, maximum commercial loads, provision no more than 4 freedoms of the air, etc. Implementation of this philosophy provides the possibilities of achieving the status quo. However, the globalization processes of the world economy on the one hand, and the steady increase of carriers operating costs on the other, provoke changes not only in civil aviation commercial policy, but also in international civil aviation regulation framework.

The key instruments of deregulations are multilateral and bilateral “Open Skies” agreements, which partially or fully don’t implement any commercial control and protection from the states. Under these conditions, each carrier is in a situation of constant growth of direct and indirect aircraft operating costs, primarily due to the dynamic growth of aviation fuel prices and permanent increase of airport and air navigation charges, taxes and fees. At the same times, carriers are actually not able to proportionally increase their air fares due to tough competition. Typically, the introduction of additional fuel surcharges is not sufficient. Unfortunately, this period is marked by a number of airlines bankruptcies. On the other hand, the process of permanent aircraft operation costs reduction could threaten the overall world civil aviation safety and security levels. On yet another hand, the adaptation of the “Open Skies” policy can bring to aviation accounts for \$1 trillion in global economic activity and creates 22 million jobs.

The following are principal features of “Open Sky” policy:

- open routes and points of flights;
- increasing routing flexibility;
- unlimited capacity and frequency;
- development of code-sharing flights;
- rejection of airlines passenger and cargo tariffs states control;
- liberalization of non-schedule and charter flights;
- liberalization of cargo transportations;
- high level of safety and security requirements;
- possibilities to provide self-handling at abroad airports;
- charges, taxes and fees market orientation;
- open competition and airlines state-support prohibition;
- liberalization of airlines sales and computer reservation systems using [1].

2.3 THE LIBERALIZATION OF AIRLINES DESIGNATION, NATIONAL OWNERSHIP AND CONTROL PROVISIONS IN CONDITIONS OF WORLD AIR TRANSPORTATION MARKET GLOBALIZATION

Historically, states generally don’t provide the air routes rights for carriers, that are not in a preferred state ownership and are not under the de facto control from the state. As a result of globalization and liberalization, the criterion of national ownership and control becomes increasingly irrelevant. Many carriers don’t belong to the state, and some states provide controlling availability to their own citizens. The positive aspect of these

tendencies raise no doubt, because more efficient carriers, as a rule, support the required safety level and provide more attractive fares and high-quality aviation service. But in this situation we can't be sure that air carrier will primarily represent the interests of their own country. Powerful global air carriers actively develop new forms of commercial cooperation. In recent years, many states have relaxed restrictions on foreign investment in their national air carriers. Nowadays, large airlines from different regions of the world successfully buy controlling stakes of foreign carriers. In this situation we can identify risks as the potential emergence of "flags of convenience" in the absence of effective regulatory measures to prevent them, and potential deterioration of safety and security standards when there is increasing emphasis on commercial outcomes. Relaxation of national ownership and control provisions needs to be accompanied by appropriate measures to prevent the emergence of "flags of convenience" and to ensure that safety and security are not compromised [1].

2.4 THE DEVELOPMENT OF AIRLINE ALLIANCES, CODE-SHARING AGREEMENTS AND FRANCHISING

As noted before, globalization trend has resulted in a significant increase of aviation market competition level. At the same time, commercial activity on the verge of profitability poses danger for aviation safety. In order to solve this problems powerful airlines successfully practice non-competition philosophy of commercial activity collaboration and coordination. The first step is signing of Bilateral Interline Agreement (BITA). The second step - the representation of joint transfer directions tariffs system (in the framework of Special Prorate Agreement (SPA)). The following step of consolidation is signing of code – share agreement: at the beginning with a proportional block sale (Code – Share Blocked Space Agreement (CSBSA)), and then with free distribution of two airlines (Code – Share Free Sale Agreement (CSFSA)). These procedures show development of marketing alliances relations. They have been used by many airlines to extend their scope of market access and have proved very effective in developing synergies and increasing revenues of the airlines concerned. While code-sharing allows airline partners to offer 'seamless' carriage, as if only a single airline was being used, the practice has led to concerns of governments as to the safety standards of foreign airlines their national airlines have code-sharing arrangements with. Another concern relates to the security implications caused by the potential transfer of a security threat, which may exist against one airline, and be spread to its partner or partners in a code-sharing arrangement, and any subsequent additional security measures imposed by the appropriate authorities.

The next step of airlines collaboration is the development of strategic and global airlines alliances. Consolidation of most powerful airlines, which represent all regions of the world, results in geometrical growth of their competitive advantages gained due to: multilateral co-ordination of international fares, harmonization of the airlines loyalty systems, distribution of air transportation sales under conditions of Multilateral Interline Agreement (MITA), global compatible exploitation of routes, commercial optimizations of aircrafts parks, promotion of the optimized direct and transfer time-table. As a result of these coordination actions the alliance member airline can conduct the substantial economy of direct and indirect operating costs, marketing, sales, administrative and other overheads costs. The above mentioned positions result in the full implementation of economy of scale and give possibility to offer to customers more flexible, cheap and effective international fare policy. As a result, now members of global alliances serve more than 66 percent of global passenger flow [1].

2.5 THE DEVELOPMENT OF MODERN AIRLINE BUSINESS MODELS

In recent years, successful low-cost carriers (LCCs) have been challenging the full-service network airlines. The characteristics of typical low-cost operational strategy are as follows:

- limited passenger services;
- frequent and reliable departures;
- short-haul, point-to point services;
- small & medium sized airports, preferably secondary;
- low ticket prices;
- lean, productive crew;
- maximum aircraft utilization.

Cost advantages of the low-cost airline business model include:

- homogenous and young fleet;
- high-density seating, fewer galleys and toilets;
- no free meals and drinks, lounges and ffp's;
- no seat reservations;
- use of smaller airports;
- no interlining, no flight connections;
- focus on direct sales
- low prices sell themselves, aggressive PR.

In these conditions it is possible to establish the gradual evolution of two airlines models (classical and low cost) directed on meeting each other. Therefore, the low cost airlines utilize the discounted fares, which are actively and widely shown in advertising, at the same time gradually increase base fares. Regular international airlines are engaged at the structured aircraft operating cost economy and implement the complex of consolidation actions, directed on the use of economy of scale. However, the program of cost savings represents a potential threat to the level of safety and service quality of classic carriers.

In the segment of air cargo, the highly sophisticated airline/parcel express delivery companies, which grew substantially in the past decade, continue to expand this specialized service. These companies operate large jet cargo fleets combined with surface delivery systems to provide continental overnight deliveries and second day intercontinental services via strategically placed sorting hubs. This concept has also been adopted by a number of postal administrations.

2.6 THE OUTSOURCING OF GROUND HANDLING, AIRCRAFT REPAIR AND MAINTENANCE

Outsourcing is the next trend of air transportation market globalization. Outsourcing may be well illustrated by ground handling, and aircraft repair and maintenance. We can see the tendency of liberalization of these activities in many bilateral and multilateral air services agreements. Nowadays, ground handling, aircraft repair and maintenance are usually outsourced to specialized companies. These companies are not constrained by national ownership restrictions, which represents new threats for aviation safety and security. To address this concern, ICAO has recently conducted a study on the safety aspects of ground handling, aircraft repair and maintenance which led to a review of, and amendments to, the existing standards and recommended practices (SARPs).

2.7 THE GLOBALIZATION AND COMMERCIALIZATION OF AIRPORTS AND AIR NAVIGATION SERVICE PROVIDERS

The next trend of air transportation market globalization is the commercialization or privatization of airports and air navigation service providers, and change in ownership and control of these formerly state-owned entities, or the transfer of operations by governments to autonomous entities or to the private sector. ICAO has recommended that where an autonomous body or entity is established, the State should condition its approval of the new body by requiring that it observes all relevant obligations of the State specified in the Chicago Convention and its Annexes. Of particular significance is the fact that aviation security has now taken on the highest importance with consequences for facilitation of passengers, costs of providing increased security measures and, in differing degrees around the world, public confidence. World aviation needs to ensure that security measures do not disrupt or impede the flow of passengers, freight, mail or aircraft, and also needs to take positive measures to restore public confidence in air travel and revitalize the air transport industry. In this regard, close coordination amongst air transport regulators, law-enforcement authorities, airlines and airports should help bring about complementary facilitation and security programs that could reduce the negative effects, and achieve maximum efficiency in border clearance operations and high quality security and law enforcement.

Table 1 is excerpted from a table of the world's 100 largest (by revenue) airport groups. Of these 100 largest airport entities, 36 are either fully or partially owned by investors (or are in the process of becoming so, as in Spain and Portugal). In cases of partial privatization, either a minority or majority stake is held by the national, regional or local government entity in which the airport is located. A number of these global airport groups also manage overseas airports, on a contract basis, without actually obtaining an ownership share, a good example being Fraport with Cairo Airport. Several smaller airport companies (e.g., Hochtief Airport, HRL Morrison/Infratil, Peel Airports) had revenues below the threshold for inclusion in the top 100, so are not included in the table. Total revenue for the 36 privatized entities was \$33.6 billion, which is 45% of the revenue of the entire top 100 airport groups (at Table 1 you can see Largest Privatized Airport Groups) [2].

Table 1. Largest Privatized Airport Groups

Airport Group	Global Rank	Main Airports	Revenue(\$Million)	Privatization Status
AENA	1	Madrid, Barcelona	\$4,521	On hold
Ferrovial	2	Heathrow	\$3,956	Full
Aeroports de Paris	3	Paris de Gaulle and Orly	\$3,497	Partial
Fraport	4	Frankfurt	\$3,314	Partial
TAV Airport Holding	14	Istanbul, Ankara	\$1,231	Full
Flughafen Zurich	19	Zurich	\$1,028	Full
Southern Cross Airports	20	Sydney	\$1,015	Full
Beijing Capital Intl. Airport Group	21	Beijing	\$1,008	Partial
Airports of Thailand	22	Bangkok	\$945	Partial
Malaysia Airports Holding Berhad	23	Kuala Lumpur	\$902	Partial
SEA Aeroporti de Milano	24	Milan	\$901	Partial

Aeroporti di Roma	25	Rome Fiumicino and Ciampino	\$883	Full
Flughafen Wien	28	Vienna	\$814	Full
Airports Company South Africa	30	Johannesburg, Cape Town	\$775	Partial
Guangzhou Baiyun International	35	Guangzhou	\$657	Partial
Copenhagen Airports	36	Copenhagen	\$628	Partial
Aeroportos de Portugal	38	Lisbon	\$604	In process
Flughafen Dusseldorf	41	Dusseldorf	\$585	Partial
GMR Infrastructure	42	New Delhi, Hyderabad	\$563	Partial
Australia Pacific Airports Corp.	43	Melbourne	\$559	Full
Brussels Intl. Airport Corp.	45	Brussels	\$527	Full
Aeropuertos Argentina 2000	48	Buenos Aires EZE and AEP	\$470	Full
Athens Intl. Airport	50	Athens	\$465	Partial
Brisbane Airport	51	Brisbane	\$456	Partial
Abertis	57	London Luton, Cardiff, Belfast	\$409	Full
Grupo Aeroportuario del Pacifico (GAP)	59	Guadalajara, Tijuana	\$396	Full
Aeropuertos del Sureste (ASUR)	66	Cancun	\$367	Full
Flughafen Hamburg	68	Hamburg	\$354	Partial
Auckland International	77	Auckland	\$304	Partial
Westralia Airports	78	Perth	\$300	Full
Aeroports de la Cote d'Azur	82	Nice	\$265	Partial
Operadora Mexicana de Aeropuertos (OMA)	86	Monterrey, Acapulco	\$197	Full

Source: Robert Poole, Annual Privatization Report 2013: Air Transportation, Airport Privatization. The Reason Foundation - <http://reason.org/news/show/apr-2013-airport-privatization>. [2]

During the past two decades, more than 50 governments have “commercialized” their air traffic control systems. That means they have organizationally separated the ATC function from their transport ministry (putting it at arm’s length for safety regulation), removed it from civil service, and made it self-supporting from fees charged to aircraft operators for ATC services. As of mid-2012, the Association for Air Navigation Service Providers, CANSO (the Civil Air Navigation Services Organization) lists 76 full members, i.e., entities that provide air

navigation services. Of those, over 50 are commercialized; these include the ANSPs of Australia, New Zealand, Thailand, India, Canada, the UK, Ireland, Germany, Spain, Portugal, Austria, Switzerland, most of the rest of the E.U. countries, and South Africa. Governmental ANSPs include Cyprus, Luxembourg, Greece, the Maldives, and the FAA's Air Traffic Organization (which is still embedded within that agency and funded by annual appropriations from the federal budget) [2].

2.8 THE PROBLEMS OF AIR CARGO AND LOGISTICS TRANSPORTATION IN CONDITIONS OF GLOBALIZATION

Air cargo and logistics are an important component of international air transport in conditions of globalization. They play an increasingly important role in the global economy, as well as in the national development and international trade of many States. The past two decades have seen substantial growth worldwide in air cargo traffic. This tendency will certainly continue in the future. By the ICAO forecast – the projected growth rate of 6.6 per cent per annum for world scheduled freight tonne-kilometres for the period to 2040. By the opinion of Boeing experts - over the next 20 years, world air cargo traffic will grow by 5.2% per year [3].

The current worldwide air cargo regulatory regime is primarily composed of some 4,000 bilateral air services agreements. But a strong increase in air cargo and logistics transportations highlights the need for regulatory platform development, and for special regulatory base separate from that for passenger service. In an increasingly globalized and liberalized environment, air cargo operations need to be as efficient, economical, and expeditious as possible to meet users' demands, particularly for transport of high value and time-sensitive freight. One of the main air cargo problem is the framework of market access rights in multilateral and bilateral air services agreements.

The restrictions are usually imposed in respect of freedom of air, points, routes, fares, frequency, etc., but cargo transportations have different transportations structure of flows, seasonal codes, fares etc. than those for passengers. In considering greater globalization and liberalization of the air cargo sector, it should be recognized that there remain some concerns about whether there should be special or separate regulatory platform for international air cargo operations. Globalization and liberalization of air cargo market access would give a major impetus to economic growth by permitting market forces to determine flows of cargo in the interdependent global marketplace. Most importantly, cargo liberalization would open up new opportunities for secondary airports, relieve pressure on capacity-constrained hubs, lead to a more efficient use of scarce airport capacity in general, and provide a stimulus for world trade and job creation.

Security is one of the main strategic targets of the worldwide aviation activity development. The key problem is the dynamical growth of aviation logistics system and increasing of number of shippers and consignees, which involved in the aviation logistics transportation. In connection with this problem the 37th ICAO Assembly decided to include aviation logistics in the scope of aviation security. Paragraph 4 of Declaration on Aviation Security of the 37th ICAO Assembly declared: “develop and implement strengthened and harmonized measures and best practices for air cargo security, taking into account the need to protect the entire air cargo supply chain”. At present, we can identify the following areas of security for world logistics system: physical security - aircraft protection; tampering; access control to logistics infrastructure; cyber security - same standards as for CNS systems: protection of software and data links from hacking; spoofing; interference or malicious hijack.

2.9 INTERNATIONAL AIRLINE FARES REGULATIONS IN CONDITIONS OF AIR MARKET GLOBALIZATION AND LIBERALIZATION

International airline fares are one of three basic elements of international air transport commercial regulations, two other elements include access to the market and transport capacity. In present time we could point out the next levels of International airline fares regulations:

- multilateral fares co-ordination, which is offered by the International Air Transportation Association (IATA);
- fares co-ordination is within the limits of inter-governmental agreements on cooperation in air transportation, which is offered by the International Civil Aviation Organization (ICAO);
- airline confidential fare policy, which is based on potential possibilities and suppositions of the above-mentioned levels of regulations.

The oldest and most widespread system of multilateral fares co-ordination is IATA transportations conferences (TC) system. Conferences perform the international fares coordination within the limits of tariff areas of TC1 (South, Central and North America), TC2 (Europe, Africa, Middle East), TC3 (Central and South-East Asia, Far East, Australia and Pacific Ocean Islands), between the pair of tariff areas and at world global level. Thus IATA conducts coordinating and methodological work only. All of decisions with regard to a structure and levels of international fares are directly taken by IATA member airlines and based on discussion and mutual concordance. Governments individually and collectively occupied the following position concerning IATA activity at the field of fares multilateral coordination.

- depend upon it as on the basic mean of international fares and as on the instrument of simplification of the interline world system;
- occupied neutral position, not forbidding it and not requiring its observance;
- introduces conditions or limited its implementation.

During many years the IATA international fares multilateral co-ordination structure has been developed in more flexible, clear and less obligatory system. Following that, the question is whether these changes allow to adapt this system to more competition terms and conditions, or make it absolutely inappropriate for decisions making which would satisfy airlines and governments requests in course of multilateral fares co-ordination [4].

Reasons of international airline fares regulations by the state are:

- providing a national airline or airlines with the real possibilities for international air transportation implementation;
- providing a national airline or airlines by just and equal conditions for participating in competitive activity at international air transportation implementation;
- support to the proper national aims and tasks, for example support to international tourism and trade;
- encouragement of international air transport competition, for example by providing flexibility to the tariff policies of given airlines;
- satisfaction of international air transport customers necessities;
- uphold of difference between regular and irregular air transportations

The types of the tariff modes represent both reasons of fares regulations, and the fact that these reasons are not always understood identically by the involved states. Thus, a few tariff modes are a kind of compromise, which represents different reasons retained by states with regard to international airline fares regulations. Such

position combined with airlines efforts to use tariffs suitable to different markets and different segments of the same market resulted in creation of the complicated and unclear international airline fares system.

In the process of aviation tariffs co-ordination the different criteria of estimation are developed. These criteria could be set out as four categories:

- criteria related to a specific cost and terms of application of tariffs;
- criteria related to the cost;
- criteria related to the terms;
- criteria of the potential consequences of the offered tariff.

Some of criteria which differ from a cost and terms of specific tariff include the following:

- Is a tariff concerted (as a result of fare co-ordination either between the route airlines, or based on multi-lateral base through the IATA instruments)?
- Was a given tariff established by own initiative of an airline (for example, with the purpose of taken of leadership) or it is a gathering tariff?
- If the tariff is presented a foreign airline, what idea national airlines have?

The followings criteria, concerning the cost:

- Does the price exceed the top set limit?
- Is the price placed within the fare construction area set limits?
- How reasonably does the price correlate with the long-term fully up-diffused airline aircraft operation costs taking into account a requirement of a positive income on a capital?

Quality criteria include a question about whether the state considers that:

- either a tariff is artificially low because of governmental grant or other external support;
- or a tariff is unreasonably low taking into account a situation at the competition market;
- or a tariff is overpriced, that inflicts disbursement to the customers;
- or a tariff is unreasonably high or restrictive following the misuse of dominant position.

Because of imprecise and subjective character of these criteria the states encounter difficulties with a concordance and accordingly with an implementation of these types of criteria to the concrete tariffs. In some criteria preference aims at the potential achievement of the offered tariff. For example: whether there is unjustified discriminatory; whether it is instrumental to the creation of monopoly; whether it leads to the general losses of all airlines enroute or on the group of routes.

The following two basic conceptions of international air transportations development made a substantial impact on the evolution of IATA international airline fares system, as well as on the evolution of development of the fare limits of inter-governmental agreements on cooperation in air transport: detailed commercial regulations (Bermudian types of inter-governmental agreements on cooperation in air transport) and liberalizations (liberalized inter-governmental agreements and Open sky inter-governmental agreements). Currently, the world market was divided in this question in the proportion 50/50. But we have to notice the tendency of increase of liberalized type agreements segment during the last decade.

Currently, the EU countries, as the first and oldest opponents of aviation liberalization philosophy, united potential opportunities of regional civil aviation, initiated signing of Open sky agreements not only with neighbor countries (including Ukraine) but also with an old competitor, namely the United States of America. The gradual decreasing of the commercial regulations results in simplification of international aviation tariffs co-ordination process. The most conceptual form of liberalization ideology realization is Open-sky agreement, where government fares

control is fully removed. On the one hand, it gives airlines unlimited possibilities in relation to development of their own tariff policy, and blocks the possibility of state limitation or vice versa state support of tariff policy. But on the other hand, it actually cancels protective and preference measures in relation to national airlines. Initiating of horizontal Open Sky agreement with the EU countries caused discussion between its supporters and opponents [5].

The development of globalization and liberalization processes on the aviation market changes the existent system of international airlines fare regulations. On the one hand, these changes give airlines opportunity to develop their own international fare policy more flexibly; on the other hand, they promote the already existent high level of competition at the market. Modern tendencies points out gradual process of declaim of states protectionism and development of the instruments of rate-setting not at intergovernmental level, but at the level of airlines which are consolidated. The clear monitoring of international airlines fare regulations and development of complex of preference actions in sphere of fare policy is needed to maintain the acceptable level of airlines competitiveness [6].

2.10 POSITIVE ASPECTS AND RISKS OF AIR TRANSPORT GLOBALIZATION

The globalization of international air transport includes many aspects and plays an important role in the process of world civil aviation development. Among the positive aspects of globalization it is possible to determine: the development of global civil aviation safety system which unites leading international and regional, intergovernmental and non-governmental organizations in order to improve safety, security, efficiency and economic feasibility of aviation activities; the development and commercialization of the world airport system; coordination, standardization and expansion of cross-border limits in the segment of air navigation services; development of air carriers competitive and non-discriminatory environment for international air transportation market; significant increase of air cargo and logistics transportations.

On the other hand, globalization has the following threats and risks: possible loss of states control over their own commercial airline market and stakeholders (air carriers, airports, ATC providers); bankruptcy of national air carriers due to stiff competition from financially strong global alliance member airlines and LCC; airlines cost savings programs represent a potential threat to its level of safety and service quality. The complex issue of world air transportation market globalization processes is the basis for recent development of civil aviation activity [1,6, 8, 9, 10].

Dmytro Bugayko
International Cooperation and Education Institute;
ICAO Institute;
National Aviation University Kiev, Ukraine
bugaiko@nau.edu.ua
ORCID 0000-0001-9901-4792