Business Model Changes of an Incumbent Player in the European Airline Industry

A Case of the Lufthansa Group

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ABSTRACT

The purpose of this paper is to investigate in how far influencing environmental factors have caused developments and adaptions to a dominant incumbent player of the European airline industry in the last decade.

As a representative for these various incumbents the Lufthansa Group with its flagship airline Lufthansa has been chosen as a unit of analysis. Developments within the group were analyzed by using Osterwalder's business model canvas framework. Subsequently, these developments were not only reported but also put into context of macro-environmental and competitive forces that may have caused them in the first place. The data and information have been gathered via a desk research approach, analyzing majorly annual reports, press releases and newspaper articles of influential papers.

Results from the research indicate that the Lufthansa Group made majorly small-scale, incremental adaptions to its practices over the last decade that may have been caused by social, economical and technological forces in the macro-environment, as well as by competition of low-cost entrants in the European short-haul market. A drastic revolution in their business model has just emerged within the last couple of years, when a restructuring of the group started. The key development, is the decision to move most short-haul operations to the low-cost subsidiary Germanwings, having Lufthansa's focus on the medium-and long-haul market. This finding indicates some sort of convergence of the incumbent's business model on the short-haul segment with the new-entrants approach. Depending on the success of this move, it may imply a superiority of the low-cost model in short-haul markets, so that the new hybrid approach of operating different business models in separate markets may indicate the a future alternative of international airline groups.

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1. INTRODUCTION

For decades the structure of the European aviation market was quite predefined due to regulations of the industry. Before the airline market liberalization, a group of fragmented national air markets existed, which were served by national carriers (European Commission, 2012). Airlines could only act between two markets via bilateral agreements set by governments, leading to a restriction of market forces and competition (Butcher, 2010; Morrell, 1998). The whole liberalization of the airline industry aimed at creating a single, integrated European airline market (European Commission, 2012), with the intention to bring benefits to consumers by lower fares and a wider choice of offers, based on the principle of competition (Morrell, 1998). Prior to this de-regulation inefficiencies by traditional carriers were relatively protected due to their monopolies, being at a disadvantage for consumers and the economy as a whole (Doganis, 1994; Wright, 2014). The market liberalization took place as a series of three packages that were gradually implemented in the time period of 1987 to 1997 by the European Commission (Butcher, 2010; Morrell, 1998). Results from the liberalization were new entrants to the industry in general (Doganis, 1994; Morrell, 1998) and the emergence of new players as low-cost airlines like Ryanair, Virgin Express or Easyjet (Buck & Lei, 2003; Graham, 1998; Mason, 2001). This so-called liberalization of the European aviation market can be seen as the trigger for the evolution of new business models in the aviation industry in Europe, which were further accommodated by influential environmental factors. In particular did the liberalization of the aviation market open the doors for the "new" business model of low-cost carriers. According to the German Aerospace Center "Low cost carriers […] focus on cost reduction in order to implement a price leadership strategy on the markets they serve." (DLR, 2008, p. 8). Before the liberalization the models of charter airlines and full service carriers solely dominated the market. As the dominant incumbent a full service carrier can be defined as "a "legacy" or "full service network carrier" is an airline that focuses on providing a wide range of pre-flight and onboard services, including different service classes, and connecting flights." (DLR, 2008, p. 5).

The research goal of this paper is to determine in how far the business model of a dominant incumbent following a full-service approach has developed over the last decade. A focus lays on developments in response to environmental factors influencing the industry in Europe, and to explore if a convergence to the more novel low-cost model is observable.

As a guiding research question the following will serve:

In how far did a dominant incumbent firm of the European airline industry react in response to environmental changes, by making adaptions to its underlying business model over the last decade?

A sub-question relevant in the analysis part will be: What have been dominant environmental factors that affected the evolution of business models in the European airline industry?

This topic appears worth discussing in times when European airlines as the AirBerlin Group are in severe financial troubles (AirBerlin, 2014; Vasagar, 2014), while the low cost airline Ryanair has been able to report new record profits in its most recent annual report of 2013 (Ryanair, 2013). Furthermore, it appears interesting to see if a convergence of the incumbent to the new model takes place since the business model approach of the new player Ryanair seems to be more profitable than the incumbents approach (see Table 2, p.5) in an industry that is known to be the least of all in terms of profitability (Porter, 2008). It adds to literature by examining influential environmental factors for the airline industry in Europe and by studying in how far a dominant incumbent player's business practices have developed as a response to these.

The outline of this thesis will be as follows: First a theoretical framework will start by giving an insight to the concept of business models, by explaining its origin, issues surrounding the theory, its benefits and framework approaches in analyzing the concept. It will be finalized by a short review of academic literature on the topic of business model evolution and causing factors. In the following the analysis part will begin by examining the dominant factors that may have affected the development of business models in this market. As a final step the dominant incumbent player the Lufthansa Group, with its flagship Lufthansa, will be studied to identify adaptions in its business model, which may represent a response to observed environmental factors, and to see if a convergence to the new business model approach, driven by low-cost principles, is detectable.

2. THEORETICAL FRAMEWORK

2.1 Business Models: Origin, issues, functions and frameworks

2.1.1 A business model, what is it?

The concept of business models is among the most prominent topics in modern literature (Baden-Fuller & Haefliger, 2013; Chesbrough & Rosenbloom, 2002), while at the same time being one about which little consensus among academics exists. (Al-Debei & Avison, 2010; DaSilva & Trkman, 2013).

As described in DaSilva and Trkman (2013) and Osterwalder, Pigneur and Tucci (2005) "business model" as a term has been first used by Bellman et al. in an academic article published in 1957. Nevertheless, business models as a widely used topic have just become popular since the advent of the Internet age, especially among high-tech start-ups (DaSilva & Trkman, 2013; Demil & Lecocq, 2010; Magretta, 2002; Osterwalder et. al., 2005; Shafer, Smith, & Linder, 2005). Nonetheless, the concept did not only attract the interest of consultants and managers (DaSilva & Trkman, 2013), but as well of academics and researchers, as an analysis of the term business model in the electronic bibliography "Scopus" (www.scopus.com) shows. Published literature in the disciplines of accounting and management sciences containing the term within the text or in the title has substantially increased up from year 2005, as visible in Figure 1.

A key issue concerning the concept is that "no generally accepted definition of a business model has emerged" (Shafer et al., 2005, p. 202). Baden-Fuller and Haefliger (2013) define a business model as "a system that solves the problem of identifying who is (or are) the customer(s), engaging with their needs, delivering satisfactions, and monetizing the value." (p.1). In contrast to that Chesbrough and Rosenbloom (2002) rather see a business model as a mediator between technical inputs and economic outputs, which is needed for successful commercialization. Shafer et al. (2005) define it as "a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network" (p. 202).

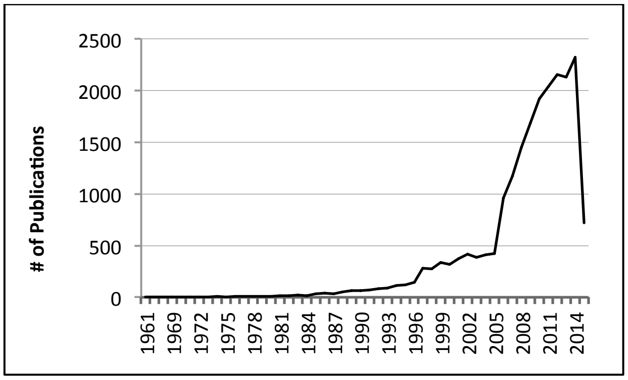

Figure 1: Amount of publications in the electronic bibliography "Scopus" in the fields of accounting and management containing the term "business model"

Another interpretation is given by Zott and Amit (2010) who describe it as "the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities" (p.219). Osterwalder et al. (2005), who gained popularity in the field of business models, define it as:

> "A conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, to generate profitable and sustainable revenue streams." (p.16).

In 2010, Osterwalder and Pigneur presented another definition, which is comparatively short to their previous one: "A business model describes the rationale of how an organization creates, delivers, and captures value" (p.14). At last, a very different approach is taken by Magretta (2002), who claims that business models are "stories that explain how enterprises work." (p.4). These stories will then answer questions concerning customer segments, what customers do value, how to make money, and how to deliver value at a low cost.

As this input of only a few definitions shows, there is clearly no conformity on the concept yet. Concluding, one can say that most prominent definitions have the aspect of value, either in the sense of creating it and transferring it to consumers or otherwise taking the company's perspective in capturing it, in common.

2.1.2 Functions of business models

A critical question is why business models are perceived as such important and what their use is for companies. Baden-Fuller and Haefliger (2013) for example argue that a "business models choice determines the nature of complementarity between business models and technology and the paths to monetization. A poor choice can lead to low profits, a good choice to superior profits." (p. 4). Next to that the choice of a particular business-model acts as some sort of filter, which will focus on particular practices and activities, while other alternatives may get neglected and sorted out (Chesbrough & Rosenbloom, 2002; Teece, 2010). Furthermore, business models "can be powerful tools for analyzing, implementing and communicating strategic choices" (Shafer et al., 2005, p. 200). Next to that a business model may act as some sort of common language among stakeholders and serve as a cognitive tool for visualization (Arend, 2013). As Zott and Amit (2010) describe it business model choice is of crucial importance for a variety of reasons. Firstly, it determines the set of activities performed and resources needed by a company; secondly, it determines the ability to create and gain value, depending on the competitive surrounding; thirdly, it determines a company's bargaining power, again depending on the competitive environment determined by the choice of business model; and lastly, it as well predetermines a company's key partners, suppliers and customers outside its own micro environment. Next to that, paying attention and gaining an understanding of the concept of business models is important, since if done well they have the chance to reshape industries and the competitive environment (Johnson, Christensen & Kagermann, 2008; Teece, 2010). Osterwalder et al. (2005) identify five functions that the concepts of business models serve. They help to gain an understanding of the core business logic and facilitate sharing with others, it contributes to analyzing the business logic, it improves the management of a company, and lastly it enables to compile possible scenarios and futures of a business. According to Chesbrough and Rosenbloom (2002) a business model has the following six functions: a) to articulate the value proposition; b) identify a market segment; c) define the value chain structure; d) estimate the cost structure and profit potential; e) describe the firms position within the value network; and f) formulate a competitive strategy. Magretta (2002) sees business models as some sort of hypotheses, which are getting tested in the progress of business and are as a response to feedback and success adapted. "A business model's great strength as a planning tool is that it focuses attention on how all the elements of the system fit into a working whole." (Margretta, 2002, p.6).

What becomes evident from this section is that academics haven't found a universal agreement on the pure functions of business models yet, which probably results from different research backgrounds and different underlying definitions of what the concept actually is and contains. Albeit, there is some agreement that the choice for a specific approach of a business model is of great importance for a company, since it will have profound influence on future decisions and the market a company is operating in. For example, it may pre-determine the available supplier base, the market segment and a company's competitors. Next to that, it appears as well that research so far agrees to a certain extent that a business model facilitates the understanding of core ideas and the sharing of these with others as possible investors or stakeholders, like employees and suppliers.

2.1.3 Issues relating the concept

Besides being a very popular topic, business models remain as well extremely controversial, as expressed by an over-existence of definitions, which is as well acknowledged by academics (DaSilva & Trkman, 2013; Osterwalder et al., 2005). Al-Debei and Avison (2010) claim such a lack of consensus may as well come from the fact that the concept of business models is investigated by a variety of different research backgrounds and is applied by practitioners according to their individual company's context. This trouble of research being conducted by various academic perspectives, which leads to different interpretations of the business model concept, is further supported by Chesbrough and Rosenbloom (2002), as well as Shafer et al. (2005). Next to that "one of the shortcomings in business model literature is that the different authors rarely build on each other. Consequently, business model research as a whole advances more slowly than it could and often stays at a superficial level." (Osterwalder et al., 2005, p. 33). As Al-Debei and Avison (2010) observe business-models are frequently falsely used and confused with other management concepts as strategy, supporting confusion and discussion about the concept (DaSilva & Trkman, 2013; Magretta, 2002). However, Shafer et al. (2005) bring it quite straightly to the point; a business model is not at a strategy, which is further supported by Teece (2010). Chesbrough and Rosenbloom (2002) define three major points of difference between the concepts of strategy and business models; those are a) a clearer focus on value capturing by the strategy concept; b) financial dimensions are more frequently neglected in business models; and c) strategy assumes availability of a vast amount of reliable information, while business models assume limited knowledge biased by previous experiences. A further critical difference to strategy lies in the fact that business models do only describe how the links of an enterprise work, however they do not take care of competition as a factor (Magretta, 2002), which is a fundamental element in strategy.

2.1.4 Frameworks for analysis

Several academics have proposed so-called frameworks, meta-models or ontologies, which shall enable an easy analysis of companies' business models by determining which elements are typically expected in a business model. Similarly, entrepreneurs can use such frameworks in order to facilitate the development of their own business model. Zott and Amit (2010) propose an activity system design framework, which disassembles a business model according to two dimensions. On the one hand design elements describe a companies content (what activities are done?), structure (how are activities linked?), and governance (who and where will activities be performed?). These design elements describe the basic set up of the company. On the other hand they are not complete and useful without design themes, which describe the general competitive approach taken by a company. Those can be novelty (innovative approach), lock-in (buy in elements to keep consumers), complementarities (activity bundling) or efficiency (reducing costs by optimization). According to this framework companies' need to make decisions about all those design elements and combine them with themes, which will result in a distinctive business model and by that an individual way of creating and capturing value. Another framework is the V^4 Business Model Ontological Structure proposed by Al-Debei and Avison (2010). At its core it consists of four value dimensions; starting with the value proposition as the central, most important factor. Next to that value-architecture, comprising resources and competences; value-finance, including revenue streams and pricing models; and the value-network, representing the inner and outside relationship web, form the residual three dimensions. A tool that has become prominent recently, and which will be used as a tool of analysis in this paper, is the business model canvas framework of Alexander Osterwalder, which is based on work of his doctoral dissertation in 2004 (Osterwalder, 2004). The business model canvas consists of nine building blocks forming the four key pillars of the framework, which are offer/ product, customers, infrastructure and financial viability. Those building blocks are arranged visually as a framework, which can be frequently used as a template for printing and a consequential analysis. As the authors describe it themselves, the business model canvas forms "a shared language for describing, visualizing, assessing and changing business models" (Osterwalder & Pigneur, 2010, p.12). Due to its set up it allows a comprehensive and accurate assessment of an enterprise and its environment (Anderson et al., 2006). This is as well acknowledged by Maurya (2012), who used the canvas business model as a basis for his design of

Table 1: The pillars and corresponding building blocks of the "Business Model Canvas Framework"

Pillar	Building Block	Description
Offer / Product	Value Proposition	"The aggregation, or bundle, of benefits that a company offers customers." (Osterwalder & Pigneur, 2010)
Customers	Customer segment	"The different groups of people or organizations an enterprise aims to reach and serve." (Osterwalder & Pigneur, 2010)
	Channels	"Describes how a company communicates with and reaches its customer segments to deliver a value proposition" (Osterwalder & Pigneur, 2010)
	Customer Relationships	"Describes the types of relationships a company establishes with specific customer segments. " (Osterwalder & Pigneur, 2010)
Infrastructure	Key resources	"Describes the most important assets required to make a business model work." (Osterwalder & Pigneur, 2010)
	Key activities	"Describes the most important [actions] a company must do to make its business model work." (Osterwalder & Pigneur, 2010)
	Key partnerships	"Describes the network of suppliers and partners that make the business model work." (Osterwalder & Pigneur, 2010)
Financial viability	Revenue streams	"Describes the way a company makes money through a variety of revenue flows." (Osterwalder, Pigneur, & Tucci, 2005)
	Cost structure	"Describes all costs incurred to operate a business model." (Osterwalder & Pigneur, 2010)

a lean canvas, which is similar to Osterwalder's but has a focus on entrepreneurs designing their own start-up business models. Table 1 gives a short description of the individual building blocks and their affiliation to the four pillars.

As with the definitions, the approaches to a framework or ontology differ again, depending on the researcher describing it. However, it is as well visible that a central part in most frameworks is the aspect of value, which is transferred to a customer. Summarizing it can be said, as Al-Debei and Avison (2010) support it, that the business model concept in general needs clarification and consensus, so that as a final result a unified single framework can be created.

2.2 Business model dynamics

After having gained an insight into the concept of business models, the topic of evolution and innovation of business models and the driving factors, which may lead to such developments, are still missing and will subsequently evaluated. "Business model innovation refers to the search for new logics of the firm and new ways to create and capture value for its stakeholders […]." (Casadesus-Masanell & Zhu, 2013, p. 464).

As observed by Kijl, Bouwman, Haaker and Faber (2005) the question of which factors may drive a change in business models for firms is not in depth investigated by researchers yet. Therefore, the key question concerning this topic is what kind of factors may have an influence on business models of companies.

Demil and Lecocq (2010) say, "a business model may evolve as response to both external and internal factors" (p.236). External factors are according to the authors equal to environmental changes as new entrants or increased costs for key resources. Other external factors that may trigger a need for adaption in a business model can be innovative technologies, deregulation or market changes (Al-Debei & Avison, 2010). According to Teece (2010) factors might be market changes, technologies or legal developments. Baden-Fuller and Haefliger (2013) argue that business model innovation does not necessarily need a shift in technology to occur, an example stated by them would be the just-in-time principle, developed and adopted in Japan. As said before, Demil and Lecocq (2010) argue that those dynamics do not only emerge from the outside of a company but can as well arise from the inside. They name four overarching areas of change within a firm that may give rise to shifts in a dominant business model. Those are a) crucial management decisions; b) uncontrollable developments in elements (e.g. reputation or externalities); c) the interaction of elements within core components (e.g. synergies); and d) interactions between core components (e.g. complementarities).

One thing various scholars agree on is the factor of competitive advantage. As Teece (2010) claims "business model innovation can itself be a pathway to competitive advantage if the model is sufficiently differentiated and hard to replicate for incumbents and new entrants alike" (p.173), which is as well supported by Magretta (2002) saying that a business model itself can be a competitive advantage in the market. Besides that, Weiller and Neely (2013) frame it in a different way by observing that companies have to develop their business models in order to retain their initial competitive advantages.

In order to analyze business model factors causing dynamics in the European airline industry a guiding model or framework is needed. Since this analysis will take place at an industry level, it will be focused on macro-environmental factors. A useful tool for such an analysis is presented by the PESTEL framework, which "categorizes environmental influences into six main types: political, economic, social, technological, environmental and legal." (Johnson, Whittington, & Scholes, 2011, p. 50). It appears to be a valid approach, since for example Kijl et al. (2005) describe the framework as "useful for analyzing [macro-environmental] factors that are affecting organizations." (p. 8).

When talking at the industry level a major factor that may cause dynamics can be competition, which should not be neglected. Since competition does not represent a macro-environmental factor the PESTEL framework does not cover it. An important concept describing this force is represented by Michael Porter's five forces framework (Johnson et al., 2011; Porter, 1979). The framework helps in assessing the degree of competition in a particular industry and by that its attractiveness. It consists of the five competitive forces: the threat of new entrants, the bargaining power of buyers, the bargaining power of suppliers, the threat of substitutes and the extent of rivalry among existing competitors (Johnson et al., 2011; Porter, 1979; Porter, 2008).

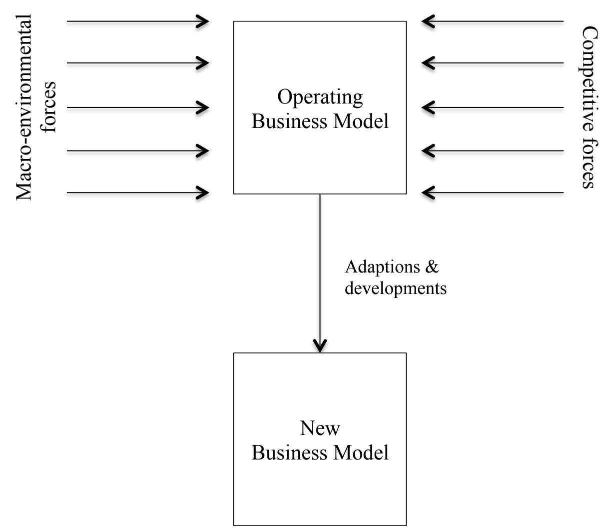

Figure 2: Potential forces influencing the adaption to a new business model

3. METHODOLOGY

This paper follows a qualitative, exploratory research approach, in order to gain insights to market developments of the European airline industry and emerging trends in business approaches. The analysis of this paper consists of two parts, firstly, a study of factors influencing business models that are prevalent in academic literature and secondly, a study of the developments in the business model of a dominant incumbent of the full-service airline approaches.

The data for the literature review has been gathered by the use of the electronic bibliographies and search engines Scopus, Google Scholar and the library catalogue of the University of Twente. Furthermore, the so-called snowball method (van Aken, Berends, & van der Bij, 2012) was used, especially

tacking the approach of backward snowballing, which is the tracing of influential references used in relevant literature. An initial screening of the abstract and contingently its conclusion assessed academic articles, in order to see a potential contribution to the literature review. As a basis of analysis the PESTEL framework is used, since macro-level factors shall be identified, having an impact on all industry players as a whole not only on single ones. However, the analysis will be focused on the dimensions of economical, social and technological aspects, making it rather an EST analysis. This focus is done, since it is assumed that those dimensions contain most influential drivers for a distinct development in business practices. Next to that, it is expected that factors in other dimension, as regulatory compliance, would have an influence on business models in the industry, however not in way that may have lead to differentiated adaptions and evolutions.
Economic factors will be studied with focus on macro-environmental developments as increases in consumer demand, economic growth or shifts in disposable income. Social, or respective socio-cultural factors do include lifestyle trends, shifts in consumer preferences and attitudes or demographic changes. Finally, technological factors will concentrate on technological shifts and advancements as the role of the Internet or progress in communication technologies.

The PESTEL analysis will be accompanied by an assessment of the industry's competitive situation by the use of Porter's five forces framework. The individual dimensions will be shortly assessed in the first part of the analysis, a focus will lie on the present and growing rivalry among existing players. This focus is done, because it is assumed that competitive rivalry forms a significant influence on the business practices of incumbents in the industry. Besides, the other four dimensions form the competitive environment of the industry in general, but may not have lead to individually different business model adaptions of new and incumbent players. Furthermore, it is based on the limitation of a restricted length of this article, which inhibits both a complete PESTEL and five forces analysis, without acting on a superficial level.

In its second part the analysis will take form of a case study, examining the development of core business practices of one key player of the full-service business model approach over the last decade by using Alexander Osterwalder's canvas framework (Osterwalder & Pigneur, 2010). A study of these developments will especially try to reveal distinctive reactions to observed influencing environmental forces. Reasons for choosing the canvas framework for analyzing the business model developments are that it takes a holistic approach, being not only focused on revenue and cost streams. Next to that the argumentation of Maurya (2012) is followed in saying that the framework allows a fast and concise analysis of a company's business practices. The analysis will give a special focus on the building blocks of key partners, value offering, customer segments and the financial structure consisting of revenue streams and a company's cost structure. By this at least one dimension of every pillar of the business model framework is in depth investigated. The focus on these dimensions is grounded by the assumption that differentiated adaptions to the incumbent's business model have occurred in these sections, indicating an evolution of the business model. Nevertheless, since a business model has to be analyzed as a whole, changes in the residual building blocks will be more briefly studied as well.

As a key player the Lufthansa Group, as representative of full-service airlines is chosen. The Lufthansa Group is picked since it represents Europe's biggest airline group (Statista GmbH., 2014) having a long heritage in the passenger market and being as well by that a dominant incumbent player of the industry. The Lufthansa Group as a whole operates in a variety of different business segments; nevertheless the analysis will focus on the passenger airline segment, with the flagship Lufthansa. As a major unit of analysis Lufthansa Passage will be studied, since it represents the traditional core element of the group. During the analysis of certain building blocks other subsidiaries of the group may become part of the analysis as well. In Table 2 key figures of the Lufthansa Group are presented, for comparison the corresponding data of Ryanair, representing Lufthansa's biggest European competitor in the short-haul market and being at the same time a pioneer of the low-cost approach in Europe, are shown as well.

<u>Table 2:</u> Key figures of the Lufthansa Group and its competitor Ryanair

	Lufthansa	RYANAIR
Ownership structure	*German "Aktiengesellschaft" Public limited company*	*Public limited company*
Founded	*1953*	*1985*
Headquarter	*Cologne, Germany*	*Dublin, Ireland*
CEO	*Carsten Spohr*	*Michael O'Leary*
Business segments	*1. Passenger Airline Operator 2. Logistics 3. Maintenance, Repair & Overhaul 4. Catering 5. IT Services*	*1. Passenger Airline Operator*
Destinations	*274*	*180*
Fleet size	*622*[1]	*305*
# Employees	*118, 214*	*9,059*
# Passengers	*104.58 million*	*79.3 million*
Turnover	*€ 30.02 bn.*	*€ 4.88 bn.*
Profit	*€ 313.00 mil.*	*€ 569.30 mil.*

[1] 20 airplanes belonging to the Lufthansa Cargo (Logistics) segment

<u>Sources:</u>
Ryanair, 2013; Ryanair, 2014a; Ryanair 2014b; Deutsche Lufthansa AG, 2014c

The approach for analyzing developments of this player will be done via the assessment of secondary data. An essential source will be annual reports prepared and published by Lufthansa from 1997 to 2013, next to that press releases, newspaper articles and website information will serve as further sources. A limitation of taking annual reports as a main source might be a positive bias towards the companies' performances (Demil & Lecocq, 2010). Due to the high regulatory demands put on these reports they appear to be still a valid source.

4. ANALYSIS

4.1 Driving factors to business model changes

4.1.1 The macro-environment

4.1.1.1 Economical

The growth in disposable income (Eurostat, 2014) has made it possible for more people to take advantage of air travel (Dresner, 2006; Graham, 2006; Graham & Shaw, 2008).

However, demand is not only raised by an increase in average disposable income, but as well by lower ticket fares in the short-haul market (Wensveen & Leick, 2009). As Graham & Shaw (2008) state low-cost airlines do not only benefit from increased demand by an increase in disposable income, but they as well facilitate that development by pushing market fares further down (O'Connell & Williams, 2005). Another feature, that belongs partly to the political dimension and which contributes to increased demand in the tourism industry in general and the airline industry in particular, is the enhanced freedom of movement of people (Mason & Alamdari, 2007), which expresses itself in the abolishment of inter-European borders. Not only economic development but as well low-cost carriers themselves contribute to increased interest in air travel, as Graham (2006) argues low-cost carriers are generating traffic by encouraging more frequent flying, instead of only "appealing to the less wealthy parts of the population" (p. 19). Therefore, it is assumed that increased demand for air travel in the European Union is an economic driver for adaptions in airlines' business models. It is proposed that this factor may have been generated by general lower competitive airline fares and a higher disposable income of EU citizen, which may have lead to a higher amount to spend.

4.1.1.2 Social

In the social dimension of the PESTEL framework two major trends can be observed, which are namely a developing affection of consumers for shorter but more frequent holidays a year and a fragmentation of business travellers, which will be explained in a moment.

4.1.1.2.1 Shifts in consumers' holiday preferences

In general it can be said that leisure travel has risen on a much faster level than business travel (Dresner, 2006; Mason & Alamdari, 2007), making it important to look on developments in this customer segment.

It is observable that the valuation of time has changed in recent decades. A tendency towards taking shorter holidays but those then more frequently a year has developed (Buhalis & Law, 2008; Mason & Alamdari, 2007; Teichert, Shehu, & von Wartburg, 2008). As Graham (2006) further states this is partly due to increased work pressures in today's society, leading to fear of job loss and the unwillingness to stay away from the work place for too long time. Next to that the sociological development of couples having both partners full-time working may make it increasingly difficult to arrange joint long-term holiday breaks. Moreover, do flexible working arrangements make it as well possible to take an extended weekend break, as for example a short city-trip (Graham, 2006). In this dimension low-cost airlines are not only a big winner from this development but as well actively encourage weekend-breaks (Buck & Lei, 2003). Due to this, it can be argued that besides price level and economic conditions, time available for leisure activities is an important determinant in the demand for leisure travel services (Graham, 2006). This is especially important for air travel services, since shorter holidays may imply that minimizing travel time becomes gradually more important to benefit most from the holiday (Graham, 2006).

Nevertheless, Mason and Alamdari (2007) say "low fares have been the main stimulus for growth in leisure travel, with leisure passengers being prepared to switch destination for good deals." (p. 303). As an example of a low-cost airline reacting on this, one can see Germanwings offering blind-booking services. Here leisure travelers can select a package, representing the possibility of various destinations for a comparable low price (Germanwings, 2007). Until the purchasing process is finished customers do not know what their travel destination will be, expressing someway the willingness of choosing low-costs for an unknown outcome (Mason, 2005).

4.1.1.2.2 Fragmentation of the business traveller segment

Literature recognizes a decreasing propensity of people using business class offerings, especially on the short-haul destinations, instead switching to the cheaper economy class (Mason & Alamdari, 2007) or even to low-cost airlines (Fourie & Lubbe, 2006; Mason, 2005).

As Dresner (2006) says "a key difference between leisure and business passengers, […], relates to their price elasticity of demand" (p.29). Instead of looking primarily for low-costs, business passengers are rather valuing time (Dresner, 2006), which may benefit low-cost carriers, since their business model aims for a higher frequency of flights, by having low turnaround times (ELFAA, 2004). Gilbert, Child and Bennett (2001) conclude that quite a lot of business people would be willing to use low-cost airlines, indicating those could make use of the business passenger segment as long as they would offer frequent flights and have a high punctuality. Furthermore, do business passengers increasingly use low-cost carriers because of a more dispersed choice of destinations (Mason & Alamdari, 2007).

It is further observed that the two types of business and leisure customer are quite similar in a variety of aspects, making it not that necessary for airlines and airports to differentiate between them (Dresner, 2006), as for example via separated cabins. However Huse and Evangelho (2007) conclude that there are two types of business travellers. On the one hand the no-frills passengers having a more simplistic attitude towards the travel service and on the other hand the so-called luxury-loving passengers, who value mile programs, lounges and service quality quite high. Especially "senior executives seem to be keen on business lounges" (p.266). A further result of the research of Huse and Evangelho (2007) is the importance of exposure to low-cost services. They found out that a significant amount of business passengers do reassess the no-frills services provided by full-service airlines against the increased price, once they have been flying with the low-cost alternative, being in favor of the latest. With regard to special business customer segments it is likely that especially small and medium enterprises (SMEs) are rather looking at the price when selecting business travel opportunities (Fourie & Lubbe, 2006; Graham & Shaw, 2008; Mason, 2001; O'Connel & Williams, 2005), than big, listed corporations having travel policies and designated departments for arranging trips, who may able to negotiate special terms (Mason, 2001; O'Connell & Williams, 2005).

The findings from the literature, concerning reassessment of inflight services, as well as the continuous use of low-cost airlines by business customers, actually gives rise to the assumption that a price elasticity of demand for business passengers partly exists, which would be in favor of the new low-cost model approach. This is supported by Mason &

Alamdari (2007) and is by that somehow in contrast to the statement of Dresner (2006).

4.1.1.3 Technological

A further factor that benefited adaptions in business models of the airline industry and the emergence of low-cost carriers has been the Internet and technological progress in general (Gilbert et al., 2001; Mason & Alamdari, 2007). Buhalis (2004) goes so far and says that the arrival of the Internet enabled new business models in the airline industry to emerge. It is clear that not-only low-cost carriers benefited from the Internet but the industry as a whole, including charter and full-service carriers. The important difference however is that low-cost carriers may have been better able to take advantage of this initial technological shift in certain areas as operational efficiency, since they were less inclined by established practices (Buhalis, 2004; Buhalis & Law, 2008). The use of information and communication technology (ICT) made it possible for all players to improve its operations, as fleet or staff utilization, or improve in-flight entertainment and traveller satisfaction (Buhalis, 2004; Buhalis & Law, 2008), which appears to be more important for full-service carriers. Most importantly for low-cost carriers did the Internet and ICTs make it possible to directly communicate with customers and by that pushing away intermediates as travel agencies (Buhalis, 2004), having more direct, online bookings by customers (Gillen & Lall, 2004), which reduces costs dramatically. Another form of those intermediates that emerged in the travel industry have been online-travel agencies as Expedia and more significantly websites comparing flight fares online, as Swoodo or Opodo, which have been set up by various alliances of airlines (Buhalis, 2004). Though, if passengers use those platforms for finding low fares they appear to be more beneficial for low-cost carriers who are then displayed more frequently. Such ICT progress leads to an increased price transparency (Buhalis & Law, 2008; Mason & Alamdari, 2007) leading to lower competitive fares, which is further accommodated by technological advancement as more fuel-efficient air planes (Franke, 2007), enhancing the demand by leisure passengers (Mason & Alamdari, 2007).

However, Mason & Alamdari (2007) as well recognize that ICTs may as well decrease demand for air travel services, as for example business customers need to travel less frequently for meetings, since web-conferences represents a fast and extremely cost efficient alternative.

4.1.2 The competitive environment

This section will focus on the current competitive rivalry in the European airline industry as an external force to incumbents' business models in the market. The residual four forces are as well briefly displayed, since they shape the competitive situation in the industry in general, however it is assumed that competitive rivalry is the main force causing dynamics in incumbents' business models.

Rivalry among competitors in the European market can be said to be high (Wright, 2014), several players compete on similar or even the same routes within the intra-European market. This rivalry as well expresses itself in a low average-profitability of the industry in general (Porter, 2008).

With regard to environmental factors that may cause business

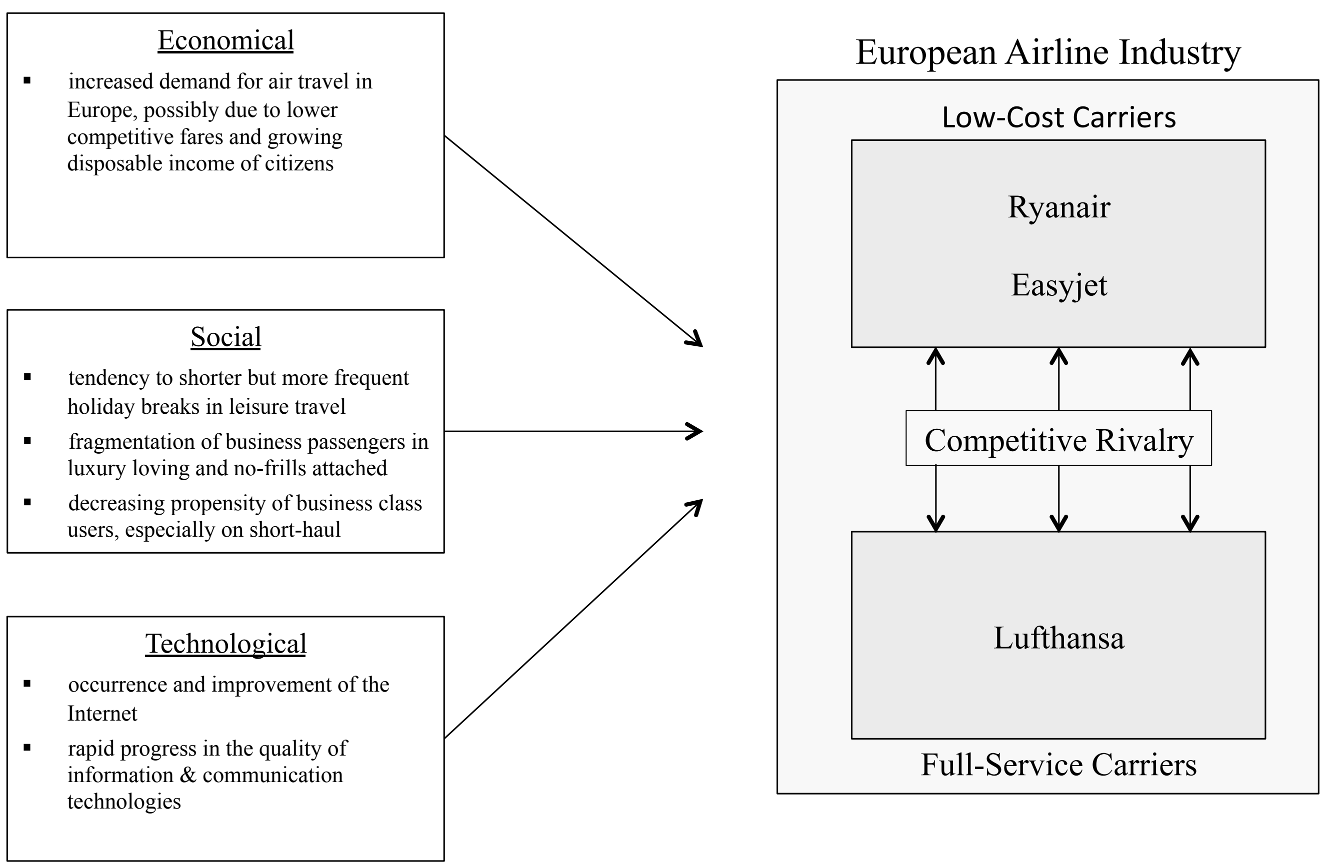

Figure 3: Driving factors of the macro- and competitive environment to business model changes of incumbent full-service players in the European airline industry

model dynamics, competition by other players can be assumed to have a profound influence on incumbents' practices. In this sense, especially low-cost airlines as Ryanair and Easyjet represent a threat to the incumbents of the industry in Europe (Deckstein & Mahler, 2011; Deutsche Lufthansa AG, 2011b). The importance to see competition, especially of low-cost players, as an external force that may cause alternations in Lufthansa's business model expresses itself in the increasing market share of low-cost players (DLR, 2008; Thomas, 2013). As the German Aerospace Center reports low-cost airlines increased their market share in seat capacity from 1998 with 5% to 2008 with 30% in the European geographic market (DLR, 2008). In a recent press release the European Commission made it even more drastic by stating "In 2012 for the first time, low-cost airlines (44.8%) exceeded the market share of incumbent air carriers (42.4%), a trend which continued in 2013." (European Commission, 2014, para. 9). The significance as a factor is even more evident by the fact that Ryanair nowadays forms Europe's second biggest airline after the Lufthansa Group (Statista GmbH., 2014), being the biggest rival on the short-haul market for the incumbent. If looking at airlines individually, Ryanair is even exceeding the passenger numbers of Lufthansa, as a single airline. Based on these observations it is proposed that competition by low-cost airlines forms a driving external force to the incumbent's business model, represented by the Lufthansa Group, potentially causing adaptions to it.

For thoroughness the residual dimensions of the five forces framework are subsequently evaluated in Box 1 presented in appendix 9.5.

4.2 Business model dynamics of the Lufthansa Group

The following section will display observations of developments and evolutions in the Lufthansa Group's business practices. Selected building blocks of the business model canvas framework will be displayed in depth while the residual ones won't be neglected but more briefly studied. Those developments will not only get described but as well put into potential relations to already analyzed influencing environmental factors.

4.2.1 Key Partners

In this building block one can observe several developments that in its essence have already been pursued by the Lufthansa Group since its privatization in 1997. Those developments can be categorized in the sections of creation of alliances and joint ventures, subsidiaries plus investments and the Star Alliance.

It can be observed that within the last decade the Lufthansa Group has set up a vast amount of alliances around the globe as well as joint ventures, as the A++ for the North American market in cooperation with United Airlines and Air Canada (Deutsche Lufthansa AG, 2011a) and J+ for the Asian market in cooperation with All Nippon Airways (Deutsche Lufthansa AG, 2012a). These alliances and joint ventures have brought benefits to consumers by enabling easier switches between flights and a generally higher accessibility of destinations (Deutsche Lufthansa AG, n.d.a). This development can not be seen as a reaction on factors in the social dimension since these alliances majorly have effects on the long-haul market, while social dynamics are rather expected to be focused on the short- to medium-haul market. Nevertheless one could argue that it is some sort of reaction to a continuous increase in air travel demand, since those alliances and joint ventures promote a more dispersed offering of destinations. However alliances can rather not be seen as a reaction on the dynamic of technology but that they are rather facilitated and enabled by the improved ICT capabilities of all partners. With regard to competition of low-cost airlines, the situation is alike to the social dimension. The competition of low-cost airlines is focused on the inner-European short-haul market, while these alliances are concentrated on the long-haul destinations to connect continents. Nevertheless, one could argue that alliances try to promote more frequent long-haul travel by that tacking away customer from the short-haul market and by this from low-cost competitors.

A second development that occurred on a continuous basis in the last decade is the acquisition of and investment in other airlines. Acquisitions are majorly focused on the inner European market as SWISS Airlines (Deutsche Lufthansa AG, 2008) or Germanwings (Eurowings, 2014), while investments do rather occur into other continental operating markets. Examples of investments are share acquisitions of the no-frills airline JetBlue Airways in the United States (Deutsche Lufthansa AG, 2009; JetBlue Airways, 2014) or the joint venture of Sun Express with Turkish Airlines (SunExpress, 2014), however this joint venture had already been started way ahead of Lufthansa's privatization. This development is assumed to be a reaction on environmental factors in the economic and social dimension. First the increase of the group network facilitates the range of offered destinations to customers, which is needed to meet increasing demand and potentially to promote further new demand. Depending on the level of interactions and created synergies with alliance partners, joint ventures and subsidiaries, the Lufthansa Group and its partners may actually be able to actively shape the economic factor of increasing demand for air travel by pushing down fares due to lower costs. Next to that, the acquisition and investment in budget airlines as Germanwings, show a reaction on the social dynamics of no-frills business travellers and as well shorter holiday breaks. These shorter holiday breaks are for example promoted and answered by Germanwings, which had introduced their blind-booking service in 2007 (Germanwings, 2007), which reacts and facilitates the demand of short-haul weekend trips. Besides, the investment in budget airlines may show some sort of reaction to the driver of low-cost competition. In the case of Germanwings this is done via entering the low-cost segment in Europe and actively competing with the low-cost players in their own segment. In the other cases it appears to be more like a financial investment to get a return, since those players operate on different short-haul markets, away from the home base of the Lufthansa Group. Otherwise these investments may function to get some foot into these markets, to supplement long-haul arrivals in these regions. Finally, as with the creation of alliances technology can rather not be seen as a driving force leading to this development, but again acts more as a facilitator, since improved ICT capabilities encourage a more easy and intense cooperation between the different Lufthansa Group members and partners.

A last finding, which is detectable in this section, is the heavy focus of the Lufthansa Group on the STAR Alliance that has grown rapidly since its foundation in 1997, having today 26 members (Star Alliance, 2014). It is observable that several of the former bilateral Lufthansa alliance partners became subsequently integrated into the STAR Alliance. Due to the fact that the foundation of the Alliance lies even a substantial time span before the turn of the millennium raises doubt if it can be seen as a direct reaction to analyzed environmental forces in the dimension of economical, social and technological factors as well as competition. Profound answers on that could only be given by internal company data. Nevertheless the alliance group incorporates responses to some of the factors, which are similar to those of the bilateral Lufthansa alliances and joint ventures. The STAR Alliance reacts and promotes demand for air travel by increasing the destination network and it tries to give satisfaction to luxury loving business travellers by making services as lounges and mile upgrades available within the whole alliance network (Singapore Airlines, 2014; Turkish Airlines, 2008). However, as criticized by CNN benefits for customers are just superficial if one is a less-frequent flyer (Snyder, 2011). Again this alliance network appears to be facilitated and improved over time by the development in ICT capabilities, nonetheless ICT capabilities are not assumed to be a driving force for this adaption in the key partner building block. Next to that, it does not appear to counteract to low-cost competition, since the alliance is more aimed on the long-haul market.

4.2.2 Value Proposition

The building block of value proposition describes the value that is delivered to the customer in form of the product and service offering. In here Lufthansa has reacted to three influencing forces, namely the social and technological environmental dimensions as well as to low-cost competition.

A key feature of a customer's flight experience is probably represented by contemporary inflight entertainment, which Lufthansa constantly tried to maintain and improve. As an example they introduced as part of their air fleet overhaul in seat monitors for watching most recent TV shows and movies or for playing video games, which is mostly focused on long-haul operations (Deutsche Lufthansa AG, 2008; Deutsche Lufthansa AG, 2009). Next to that Lufthansa was the first airline introducing Internet on its long-haul flights between 2004 and 2006 (Deutsche Lufthansa AG, 2004; Deutsche Lufthansa AG, 2005). This offer has been again introduced in late 2010 for North-Atlantic flights after Lufthansa was able to find a suitable partner (Deutsche Lufthansa AG, 2011a). The newest innovative adaption by Lufthansa is called BoardConnect, which shall be introduced in 2014 (Deutsche Lufthansa AG, 2013c.). This system allows passenger to access an app on their smartphones or tablet computer by which they can make use of all inflight entertainment or place a menu order with one of the flight attendants (Lufthansa Systems AG., 2014a). All these adaptions to the delivered customer value clearly represent a reaction to the dynamic of rapid improvements in ICT and the Internet technology. Similarly, the introduction of Internet offerings during the flight may as well appeal to business travellers since it may allow them to keep on working during a long-haul flight. Likewise does Lufthansa react to the competition of low-cost airlines, by improving their inflight-service value, which may convince previous low-cost customers to reassess the value of these services and switch their supplier of travel services back to Lufthansa. Further, it may support the retaining of already existing customers, who place a higher value on service than on price and may recognize a continuous improvement of the technological service provided by Lufthansa.

A second development is focused on luxury loving customers, meaning business and first class customers of Lufthansa. As with the Star Alliance, Lufthansa has already used certain offerings as business lounges and designated cabin segments for decades, however they have as well been continuously improved to meet contemporary technological standards, as for example the equipment of all their lounges with WLAN hotspots as a reaction to technology advancements (Deutsche Lufthansa AG, 2004). However, those actions are nowadays in times of smartphones relatively outdated. Other adaptions for more price insensitive customers have been the building of a whole first class terminal at the main hub Frankfurt International Airport (Deutsche Lufthansa AG, 2005) accompanied by special first-class lounges and areas at other main hubs. These first-class services for example include special limousine services or the provision of personal assistants for the term of stay. Furthermore did the Lufthansa Group establish a complete new subsidiary in 2005, namely Lufthansa Private Jet (Deutsche Lufthansa AG, 2006). However this feature plays partly in the building block of customer segments. It offers customers almost, if not the same, inflight services as during a first class flight, with the difference of having the plane solely for yourself and your guests. Therefore it can be said that this offering is rather designated for completely price insensitive consumers. It is proposed that by these actions and adaptions to their product and value offerings Lufthansa clearly responds to the social dynamic of different types of (business) travellers, being focused on the segment of high-class luxury loving passengers. At the same time this developments may react on the competition of low-cost airlines, since by these changes Lufthansa clearly differentiates its offering from its biggest rivals in the market. Albeit, it appears doubtful in how far the introduction of Lufthansa Private Jet affects its low-cost competition since it seems unlikely that those customers would usually consider low-cost services of other airlines in the short-haul market.

4.2.3 Customer Segments

The next building block under analysis is represented by the adaptions to the customer segments of the Lufthansa Group. Here findings are most recent and as well most crucial for the overall analysis. As a first thing Lufthansa announced in 2012 that they would introduce the new cabin offering of premium economy class on long-haul flights (Deutsche Lufthansa AG, 2013a). As recently announced this service adaption will start in the end of 2014 (Bryan, 2014a; Deutsche Lufthansa AG, 2014a; Deutsche Lufthansa AG, 2014b). The class combines inflight services with a tendency to the level of the business class with a more affordable lower price. A substantial change represents the option for premium economy passengers to access airport lounges for a fixed fee of 25€ (Deutsche Lufthansa AG, 2014b), which were before exclusively accessible if a customer belonged to business or first class or had a high frequent flyer status. It is expected that this adaption is intended to serve the more price sensitive customers, which are at the same time attracted to more luxurious services, and would therefore be willing to pay an additional amount of money. With regard to the social force of a growing propensity of no-frills business travellers, this movement may as well describe some reaction. Possibly it can form an attempt to win back former business class passengers, by the severely cheaper price of the premium economy tickets if compared to the business class. However, the new cabin offer may only achieve this on the long-haul market and is due to this as well rather not reacting to the grown competition of low-cost airlines on the inner-European market. Lufthansa does not appear to be an innovator in this segment since those intermediate classes on long-haul flights are already used by other full-service airlines as British Airways or Qantas (Bryan, 2014a), so that it rather represents some reactive step to be ahead with long-haul competitors.

A second recent development can somehow be seen as an overarching change that plays in several building blocks of the canvas framework. Nonetheless, it reshapes the segmentation structure of the Lufthansa Group and represents a major adaption and evolution to its business model. In 2012, the Lufthansa Group announced the overhaul of its low-cost subsidiary Germanwings, which first of all included a reconfiguration of the airline's ticket offerings (Deutsche Lufthansa AG, 2013a). Customer can by now choose between three different ticket possibilities: "Basic" intended for low-cost passengers that just want the pure flight and who have to pay for each additional service; "Smart", in which the service level is more comparable to an economy class; and "Best" which is intended for former customers of the business class segment (Germanwings, n.d.; Germanwings, 2013). Customers are not segmented within the airplane by different cabins but are sitting more or less all together in one cabin, just the "Best" section is separated by a visual cover (Germanwings, 2013). A second step of this overhaul has been the transfer of most of Lufthansa's inner European short-haul flights to Germanwings, which was started in July 2013 (Bartels, 2013; Deutsche Lufthansa AG, 2013a; Germanwings, 2013). As said before, this movement represents a major turn in the business model of the Lufthansa Group and can be seen as a reaction to the successful competition by low-cost operators and the social dynamic of an increase in no-frills loving business customers on the short-haul market, however simultaneously Lufthansa's tries to keep attractive to its more luxury loving customers. Furthermore, may the providing of more low-cost offerings, react and stimulate the trend of short-weekend holidays. With regard to competition, Lufthansa responds further to an economical dynamic, which is different from the industry level of increased demand in air travel. This economic dynamic namely is that the traditional short-haul service operations of Lufthansa are gradually unprofitable (Brautlecht, 2014; Deutsche Lufthansa AG, 2011b; Germanwings, 2013; Handelsblatt, 2013; Hedtstück, 2013) making it senseless for them to keep sticking to their traditional approach.

In summary, this movement shows a drastic overturn of operations to respond to the threat of no-frills airlines, which have continuously increased market share in the European industry market. The new segmentation of Germanwings created a new form of low-cost airline, which tries not only to appeal to price sensitive low-cost customers, but which takes the different customer preferences into account, while attempting to achieve the low-cost principles of efficiency.

4.2.4 Cost structure

With regard to the cost structure of the Lufthansa Group, one can say that they have so far been operating on a value driven approach, in which the customers' satisfaction has been the key interest instead of aiming at cost reductions.

However, it appears that the environmental force of low-cost competition, combined with the internal economic factor of reduced profitability on the short-haul market may have switched Lufthansa's position at least partially. In this manner the SCORE program, started in 2012 (Deutsche Lufthansa AG, 2013a), displays some sort of evolutionary development in the Lufthansa Group. It might get considered the most comprehensive restructuring program ever started of the whole Group, in order to drive down costs and enhance profitability and efficiency (Deutsche Lufthansa AG, 2013b; Handelsblatt, 2013). A key part of this program has been the restructuring and repositioning of the new Germanwings (Bay, 2013; Deutsche Lufthansa AG, 2013a). Due to Lufthansa's decision to switch the short-haul business to Germanwings, with its overhauled low-cost approach, it looks as if there is as well a shift from value-driven to being more cost-driven on the short-haul market. Costs can therefore get decreased due to an expected higher efficiency of the low-cost subsidiary and reduced complexity (Deutsche Lufthansa AG, 2013a; Hedtstück, 2013).

A second aspect of the SCORE program concerns the centralization of administrative, financial and purchasing manners (Deutsche Lufthansa AG, 2013a; Deutsche Lufthansa AG, 2013b). With regard to this, developments in the key partner building block as well may have implications for the cost structure. Since the Lufthansa has been adding new acquired airlines in the inner-European market to its group they may be able to benefit from synergies and economies of scope, driving down its cost basis. An example for this could be a higher bargaining power with suppliers due to a joint procurement. Such synergies were already successfully pursued with SWISS Airlines in the past after the integration of the airline to the group (Deutsche Lufthansa AG, 2011a; Handelsblatt, 2007). Another aspect regarding synergies is the centralization and outsourcing of manpower, so that costs for salaries are more effectively used (Deutsche Lufthansa AG, 2012b; Handelsblatt, 2014).

As shortly mentioned it is proposed that this restructuring program, including the repositioning of Germanwings, is a reaction to the driving force of successful low-cost competition (Brautlecht, 2014; Gerlach, 2013) and Lufthansa's personal economical aspect of reduced profitability in the short-haul market segment (Brautlecht, 2014; Gerlach, 2013). It appears doubtful that it is a reaction to the residual dimensions of social and economic factors, including an overall enhanced demand for air travel services. Next to that it isn't clear in how far technological advancement can be seen as a driving force for parts of the SCORE program. Even though improved ICT capabilities have a positive benefit on a centralized administration and procurement, it appears unlikely that it has been a driving force.

4.2.5 Revenue streams

The revenue streams of the Lufthansa Group are quite diversified depending on the different operating segments. With focus on the passenger segment, one can say that the main generator have been ticket sales to customers in form of transaction revenues as it is today. The pricing mechanisms of Lufthansa are expected to follow a dynamic pricing approach in form of yield management, as it is common for airlines (Osterwalder & Pigneur, 2010; Etzioni, Tuchinda, Knoblock, & Yate, 2003). Furthermore, it makes sense that Lufthansa takes advantage of yield management itself since Lufthansa Systems offers the development and implementation of such systems to other airlines (Lufthansa Systems AG, 2014b). Yield management may take various approaches, however in general it has the intention to maximize utilization of the aircraft and by that to increase profitability. The price for a ticket may for example depend on variables as the time of purchase, or the availability of seats. Nevertheless, the exact pricing mechanism used by each airline is not known, since it may provide a competitive advantage (Dierckx, 2013; Etzioni et al., 2003).

The transfer of all inner-European flights to Germanwings again represents a development that affects as well this building block. Already in the past the passenger segment of the Lufthansa Group had an additional revenue stream of ancillary services of Germanwings, as snacks sold on board of airplanes, which is a common characteristic for low-cost airlines (DLR, 2008; ELFAA, 2004; Graham & Shaw, 2008). However this was not common for normal flights of Lufthansa or Swiss, where even the cheapest ticket included those ancillary services as part of their full-service approach. Due to the fact that the subsidiary shall serve increasingly all short-haul operations of Lufthansa, this revenue stream becomes more influential for the whole short-haul market of the Lufthansa Group.

Despite this it is detectable that Lufthansa uses as well price segmentation, which was already done since its privatization (Deutsche Lufthansa AG, 2014b). Different base prices are used for the tickets of economy, premium economy, business and first class. This principle has now developed as well for Germanwings, which will have three different service classes for the short-haul market, named Base, Smart and Best (Germanwings, n.d.; Germanwings, 2013).

What is observable is that developments in the building block of revenue generation majorly occur due to preceding changes in other building blocks as the customer segmentation. Furthermore, do most practices not represent major turns in operations but where already used before, as ancillary revenues by Germanwings. Due to this, severe developments or an evolution in this building block are rather not present. However, the most drastic change is represented by the introduction of price and customer segmentation in Germanwings, as well as the more heavy reliance on ancillary revenue generation by providing more low-cost services on the short-haul European market. Developments in this dimension are assumed to be driven by low-cost competition on the short-haul market and the reduced profitability of the traditional approaches. Besides that the price segmentation of Germanwings can be seen as a reaction to the different kinds of passengers, ranging from no-frills loving to luxury loving in the social environmental dimension. Technology is presumed to be a facilitating factor, since the efficiency and success of yield management systems of the whole Lufthansa Group are probably getting enhanced by more sophisticated ICT capabilities.

4.2.6 Residual building blocks

Key activities, key resources, customer relationships and channels represent the remaining building blocks of the canvas framework. Due to scope limitations they will be studied more briefly within this section.

Key activities of the Lufthansa Group rather follow the network category of the canvas framework (Osterwalder & Pigneur, 2010). It can be argued that the most important activity is the service provision of air travel. Quality, reliability and punctuality form core principles of Lufthansa's strategy (Deutsche Lufthansa AG, 2003; Deutsche Lufthansa AG, 2014c). Therefore, ensuring a continuous high-level of service quality appears to be the major key activity of the airline group, which has not changed over the last decade. Nevertheless it could be argued that due to the transfer of most parts of the short-haul market to Germanwings (Bartels, 2013; Deutsche Lufthansa AG, 2013a; Germanwings, 2013), a key activity of the short-haul segment has become to increase efficiency and drive down costs by the SCORE program. By this, changes in key activities rather result from preceding major developments in other sections of the business model. Via their assurance of quality the Lufthansa Group especially reacts to the customers, who have an affiliation to service and luxury. Nonetheless, the internal factor of decreasing profitability, the competitive force of low-cost airlines and the social force of an increase in low-cost loving business passengers may have caused the switch to a more cost-focused behavior.

Their capital-intensive airplane fleets, as well as their high quality staff represent the key resources of the Lufthansa Group. This remains as it has probably been in the past, nevertheless as part of restructurings in the group, some human resources have been outsourced or at least been made available for tendering with external providers, as for example the ground staff at certain airports (Bryan, 2014b; Handelsblatt, 2014; Sheahan, 2013). Furthermore, does the overhaul of the fleet represent a continuous development throughout the decade that does not represent a severe change in this segment. Such an overhaul and renewal of the fleet might be driven by a general technological progress and the threat of increasing resource prices as for kerosene (IATA, 2013). The outsourcing and reducing of human resources on the contrary may rather react to the unprofitability of the airline on its short-haul market and the threat of low-cost competitors, whose salary costs are severely lower than of Lufthansa (Bryan, 2014b).

Regarding the customer relationships it appears reasonable to say that direct personal interaction with the customer is important for a service company as an airline. Besides the acquisition of customers, it appears that Lufthansa places as well a focus on the retention of customers, as expressed by their frequent flyer program Miles & More, which was started in 1993 (Deutsche Lufthansa AG, 1999). Due to the well-known brand of the frequent flyer program Lufthansa is also present to their customers' minds in daily life, since customers can earn bonus miles at several partner shops, as for example the fashion chain Peek & Cloppenburg (P&C, n.d.). An addition to this service was the start of the Hon-Circle program in 2004, which gave privileges to very loyal customers, earning 600.000 miles within two years (Deutsche Lufthansa AG, 2005). For receiving those benefits, frequent flyers receive an incentive to stick to the company. In general it can be said that no severe developments in this section are observable, the Lufthansa Group places a focus on quality and the customer's satisfaction, which is as well the case for other parts of the group. The main environmental influences, which may have lead to service adaptions, especially intended for the high-value customers, could be the social dimension of an increase in no-frills business customers and of low-cost competition, with the intention to clearly differentiate from the no-frills players.

Channels for reaching its customer basis of the Lufthansa Group are both direct and indirect. Indirectly Lufthansa is mainly present via travel agencies, while directly more via the word wide web. Especially the Internet presences of the individual airlines and the group in general play a vital role as a channel, which is driven by the rapid technological progress in ICT capabilities. The importance of the Internet as a channel becomes more evident when seeing that online sales via the Lufthansa portal climbed from 11% in 2008 to 26% in 2010, which describes a rather narrow time-span (Deutsche Lufthansa AG, 2009; Deutsche Lufthansa AG, 2011a). In its annual review of 2013 the International Air Transport Association (IATA), reported that about 40% of tickets were sold directly via airlines' corporate websites (IATA, 2013), which again stresses the importance of this channel for modern airline operations. An example of a minor development to keep up-to-date is the integration of Apple's passbook app as a medium of interaction with customers (Deutsche Lufthansa AG, n.d.b), however this is not solely used by the airlines of the Lufthansa Group but by a lot of airlines in general. In summary, one can say that the importance of Internet presence and campaigns has grown within the last decade, which is caused by the extremely fast improvements made in the technological environment and the simultaneous acceptance by users. Besides this, no major developments in this building block are detectable, and it seems unlikely that low-cost competition, different kind of passenger types or increased air travel demand may have functioned as forces for a more heavy reliance on direct ICT channels.

5. DISCUSSION AND CONCLUSION

As the analysis has revealed several external factors may have shaped Lufthansa's adapting actions in the past. While forces as technological progress had probably minor influences on evolutionary change, the competitive force of successful low-cost airlines in the European short-haul market appears to be the main external driver for drastic dynamics in the Lufthansa Group. However, aside to competition, structural changes appear to be further caused by Lufthansa's internal force of decreasing profitability on the short-haul market segment. Nevertheless, this may as well be a result from the external competitive force.

Regarding developments, Lufthansa has over time adapted to given business model drivers; although no major evolutions are detectable until the year 2012. Instead the Lufthansa Group rather made small-scale, incremental adaptions to existing value offerings and operational practices, which were benefited by technological progress. Examples for this are the introduction of BoardConnect, or of the premium economy class. Further, they stuck to their tactic of setting up alliances all around the globe, and on enhancing the influence of the STAR Alliance. By these actions they are vigorously following their strategy of continuous improvement of customer satisfaction, without making radical changes to their general practices. This reluctance to stick with the established practices appears to fit with the industry, where no major, rapid evolutions are visible on a first sight. Instead incumbent airlines rather continuously improve their core activities. Albeit, it becomes as well visible that most of these incremental developments of the Lufthansa Group, as on-board Internet, in-seat entertainment or the premium economy class, are focused on the long-haul market, by that not responding to the severe threat of successful low-cost competition in the inner-European market, the dynamic of short-term travels or Lufthansa's internal pressure of reduced short-haul unprofitability.

Nevertheless, by the end of 2012, Lufthansa started a radical evolution to its business model by launching the SCORE program, of which the transfer of short-haul operations to the restructured low-cost subsidiary Germanwings forms a key element. By the simultaneous revolution in ticket offerings of Germanwings, the Lufthansa Group actually created some sort of new lost-cost airline, which is taking the demands of both no-frills and more service attached customers into account. The significance of this evolutionary development becomes further emphasized by the influence it has on other building blocks of the business model as key activities or revenue streams.

This step to establish the new Germanwings with its new low-cost approach on the short-haul European market actually shows that there is some partial convergence of the incumbents' business model, to the more new low-cost model approach.

In an attempt to link the concept of business models to the important concept of strategy, one can say that Lufthansa actively reshaped their operating structure and their strategic positioning in the European market as a response to social and competitive forces. Their overall strategy is by this to make their short-haul market more profitable again via reacting to market forces as the growing demand for no-frills services and increased resource prices. The business model can be seen as the operational part of the overall strategic plan, which has been adapted to generate profitable revenue streams again. In this sense the strategy has been adapted to environmental and competitive forces, which then consequently affected adaptions in the business model, which in its plain form neglects the concept of competition. With regard to Porter's generic strategies one could argue that Lufthansa switched from an overall differentiation strategy, in form of superior quality and flight experience in all market segments, to a focus strategy applying different approaches to different markets. Focus in this sense means, that a more cost-driven approach is taken for the short-haul market, where they have to compete with low-cost players, while the traditional full-service offer is still running on the long-haul market.

Regarding the European industry this major shift in strategy appears to be quite new and revolutionary. It is especially really influential, since Lufthansa as Europe's biggest airline itself represented the biggest incumbent, who has been fighting low-cost airlines on the short-haul market by their traditional approach of providing full-service to the passengers for the last decade. If one combines the fact that pioneers of the low-cost approach in Europe, Easyjet and Ryanair, are remaining profitable and are even expanding their operations, with the observation of a partial convergence of a dominant incumbent to the low-cost approach, one may actually gain the assumption that the low-cost business model in air travel has a certain superiority in the European short-haul industry. If this would be the case it could be expected that other former pure service airlines in Europe would follow the example of the Lufthansa Group and switch most of their short-haul business to their low-cost subsidiaries. However making such predictions based on this individual case analysis is not possible.

Interesting questions that arise from this evolution to a hybrid approach are at first if the new Germanwings low-cost approach will actually pose a severe threat on established low-cost airlines practices, so that these may loose customers to Germanwings. If that would be the case, low-cost airlines would be in the uncomfortable position of having a need to react to this industry evolution by making adaptions to their practices, too. In the same manner a question for the future remains if former Lufthansa customers will accept the new Germanwings approach, since German newspapers already reported about complaints of frequent flyers and business passenger who fear for their privileges (Bartels, 2013; Bay, 2013). Besides that, it remains interesting in how far the strategy of the Lufthansa Group operating the new low-cost approach on the short-haul and a traditional full-service approach on the medium- to long-haul market shows a future alternative of international active airline groups and alliances.

In summary, results from this thesis are not only the descriptions of changes in Lufthansa's business model but their interaction with potential causes from the macro- and competitive environment. The main result of this thesis is the detection of Lufthansa's switch to a hybrid business model, operating its traditional full-service concept on the long-haul market, while transferring most of the short-haul segment to the low-cost subsidiary Germanwings resulting in a partial convergence of the dominant incumbent's approach with the one of low-cost entrants.

6. CONTRIBUTIONS, LIMITATIONS, AND FUTURE RESEARCH

This thesis tried to contribute to scientific literature by giving an understanding in how far the business model of a dominant player in the European airline industry has evolutionary changed in potential response to macro-environmental and competitive influences. By this it helps in gaining an understanding of external forces, which might be used for comparative investigation in other markets.

While the topic of business models in the airline industry appears in general to be sufficiently covered by existing literature, this paper took a different approach in investigating dynamics and changes of a certain player over time. Besides, that the paper tried to investigate the aspect of convergence in business models in the European airline industry, a topic that seems to be mostly missing so far. In this approach it is different from most existing literature, which has placed a focus on the various differences between existing business model approaches in the industry in general.

Further, it adds to business model literature by combining parts of the PESTEL framework with the business model canvas for an incumbent European airline, and especially by the attempt to incorporate competition, as an external factor in the analysis of this business model framework.

The findings of the paper reveal a partial convergence of the incumbent's business model to the new entrants' one combined with the switch to a hybrid business model approach, which on first sight at least for the European market represents an observed novelty.

By this observation the paper raises the important question, if the future of the European short-haul market actually still contains the business model approach of full-service airlines.

Based on this thesis, companies in the worldwide airline industry may get an insight to environmental forces that may as well shape their home market. Furthermore does it provide them with an insight to a hybrid approach of having two business models for separate market segments, which may work for them as well to improve profitability of their operations.

The paper is constrained by several limitations as its scope, restraining the depth of analysis. Moreover, are the relationships between business model developments and driving environmental forces mainly based on reasoning and critical assumptions. They could only be confirmed and validated via internal company information of the Lufthansa Group, which were not assessable. Moreover, did annual reports and press releases of the Lufthansa Group represent a major source for detecting developments in the business model building blocks. A possible limitation concerning this sort of company data is a positive bias by the company, in order to appear as good as possible to investors. Besides, it is a limitation that the unit of analysis is not a hundred percent clear, since it sometimes switches between the Lufthansa Group in general and Lufthansa as an individual airline. However, in the course of this analysis this had to be done, to enable a study of all building blocks of the business model. Besides that, due to an analysis of annual reports a distinction became quite difficult. A last limitation is presented by a pure literature analysis to detect environmental influences, so that it is possible that additional influencing factors may have been missed.

Further research should be done in a couple of areas.

First of all, a study of the performance of the Lufthansa Group in the near future may give insights if a successful business model evolution has taken place, which may have reshaped the industry. Moreover, should internal forces of the Lufthansa Group be considered as well, as the already observed short-haul unprofitability, therefore joint research with the Group itself should be conducted so that a more complete study using internal data can be done. This would as well be useful to confirm propositions of this thesis and investigate causal relationships.

Since this thesis was focused on the environmental dimensions of economic, social and technological forces, further research should try to find reactions on developments in the other dimensions. In this manner especially political decisions as the air travel tax in Germany may have an influence on the profitability of a few players. Next to that did academic literature name the fragmentation of business travellers in no-frills attached and luxury loving, in the same manner it would be interesting to investigate this for leisure travel, since findings would help to predict the future structure of the European short-haul market.

Moreover did the section of competition focus on the short-haul European market with its low-cost airlines. A threat to established players on the long-haul market is increasingly represented by airlines from the Gulf areas, which are subsidized by cheap kerosene of its governments, making their operations more profitable and competitive. This dimension of competition was not covered in this thesis, so that the influence of long-haul competition by Gulf airlines on European incumbents should be studied as well. Regarding short-haul competition, the new travel substitute of long-distance buses, gains increasing popularity in the German market. In case that this popularity continuous within Europe and the service gets expanded, it might be that it forms a threat to low-cost air travel, which could and should get investigated by further research.

As a final suggestion similar studies should be conducted for other incumbents of the industry as British Airways or AirFrance/KLM to identify reactive developments in their practices. Findings from these analyses would make it possible to identify similarities and differences, which may give indications on developments and structural evolutions of the European industry in general.

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9. APPENDIX

9.1 Abbreviations

Air Berlin	Air Berlin PLC & Co. Luftverkehrs KG..
DLR	Deutsches Zentrum für Luft- und Raumfahrt e.V. (German Aerospace Center)
ELFAA	European Low Fares Airline Association
Eurowings	Eurowings GmbH.
GmbH.	Gesellschaft mit beschränkter Haftung (company with limited liability)
IATA	International Air Transport Association
ICT	Information and Communications Technology
n.d.	no date
P&C	Fashion chain comprised of the two companies Peek & Cloppenburg KG Hamburg and Peek & Cloppenburg KG Düsseldorf
para.	Paragraph
Ryanair	Ryanair Plc.
SCORE	Change program of the Lufthansa Group, started since 2012. Its name is comprised of the first letters of its main fields of action: Synergies, Costs, Organization, Revenue, and Execution.
SME	Small and Medium Enterprise
SunExpress	SunExpress - Güneş Ekspress Havacılık A.Ş.

9.2 List of figures

9.3 List of table

9.4 List of boxes

9.5

Box 1: The residual dimensions of the five forces framework of the European airline industry

The threat of new entrants

The basis for the threat of new entrants in the airline industry is represent by the industry's liberalization between 1987 and 1997. Due to the adapted legislation it was possible for new players to enter the market (Doganis, 1994; Morrell, 1998; Buck & Lei, 2003) and obtain an operating license (Graham, 1998; European Commission, 2012; Gillen & Lall, 2004).

Nowadays the threat of new entrants appears from a theoretical perspective to be quite high in the European market. Capital requirements for new players appear to be easily assessable, as Porter states, "financing is available to purchase expensive aircraft because of their high resale value." (Porter, 2008, p. 81). Current governmental policies as the subsidizing of secondary airports (European Commission, 2014) or supporting slot allocations for new players (Butcher, 2010) further facilitate easier entrance to the market. Next to that the service provided by competitors in the industry is easily imitable. However a slight constraint can be the access to distribution channels. With regard to this new entrants might need to use secondary airports, since major hubs are mostly congested (Flouris & Walker, 2005; Porter, 2008).

Despite this theoretical view that new entrants represent a threat it can be rather assumed that the risk for that is comparatively low. Due to already heavy competition and low profitability in the European market, it appears unlikely that a huge amount of new entrants will join the battle for customers on existing markets.

The bargaining power of buyers

The power of airlines as buyers is moderate, and can more or less just get used if their fleet needs to get overhauled. A switch between airplanes is extremely costly, so that a bargaining power is in place if an airline wants to place a huge order for new airplanes at once (Porter, 2008).

The bargaining power of customers as buyers on the contrary appears to be quite high. Customers have usually low switching costs to a competitor and the service is in most cases similar if not almost the same. "If buyers believe they can always find an equivalent product, they tend to play one vendor against another." (Porter, 2008, p. 83). Another factor contributing to the power of customers is that nowadays most prominent city connections are served by several airlines simultaneously, making a switch easier.

The bargaining power of suppliers

Suppliers in the airline industry are quite powerful. Regarding the supply of aircrafts there are two dominant players, the US manufacturer Boeing and the European manufacturer Airbus (Wright, 2014). Due to this oligopoly airlines are quite restricted in their choice (Johnson et al., 2011), however Porter (2008) as well states that due to the rivalry among those manufacturers and the huge order values of airlines, the later might be even in a better negotiation position, which would lower the power of suppliers.

Another form of high supplier power is present if no substitute for the offered product or service exists. As Michael Porter describes it for the airline industry: "Pilots' unions […] exercise considerable supplier power over airlines partly because there is no good alternative to a well-trained pilot in the cockpit." (Porter, 2008, p. 83). Besides that airlines are as well susceptible to the power of airports, which may have a monopoly in certain regions, where they operate (Wright, 2014).

The threat of substitutes

The threat of substitutes is quite moderate and difficult to assess. On the long-haul leisure market substitutes are relatively missing (Wensveen & Leick, 2009), however for short-haul and especially regional carriers modern train connections as well as the European highway network can posse an alternative for consumers (Graham & Shaw, 2008). With regard to business travellers a substitute is represented by technology and the ability of videoconferences in particular, those advanced technologies may make travel obsolete and represent a clear substitute for air travel services (Mason & Alamdari, 2007; Porter, 2008).