

Таким образом, современный рынок авиационного лизинга можно рассматривать как сложную динамическую систему, где существует многообразие лизинговых бизнес-моделей, что дает возможность современным авиакомпаниям обновлять летный парк за счет приобретения лучших образцов авиационной техники.

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The University Role in Mitigating and Overcoming Global Air Transport Sector Challenges

The President (2006-2013) of the Council of the International Civil Aviation Organization (ICAO) highlights the overall air transport sustainability as a more demanding challenge to be achieved. In addition to safety, security and environmental considerations, it

means meeting the global demand for regular, efficient and economical air transport. Finally, it means supporting competitive economies and promoting balanced regional development [1]. In this paper we'll investigate the air transport challenges in the context of the sustainability problem.

At the ICAO Air Transport Symposium (IATS) in April 2012 [2] ICAO proposed a definition for air transport sustainability to embody the UN definition of sustainable development. Thus, a sustainable air transport system “should be affordable, should operate safely, securely, fairly and efficiently, and should offer choices of air services while supporting a competitive economy and balanced regional development».

The International Air Transport Association (IATA) identified 13 drivers that were likely to have a high impact on air transport sustainability out to 2035 and where there was a high level of uncertainty as to what that impact would be [3]. The drivers assessed as having greater than average impact and uncertainty are: alternative fuels and energy sources, cybersecurity, environmental activism, extreme weather events, geopolitical (in)stability, infectious disease and pandemics, international regulation of emissions and noise pollution, level of integration along air-industry supply chain, new modes of consumption, price of oil, strength and volatility of the global economy, tensions between data privacy and surveillance, terrorism.

Firstly, we would like to pay attention to safety and security challenges. Aviation safety is at the core of ICAO's fundamental objectives. The organization is constantly striving, in close collaboration with the entire air transport community, to further improve aviation's successful safety performance while maintaining a high level of capacity and efficiency.

On the one hand, dramatic events have a detrimental effect on the growth of air transport. On the other hand, security checks add an additional burden on travelling. Security issues for research and development include crisis management, attack-prevention through airport and aircraft protection technologies. Mention should be made of serious facts about 69 acts of unlawful interference recorded between 2011 and 2016, a total of 884 deaths were formally recorded.

Hazards and potential or new risks should be identified. This is a challenge of predictive risk management. So, the essential question is how to reduce the risk of an accident that has not happened (yet). For example, one of the tasks of ICAO is *to develop an effective response to the disruption of the aviation system created by natural disasters, conflicts or other causes*.

Further, note that there are many unique research issues on Unmanned Aircraft Systems (UAS). Safe integration of UAS into airspace will be a long-term activity with many stakeholders. It could comprise, for example, detect-and-avoid technologies, protection from unintentional or unlawful interference, separation standards from other aircraft, and the development of regulatory framework.

Eco-friendliness, Regularity, Affordability challenges can be defined as *environmental awareness, planning and understanding of future travel needs*. Trade-off decisions should be made by all industry actors to avoid aviation environmental impacts that include gaseous emissions and noise. There is a need for global agreements and decisions on “green” approach to maintain fair competition.

Planning and understanding of future travel needs concerns the problems of regularity and affordability. The air transport world makes forecasts and predictions but fails to understand the influencing factors. A deep knowledge of such factors would help refine projections.

The next challenges are *Economy and Efficiency*. Financing the air transport system infrastructure and resource scarcity management remains key issues of aviation industry. The questions are: a) how the costs of the infrastructure investment should be shared between the users? b) how to evaluate the efficiency of these investments?

And the last but not the least key point we will make is that the proposed solutions should manage scarce resources.

However, at the heart of the discussion is the universities' role in mitigating and overcoming the Global Air Transport Challenges. We can determine five activities as the prime goals of the universities. They are Knowledge Repository, new Knowledge Generation (and creation), Knowledge Transfer to the Next Generation, Knowledge Transfer to the Society [4], and the fifth and additional role is Generating economic development.

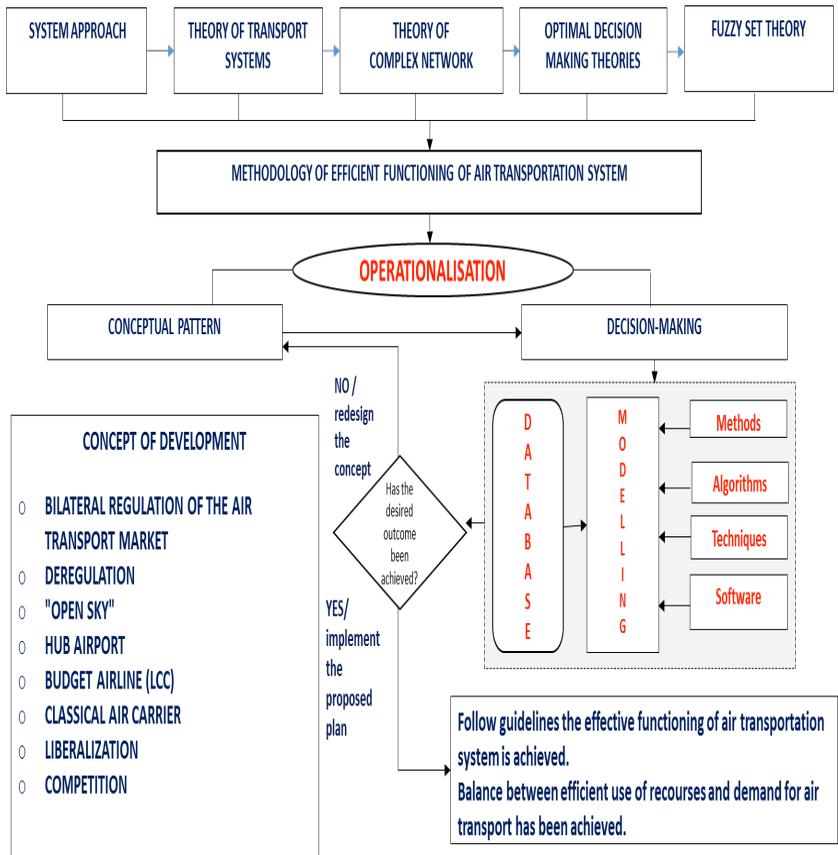
Knowledge Repository, new Knowledge Generation, Knowledge Transfer to the Next Generation. First, we should differentiate here between an undergraduate degree and a postgraduate. At the undergraduate level, a student may select different modules which are not the same, but they are highly related. The undergraduate degree is focused on providing the foundation of a specific area. Postgraduates can select modules which a high level of similarity. The postgraduate study gears towards providing the students with the detailed information on a certain field. Lecturers in postgraduate degrees are professionals who have conducted various research studies and have several publications in scholarly journals which are used as academic references and citation for the educational field. Most of the time, teaching at this level entails research and critical analysis of previously done research studies to find weaknesses or disapprove specific theories and models.

Training at the undergraduate level encompasses instructions and assessment tests for the students to cope with relevant modules. On the other hand, postgraduate studies undertake a higher-level collaboration between the students and their supervisors. Doctoral students are encouraged to interact with their supervisors as their peers so that they can offer guidance and specific instructions for the students stuck in a particular section. Moreover, the students interact not only with the professionals within the academic context, but also with those outside the academic fields.

The basic purpose of lecturing as the cornerstone of university teaching is to disseminate information. It is an effective method of communicating theories, ideas, and facts to students. The lecturers select important information for learners and transmit this knowledge in the lecture. We consider the interactive lecture techniques as a good approach allowing students to apply what they have learned and give them a context for upcoming lecture material. Aviation management disciplines are based on the fundamental principles and procedures, such as math and natural sciences. Therefore, one of the knowledge transfer outcomes is student's ability *to demonstrate understanding of an optimization model for airline/airport activities.*

Knowledge Transfer to the Society and Generating economic development. We would like just to mention the main ideas of how

to carry out that additional role. We offer six steps (figures 1) to meet the Global air transport challenges:



1. System approach which is crucial in aviation transport problem-solving.
2. Development of efficient functioning methodology.
3. Operationalization.
4. Database creation.

5. Simulation.

6. Rational and effective solutions for the air transport sector.

We have arrived at the following: university and air stakeholders should collaborate for a repository, generation and transferring global aviation knowledge. The Global Air Transport Sector Challenges have intensified the need for strategic partnership between a university, air transport companies or organizations. The six steps set for mitigating and overcoming the said challenges will help transform the role of the university into a major center of competence for air transport growth promotion. When the university and the aviation industry work in tandem to expand knowledge frontiers, they become a powerful engine for better decision-making to achieve the overall sustainability of air transport.

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