
Editorial

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Biographical notes: Andreas Wittmer is the Managing Director of the Center for Aviation Competence at University of St. Gallen, Switzerland, and President of the Swiss Aerospace Cluster. Furthermore, he is a freelance Air Accident Investigator in Switzerland. He has published and frequently speaks at conferences and professional meetings on air transport management and economics. He teaches on international business, transportation and aviation topics at different management schools internationally.

Ian Douglas is a Senior Lecturer at the School of Aviation, University of New South Wales, Australia, and is a Commissioner of the Australian International Air Services Commission. Furthermore, as a Consultant on airline pricing and revenue management, he has advised airlines in the Asia-Pacific region. He teaches on transport economics and aviation strategy at the University of New South Wales, and has taught strategic management and management consulting at management schools in Australia, Indonesia and China.

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The 2011 Air Transport Research Society (ATRS) Conference was held in Sydney, Australia. In its 15th year, the conference attracted 256 participants from 34 countries and 217 paper presentations were made. The ATRS, a special interest group of the World Conference on Transport Research Society (WCTRS), attracts researchers, policy makers, executives and practitioners from worldwide, to share research issues, methodologies and results, to enhance research capability on multinational and multidisciplinary air transport issues, and to find solutions to current and anticipated future challenges.

We have made *challenges in aviation management and regulation* the theme of this ATRS special issue. The air transport industry plays a major role in the world's economic activity and remains one of the fastest growing sectors. Given this, political challenges are growing due to increasing negative effects such as air traffic noise and emissions resulting in a variety of environmental charges. Airlines and airports have grown not only due to increased liberalisation around the world but also due to increasing globalisation. Passenger demand has been positively affected through denser networks and segmented business models. Growth does not come without its challenges: airports have increasingly become capacity constrained, and airlines are concerned about future infrastructure accessibility.

In this special issue of the *International Journal of Aviation Management*, we have chosen six papers concerning many of these issues from different orientations.

Two papers focus on deregulation, two papers on airline and airport service quality, one on airport charges, and the final one on emissions.

In their paper, Kille, Bates and Murray stress that regional aviation is critical to the development of regional and remote communities. It has also been recognised by the Australian, Brazilian and Canadian Governments that regional aviation is crucial to the continued economic development of these countries. Based on the analysis of economic regulatory reforms in the countries the authors show that they have similar economic structures and have completed a cycle of regional aviation deregulation over the last 20 years. They suggest four criteria, service quality, competition, efficiency and innovation, to determine the impact of government economic policy on regional aviation.

Sowawattanakul and Wongsurawat analyse domestic airline networks and passenger demand in Thailand after deregulation. Major transformations have occurred to the domestic airline industry in Thailand since deregulation in the late 1990s. New entry from low-cost carriers significantly eroded the market share of the national flag carrier, Thai Airways. Using panel data spanning years 1996 to 2009, they study how different types of airlines have reconfigured their networks during this period. Results show that the dominant full-service carrier has moved toward a hub-and-spoke model, while smaller players have adopted additional point-to-point network features. They also investigate the rise and decline of various regional airports. The analysis reveals that airports which are more often chosen by start-up airlines mostly have significant surges in total passengers. Airports located in populous provinces with robust economic growth after deregulation also tend to be more successful.

In his paper, Jiang investigates airline service quality and passenger satisfaction at China Eastern Airlines (CEA) in the Wuhan Region. He conducted surveys for CEA's domestic passengers at Wuhan Tianhe International Airport in China. The results show that there is not a significant difference between the passengers' expectations of desired airline service quality of CEA and its actual service quality, and the quality of airline service is important to improve the level of passenger satisfaction. The results also show

that there is a significant difference in expectations among different travel groups; and there are no significant differences between passengers' expectation and actual service quality.

Borille and Correia focus their paper on the investigation of arrival processing facilities at airports under different scenarios. They develop a simulation model and test it with 100 passengers at the arrival hall of Rio de Janeiro International Airport in Brazil. The validation of the model was conducted in comparison with real system results. Nine combinations of conveyor belt dimensions, waiting time at the baggage claim area, the percentage of passengers with two bags, and the number of passport control desks were tested. The results indicate that the level of service offered could be significantly improved by managerial decisions related to the number of passport control desks and baggage loading at the carousel.

de Carvalho da Costa and de Carvalho da Costa analysed possible environmental impacts of aviation from the FIFA World Cup in 2014 and the summer Olympic Games in 2016. Given the continental dimensions of Brazil, much of the transportation will be through civil aviation. Using a methodology developed by the Intergovernmental Panel on Climate Change (IPCC) they studied current emissions of carbon dioxide by the main airlines operating in the Brazilian domestic and international markets. The outcome of their study was reference characterisation of the sector's emissions in order to propose mitigation actions of these additional emissions stemming from the two sporting events.

In the final paper presented in this special issue, Plötner, Wesseler and Phleps identify key operational parameters affecting airport charges. He states that the analysis and assessment of new air transport concepts, yields operating costs such as direct operating costs (DOC) one of the most important metrics. However, most published methods are either outdated or having limited functional sensitivities, especially when it concerns airport charges. Only a few DOC methods take such important charges into account. The outcome of his study was the identification of the main operational parameters and establishing their values in a readily available form and applicable to air transport concept assessment.

We hope our readers, whether from industry or academia, find the articles valuable and encouraging to undertake further investigation into the respective topics introduced in this ATRS special issue. We, the editors, would like to take this opportunity to extend our appreciation to the people that contributed to the ATRS Conference 2011 in Sydney and the numerous reviewers for this *IJAM* ATRS special issue.