

# Airline Network Development in Europe and its Implications for Airport Planning

This book explores what the consequences of a deregulated EU air transport market are for airline network development and airport planning. The book analyzes changes in airline route reconfigurations, changes in airport hierarchy and individual airport network quality, and changes in strategic airport capacity planning. The book provides airports with information on how to deal with increased uncertainty as a result from changing airline network behavior.

A book review by Frank Witlox

It is fair to say that, today, there is no real shortage of useful academic books that deal with airline economics, network optimization and airport planning. The traditional existing contributions written by e.g. Button, Dempsey, Doganis, Gillen, Goetz, Graham, Morrell, Williams, and others, are well-known and well-cited. So, the question is: what makes Guillaume Burghouwt's book on *Airline Network Development in Europe and its Implications for Airport Planning* so different from the already existing books? Well, in my view, there are several reasons. For one, the main focus in Burghouwt's book is on Europe. As a result of the three 'packages' of deregulation measures, the European aviation market underwent drastic changes. The deregulation measures are responsible for the gradual removal of a series of restrictions to airline competition within Europe. And with each package, the opportunities for airlines to alter airfares, frequency and capacity have increased. Clearly, this process - and experiences after deregulation in the United States was introduced show this as well - has led to important changes in the way airlines organize their networks and how airport authorities plan their infrastructure. It is precisely this issue that forms the core of this book. It describes the changes in airline network strategies after the deregulation of the EU aviation market and identifies the factors that have been crucial to these changes.

In addition, the book also assesses the effects of changing airline network

structures on the connectivity of airports. This is a second important novelty that is characteristic for the book: how can airline networks be conceptualized (chapter 2), how can they be described and measured (chapters 3-5), how can they be illustrated (chapter 6) and, more important, how can they be assessed (chapter 7)? Different approaches are suggested and explained: e.g. a spatial approach using graph theory, location-allocation models and spatial concentration measures leading to an assessment of the spatial configuration of airline networks in Europe, and a temporal approach taking into account wave-system structures, network reconfigurations and dynamics in airport hierarchy leading to an evaluation of the temporal configuration of airline networks in Europe.

A third issue concerns the identification of the effects of changing market circumstances and network structures on the planning of airport infrastructure (chapters 8 and 9). The new air transport regime and the adoption of hub-and-spoke systems have also changed the context of airport planning. An important element in this discussion is the volatility of airport traffic, and how airports react when using a flexible strategic planning style.

Fourth and finally, Burghouwt deploys an interesting mix of research methods: quantitative research (network analyses, spatial concentration indices) and qualitative research based on document analysis and interviews with airline and airport execu-

tives. In addition, the book contains numerous airline case studies (including KLM, BA, Iberia, Swiss, Braathens, Meridiana, Régional Airlines, easyJet, Air Berlin, Germanwings, Virgin Express, BMIBaby), and an extensive airport case study (Schiphol) to make its point.

## Conclusion

The aim of this book is to explore the complex relationship between airline network development, airport connectivity and airport planning in a European air transport market setting. In my view, it does so quite convincingly, as it strikes a good balance between theoretical conceptualization and real-world case studies and practices. The book thus provides good value for money.

## About the Author

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## Book Information

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