SUMMARY

The research done in the scientific world runs parallel to the practice by airline companies and both are not necessarily related; often both worlds not knowing what is going on the frontline of each other's research. This is because the airline companies tend to keep their working models secret and fine-tune them in-house. Also the integration of a (new/refined) model is difficult and costly. So it's better to stick with the original plan and optimize then switch to a completely different model halfway through. Consequently researchers are often left in the dark about the finesse of the working models in practice, whereas Airlines are not likely to adopt the newest models out there in the literature (Talluri & Van Ryzin, 2005).

In this report we will distinctly look at the literature. As a result of the above-mentioned secrecy two main types of articles can be found in literature. First of which is an *active* development of new and refined models that calculate optima under predetermined parameters and assumptions. These are perhaps the new and pioneering models but not necessarily adopted by the airlines. The passive approach takes for granted that models are used by airlines; however the parameters and their coefficient are unknown. By deriving the parameters and coefficients one can learn from the models used by the airlines.

This report aims to clarify the techniques used for the main profit drivers. Profit is generally known as revenues minus costs; by maximizing the first and minimizing the latter airline companies will be able to achieve better financial performance and improve competitiveness.

Presently in the Airline industry three different business models can be distinguished: Full Cost Carriers or legacy carriers, Charter Airlines (in the past known to be the low cost carriers), and the new Low Cost Carriers. The techniques presented in this report are often solely present in either a FCC or LCC. However, the techniques that are presented are not the *mere* differences that set them apart. The aim is also not to compare the different business models or their success. This report will point out when a technique is applied to a certain business model; and often by their successes we can judge the success of the technique as discussed in section 1.2.

In the introduction a *schematic overview* is presented which captures all theory discussed in the researched papers and should be used as an aid in keeping oversight of the material. In chapter 1 the report will elaborate on *pricing models* and conduct an in depth analysis of Revenue Management. In chapter 2 the report presents findings on models used for determining *operational costs*. In chapter 3 maximization of revenues and minimization of costs are brought together in *fleet assignment* models. Chapter 4 aims to deduct the most important *parameters* presented in the literature. In chapter 6 the report draws conclusions and proposes recommendations on the performed research.