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Strategic Behavior of European Low-Cost Airlines: A Review and Economic Analysis

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Abstract

The remarkable evolution of low-cost carriers (LCC's) in Europe has been subject to intensive discussions in recent years. Approaching industry maturity has revealed strategic errors among many airlines and caused several markets to exit. Various carriers have ended up in hybrid positions while trying to differentiate in order to remain competitive. This paper occupies with the role of strategies in the airline industry and assesses the level of deviation from the original low-cost model amongst European LCC's. Synthesizing existing research and literature provides evidence that LCC's adapting full-service network carrier characteristics perform worse than strict low-cost adherers.

Keywords: Low-Cost Airlines, Strategic Behavior, Financial Performance

JEL Classification: D02; D12; L10; L84

1. Introduction

Since the liberalization of air services in the 1990s, low-cost carriers (LCC's) have conquered Europe in near record time. Today, they play a major role in the industry and are about to dominate the market in the coming years (Dobruszkes, 2013). Start-ups, as well as traditional full-service network carriers (FSNC's), have recognized the enormous potential of the low-cost strategy and consequently tried to replicate it during the years. Even though some succeeded, the majority of them failed. While Europe's most famous LCC Ryanair regularly attracts media attention and captures the news with astonishing financial results, other carriers have difficulties to survive. In fact, of more than 40 market entrants since 1992, only about a quarter still operate (Budd et al, 2014).

Academics, as well as industry experts, refer to approaching industry maturity as a reason for this remarkable rate of failure. Researchers point out that carriers increasingly depart from the low-cost model in order to differentiate and remain competitive. While extensive work has been done on identifying low-cost

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carrier characteristics, the more recent topic of airline business model convergence has caused confusion within the industry.

The question that arises is how the deviation from the low-cost approach affects an LCC's financial performance. Therefore, this paper aims to synthesize existing research and literature to investigate the role of competitive strategies in the airline industry. The main aim of this paper is threefold: 1) does competitive strategy exists for low-cost airline industries in Europe? 2) to what extent the European LCC's have altered their business models to pursue a differentiation strategy and 3) how the adoption of different strategies affect their financial performance?

By analyzing available studies, our findings revealed that strong competition and competitive behavior exists among low cost carrier airline industry. Furthermore, the European LCC's increasingly seek to differentiate their strategies improving their product offer, changing their organizational structures and thus adopting hybrid strategies. Moreover, the results indicate that low- cost carriers adhering more strictly to the LCC specimen enjoy greater profitability than those adapting FSNC features. The reasons lie in rising costs because of inconsistent activities associated with hybrid approaches. This confirms the importance of choosing a clear competitive strategy within the airline industry in order to avoid being "lost-in-the-middle".

The remainder of the paper is organized as follows: Theoretical background and literature are presented in section 2. Section 3 offers different ways to cope with competition. Low-cost carrier model is explained in section 4, while findings are discussed in section 5. Finally, discussion and conclusion are exposed in section 6.

2. Theoretical Background and Literature

This section explains the theoretical background and literature related to strategic behavior of low-cost carriers in Europe. Primarily, the conceptual background of this study is established by the theory of economies of scope (and scale) and the evolutionary theory, which discusses the rationale for firms to set up and operate their businesses (Graf, 2005). These economies of scale and scope attracts other small firms (airline industries) to operate their business regardless of their country of origin (Doganis, 2005). The analysis in this paper, focuses on the highly competitive European market and thus solely on European airlines. However, the paper will also introduce other markets, primarily the North American market, as points of reference. Those markets have reached a certain

maturity in contrast to the emerging markets of for instance Africa and South East Asia (Vasigh et al, 2013), which allows a more comprehensive and valid analysis (Hannigan et al, 2015). Given the fact that the time-frames and surveyed airlines vary from author to author, different carriers and sample periods from 1992 till 2012 are included. Moreover, as different generic LCC characteristics are identified, this paper seeks to combine the findings and presents a model that summarizes the most important features, i.e., those that are considered vital by all researchers. Thus, this paper identifies industry trends rather than single observations. Thus, findings and consequent conclusions are useful for academics and researchers in that they indicate whether LCC's are better off by adhering closely to the archetype or by adopting hybrid strategies.

Based on available theoretical and empirical literature, further conceptual discussion related to low-cost carrier evolution in Europe is presented in the following sub-sections (for detail, see Porter, 1996; Gillen and Gados, 2008; Gillen and Lall, 2004; Vasigh et al, 2013; Budd et al., 2014).

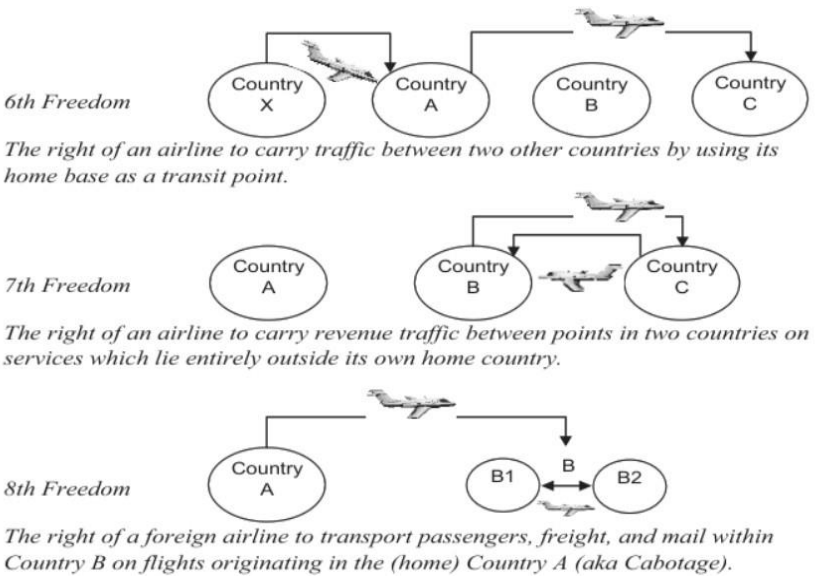
2.1. Low-cost Carrier Evolution in Europe

With the creation of a single European aviation market under an open skies' agreement between 1993 and 1997, EU governments have gradually liberalized intra-European air travel. The deregulation enabled EU-carriers to operate routes across the continent regardless of their country of origin (Doganis, 2005). While prior to the agreement, restrictions and regulations only allowed airlines to serve international destinations using their home bases in accordance with the sixth freedom of air transportation, the liberalization opened up entirely new possibilities. As of then, airlines were free to introduce services in any EU-member state plus Iceland and Norway. For instance, German carrier Lufthansa could directly connect international city pairs as Paris and Amsterdam (7th freedom rights). Further, deregulation empowered airlines based in one country to serve domestic city pairs within another country (8th freedom rights). Lufthansa was thus also able to operate connections between Barcelona and Madrid, while KLM could fly from Frankfurt to Munich.

The freedoms of air transport set the legal framework for an airline's international operations and are granted by governments. Figure 1 summarizes those of interest concerning the deregulation of European airspace (Vasigh et al, 2013). In addition to the possibility of free route choice, airlines were no longer restricted in deciding on capacity and flight frequency. This caused some carriers, especially Irish LCC Ryanair and British low-cost airline Easyjet, to rapidly expand their operations. As a result, this increased competition for incumbent

carriers and made fares drop sharply, driving some long-established airlines into bankruptcy (Doganis, 2005).

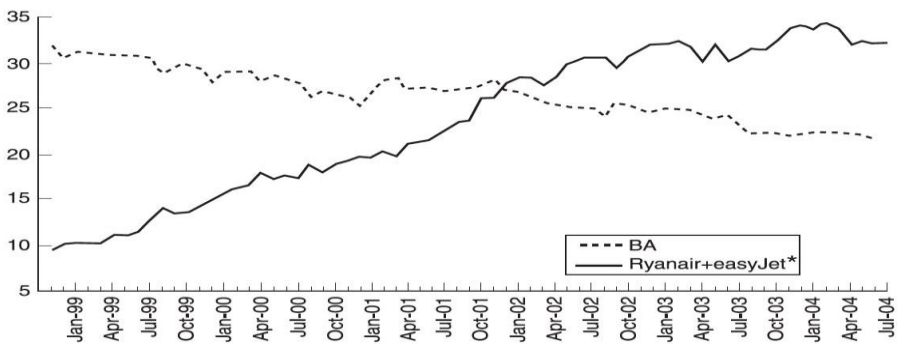
Figure 1: Freedoms of Air Transportation (6-8)



Source: Vasigh et al, 2013 (p. 19)

Figure 2 illustrates the growth of UK-based LCC's (Ryanair, Easyjet, Buzz and Go) between 1999 and 2004 in contrast to British Airways (BA). The values on the y-axis denote the percentage of share of passengers on board all UK-short-haul and domestic scheduled operations (Alamdari and Fagan, 2005).

Figure 2: Growth of Low-Cost Airlines from the UK



Source: Alamdari and Fagan, 2005 (p. 379)

With the end of government control, barriers to entry fell and the era of the low-cost carriers was born (De Wit and Zuidberg, 2012; Shaw, 2011).

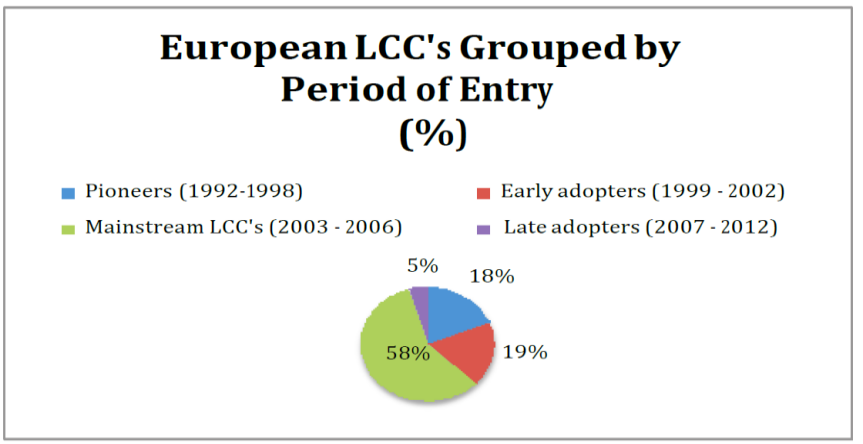
2.2. Market development

The new opportunities have not only caused UK-based LCC's to expand. The LCC sector as a whole experienced impressive growth. By 2012, low-cost carriers accounted for more than 28% of all passenger flights within Europe. For the purpose of illustrating this evolution, Budd et al (2014) assigned all LCC-market entrants following the liberalization to four groups according to their dates of entry.

Pioneers denote those airlines that started operations between 1992 and 1998. They include carriers that were established before and adapted the low-cost model during this period. Indeed, those airlines were the first European carriers performing low-cost operations. Early adopters, then, followed in the period from 1999 to 2002, whereas mainstream LCC's entered in the consequent four years (2003 - 2006). The remaining airlines (late adopters) followed between 2007 and 2012.

As shown in Figure 3, eight out of 43 LCC's that entered were pioneers, making up 18%. Nine airlines started operations between 1999 and 2002 (19%). The vast majority of low-cost entrants, 25, commenced operations between 2003 and 2006 (58%) and only two airlines entered the market as for late adopters between 2007 and 2012 (5%).

Figure 3 - European LCC's assigned to market entry periods in % (rounded numbers)



Source: Own work, data obtained from Budd et al (2014) p. 80

The chronology indicates initial insecurities among airlines while liberalization was underway. Likewise, it stresses increased confidence in the years after deregulation was completed. The fact that only two carriers entered in the most recent period indicates that increased competition among low-cost carriers have caused the LCC-sector to become less attractive (Budd et al, 2014). Moreover, the decreasing number of entrants in the years following the boom-period of 2003 – 2006 shows that the market has become increasingly saturated.

This is confirmed by Porter (1996) who refers to industry maturity as a stage characterized by declining growth rates and market exits. Indeed, while a good number of low-cost carriers have ceased operations throughout the entire period of 2003 - 2011, the majority of those LCC's that failed over the years have left the market parallel to the decline in new entries, i.e. between 2007 and 2009 (Budd et al, 2014).

3. Ways to cope with Competition and Strategies

Given the developments evaluated in the previous section, the transition to industry maturity has proven to be a critical period for many airlines. As Porter (1980) points out, those times generally determine the viability of a company's strategic foundations. While initial rapid growth tends to hide errors and enables poor businesses to survive and even perform successfully in financial terms, maturity inevitably uncovers potential weaknesses and indicates the importance of being able to compete. Competitiveness, indeed, requires successful executions of well-designed and well- implemented strategies. Successful strategies are not – or at least only secondary – influenced by business cycle fluctuations (Gillen and Lall, 2004). Hence, they can be regarded as sources of sustainable profitability.

In this regard, as Porter (1996) points out, it is of high importance to distinguish between strategy and operational effectiveness. While the strategy is described as a way of conducting business differently from rivals, operational effectiveness includes doing similar activities better than competitors (Porter, 1996).

3.1. Competitive Strategies

After Porter (1996), competitive strategy is about making a difference. It includes choosing a certain set of activities that delivers matchless value to customers. Consequently, companies must perform in distinct ways. A strategic orientation must be found based on a tailored set of practices. American low-cost carrier Southwest Airlines successfully implemented a strategy by deliberately choosing new ways to offer different products and services (Gillen and Lall, 2004).

All their activities were aligned to deliver a unique value mix to their passengers, namely low-cost flights between medium-sized and larger city-pairs within the US (Doganis, 2005), as Porter (1996) points out, sound strategies underlie two vital restrictions.

3.2. Trade-offs and Strategic Fit

Firstly, he claims that for strategies to work properly trade-offs must be made. Only when certain activities are ignored or dropped in favor of others, successful strategic positions can be obtained. For instance, airlines can barely succeed in shortening turnaround times when serving huge, congested airports. The larger distance between gates and runway at major airports results in longer aircraft taxi times. Likewise, providing hot meals on board requires time-consuming cleaning between the flights. Therefore, if activities are incompatible, choices must be made (Gillen and Lall, 2004).

The issue of brand confusion inevitably caused by inconsistencies between activities confirms the importance of decision-making. Airlines that are known and chosen for delivering particular kinds of values, for instance, outstanding services, may risk reputation and credibility when offering opposing kinds of values simultaneously, as for instance low-cost flights (Porter, 1996). This phenomenon is particularly observed among well-established carriers operating subsidiaries as a response to LCC competition (Gillen and Gados, 2008).

Secondly, Porter argues that strategic fit ultimately strengthens competitiveness (see also Gillen and Lall, 2004). Successful airlines do not rely on a single competence that gives them a competitive advantage. Rather, they profit from several activities that fit and reinforce one another (Porter 1996). Again, this is well illustrated by Southwest, lowering the costs of selected activities while performing others in certain ways. By offering short-haul, point-to-point operations, in-flight services can be reduced and baggage-transfer can be avoided. This ensures better utilization of flight and ground crew and enables considerable cost savings (Doganis 2005). The essence of strategic fit, hence, is that only compatible activities linked together create a powerful competitive advantage. Consequently, success is explained by "the whole" rather than by single individual strengths or core competencies (Porter, 1996; Kangis & O'Reilly, 2003).

Strategies incorporating both trade-offs and fit not only improve efficiency, they likewise make it difficult to imitate positions (Gillen and Lall, 2004). While single activities can be copied easily, a whole set of interrelated practices is difficult to replicate. Indeed, the main reason why companies fail today is their

inability to pursue own, distinct strategies. Instead of looking for niches and ways to innovatively gain competitive advantage, managers nowadays evermore seek to copy each other's activities (Porter, 1996).

3.3. Operational Effectiveness

Unlike strategy, operational effectiveness is not about obtaining a certain strategic position. Rather, it means to improve performance in operations (Gillen and Lall, 2004). It includes doing similar activities better than competitors and covers all possible ways of helping to achieve superior utilization of inputs (Porter, 1996). According to Porter (1996), operational effectiveness is achieved in several ways. One includes ensuring high labor productivity by motivating employees. Another includes using the newest, most efficient technologies to optimize production. Possibilities are manifold and depend on what kind of value is to be delivered. If a company can offer similar products at lower costs than its rivals, it will technically earn more on those products. This way, cost-advantage is achieved.

While operational effectiveness clearly has impacts on profitability and thus is a vital component in staying ahead of competitors (Hannigan et al, 2015); Porter (1996) criticizes the increased focus on eliminating inefficiencies while neglecting the importance of strategy. He points out that while operational effectiveness is a necessity, it is by no means sufficient in today's business environments. Daft and Albers (2013) confirm this notion while referring to the importance of possessing a minimum of unique resources and capabilities that enable airlines to remain competitive.

Competing solely based on operational efficiency is mutually destructive and, in the end, leads nowhere. This is because best practices are identified and imitated in no time (Gillen and Lall, 2004). Therefore, standards for all companies rise, thus leading to relative success for no one (Porter, 1980).

As companies compete on operational effectiveness, their strategies more and more converge. Hence, they deliver increasingly homogeneous sets of values (Porter, 1996; Hannigan et al, 2015). In the absence of a sound strategy, being operationally effective might enable businesses to gain market share but will not have a sufficient sustainable impact on profitability. Indeed, only the interplay of both components can lead to superior performance and enable a company to survive within competitive industries (Porter, 1996).

3.4. Porter's Generic Strategies

Porter (1980) presents three strategic positions that can lead to competitive advantage and help outperform other firms. Firstly, companies can obtain a cost leadership position. Here, firms rely on substantially lower operating expenses than their rivals. This allows them to compete on lower prices. Profits are generated through cost reduction rather than by revenue achievements (Shaw, 2011).

Such a strategy requires vigorous cost minimization in all areas of business, along with strict cost and overhead control. Though product and service quality cannot be ignored, the running theme is low-cost relative to competitors. Huge initial investments to facilitate scale economies, as well as a certain market share might be necessary conditions for succeeding as a cost leader (Porter, 1980).

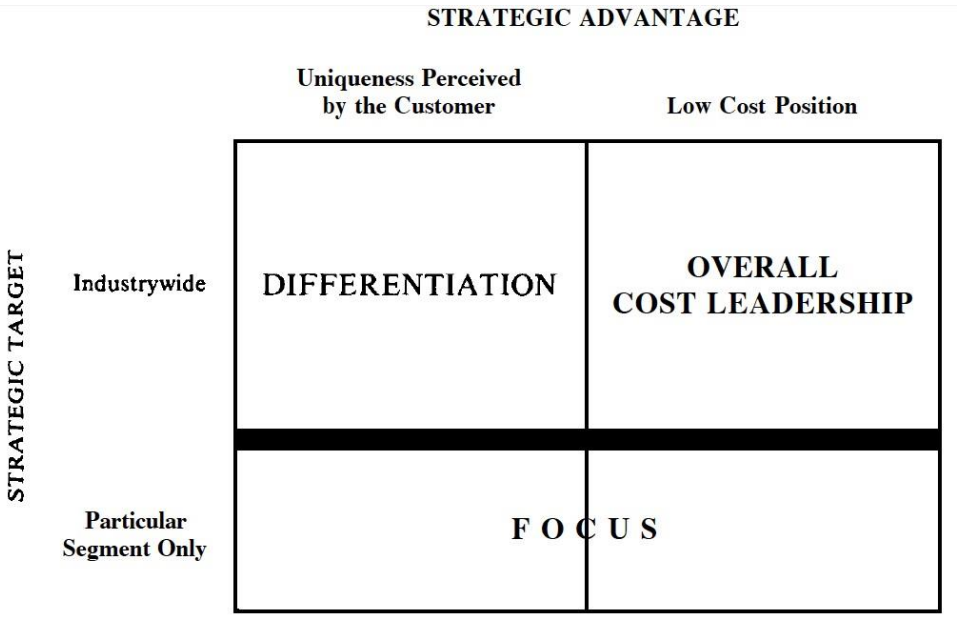
Contrary, a differentiation position requires companies to synergize all their activities to achieve differentiation. It is about offering a unique product or service that customers are willing to pay superior prices for. Thus, unlike cost leaders, differentiation firms achieve profits by striving for higher revenues. Although costs cannot be entirely ignored, they are not the primary strategic objective. While there are many ways to achieve differentiation, for instance, high-end technology or superior customer service, Porter (1980) advises approaching several dimensions. Differentiating in multiple areas potentially strengthens a company's image and helps to achieve its objectives.

In contrast to cost leaders, high market share for differentiators is rather a disadvantage. It might confuse customers and lead them to perceive the company as generic rather than unique (Porter, 1980). Now, the focus position, indeed, denotes approaches rather than a discrete strategy (Murray, 1988). A broad or focused approach can be obtained and is independent of the choice of either cost leadership or differentiation strategy. Rather, it is applied to either of the two. Companies pursuing broad strategies target multiple segments, while companies following a focused approach concentrate on a single segment (Murray, 1988; Shaw, 2011). Whereas the cost leader and differentiation positions aim to achieve industry-wide objectives, the focused approach seeks to serve a particular target within a certain segment (Porter, 1980).

Figure 4 illustrates Porter's generic strategies. The horizontal axis shows the two sources of competitive advantage, namely the cost leadership and differentiation positions, whereas the vertical axis denotes the scope, i.e. the broad or the focused approach on either of the sources. Once a company has decided for being a cost leader or a differentiator, the choice of the right approach depends on

external factors. Customer attributes must be taken into account. After Murray (1988), a focused strategy is only viable if customer preferences are heterogeneous. That is, there must be different customer segments within an industry. Further, the segments must vary to a certain extent. The less synergy between preferences, the more promising a focused approach.

Figure 4: Three Generic Strategies



Source: Porter, 1980 (p. 39)

In the airline industry, customers tend to differ in their needs. Not only is there a separation between economy and business travelers, but segments also vary in terms of preferences regarding frills and entertainment (Teichert et al, 2008). While this to a high extent applies to full-service network carriers, it only plays a secondary role among low-cost airlines. As LCC's provide short-haul operations, less comfort and service is needed. Therefore, while bearing the approaches in mind, the vital part in setting the foundations for success in the low-cost sector is the choice of one of the generic strategies rather than an emphasis on approaches (Alamdari and Fagan, 2005).

Whereas other researchers have developed own interpretations of generic strategies, most of them incorporate the distinction between cost and differentiation as the key factor in determining a company's orientation. Even though Porter's concepts are not free from criticism, their validity has been proven

many times throughout the years. Thus, they are widely accepted amongst theorists and researchers around the globe and considered a viable tool for analyzing strategic behaviors (Thornhill and White, 2007).

3.5. Strategic Adherence

Porter (1996) emphasizes the importance of choosing a clear direction and following it. He refers to the fourth position in his spectrum of generic strategies, namely 'lost-in-the- middle'. In fact, companies being 'lost-in-the-middle' lack a clear idea of how to approach the market. Those companies can neither be classified as cost leaders nor differentiators as their orientation is unclear. Profitability, however, can only be achieved by following a particular strategy (Shaw, 2011). On the one side, firms operating somewhere in between the two positions lose high-volume customers to competitors offering lower prices. On the other side, they fail to attract higher yielding customers who look for superior products (Porter, 1980). Indeed, research on strategic adherence and strategic purity confirm Porter's view, indicating a tendency of inefficiency among blurring business strategies.

Thornhill and White's (2007) is a comprehensive multi-industry study including 2351 businesses in the period of 1999 - 2000 provide some evidence that strategic purity generally tends to boost financial performance. They find that firms pursuing either strict cost leadership or differentiation approaches on average clearly outperform those following hybrid strategies. Those results are in line with earlier studies supporting Porter's (1996) notion that some business activities are mutually exclusive, therewith reinforcing the importance of trade-offs and the advantage of strategic fit (Jones and Butler, 1988; Treacy and Iersema, 1995).

Theorists argue that the complexity of hybrid strategies make it difficult to set priorities and is likely to cause confusion among both employees and customers, thus requiring costly organizational structures that are difficult to manage (March 1991; Miles and Snow, 1978). The vast majority of researchers, indeed, favor strategic purity. They argue that hybrid approaches can easily be attacked by either pure cost leaders or differentiators due to their competitive advantage in the given fields (Murray, 1988).

4. The LCC Model

4.1. Business Model Convergence

Recently, FSNC's have changed their strategies by introducing LCC elements in order to attract cost-conscious passengers. Meanwhile, LCC's have adopted features that ever since were linked to FSNC's (Klophaus et al, 2012).

Researchers point to the fact that industry maturity naturally leads to this gradual convergence of business models. De Wit and Zuidberg (2012) claim that as the European market has become increasingly saturated, some airlines struggle to maintain their growth rates while some even run into bankruptcy (see also Budd et al, 2014). In the light of intensified competition, many carriers consequently seek to improve their performance by changing the ways they operate.

Indeed, those developments make it hard to assign airlines to either of the two categories. When referring to low-cost carriers today, it must be noted that there is a wide range of approaches. Hence, the expression LCC, in fact, covers multiple business models that differ to a greater or lesser extent in their elements (Mason and Morrison, 2008). However, they all coexist under the low-cost label (Fageda et al, 2015).

In order to ascertain the range of approaches, a specimen that summarizes all generic LCC features must be established. This criterion will be the point of departure in analyzing recent developments with respect to the low-cost carriers' strategic behavior. The following sections, therefore, serve the purpose of introducing the original LCC model frequently cited by various researchers. Originally invented by Southwest Airlines in the early 1970s, it has been subject to certain alterations. Given technological progress and changing market dynamics, Southwest's strategy has naturally evolved over the years (Alamdari and Fagan, 2005).

The archetype presented in this paper, hence, is built on the very fundamentals and does not precisely mirror the airline's current approach. Rather, it reflects the commonly accepted view of a low-cost carrier amongst theorists, industry experts, and researchers today.

4.2. The LCC Archetype

While full-service network carriers essentially operate a business model based on differentiation, low-cost airlines adhering to the LCC-archetype typically follow a cost leadership strategy (Alamdari and Fagan, 2005). FSNC's mainly focus on providing a huge network of destinations including connecting flights and long-haul operations. LCC's, in contrast, concentrate on short-haul, point-to-point services (Doganis, 2005). While FSNC's seek to differentiate through comfort and superior on- as well as off- flight services in exchange for higher prices (Hunter, 2006), low-cost carriers aim to attract passengers with lower fares based on lower operating costs (Alamdari and Fagan,2005).

Underlying the activities LCC's incorporate for their approach is the philosophy of simplicity. Not surprisingly, the simplification of operations and procedures saves time and money. Complex processes, on the other hand, make operations slow and costly (Shaw, 2011). The synergy of simplification and cost reduction has in the case of Southwest led to a huge success-story and reflects Porter's (1996) idea of strategic fit. As a consequence, many carriers have tried to replicate Southwest's path throughout the years, using it as a role model for a successful LCC strategy (Porter, 1996; Doganis,2005).

In the following, the generic LCC policies will be sketched. Synthesizing airline literature and research, certain key elements are identified (Alamdari and Fagan, 2005). While not every single feature stated in the studies can be taken into account, the characteristics proposed in this paper cover the most important elements. They can be divided and either related to a carrier's product offering or organizational structure.

Product offering includes elements that determine an airline's core product bundle and thus positions the carrier in terms of passenger preferences. Organizational structure, on the other hand, describes how the carrier conducts business and includes production and distribution choices. Thus, it determines a carrier's cost position (Mason and Morrison, 2008; Daft and Albers, 2013; Daft and Albers, 2014).

4.3. Product Offering

4.3.1. Short-haul Flights and Point-to-Point Operations

Whereas FSNC's offer both long- and short-haul connections, low-cost carriers traditionally focus on the latter. While there is no clear definition, industry convention refers to 3000 km as the maximum threshold for short-distance flights (Daft & Albers, 2012). Staying within this range leaves LCC's with a number of options to reduce costs.

They include the possibilities of operating a single aircraft type and adjusting airplane and service attributes. As the flights typically do not last longer than one to a maximum of three hours (Daft and Albers, 2012), luggage compartment, as well as on-board services and comfort, can be reduced to a minimum. Further, less maintenance between the flights is needed, which helps to achieve shorter turnaround times at airports (Vasigh et al, 2013). The shorter the flight, the lower the costs faced by the carrier (Doganis 2005).

In addition, low-cost airlines do not offer connecting flights. Instead, they operate point-to-point traffic, i.e. direct flights between city pairs. That way,

passenger transfers at the airport as well as costly baggage handling systems are avoided. While this limits a LCC's ability to provide large networks of international destinations, it saves costs by reducing the amount of ground crew needed and minimizes the probability of delays (Doganis, 2005).

4.3.2. No Frills and Services

Frills include both in- and off-flight services. Inflight services are meals and drinks offered on the plane, as well as entertainment in the form of movies and the sale of duty-free products on board. Off-flight services include frequent flyer programs and airport lounges, but also the possibility to check-in luggage and make seat reservations (Doganis, 2005).

Recently, two approaches among low-cost carriers are observed. The archetypical hardliner is known for avoiding frills of any type. The vast majority of LCC's, however, have started to provide certain services in exchange for high fees (Fageda et al, 2015). While the services are unbundled, i.e. not included in the fares, those airlines can still compete on low ticket prices and take advantage of ancillary revenues (Daft and Albers, 2012). Moreover, as the frills are limited to basic services, for instance, the possibility to buy water bottles, they do not have a considerable impact on the operational efficiency of aircraft and staff (De Wit and Zuidberg, 2012). Therefore, as long as LCC's manage to keep their offerings simple, they are not considered to deviate from the specimen in this point. In comparison to FSNC's, the levels of convenience and comfort provided by offering services, in any case, are much lower among low-cost airlines, implying relatively lower operating costs.

4.3.3. Single-class, High-density Cabins, and Fare Policy

Low-cost carriers perform certain activities in order to carry as many passengers as possible. By avoiding business class and removing hot galleys, they are able to place more seats on a plane. Further, they vehemently reduce the seat pitch, i.e. the space between the seats. This enables them to achieve considerably higher utilization of aircraft per flight than FSNC's while operating the same aircraft type (Vasigh et al, 2013; Daft and Albers, 2012). As a consequence, costs per seat are reduced. Passengers, however, are required to give up comfort as less legroom is available (Doganis, 2005).

Regarding ticket prices, LCC's follow a policy of offering one fare at any certain point in time. On the one hand, this ensures planning security as passengers book immediately and do not wait for prices to decrease on certain days. On the other hand, it ensures simplicity and prevents confusion among passengers.

However, fares, while being initially low, may increase as tickets sell out or the departure date approaches (Vasigh et al, 2013).

4.4. Organizational Structure

4.4.1. Low Labour Costs

As labor costs make up a large fraction of an airline's total expenses and thus is considered a major cost driver, one of the main objectives for any carrier is to keep those costs as low as possible (Vasigh et al, 2013). Many approaches are taken to ensure cost savings with respect to labor. While LCC's on average pay lower wages than FSNC's (Hunter, 2006), they further cut costs by securing high productivity among the workforce (Doganis, 2005). While still fulfilling legal requirements, LCC-pilots and staff traditionally work more hours than their FSNC colleagues. Also, they are often offered contingent instead of regular contracts which enables LCC's to reduce their costs in the case of unexpected economic shocks. Moreover, low-cost airlines contract out ground personnel. Unionization is less likely than for FSNC's and LCC staff is known for being highly flexible. Flight crew, for instance, engages in cleaning between the flights and sometimes helps with baggage processing. Poorer working conditions are partly offset by performance-related pay and profit-sharing approaches, ensuring motivation and increasing productivity (Hunter, 2006).

4.4.2. Low Distribution Costs

Unlike many FSNC's, low-cost carriers do not make use of costly global distribution systems (GDS) to sell their tickets. Instead, costs are saved by offering e-ticketing solutions. That way, passengers buy their tickets through the carriers' websites, which gives them a considerable distribution cost advantage (Doganis, 2005). In addition to saving travel agent fees by avoiding GDS', using online distribution systems passes printing costs to the passenger. In the case of lost boarding passes or the inability of passengers to print their tickets, LCC's provide them at the check-in in exchange for high fees.

While nowadays all airlines offer direct ticket sales through their websites, low-cost airlines have proven to use this approach more efficiently and thus achieve considerable cost reductions (Gillen and Gados, 2008; Mason and Morrison, 2008).

4.4.3. Fleet Commonality

The archetypical low-cost carrier bases its operations on a single type of aircraft. Clearly, this has a variety of advantages, with economies of scale leading

the way. For example, airlines only need to spend the fixed fraction of their fleet costs, i.e. the entire equipment needed, once. Further, flight crew training expenses can be drastically reduced. As pilots and staff only need to be educated on one particular type of aircraft, they can technically be deployed on any flight. This ensures increased operational flexibility and enables carriers to minimize training expenses (Vasigh et al, 2013; Klophaus et al, 2012). Other benefits include the possibility of discounts in the case of bulk purchasing and standardization of requirement for ground equipment (Budd et al, 2014).

In addition to backing on a common fleet type, LCC's typically choose the newest, most reliable aircraft for their operations, as for instance the Boeing 737-800 (Klophaus et al, 2012). This implies cost savings with regard to maintenance and fuel efficiency (Gillen and Gados, 2008).

4.4.4. Use of Secondary Airports

Pure low-cost airlines only serve secondary airports. Though there is no clear definition of a secondary airport, different criteria are mentioned in existing research. While Klophaus et al, 2012 refer to airports that are not served by national carriers with planes containing a minimum of 100 seats, Daft and Albers, 2012 mention airports that are within a 100km range of the actual target destination. As in the absence of a widely accepted distinction both approaches are viable, the latter definition seems to be more commonly used (De Wit and Zuidberg, 2012).

In general, secondary airports are less congested and rely on revenue-generating passengers brought by LCC's. Therefore, airport managers attract low-cost airlines with lower landing fees and operational efficiency in that they prioritize LCC processing. This shortens turnaround times for the carriers and minimizes the risk of costly delays (Vasigh et al, 2013). While the poor accessibility of secondary airports given their location outside urban areas makes LCC operations unattractive for time-sensitive consumers (De Wit and Zuidberg, 2012), it creates new demand by attracting regional passengers that otherwise would not have flown. Thus, instead of engaging in head-to-head competition with incumbent carriers on highly frequented routes, LCC's initially follow a strategy of introducing new markets and absorb demand from buses and trains (Doganis, 2005).

Summarized, the archetypical low-cost carrier aligns all its policies to the objective of minimizing expenses and thus follows a pure cost leadership strategy. This is illustrated in basic product offerings and a simple

organizational structure. Its choices involve trade-offs and ensure strategic fit in that all its business activities are consistent. Operating short-haul flights implies the possibility of avoiding frills and services. Serving secondary airports ensures short turnaround times and optimal utilization of airport facilities and ground crew. Synergizing their features, this enables LCC's to drastically cut costs and thus attract passengers through lower fares. In contrast, full-service network carriers pursue differentiation strategies by providing improved product offerings including superior on as well as off-flight services. Connecting flights and long-haul operations enable them to offer attractive networks of major international destinations. The high costs associated with increased levels of convenience and comfort are offset by higher sales resulting from higher ticket prices.

Table 1: Operational Features of LCC's and FSNC's

Category	LCC	FSNC
Generic strategy	Cost leadership	Differentiation
Product offering	Short-haul flights only	Short- and long-haul
	No frills	Extended frills
	No services	Superior services
	Single-class, high density cabin	Multiple-class, low-density
Organizational Structure	Low labour costs	High labour costs
	Low distribution costs	High distribution costs
	Fleet commonality	Fleet diversity
	Use of secondary airports	Use of major airports

Source: Authors calculation

Having sketched the theoretical background and LCC specimen, this paper now turns to the analysis of the strategic behavior of European low-cost carriers in recent years. The LCC characteristics proposed in the considered studies are to a great extent covered by the features outlined in the previous section.

5. Findings

5.1. The Degree of Low-Cost Model Adherence

Daft and Albers (2014) assessed business model alterations among 26 European airlines between 2004 and 2012. The carriers' strategies were determined on the basis of 36 components and consequently compared throughout

the period. Their findings indicate a gradual convergence implying increasing similarities in both the airlines' product offerings and organizational structures (see also Mason and Morrison, 2008). Interestingly, while the strategies of the investigated full-service network carriers remained relatively unchanged, the surveyed low-cost carriers undertook major adjustments, with Ryanair being an exception. This supports the observation of low-cost airlines adopting FSNC features to a greater extent than vice versa, proposed by Daft and Albers (2013) in an earlier work including five German passenger airlines. The intensifying airline business model convergence can thus be attributed to LCC's increasingly departing from the original low-cost model, implying a growing range of approaches within the sector (Francis et al, 2006).

By analyzing the degree of adherence to the LCC archetype among Europe's 20 largest low-cost carriers after seat capacity between 2009 and 2010, Klophaus et al (2012) confirm this development and observe fundamentally differing approaches. Based on how many of 13 identified LCC criteria the carriers fulfilled, they were assigned the categories pure LCC, hybrid or full service. The results presented in table 2 reinforce the trend of a growing hybrid sector predicted by Franke and John (2011). While Ryanair clearly adheres accurately to the original model by fulfilling all 13 criteria, the mean of 7.65 indicates the existence of blurring strategies (Fageda et al, 2015). Hence, a large proportion of airlines labeled low-cost cannot be identified as such. Rather, the vast majority, by only fulfilling 4 – 10 requirements, must be denoted hybrid carriers. This is in line with and supports the findings of Alamdari and Fagan (2005), describing the emergence of a new breed of LCC 's increasingly incorporating full service characteristics in recent years.

In a detailed analysis of the strategic behavior of six European low-cost carriers between 2005 and 2006, Mason and Morrison (2008) reached similar conclusions. In order to identify the degree of deviation from the LCC specimen, indices for different areas were calculated. Consequently, a best in class methodology was used to compare the airlines' strategies by relating their scores in each category to the highest score achieved. For example, the 2006-labor index value of 2.92 for SkyEurope was related to the best in class value, in this case, achieved by Ryanair, of 10.00. It implies that SkyEurope's performance regarding labor productivity only made up 29.2% that of Ryanair's in 2006. High scores obtained in the organizational structure categories distribution, aircraft, labor and airports as well as for cost driver indicate close adherence to the archetype. Contrary, high values in the product offering categories convenience and comfort as well as for revenue indicate huge deviations. The results shown in Table 3 verify

Ryanair as a pure low-cost carrier and confirm the weak average adherence identified by Klophaus et al (2012).

Table 2: LCC's Ranked after accordance with the Archetype

Type	Airline	Value
I	Pure LCC	
	Ryanair	13
	Wizz Air	12
	Blu Express	12
	bmibaby	11
	Blue Air	11
II	Hybrid carrier with dominating LCC characteristics	
	easyJet	10
	Jet2	10
	Corendon	10
	Transavia	9
	Vueling	8
	Aer Lingus	8
	Wind Jet	8
III	Hybrid carrier with dominating full service airline characteristics	
	Norwegian	7
	Flybe	6
	Germanwings	5
IV	Full service airline	
	Air Berlin	3
	Air Baltic	3
	Niki	3
	Meridiana fly	2
	Air Italy	2

Source: Klophaus et al, 2012 (p. 56)

Here, the more up-to-date 2006-values are considered. While Ryanair scored highest in organizational architecture categories summarized in the cost-driver index value of 10.00, the mean value of the remaining carriers of 6.23 indicates a much lower focus on cost leadership among them. Likewise, the low revenue index score of Ryanair of 5.42 identifies the carrier as the ultimate cost leader in the sample group (see also Alamdari and Fagan, 2005). In contrast, the mean value of the other carriers of 8.02 indicates an average business model rather

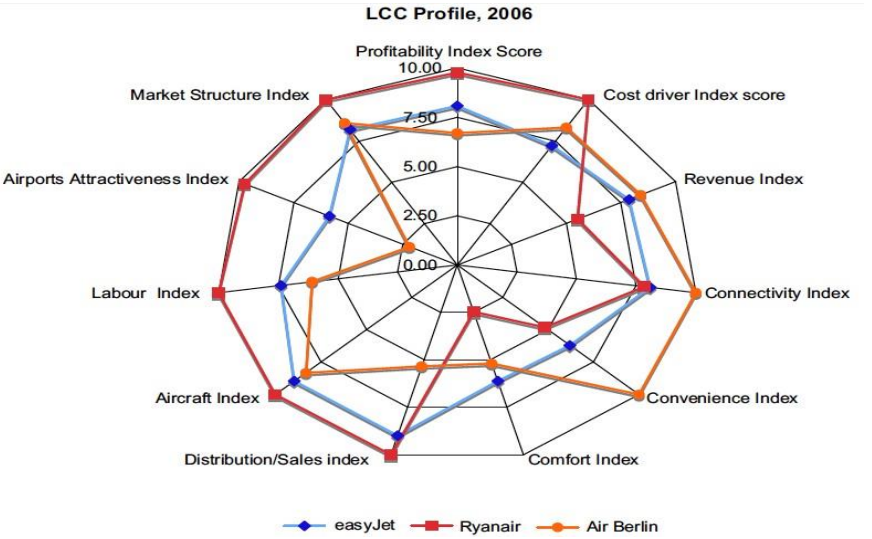
driven by high sales levels, implying relatively higher average scores in the categories convenience (8.01) and comfort (6.94).

Table 3: Index Scores for European LCC's (2005-2006)

Summary	EasyJet, 205	EasyJet, 206	Ryanair, 2005	Ryanair, 2006	Norwegian, 2005	Norwegian, 2006	Flybe, 2005	Flybe, 2006	SkyEurope, 2005	SkyEurope, 2006	Air Berlin, 2005	Air Berlin, 2006
Profitability index score	7.48	8.07	10.00	9.76	6.49	6.22	5.70	5.22	1.42	0.92	6.55	6.70
Cost driver index score	7.30	7.22	9.84	10.00	5.98	6.15	0.00	2.13	7.38	7.33	8.54	8.31
Revenue index	7.27	7.86	5.48	5.52	8.40	8.01	10.00	9.34	6.61	6.45	9.65	8.42
Connectivity index	7.38	8.09	6.23	7.86	3.35	3.93	4.02	4.16	3.08	3.81	8.70	10.00
Convenience index	6.05	6.20	4.34	4.83	6.46	6.62	9.06	9.12	8.08	8.12	9.95	10.00
Comfort index	5.95	6.12	2.54	2.46	5.50	5.42	10.00	9.69	9.92	8.29	5.39	5.20
Distribution/sales index	9.05	9.00	9.85	10.00	7.36	8.22	5.13	6.72	5.26	5.58	4.01	5.33
Aircraft index	8.64	8.96	9.61	10.00	8.02	8.80	8.31	7.85	8.03	8.45	8.21	8.33
Labour index	7.45	7.40	9.71	10.00	6.20	6.29	3.02	3.78	2.94	2.92	6.19	6.09
Airports attractiveness index	6.54	5.85	10.00	9.73	5.98	5.53	5.60	5.70	5.92	5.54	2.77	2.20
Market structure index	8.16	8.19	9.42	9.98	7.91	8.57	90.9	9.67	9.34	10.00	7.97	8.59

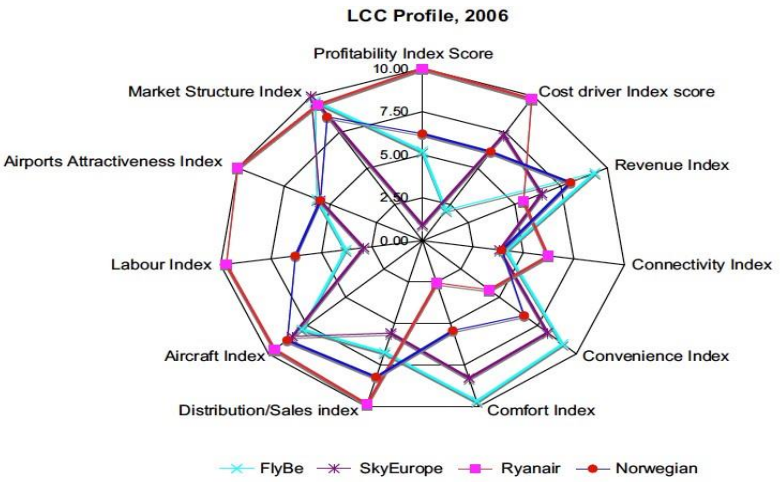
Source: Mason and Morrison, 2008 (p. 80)

Figure 5: Spider web profile: Ryanair, Easyjet and Air Berlin (2006)



Figures 5 and 6 illustrate the overall strategic behavior of the carriers by plotting the 2006-index-scores of all airlines for all categories. It shows that while the carriers tend to operate under more or less the same market structure and achieve similar aircraft productivity, significant deviations can be observed in all the other categories (see also Daft and Albers, 2014; Klophaus et al, 2012). Especially the carriers' cost positions reflected in the indices labour and distribution/sales vary considerably.

Figure 6: Spider web profile: Flybe, SkyEurope, Norwegian, Ryanair (2006)



Source: Mason and Morrison, 2008 (p. 81)

Further, huge deviations can be observed with regard to airport choice (airports attractiveness index), indicating that most LCC's today do not primarily serve secondary airports (see also Button, 2012). This is confirmed by Daft and Albers (2014) and Klophaus et al (2012), referring to AirBerlin and Easyjet, operating European networks of major airports. Similarly, the carriers follow different strategies with respect to product offerings (Button, 2012; Daft and Albers, 2013). While Ryanair reflects a strict cost leadership position by providing low levels of convenience and comfort, FlyBe, for instance, clearly emphasizes revenue maximization by offering improved services. In addition, Air Berlin attracts passengers with connecting flights (Klophaus et al, 2012).

The average convenience and comfort scores indicate that LCC's today increasingly take off from a simple, basic product design while broadening their range of service offerings (Gillen and Gados, 2008). Daft and Albers (2014) confirm this trend and refer to the fact that low-cost carriers have started to aim at attracting higher yielding passengers. This supports Alamdari and Fagan (2005), arguing that LCC's over the years have changed their strategic positions, recently departing from a cost leadership strategy by seeking to differentiate.

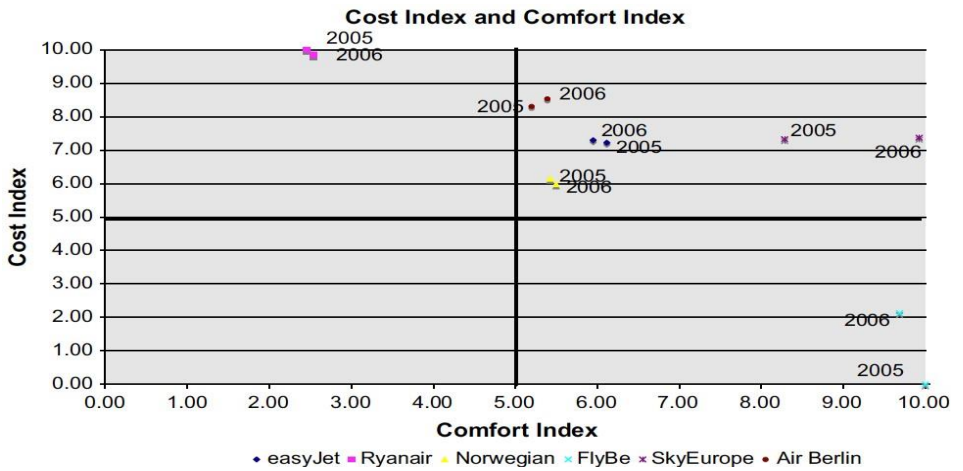
Given those findings, it appears that low-cost carriers today clearly seem to depart from the specimen while approaching differentiation positions. They seek to increase revenues by serving major airports and improving their product and service offerings.

5.2. Impact on Performance

Gillen and Gados (2008) analyzing the vulnerabilities of mixing business models within the airline industry find that LCC's providing high levels of frills and services cannot maintain cost-efficiency. Improved and extended product offerings, as well as a focus on primary airports, decrease the productivity of aircraft and staff. The consequence of allowing superior convenience and comfort is operational ineffectiveness, implying incompatible activities that result in increased costs.

Mason and Morrison (2008) support this notion, observing a significant connection between a carrier's product design and expenses. Figure 7, relating the cost and comfort indices for 2005 and 2006 of the six European LCC 's introduced in the previous section, illustrates the relationship. It shows that while Ryanair by far provides the lowest levels of comfort measured on the x-axis, it attains the highest cost index measured on the y-axis, implying the lowest costs of the surveyed carriers. Likewise, SkyEurope and FlyBe, providing the highest levels of comfort, are among the airlines with the lowest cost index, thus facing the highest expenses. From this analysis it appears that the more a low-cost carrier emphasizes improved product offerings including increased levels of services, the higher are the costs it faces.

Figure 7: Cost Implications of Comfort (2005-2006)



Source: Mason and Morrison, 2008 (p. 82)

By taking into account all index values for the sampled airlines in both 2005 and 2006 displayed in figure 3, Mason and Morrison (2008) have developed a correlation matrix (table 4) that reveals how the activities are related and show

their impact on profitability, here stated as an operating ratio. While being significantly negatively correlated with profitability, convenience (-0.60) and comfort (-0.75) show highly positive correlations with the revenue index (0.74 and 0.48, respectively). This suggests that striving for higher yields by providing improved product offerings within the low- cost sector clearly does not pay off (see also Daft and Albers, 2013).

Table 4: Correlation Matrix of Indices

Correlation matrix	Operating ratio	Cost driver index	Revenue index	Connectivity index	Convenience index	Comfort index	Distribution/sales index	Aircraft index	Labour index	Airports index	Market structure index
Operating ratio	1.00	0.27	−0.25	0.47	−0.60	−0.75	0.70	0.75	0.86	0.59	−0.01
Cost driver index score	0.27	1.00	−0.71	0.53	−0.44	−0.76	0.36	0.57	0.66	0.23	−0.03
Revenue index	−0.25	−0.71	1.00	−0.02	0.74	0.48	−0.61	−0.70	−0.49	−0.72	−0.49
Connectivity index	0.47	0.53	−0.02	1.00	0.03	−0.58	0.14	0.38	0.59	−0.20	−0.31
Convenience index	−0.60	−0.44	0.74	0.03	1.00	0.62	−0.93	−0.78	−0.73	−0.88	−0.11
Comfort index	−0.75	−0.76	0.48	−0.58	0.62	1.00	−0.63	−0.76	−0.94	−0.40	0.16
Distributions/sales index	0.70	0.36	−0.61	0.14	−0.93	−0.63	1.00	0.77	0.78	0.79	0.08
Aircraft index	0.75	0.57	−0.70	0.38	−0.78	−0.76	0.77	1.00	0.82	0.73	0.30
Labour index	0.86	0.66	−0.49	0.59	−0.73	−0.94	0.78	0.82	1.00	0.54	−0.16
Airports index	0.59	0.23	−0.72	−0.20	−0.88	−0.40	0.79	0.73	0.54	1.00	0.49
Market structure index	−0.01	−0.03	−0.49	−0.31	−0.11	0.16	0.08	0.30	−0.16	0.49	1.00

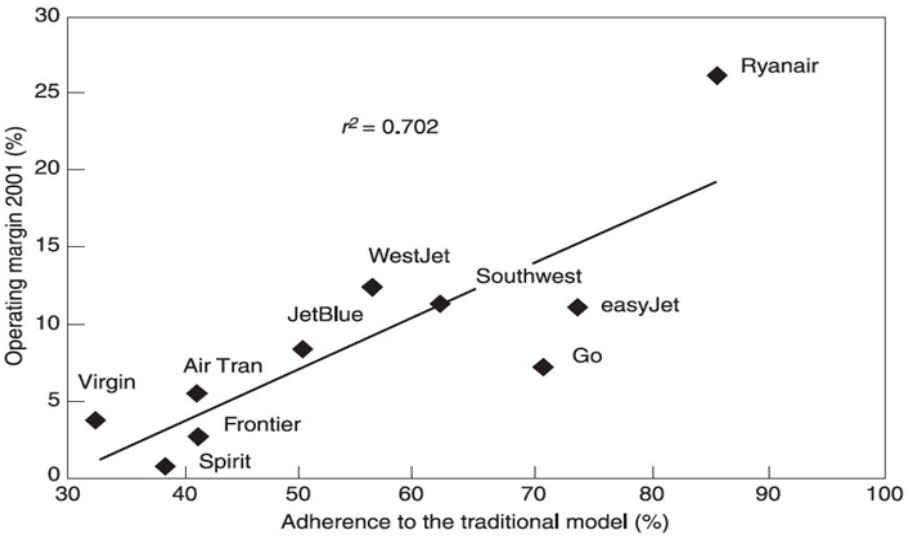
Source: Mason and Morrison, 2008 (p. 80)

Alamdari and Fagan (2005), investigating a sample of 10 low-cost carriers including European and North American airlines in 2001 support the findings by concluding that LCC's have not succeeded in translating product differentiation into profits. While pointing out that hybrid approaches not necessarily are doomed to fail (Pereira and Caetano, 2015), they find evidence that adhering to the original low-cost model potentially ensures better performance among LCC's (See also Daft and Albers, 2013). By plotting the operating margins, i.e. the percentages of the carriers' revenues that are turned into operating profit, against their adherence to the LCC-archetype, here defined on the basis of 7 variables underlying product and organizational features, they observe a linkage between financial performance and low-cost model adherence. Given that a value of 1 implies a perfect fit of the line through the data points presented in figure 8, the observed linear regression coefficient of 0.702 indicates a significant, viable correlation.

The figure shows that Ryanair, adhering closest to the original low-cost model achieves the highest profitability (see also Mason and Morrison, 2008). Belgian LCC Virgin, showing weak compatibility is among the least profitable carriers. The two remaining European LCC's, Go and Easyjet, while following the archetype relatively close, are among the better performers of the sample. Thus, the findings are in line with other research and confirm the trend that pure LCC's overall tend to achieve higher profits, implying a negative impact of giving up a low-cost leadership position in favor of a differentiation approach among low-cost

airlines (see also Mason and Morrison, 2008; Daft and Albers, 2014). Taking into account a considerably larger sample, this also holds true.

Figure 8: Correlation between Operating Margin and Adherence to the Original Low-Cost Model for Selected LCCs, 2001



Source: Alamdari and Fagan, 2005 (p. 390)

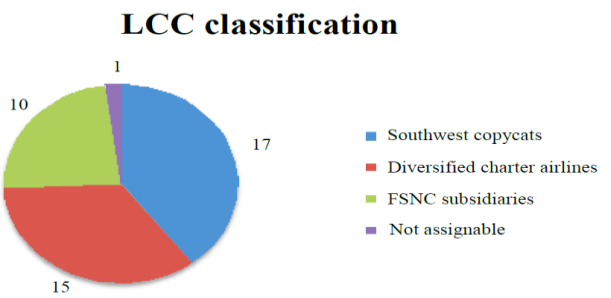
Francis et al (2006), studying the spatial and temporal development of low-cost carriers worldwide find that LCC's that have only incorporated a few features of the original model are more likely to fail than those closely following the archetype. They have identified five broad types of LCC's of which three dominate the European market, namely Southwest copycats, diversified charter airlines and FSNC subsidiaries. While the latter two consists of airlines that have been set up by their parent companies in order to prevent low-cost carrier competition from entering their routes and absorb demand and market share, Southwest copycats, being low-cost carrier start-ups, typically align most strictly to the original model.

Budd et al (2014), characterizing the market exit of European low-cost airlines have identified and classified a total of 43 LCC market entrants between 1992 and 2012 and assigned them to the three categories outlined by Francis et al (2006). As presented in figure 9, 17 were Southwest copycats, 15 diversified charter airlines, 10 FSNC subsidiaries, and one carrier was not assignable to any of the types. By 2012, only 10 of the 43 low-cost airlines that entered the market remained operational, a failure rate of 77%. Of the 17 Southwest copycats, 12 ceased operations (70.59%), compared to 12 diversified charter airlines (80%) and

8 FSNC subsidiaries (80%) (Figure 10). Hence, the proportion of failed Southwest copycats, while on average adhering closest to the archetype, is around 10% lower than for the other categories, indicating better financial performance of more pure LCC's in contrast to hybrids.

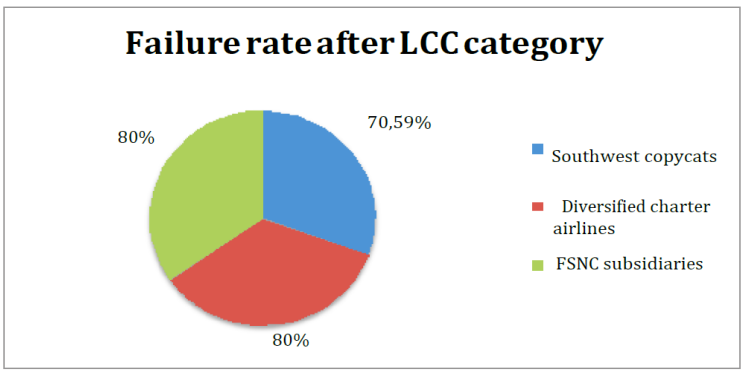
The observations indicate that striving for higher sales levels within the low-cost sector does not result in better financial performance. In contrast, it has a negative impact on the profitability of low-cost airlines. Improving product and service offerings implies the loss of a clear strategic direction and tends to result in operational ineffectiveness. The empirical findings provided are in line with anecdotal literature and suggest a trend of greater profitability among pure low-cost airlines (Shaw, 2011). This confirms the viability of Porter's (1996) theory of generic strategies. Based on the data, the statement that being "lost-in-the-middle" for a certainty prevents from financial success is thus proven true for European low-cost airlines.

Figure 9 – Classification of 43 European LCC market entrants (1992-2012)



Source: Own work, data obtained from Budd et al, 2014 (p. 79)

Figure 10 – Failure rate of each LCC category (1992 – 2012)



Own work, data obtained from Budd et al, 2014 (p. 79)

6. Discussion and Conclusion

European low-cost carriers have increasingly deviated from cost leadership positions while trying to differentiate. This has caused their expenses to increase to a greater extent than their revenues, implying a negative impact on their profitability. While neglecting the importance of trade-offs and strategic fit, they end up being 'stuck-in-the-middle' and consequently suffer a loss of competitiveness.

The evaluated studies coincide in their findings and only differ slightly with respect to single observations. For instance, a particular carrier's level of low-cost model adherence slightly deviates from study to study. The reason for such minor discrepancies can be attributed to the different sample periods and measurement characteristics applied by each author. However, the fact that the same overall trends are observed by all researchers regardless of the sample size of the studies implies a high validity of the findings.

The difficulties that have been faced by synthesizing the existing research and literature lie in a variety of factors. On the one side, the authors follow different objectives with their analyses. While some purely emphasize the investigation of low-cost carriers' adherence to the archetype and its impact on their financial performance, others mainly seek to answer different questions. Whereas, this does not imply less suitable information per se, it means that some studies provide more applicable results for answering their research questions. Therefore, they are referred to in more detail.

On the other side, the available literature use different approaches for their analyses. This applies to factors such as the criteria established for measuring low-cost model adherence, the airlines included in the surveys and the time frames evaluated. As a consequence, not all variables could be taken into account. Instead of covering the full range of findings, the task is to draw a link between the results and provide a comprehensive "whole". While this implies shortcomings, as for instance the neglect of some implications, it draws a viable picture of the prevalent trends.

The aim of this paper was to synthesize existing research and literature to investigate the role of competitive strategies in the airline industry and to ascertain the strategic behavior of European low-cost carriers in recent years. In specific, the goal was to examine the extent to which European LCC's have altered their business models to pursue a differentiation strategy and to evaluate how that has influenced their financial performance.

Academics, as well as industry experts, refer to approaching industry maturity as a reason for this remarkable rate of failure. Researchers point out that carriers increasingly depart from the low-cost model in order to differentiate and remain competitive. While extensive work has been done on identifying low-cost carrier characteristics, the more recent topic of airline business model convergence has caused confusion within the industry.

Given the considered anecdotal and empirical data provided by various available literature, a considerable departure from the original low-cost model can be observed. As a result of approaching industry maturity and intensified competition, European LCC's increasingly seek to differentiate by improving their product offerings and changing their organizational structures, thus adopting hybrid strategies. This has proven to be at the expense of their financial performance. The results indicate that by tendency, low- cost carriers adhering more strictly to the LCC specimen enjoy greater profitability than those adopting FSNC features. The reasons lie in rising costs as a consequence of inconsistent activities associated with hybrid approaches. This confirms the importance of choosing a clear competitive strategy within the airline industry in order to avoid being "lost-in-the-middle".

Considering the obtained results, one can suggest that European low-cost carriers are better off by adhering closely to the specimen instead of adopting hybrid approaches. This encourages future research to investigate whether the findings can serve as a forecast for the emerging markets of Africa and South East Asia. Potentially, this paper is of high relevance for academics and airline managers in those regions in that it may serve as a guideline of how to avoid strategic pitfalls.

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