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JATS publishes the following categories of papers written in scholarly English: a) Full Research Papers, b) Conference Reports, c) Book Reviews, d) Industry Perspectives. Papers should be submitted electronically via journal's website <https://jats.aviationsociety.gr> in MS-Word format ONLY using British spelling, single-column, 1.5 line spacing, Tahoma letters, font size 11. Section headings (and sub-headings) should be numbered and written in capital letters. Upon acceptance of a paper and before its publication, the corresponding author will be asked to sign the *Transfer of Copyright* form on behalf of all identified authors.

*Full Research Papers* should contain original research not previously published elsewhere. They should normally be between 4,000 and 7,000 words although shorter or lengthier articles could be considered for publication if they are of merit. The first page of the papers should contain the title and the authors' affiliations, contact details and brief vitae (of about 50 words). Regarding the following pages, papers should generally have the following structure: a) title, abstract (of about 150 words) and six keywords, b) introduction, c) literature review, d) theoretical and/or empirical contribution, e) summary and conclusions, f) acknowledgements, g) references and h) appendices. Tables, figures and illustrations should be included within the text (not at the end), bear a title and be numbered consecutively. Regarding the referencing style, standard academic format should be consistently followed. Examples are given below:

- Airbus (2003), *Global Market Forecasts 2003-2022*, Toulouse: Airbus.
- Fragoudaki, A., Keramianakis, M. and Jancovich, S. (2005) The Greek PSO Experience. *4<sup>th</sup> International Forum on Air Transport in Remoter Regions*. Stockholm, May 24-26.
- Forsyth P. (2002a), 'Privatization and Regulation of Australian and New Zealand Airports', *Journal of Air Transport Management*, 8, 19-28.
- Papatheodorou, A. (2008) The Impact of Civil Aviation Regimes on Leisure Market. In Graham, A., Papatheodorou, A. and Forsyth, P. (ed) *Aviation and Tourism: Implications for Leisure Travel*, Aldershot: Ashgate, 49-57.
- Skycontrol (2007) *easyJet welcomes European Commission's decision to limit PSO abuse in Italy*. 23<sup>rd</sup> April. Available from: <http://www.skycontrol.net/airlines/easyjet-welcomes-european-commissions-decision-to-limit-pso-abuse-in-italy/> (accessed on 22/08/2008).

*Industry Perspectives* are usually shorter than full research papers and should provide a practitioner's point of view on contemporary developments in the air transport industry. Contributors should explicitly specify whether their views are espoused by their organization or not.

*Conference Reports* should be between 1,000 and 1,500 words. They should provide factual information (e.g. conference venue, details of the conference organizers), present the various programme sessions and summarize the key research findings.

*Book Reviews* should be between 1,000 and 1,500 words. They should provide factual information (e.g. book publisher, number of pages and ISBN, price on the publisher's website) and critically discuss the contents of a book mainly in terms of its strengths and weaknesses.

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The aviation industry has experienced many crises, out of which it usually departed with a strong rebound. Looking at the timescale, it is justified to argue that about every 10 years, a major crisis occurs. While this frequency appears to be rather stable, the severity of the downturn differs in magnitude. Thereby, general economic development and air traffic development are connected, with the later one being more volatile. This volatility, however, is not just true for the downturn, but also for the rebound following the crisis. Taking a close look at the temporal sequence of past crises like e.g. 9/11 or the Global Financial Crisis a clear pattern can be identified. The recovery of the aviation industry lags behind the recovery of the general economy, but rebounds stronger. To determine a quantitative relation of how much stronger the aviation industry recovers compared to the general economy, a model was developed based on the data of past crises. With a detailed focus on the recovery phase, this paper gives a forecast on how the rebound following the COVID-19 pandemic is likely to develop.

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*Chao-Hung Chiang*

Fatigue poses an important safety risk to aviation, while it has been suggested as a key human factor which influences crew's working ability and flight safety. Flight attendants are in the first line to serve customers and also play an important role in flight safety. Thus, the modified Delphi method and grey correlation analysis are used to find the influential factors of the fatigue. Furthermore, the weight analysis and ranking of the fatigue factors of the flight attendants are discussed in the study context of the analytic hierarchy process. The results show that the company's planning and scheduling have the highest weight of fatigue. Furthermore, a load factor of 80% appears tiring for the crew, despite the fact that the number of flight attendants meets the legal requirements. In fact, this has the highest weight of fatigue in short-haul flights, unlike long-haul flights where the weight differs. Research findings may have managerial implications to airlines and relevant government agencies towards fatigue's reduction and improvement of flight attendants' working life.

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*Ioulia Poulaki, Elen Paraskevi Paraschi, Konstantinos Marinakos, Avraam Avramopoulos, Sevasti Makrygianni*

Significant changes have taken place at airports due to market liberalization, airport privatization and growing competition. The growing demand and evolving expectations of passengers, require new ways of using technologies, to enhance operational processes and

the whole travel experience. The digital era is transforming the aviation industry and has a significant impact on its future. The aim of this study is to assess the benefits of applying digital technologies to airports and airlines and their inseparable connection with innovative services provision to passengers, while it describes how to create a seamless end to end experience at the airport, maintaining a high level of security. Moreover, the study underlines the contribution of digital technologies to aviation industry, focusing on the organizational integration and passenger experience optimization. Reference is made to the pandemic, of COVID-19 and its impact on air travel. Primary research methodology is qualitative, with structured personal interviews, while the main findings indicated that through digital technologies and innovative services, the benefits for airports, airlines and passengers are increasing. Finally, this paper discusses a benefit model approach, based on the literature review and the research findings, with theoretical and practical implications.

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*Nikola Lukačević, Emir Ganić, Bojana Mirković*

This paper analyses the impact of aircraft noise on community around Podgorica Airport, Montenegro. The airport is located 12 km from the city centre of the Montenegro capital, Podgorica. It served 1.3 million passengers and 7.5 thousand operations in 2019. The noise impact assessment is conducted in IMPACT web-based modelling platform using the distribution of operations by aircraft types, time of the day, and radar tracks for the busiest day (August 15) in 2019. Noise contours are assessed for Lden and Lnight indicators. They were merged with the Global Human Settlement Layer to assess the number of people exposed to different noise levels. In addition, based on the World Health Organization recommended exposure levels related to their health implications, the percentages of the population highly annoyed and highly sleep-disturbed are estimated. Furthermore, facilities of public importance (schools, hospitals, churches, etc.) are assessed against compatibility with the requirements set for the Zones with increased noise protection in national regulations. The results show that the exposure of community around Podgorica Airport to aircraft noise is still not a serious issue. The near vicinity of the airport is industrial zone and the number of people highly annoyed by noise is approximately 3.2% of the total city population. Nevertheless, it is crucial to draw attention to planners to preserve airport neighbourhood from potential inhabiting, to avoid problems that some airports in the region are facing nowadays.

5. THE ECONOMIC FEASIBILITY TO REDUCING ENERGY USE IN LARGE COMMERCIAL U.S. AIRPORT BUILDINGS THROUGH LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) CERTIFICATION.....82-109

*John F. Kauffman*

There is a growing movement in the U.S. (e.g., airports) to obtaining LEED (Leadership in Energy and Environmental Design) certification to reduce energy use. LEED advocates assert, on average, 25% less energy used by LEED-certified buildings compared to conventional commercial buildings. In the absence of studies regarding large U.S. LEED commercial airport buildings, a systematic quantitative review, content analysis and SWOT was performed to determine the economic feasibility of reducing energy use in airport buildings. A systematic quantitative literature review, combined with a comparison of LEED cost-benefit studies, and LEED certification objectives - to - airport facility energy requirements and U.S. government energy reduction initiatives was performed. Positive and negative (Pro/Cons) energy reduction findings were catalogued, charted, and analyzed. The findings from 1) LEED commercial building studies, 2) the LEED cost-benefit studies, and 3) the comparison of LEED certification

program to large commercial U.S. airport energy requirements and trends were synthesized using a SWOT analysis. In aggregate, there was negligible correlation between commercial U.S. building LEED certification levels and energy use reduction. In spite of noteworthy findings regarding on-site energy reductions, there was insufficient evidence to suggest LEED reduced overall (site and source) energy use. Therefore, little evidence supports the cost-effectiveness and economic feasibility to reducing energy use simply through the LEED certification process. This study presents the pros and cons in applying LEED certification to reducing energy use in commercial airport buildings.

## EDITORIAL

This issue collects five papers focusing on a variety of topics related with the contemporary air transport environment.

In the first paper, **Jorgen von der Brelie** and **Axel Lemke** investigate the recovery of aviation industry focusing on past crises. In fact, taking a close look at the temporal sequence of past crises like e.g. 9/11 or the Global Financial Crisis, the authors observe a clear pattern showing that the recovery of the aviation industry lags behind the recovery of the general economy, but rebounds stronger. Therefore, the authors tried to determine a quantitative relation between aviation industry and general economy in terms of recovery strength, by developing a model based on the data of past crises. With a detailed focus on the recovery phase, this paper gives a forecast on how the rebound following the COVID-19 pandemic is likely to develop.

**Chao-Hung Chiang**, in the second paper, driven by the fact that fatigue, a key human factor which influences crew's working ability, poses an important safety risk to aviation and flight safety, uses the modified Delphi method and grey correlation analysis to find the influential factors of the fatigue, ranking them and discuss them upon analytic hierarchy process. The results show that the company's planning and scheduling have the highest weight of fatigue, while the findings may have managerial implications to airlines and relevant government agencies towards fatigue's reduction and improvement of flight attendants' working life.

The significant changes that have taken place at airports due to market liberalization, airport privatization and growing competition are discussed, in the third paper, by **Ioulia Poulaki**, **Elen Paraskevi Paraschi**, **Konstantinos Marinakos**, **Avraam Avramopoulos** and **Sevasti Makrygianni**. The authors assert that the growing demand and evolving expectations of passengers, require new ways of using technologies, to enhance operational processes and the whole travel experience. Given the digital transformation of the industry and the tremendous impact of COVID-19 pandemic on air travel, this study aims to assess the benefits of applying digital technologies to airports and airlines and their inseparable connection with innovative services provision to passengers. Research findings indicated that through digital technologies and innovative services, the benefits for airports, airlines and passengers are increasing. Therefore, the authors discuss a benefit model approach, with theoretical and practical implications.

The fourth paper analyses the impact of aircraft noise on community around Podgorica Airport, Montenegro, while the noise impact assessment is conducted in IMPACT web-based modelling platform using the distribution of operations by aircraft types, time of the day, and radar tracks for the busiest day of the year. **Nikola Lukačević**, **Emir Ganić** and **Bojana Mirković** assert that the exposure of community around Podgorica Airport to aircraft noise is still not a serious issue and crucial to draw attention to planners to preserve airport neighbourhood from potential inhabiting, to avoid problems that some airports in the region are facing nowadays. In the fifth and last paper **John F. Kauffman**, driven by the growing movement in the U.S. to obtaining LEED (Leadership in Energy and Environmental Design) certification to reduce

energy use, performs systematic quantitative review, content analysis and SWOT to determine the economic feasibility of reducing energy use in airport buildings, providing noteworthy findings when it comes to on-site energy reductions, while there was insufficient evidence to suggest that LEED reduced overall (site and source) energy use. Nonetheless, the pros and cons in applying LEED certification to reducing energy use in commercial airport buildings are presented and discussed.

We would like to extend our thanks to all these authors and all the reviewers for their hard work and contribution to this issue of *Journal of Air Transport Studies*. We believe that these works are providing a valuable contribution to the aviation practitioners as well as encouraging further research on the respective topics.

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