Zurich University of Applied Sciences
School of Engineering
IDP Institute of Data Analysis and Process Design

University of Belgrade
Faculty of Transport and Traffic Engineering

THE COMPARISON OF FINANCIAL PERFORMANCE OF AIRLINES WITH DIFFERENT BUSINESS MODELS OPERATED IN LONG-HAUL MARKET

Manuel Renold[1], Jovana Kuljanin[2] and Milica Kalić[2]

[1]Zurich University of Applied Sciences, Switzerland
[2]University of Belgrade – Faculty of Transport and Traffic Engineering, Serbia

OUTLINE

- Introduction
- Long-haul low-cost business model development – literature review
- Selection of the airlines with different business model in long-haul sector
- Financial performance of airlines operating long-haul market
  - Cost structure of Norwegian and British Airways
  - Comparison of airlines' financial performance
- Conclusion

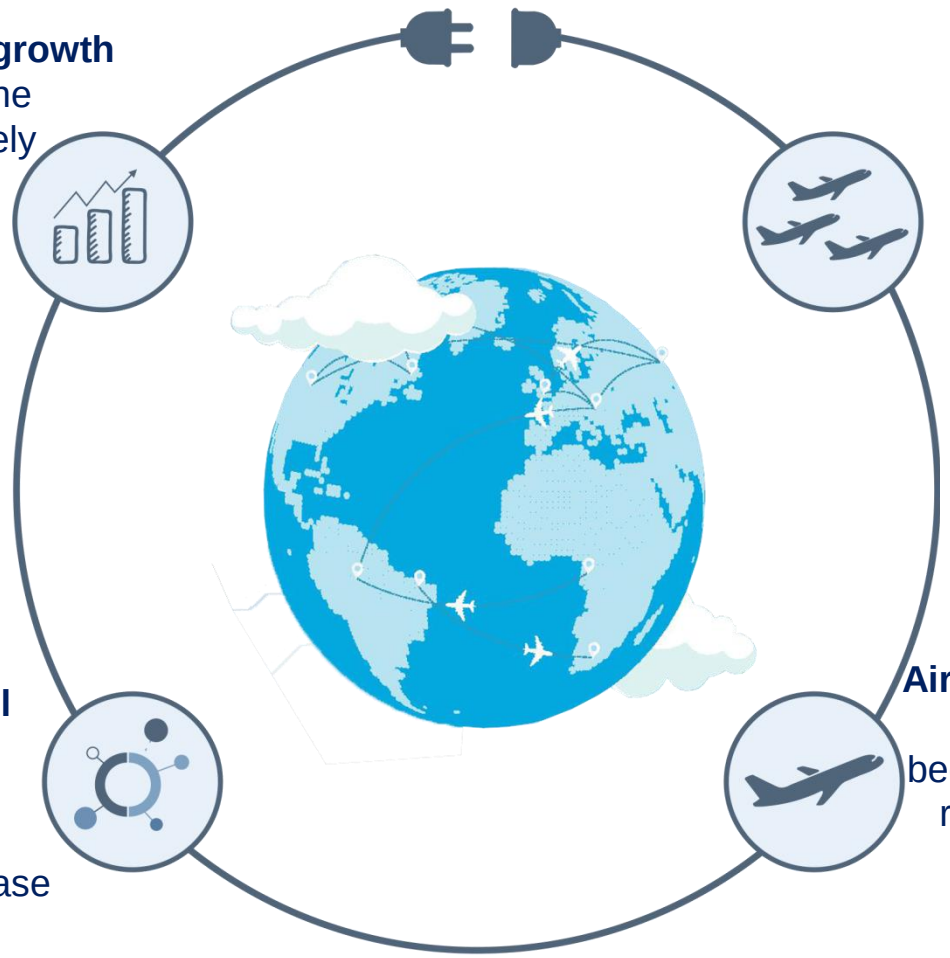
INTRODUCTION

- **The competition between LCCs and FSNCs** has been focused exclusively on short to medium-haul markets for a long time (Dobruszkes, 2006)
- The long-haul low-cost business model brought the **paradigm change** in the airline industry and its effect on competition becomes the challenging task
- Presence of several successful carriers, particularly in Europe, Asia and the U.S., brings the renewed enthusiasm that such a business model could prevail more in the near future
- Similar to short and medium-haul markets, **the presence of LCCs** in long-haul market could **impose the competitive pressure on FSNCs to reduce their fares** in order to retain the market shares

The triggers for long-haul low-cost business model development

Shift of demand, different growth speeds – China, India and the region of Middle East are likely to experience higher growth rates

Deregulation – liberalization of traffic rights will in the long run support the introduction of more intercontinental point-to-point services



Blurring of business model boundaries – a growing number of hybrid carriers, as well as convergence on traditional models in some case

Aircraft technological innovation – if either the A380 or the 787/A350 become major successes, this would respectively strengthen connecting or point-to-point traffic

Long-haul low-cost business model – literature review

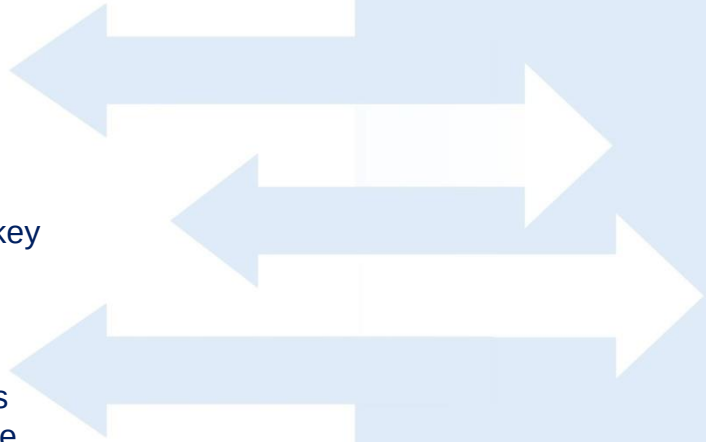
Viability of long-haul low cost business model

Optimistic approach

Douglas (2010)
LHLCC viability through the concept of an effective “dual model integration”

Daft and Albers (2012)
The importance of revenue consideration as a key factor of feasible existence of LHLCC service

De Poret et al. (2015)
Higher seating densities, higher cargo revenues and additional ancillary revenues can ensure the economic viability of LHLCC operation



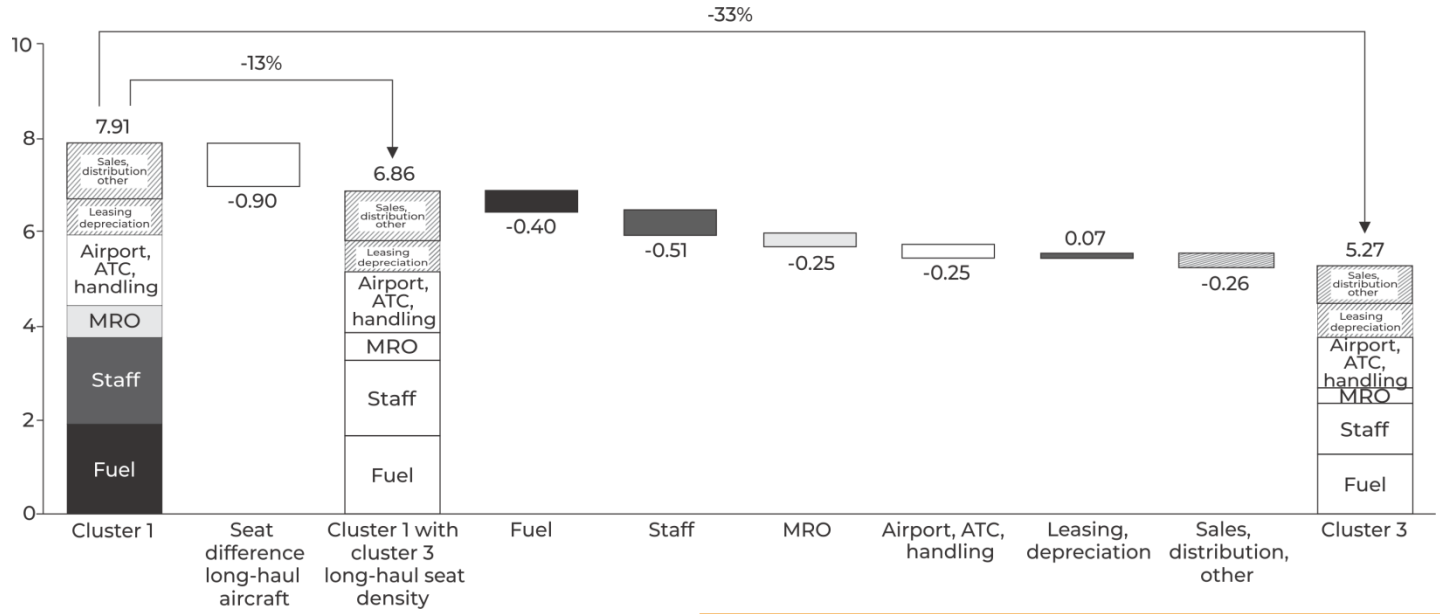
Pessimistic approach

Francis et al. (2007)
The importance of connecting passengers and high yield premium passengers that significantly reduced the economic viability

Morrell (2008)
Problem of generating demand (due to the lack of connecting passengers) to support the existence of hub by-pass service

Cost differences between LCCs and FSCs

- The third cluster derived (consists of only one carrier Norwegian Air Shuttle) achieved the **33% lower unit costs** (i.e. **2.50 US$ cents**) compared to legacy hub carriers from the first cluster (**7.91 US$ cents**), of which **24 percentage points** were considered as **sustainable**



24% sustainable cost advantage

11% driven by:
-Lower staff costs
-Choice of airports with lower charges
-Lower costs of sales and distribution

13% driven by:
-Higher seating density

Selection of the airlines with different business models in long-haul sector

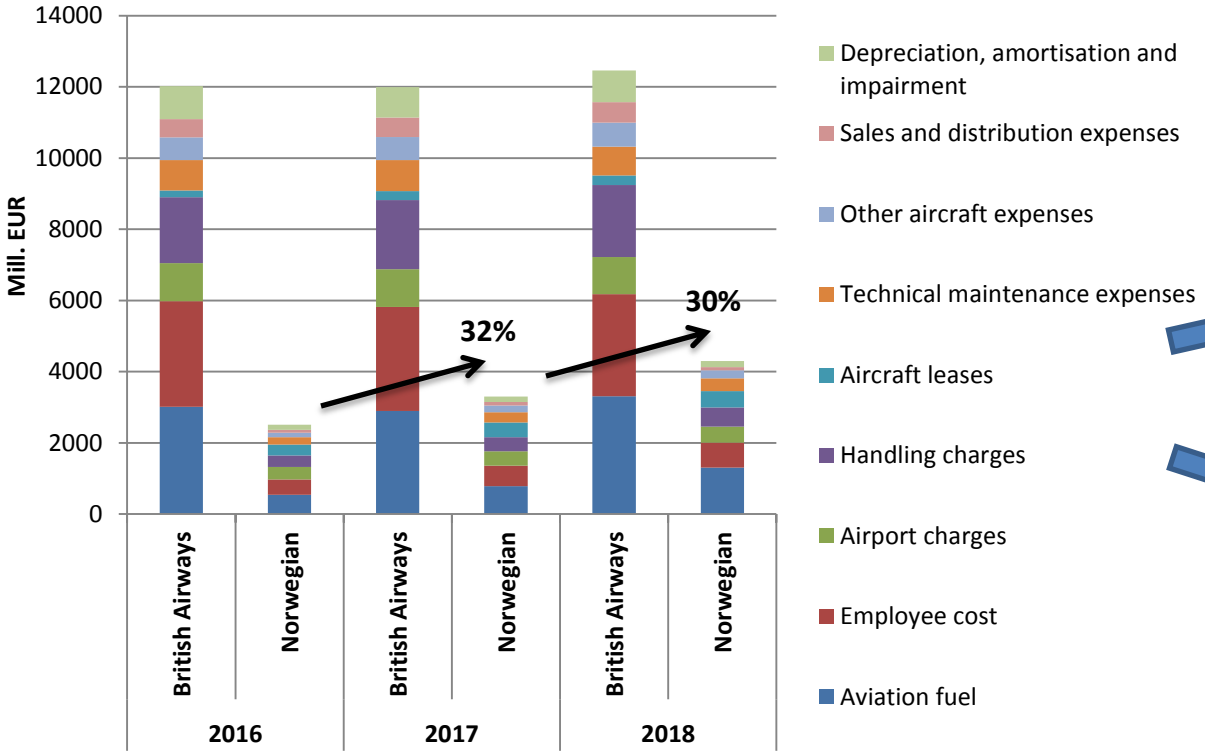
British Airways vs. Norwegian Air Shuttle

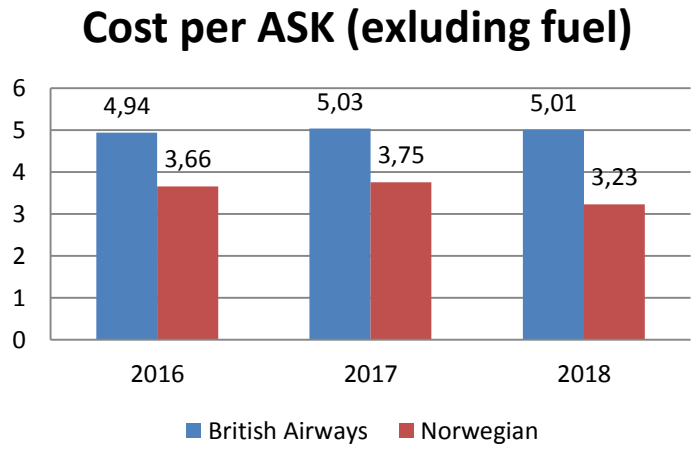
Key performance indicators for 2018:

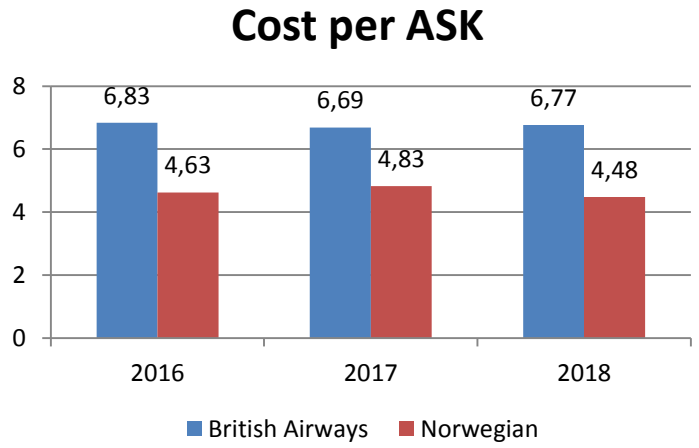
	BRITISH AIRWAYS	norwegian
ASK (mill.)	184 547	99 220
N. of passengers (mill.)	46.8	37.3
Load factor	82.5%	85.8%
Avg. sector length (km)	2 964	1 843
N. of employee	42 384	10 215
Fleet age	13.8 years	3.8 years
Routes	400 (200 destinations)	Over 500 (150 destinations)
Transatlantic routes	YES	YES

Financial performance of airlines operating long-haul market

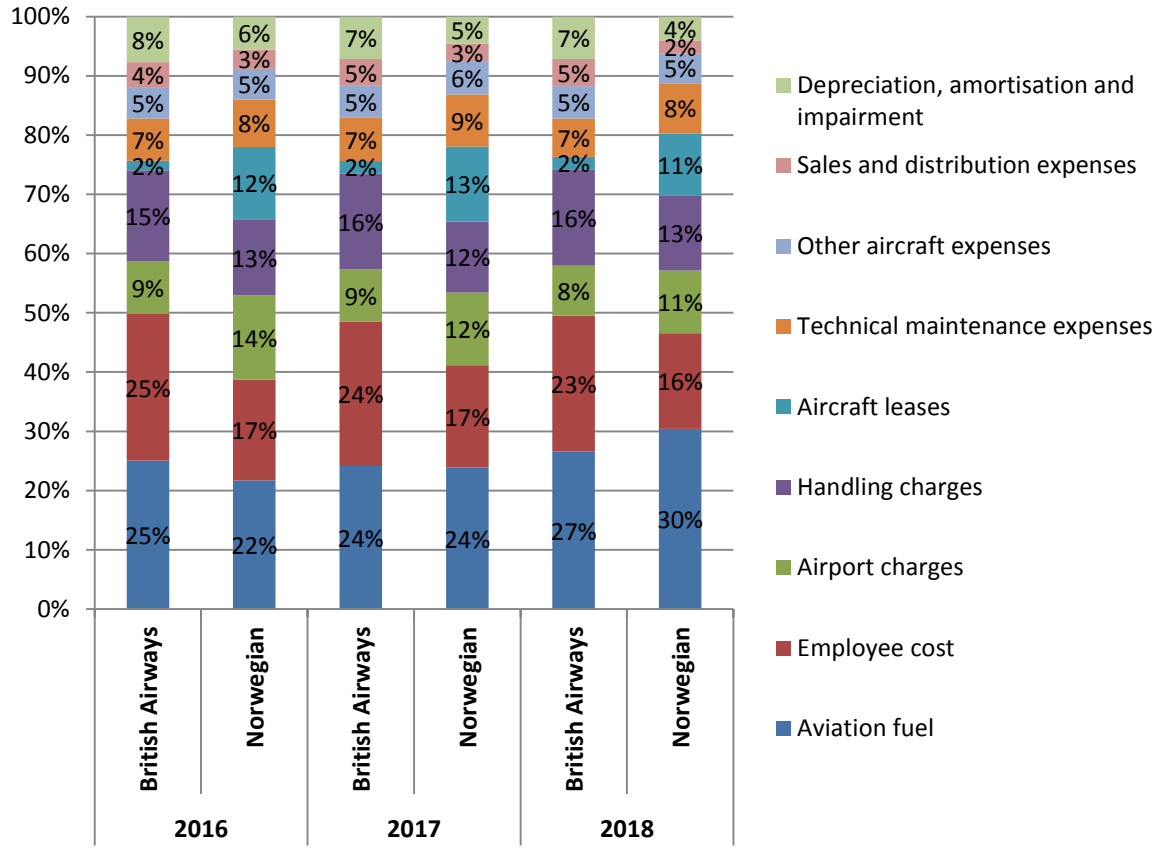
Cost structure of British Airways and Norwegian





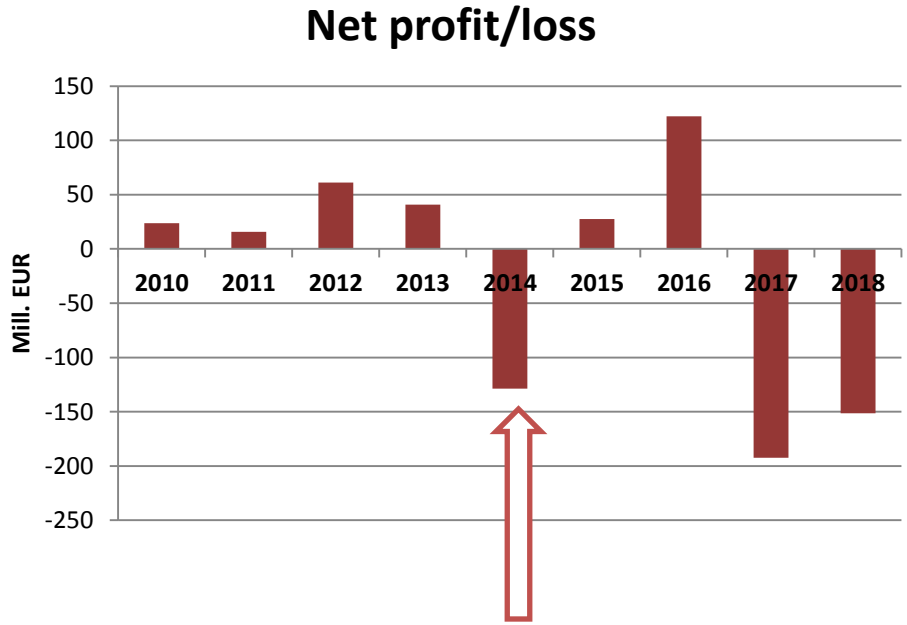


Cost structure of British Airways and Norwegian



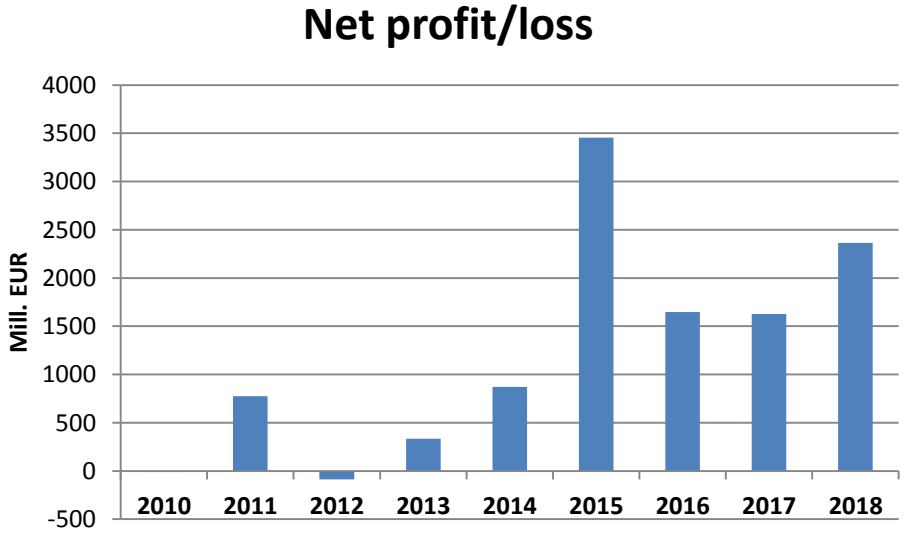
Cost structure of British Airways and Norwegian

Norwegian



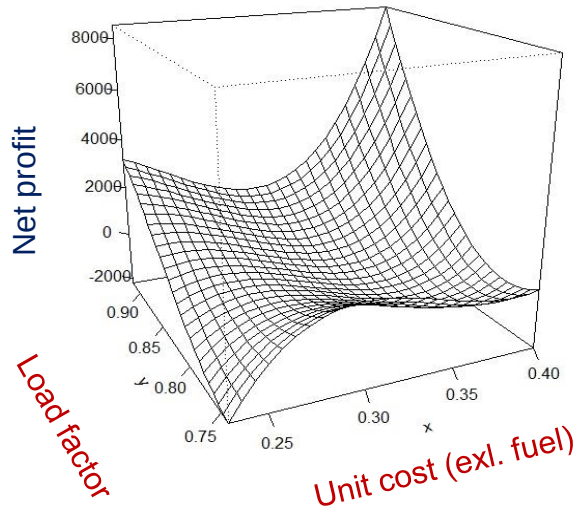
964 | 1000 | 1048 | 1168 | 1338 | ..... | 1843

British Airways



Comparison of airlines' financial performance

- **Three-dimensional graph** constructed for each carrier separate (x,y,z) –
  a nonlinear polynomial surface is fitted into 3-D dataset by minimizing distance between each data point to get a smooth surface
  - Z-axis profit
  - Z=f(x,y) - the combination of different factors that may affect the airline's financial performance
  - The orthogonal projection of (x,y,z) onto the surface with the contour plot (z= contour(x,y)) - isosurface

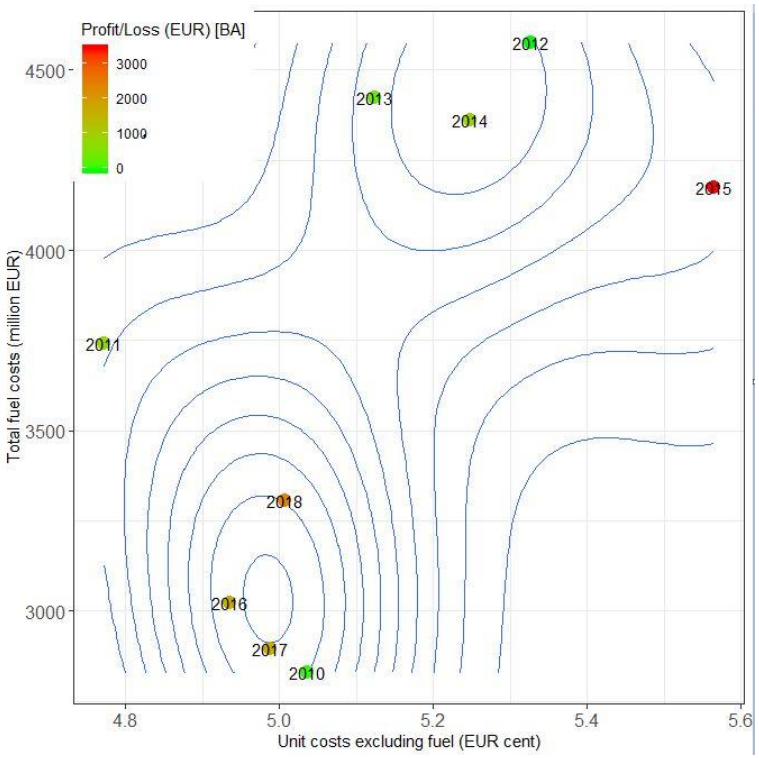


- The selection of the factors included is result of the careful examination of the relevant literature that investigates the airline profit behavior.

Comparison of airlines' financial performance

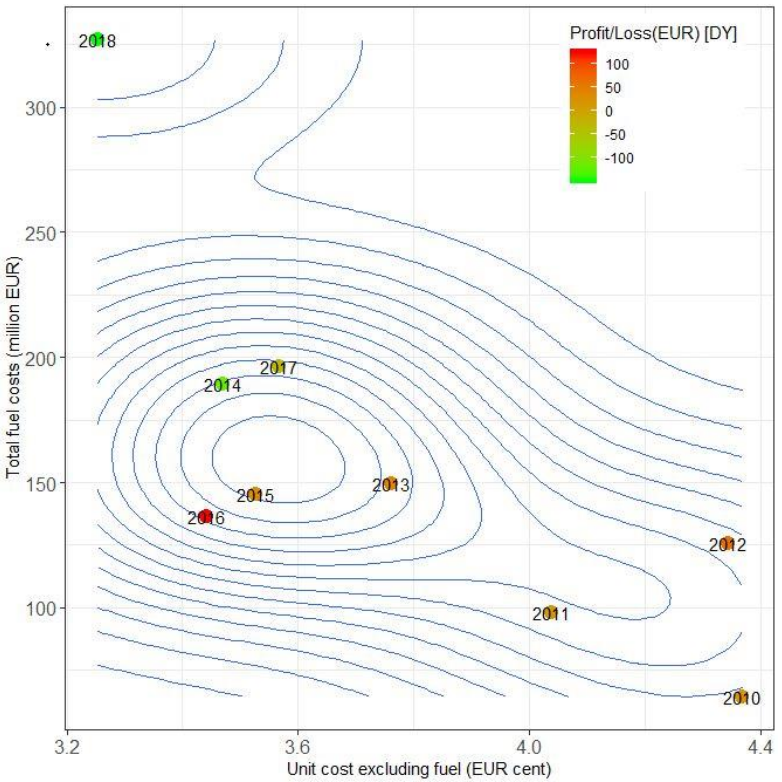
- Profit contour plot based on unit costs (excluding fuel) and total fuel costs

British Airways



- **Higher unit costs and higher total fuel costs coincide with very poor profit performance**.
- The situation in which unit costs are still high and total fuel costs are lower, seems to be favorable in terms of profit performance.
- **Fuel costs appear to have more importance than other operating costs** in the airline's financial performance.

Norwegian

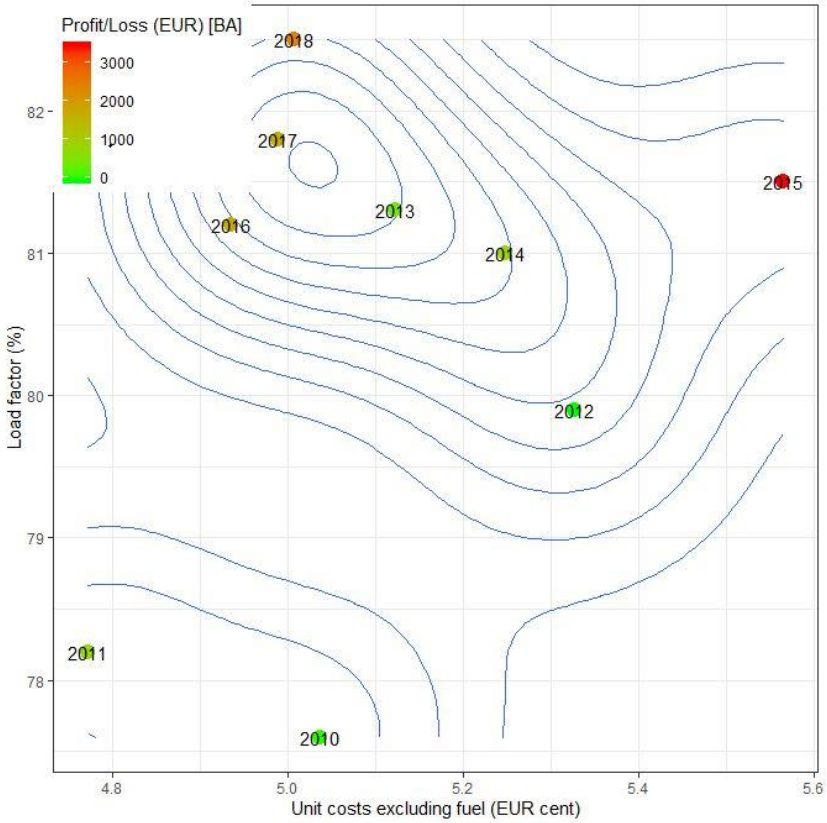


- DY' positive profit record is highly linked to **lower values of fuel costs** and **lower unit costs**.
- DY's profit performance is equally sensitive to **both higher values of fuel costs** (even in the case when other unit costs are substantially low) and **higher value of unit costs** (excluding fuel).

Comparison of airlines' financial performance

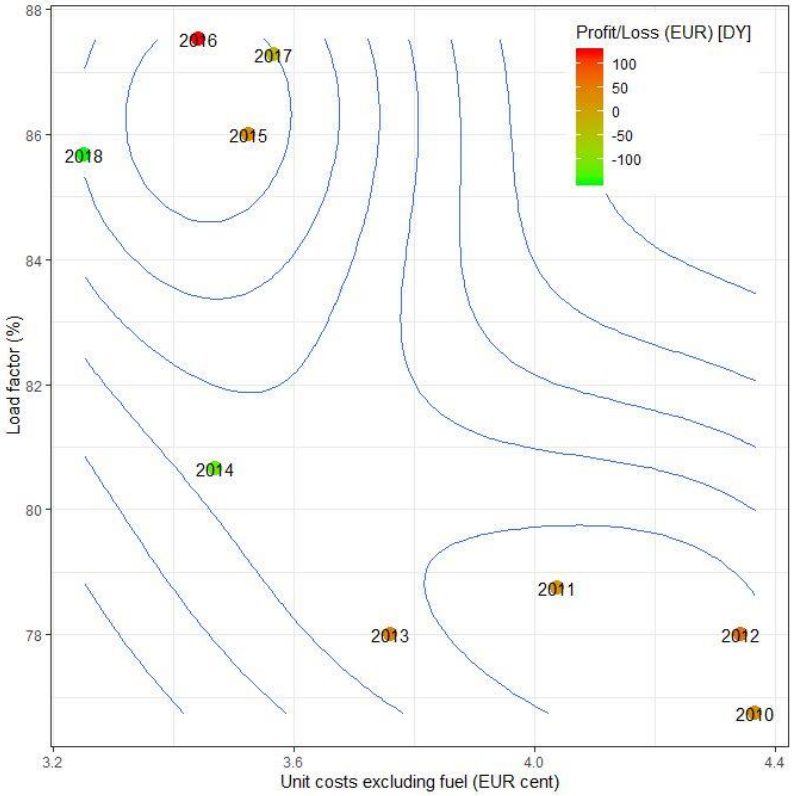
- Profit contour plot based on unit costs (excluding fuel) and load factor

British Airways



- BA can be profitable even with slightly worse performance in terms of load factor compared to its rival

Norwegian



- DY tends to have higher load factors.
- DY's positive profit records are secured only in the case of **very high values of load factor** or/and **very low values of unit costs.**

Conclusion

- The paper provides the practical mathematical tool which enables the detection of the behavior of airlines' profit performance in terms of different factors which mainly involved the operating costs.
- Total fuel costs as a major contributor in total operating costs were included separately from other costs, since it is well known that long-haul LCC model is highly susceptible to its fluctuation.
- The contour plot constructed for Norwegian mainly reveals that:
  - First, Norwegian's higher profit is highly associated with lower value of total fuel costs and lower value of other operating costs (expressed through unit costs)
  - Second, the load factor records (higher than the industry standard), combined with lower unit costs, will also ensure the positive profit performance
- The similar conclusion is observed in the case of British Airways, although business model adopted by this carrier is characterized by the higher values of unit costs and generally not so high sensitivity to load factor

THANK YOU FOR YOUR ATTENTION!