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Building from Scratch or Implementing Subsidiaries? Assessing the Best Approach to Creating a Budget Carrier

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A B S T R A C T

In light of the low-cost carrier phenomenon started by Southwest in the 1970's, flagship airlines have taken many measures to fight the budget competition. On the one hand, this paper explains the success of budget airlines in detail, while giving insight into the new trend of adopting hybrid models in the low-cost market. On the other hand, it compares incumbent airlines' strategies against the true low-cost model and elaborates that carriers within carriers fail because of insufficient implementation of low-cost structures, high cannibalization effects and low levels of autonomy that are required to build a successful subsidiary.

Key Words: Business Model, Low-Cost Carrier, Airline within Airline, Strategy

Table of Contents

1. Introduction

The aviation industry is historically marked by one of the lowest long-term returns on invested capital (ROIC). With an average of 5.9% over the last 20 years it is 9 percentage points lower than the global average (Porter, 2008). IATA (2016) states that the ROIC in the global aviation industry in 2016 reached 9.4%, where it is now finally able to cover its cost of capital for the first time. McKinsey (2017a) blames the industry landscape, per se, for this phenomenon. Long lead times, high governmental regulation and excess capacity are only a few issues in the aviation industry value chain that dictate this development. Another key component always mentioned in connection to airlines, are fuel expenses. The currently low fuel prices (US$1.40 for a gallon, as compared to US$4.81 in September 2008 (EIA, 2017), see Appendix 1 for chart) allow for record profits at many airlines but have historically always accounted for the largest expense block (PwC, 2015).

Further, the competition in air travel has become severe in the recent years, with Ryanair or EasyJet offering record-low fares across the most popular European destinations, Southwest endangering major US carriers for years and AirAsia taking over the Southeast Asian aviation market. Budget airlines are posing a serious threat to existing carriers, and with Ryanair overtaking Lufthansa in 2016 as the largest European airline[1], the menace has become eminently visible (Reuters, 2017). To fight this development, full service carriers have implemented cost-cutting measures and/or are creating own low-cost subsidiaries[2]. In the case of Lufthansa, the budget carrier 'Eurowings', operating out of Austria was established (Welt, 2015) and Singapore Airlines followed through with its plan of uniting its two low-cost brands 'Scoot' and 'Tigerair' (The Straits Times, 2016) to have a more sustainable position in the market. Today, in fact, 25% of all global flights, are operated by budget airlines (A.T. Kearney, 2016).

[1] Measured in transported passengers
[2] A list of all mentioned airlines including subsidiaries can be found in Appendix 2

There has been published much literature about low-cost carriers and the determinants of the particular business model, as well as the competition between legacy carriers and budget airlines. Few studies, on the other hand, have addressed the issue of carriers within carriers as a response to the low-cost initiative. Thus, this essay will, step by step, explain the main characteristics of both airline business models and highlight the underlying differences, while taking customer perceptions into consideration. In a second step, the popularity and success of budget carriers will be assessed and the evolution over time and space of latter evaluated. The subsequent chapter will address airlines within airlines by stating examples of such failures. Building on latter, critical factors for a successful low-cost subsidiary will be elaborated to lastly determine the best approach to construct a low-cost airline. To round up, an outlook on the future of the aviation business will be given.

2. About Low-Cost Carriers

Research identifies three major business models used in the airline industry. 'Charter' for travels operated through chartered planes, 'Low-Cost Carriers' (LCC)[3] and 'Full-Service Carriers' (FSC)[4] (Lordan, 2014), where LCCs and FSCs are subject of this paper. Lordan (2014) argues that the main differences occur on operational levels, such as cost structures, network configurations, type of airports, as well as the services offered to passengers. Hunter (2006) adds that employment relations play an important part in the LCC business model. This section will explain the original ideas of the low-cost airline model and explain the reasons for the resulting success and popularity LCCs have experienced over the past decades. In a third step, changes that occurred to the original business model due to ever-evolving market conditions will be itemized.

[3] Other terms used: budget carrier, value carrier, point-to-point carrier
[4] Other terms used: legacy carrier, flagship carrier, incumbent airline, network carrier, hub-and-spoke carrier, national carrier, premium carrier

2.1 The Original Low-Cost Carrier Model

LCCs can minimize their costs and thus follow the cost leadership approach suggested by Porter in 1985 (Hunter, 2006). In fact, operational efficiency and lower service levels allow a reduction of the costs per available seat kilometer in comparison to legacy carriers (A.T. Kearney, 2016). Gillen and Gados (2008), as well as Heracleous and Wirtz (2009), document that LCCs have an average unit cost of 5 to 8 US$ cents, whereas flagship carriers usually stumble around 10 to 15 US$ cents per available seat kilometer.[5] This paper identifies major differentiating budget airline features that result in an average cost advantage of 30%, as compared to legacy carriers (A.T. Kearney, 2016):

Cabin crews and the ground force work more efficiently. The number of flight attendants per flight is kept to an efficient minimum that only meets legal requirements, while wages are usually more competitive (Gillen and Gados, 2008). Hunter (2006) finds that the clear majority of LCCs have poorer working conditions and lower salaries, the author states that the discrepancies reach from 5% to 40%. Eurowings pilots, for example, earn 58,000€ less than comparable Lufthansa pilots after 10 years of work experience (Handelsblatt, 2015). Gillen and Gados (2008) describe that LCC pilot contracts stimulate a higher productivity, as the variable component (i.e. flight hours) weighs more to the overall salary. Further, Hunter (2006) states that crew and ground force work 10% to 35% more than in FSCs and vacation entitlements are 5% to 20% lower, respectively. Interestingly, 70% of LCCs have a unionized workforce, whereas the remaining 30% engage in atypical employment practices. Ryanair and Norwegian Airshuttle, in particular, are criticized for that. Such that Das Erste (2017) just released a documentary investigating Ryanair's employment relations. They found that pilots were hired through third party agents that, in turn, placed pilots in

[5] Appendix 3 shows a relative comparison between unit costs for LCC vs. FSC (IATA, 2006)

Ryanair's operations. This aided Ryanair in saving tax and social security expenses, indirectly boosting their revenues[6].

Besides atypical employment practices, some LCCs see an opportunity in seizing subsidies at taxpayers' expenses. As countries subsidize their secondary airports to rescue them from falling apart, those subsidies are indirectly forwarded to LCCs. Especially, Ryanair has been accused of this practice by the European Union (Bloomberg, 2013).

The aircraft utilization and network operations contribute significantly to cost reduction. Out of A.T. Kearney's (2016) publication it can be inferred that directly attributable cost benefits are estimated at around 7% to 12% in comparison to average legacy carriers. LCCs operate with a standardized fleet, which usually consist of high seat density Boeing 737 or Airbus A320 serving short- and medium-haul destinations (Klophaus, Conrady and Fichert, 2012). The fleet tends to be newer and more fuel efficient, adding to a lower kerosene consumption. Furthermore, LCCs' aircraft utilization rate is up to 40% higher than the FSCs', with planes operating 10 to 12 hours per day[7] (A.T. Kearney, 2016). Alamdari and Fagan (2005) name a high fleet utilization a *"key success factor"* that enables aircrafts to operate more sectors per day. These features lead to greater flexibility, lower maintenance and training expenditures (Alamdari and Fagan, 2005). Operations and bases originate from secondary airports and therefore enhance the average turnaround rate[8], as those tend to be less congested (Alamdari and Fagan, 2005).

Alamdari and Fagan (2005) explain that a key differentiation to FSCs is a simple point-to-point network structure that offers one-way tickets[9] (see Appendix 4 for more detailed explanation). Furthermore, this network structure does not foresee connecting flights[10], as many FSCs do, to fill

[6] This issue will not be discussed further in this paper, it merely serves as an example of atypical employment practices
[7] Subject to the comparison are short-haul operations
[8] In Ryanair's case the average turnover time is said to be 25 minutes (Alamdari and Fagan, 2005)
[9] One-way pricing is a major difference to legacy carriers that offer discounts for return trips
[10] Some US LCCs have adopted a quasi-hub-and-spoke network, which can be explained by the geographic size of the country and the inability to serve all airport combinations (Alamdari and Fagan, 2005)

their long-haul operations. According to Cento (2009), the load factor of an aircraft must also be considered. The nature of the low-cost model foresees higher load factors to ensure profitable flights, as margins are relatively lower (Gillen and Gados, 2008). Higher load factors are, in turn, facilitated by lower fare prices. However, Oliver Wyman (2016), interestingly, reveals that US LCCs, in recent years have had a 4.4% lower break-even load factor on domestic routes and 6.4% lower on international routes (see Appendix 5). US Budget carriers are apparently better at managing capacity and demand fluctuations, as well as reducing costs leading to an overall better environment.

Product offerings and distribution channels are optimized and through reduced services, budget airlines can offer lower fares for similar and even identical routes. Value carriers charge customers for standard services that are usually included in the purchase of a legacy carrier ticket (Hunter, 2006). These services include perks such as check-in baggage or on-board meals (Vidović, Štimac and Vince, 2013). LCCs have identified those ancillary revenues as great income source and are, thus, unbundling those services for fees (Rosenstein, 2013). Fallert (2102) has found that budget airlines, on average, generate 20% of their revenues by charging ancillary fees, in a revenue stream that amounted to US$22.6 billion globally in 2011. Spirit Airlines and Ryanair, for example, generate 43% and 24%, respectively (see Appendix 6), of its total revenue from ancillary services (Statista, 2016). Psychologically, this unbundling strategy has made fares more transparent and clients see advantages, as they are only charged for services they use (Rosenstein, 2013). Besides the no-frills policy, LCCs usually equip their planes with a single-class cabin outline. Frequent flyer programs, such as Lufthansa's 'Miles & More' or American Airlines' 'AAdvantage' are not part of the classic low cost model.

Furthermore, budget airlines focus on direct sales channels, especially online, to save commissions (A.T. Kearney, 2016 and Hunter, 2006). Between 50 to 80% of LCC tickets are sold

directly through the airline without an intermediate travel agent. More modern systems and less back-office staff contribute to additional cost saving opportunities (A.T. Kearney, 2016).

Another common feature is the partnership with third parties, which consist of hotel platforms or rental car firms (Rosenstein, 2013). Additionally, marketing expenses are kept minimal, as most of the PR is distributed online (Budd et al., 2014).

Fuel expenses have been mentioned in the introduction but are not further itemized, as despite its business model, an airline, will face the same charges for fuel. Resulting, this expense category has no (or very little) influence on the decision process of creating a budget carrier. Furthermore, McKinsey (2017b) finds no structural saving opportunities regarding kerosene costs.

2.2 Budget Airlines – A Success Story

Air travel was considered a luxury undertaking in the 1950's. The Economist (2013) estimates that in 1952, a return trip from London to Scotland was equivalent to an average employee's weekly salary, while a flight to New York would require saving for five months. The initial disruption took place in 1967, when Southwest was founded in the USA and offered flights for as low as US$20 to travel from Huston to Dallas. The first flight was conducted in 1971 and immediately gained wide acceptance amongst the budget conscious population. By mixing the characteristics mentioned in section 2.1 with a 'sexy' and modern company appearance[11], it could attract a growing number of passengers (The Telegraph, 2013). Southwest's initial 'low-cost no-frills' operating model was soon replicated across the world (The Economist, 2013), with the three most notable *"copy-cats"* being Ryanair in 1990, EasyJet in 1995, and AirAsia in 2001.

[11] Southwest was advertising with the slogan: "long legs, short nights" (The Telegraph, 2013). A similar approach is observable with the budget airline, VietJet, in Vietnam. VietJet is known as the 'bikini airline' due to uncommon PR actions (BBC, 2017a)

The trigger point that allowed for this development was the deregulation and liberalization of the airspace that first occurred in the USA in 1978 and subsequently moved to Europe[12] and lastly Asia (Budd et al., 2014). The aviation market during that time was marked by heavy subsidized and state-owned national carriers with growing overcapacities (Franke, 2004), opening a gate for alternative providers. Budd et al. (2014) calculate that the liberalization has had the biggest impact in Europe, as LCCs account for 28% of the European air travel in 2015 (Eurocontrol, 2016).

Franke (2004) explains that LCCs established a sustainable business model that is more easily adaptable to demand changes. The author argues that the main reason lies in the lean-business model that LCCs implemented (i.e. point-to-point network, fleet commonality and alike) and that the no-frills approach only plays a secondary role. Furthermore, he argues that the service provided by LCCs is not *"poor"* but rather *"focused"* to meet operational excellence. A further key success factor is that budget carriers use different tools and do not exactly pursue the network carrier approach, meaning that FSC will encounter problems when trying to replicate the LCC business model, as existing hubs must be sustained and cannot simply be replaced by a point-to-point framework (Franke, 2004).

Very important to note is that budget airlines created a so-called *"latent demand"*, i.e. attract customers that would not have taken the service into consideration otherwise (Franke, 2004). O'Connell and Williams (2005) reassure that a new market was created by attracting many first-time flyers. They investigate reasons, customers choose LCCs over FSCs and vice versa. Given the age of the study, the figures are not representative of today's environment but deliver fundamental explanations. Such, the research reveals that a significant portion of low-cost passengers are young (under 24 years) and travel for leisure purposes. As their parents mostly finance those trips, the

[12] The Third Aviation Liberalization Package in June 1992 allowed for a single European aviation market (Budd et al., 2014)

least costly option is rather chosen. 43% of LCC passengers answered they would switch to the incumbent airline if it reduced its fare by 30%, whereas only 5% would switch for a 10% price reduction. This revelation and the fact that over 75% of participants have listed the fare price as most striking reason for choosing LCCs, without a doubt, rank financial considerations as number one selling point for budget carriers. O'Connell and Williams (2005) argue that value carriers induce a certain customer perception by concise PR actions. Ryanair, for example, gives away free flights and simultaneously rises customer expectations of cheap plane tickets.

Older passengers vote largely in favor of incumbent airlines as their preferences and purpose of travel differ. Although, LCCs increasingly attract self-employed business people, large companies still opt for FSCs, explained by the fact that business travelers value airlines that offer a higher frequency and flexibility of flights[13] (O'Connell and Williams, 2005).

All in all, low fares that facilitated tapping onto a new market firmly shaped the success of LCCs. The liberalization of airspace allowed those airlines to grow and offer passengers a broader spectrum of connections. O'Connell's and Williams' (2005) study has also shown that that there are no attitudinal differences among continents, which presents an argument for global robustness and validity of the obtained results.

2.3 How Budget Airlines Have Evolved Over Time

Budget Airlines have become a huge success over time and grown immensely. To illustrate the vast expansion of LCCs after taking off in the mid 1990's, Ryanair, for instance, introduced 200 new connections in 2016 (Statista, 2017), as compared to the previous year. The fleet grew by 33 planes from 2015 to 2016 and now amounts to over 340 planes. Yearly transported passengers have grown by 12% to 109 million in 2016 (Ryanair, 2017a). EasyJet and others, although smaller, have

[13] Example: TAP's 'bridge' between Porto and Lisbon with flights departing every hour (TAP, 2017).

comparable statistics in terms of expansion. One fact that has surely contributed to a wider reach are flights conducted to primary airports[14] that can pool more capacities.

Budd et al. (2014) conducted a comprehensive study on the failure of European LCCs over 20 years and found that only 10 out of initially 43 low-cost operators since 1992 are still operating. Understanding changing customer needs and industry trends is key to successfully operating in this market. Due to the immense efforts of national carriers to regain market presence, LCCs are forced to adapt their business models to a more *"hybrid"* form that deviates from the original low-cost model (Klophaus, Conrady and Fichert, 2012).

It seems as if 'frills' are playing a bigger role than before. Especially with LCCs entering the long-haul market[15], in-flight entertainment and meals become essential (Dennis, 2004). To counteract, some low-cost carriers include more options in their service. Loyalty programs to incentivize customers to stay with one airline, for instance, are used by AirAsia (2017) or EasyJet (2017), the programs are called 'BigPoints' and 'Flight Club', respectively. Transavia and Eurowings have even inherited the parent's award programs (Flying Blue, 2017; Miles & More, 2017). Other LCCs include free check-in baggage for every seat, examples are NOK Air (2017) in Thailand and Malindo Air (2017) in Malaysia. Other companies, such as Scoot (2017) in Singapore or Norwegian Air Shuttle (2017) in Norway have made an approach to close the gap to flagship carriers when it comes to business travelers or customers with higher needs – a premium cabin was introduced on longer haul routes that includes the usually expected premium amenities[16] (Alamdari and Fagan, 2005).

[14] Ryanair now flies from Lufthansa's base in Frankfurt, an airport that has been avoided due to high fees (Handelsblatt, 2017)
[15] Low-cost long-haul is a very interesting subject that is currently being highly pursued. The topic will go beyond the constraints of this paper and will thus not be itemized here in detail
[16] Flagship carriers still offer much more luxury premium cabins, many of them even with fully reclined seats

Ryanair is a great example to demonstrate that adaptation and change was needed, when it announced its 'Always Getting Better' campaign to fight the resentment customers were increasingly experiencing (Ryanair, 2017b). The promotion was basically necessary to increase customer satisfaction through innovation in order to remain a market leader and ultimately re-brand its image. Thus, the company approached their clients by offering a broader platform, such as an app and a more welcoming manner of employees.

Having a look at the pioneer, Southwest, some changes that reflect today's reality are evident: USA Today (2014) explains that the airline has taken up longer flights from coast to coast and even introduced international flights. Just as Ryanair, Southwest is approaching the lucrative business segment, it therefore altered its reward program and boarding process with more options. However, CEO Kelly, emphasizes that its free baggage allowance policy will continue (USA Today, 2014), which is a major difference to all other direct competitors (Forbes, 2105). Yet, the airline can keep its 30-40% cost advantage over its close flagship competitors and even shows a 10% lower cost structure to other average LCCs (Forbes, 2015). Another US LCC, Spirit Airlines, on the contrary, is persistently sticking to the basic low-cost concept from the 1970's (Rosenstein, 2013).

3. Legacy Carriers' Response to the Low-Cost Challenge

A common strategy incumbents can pursue when observing the market entry of new competitors is the simple *"wait and watch"* approach, where the new entrant can carefully be assessed (Berman, 2015). National carriers have 'waited' but only late realized the enormous threat those LCCs were posing to their businesses and as a response modified their operating models with a focus on cost-cutting. Franke (2004) reckons it took major airlines in the US about 15 years, and in Europe about 20 years to take the low-cost challenge seriously. The later deployed *"matching strategy"* (Berman, 2015; Klophaus, Conrady and Fichert, 2012) mainly targeted unbundling of services. US carriers,

for instance, started cutting on-board meals on short haul flights (The New York Times, 2001), Lufthansa introduced an 'Economy Light' booking class that does not include check-in luggage (Lufthansa, 2015) and later even imposed a fee of 16€ on all tickets purchased through third party agents (FAZ, 2015). During the privatization of Portugal's national carrier, TAP, aircrafts received a new seating layout and new fare tariffs were introduced (Jornal de Negócios, 2016). In fact, Barbot (2004) finds statistical evidence that major airlines in Europe, Brazil and the USA have lowered their fare prices in response to the entry of LCCs.

Prior to implementing matching strategies, incumbent airlines created subsidiaries, targeting the price sensitive customer. According to Graham and Vowles (2006), there are three reasons for the legacy carrier to engage in such an undertaking: First, as a mean of network expansion, following a separation strategy. Second as a *"pre-emptive strike at LCCs"* to deter market entry, or third, as a direct response to the LCC competition on the FSC's hubs. The low-cost subsidiary approach can be classified as an attempted *"fighter brand"* (Berman, 2015). The rationale is not only to compete with budget carriers but also to enhance corporate value (Graf, 2005). Either the profitability is increased or growth enforced. Section 3.1 will address examples of airlines within airlines in more detail. Subsequently, key issues will be identified to conclude the most viable strategy for successfully creating budget airlines.

3.1 Airlines within Airlines – Doomed to Fail?

The literature gives a vast number of examples where early attempts at creating budget subsidiaries failed, especially the USA presented prominent examples with Continental Lite or United Shuttle in 1994 (Boroh, 2016; Graf, 2005). Graf (2005) identifies two incompatibilities in simultaneously operating two different business models within the same grouping. Firstly, he argues that the respective configurations are opposite and can thus not work in harmony. The nature of a low-cost

versus a full-service operation cannot simply be combined. Second, the low-cost business model is not correctly enforced on the subsidiary. Some key features of the original low-cost ideal, as described in section 2.1, do not apply or resemble a compromise between full-service and budget carrier.

Graf (2005) further elaborates that a major issue consists of cannibalization effects. On the one hand, the product offerings are very similar, especially considering the newly introduced limited booking classes of incumbent airlines, whereas, on the other hand the targeted customer segments are identical. This, for instance, is a mistake committed by the parents of *Go* and *Buzz*[17] in the 1990's. Both LCCs offered premium services and flew competing routes that not only targeted the price sensitive traveler but also the more affluent business person (Graf, 2005). Inherently also causing confusion between passengers and employees, as those cannot clearly distinguish the poorly communicated differences. Closely connected to this issue is the destruction of brand value. The caused confusion can lead to customers perceiving a lower quality product offered by the legacy airline, or on the contrary, pose too high expectations on the low-cost arm, all in all generating dissatisfaction (Graf, 2005; Gillen and Gados, 2008).

The level of independence the subsidiary experiences is another critical subject. The more independence a unit has, the more freely decisions can be taken to enhance the unit's development. On the one hand, the parent company wants to have control over its subsidiary to ensure compliance within the group, on the other hand it wants to create a separate entity on the operational level (Graf, 2005). Graf (2005) finds that the level of independence across subsidiaries varies to quite some extent but investment decisions are yet centralized and deployed by the parent. Network planning is semi-liberal and flown routes are not thoroughly thought out. This ultimately leads to

[17] *Go* and *Buzz* were low-cost subsidiaries from British Airways and KLM, respectively that were sold to EasyJet and Ryanair

restrictions within the subsidiary and impedes its growth. At the same time the parent experiences lower growth rates because more resources are mobilized to develop the new subsidiary and innovation in the core business is left behind. Gillen and Gados (2008) argue that a low autonomy in both financial and operative planning impeded US budget subsidiaries to lower cost levels to the *"true"* LCC competition standards. Kittilaksanawong and Perrin (2016), as well, name All Nippon Airways (ANA) a conservative parent company that stemmed Vanilla Air's expansion as a LCC in the Japanese market[18].

Third, the organizational form of the group becomes more complex and thus less flexible. The management experiences difficulties in allocating resources and coordinating the two contradictory business models. Graf (2005) claims, the *"corporate strategy becomes unclear"* and the airline group loses focus on its actual operations. Furthermore, the processes within the grouping become less efficient, as corporate functions will be doubled and employees experience a decreased satisfaction, ultimately leading to higher costs and uncertainty. However, Gillen and Gados (2008) highlight that low-cost employment policies and practices must be enforced to stand a solid competitive position. In fact, many subsidiaries failed as wage differences and working conditions were not adapted significantly, partly because of strong unions (Graham and Vowles, 2006) and partly to avoid internal resentment.

Overall, the industry has not shown many examples of successful low-cost subsidiaries. Although Go generated profits for British Airways when it exited its operations (Graf, 2005), Boroh (2016) indicates that Go was eroding too much of the parent's business and had to be sold off. Gillen and Gados (2008) suggest that Go was *"too successful for British Airways"* as passengers experienced the service of a legacy airline for a fraction of the price. This is a clear indication that

[18] Vanilla Air was formally a joint venture between AirAsia and ANA, named AirAsia Japan but was fully acquired by ANA after differing opinions among the two partners. It must also be noted that the highly regulated Japanese Aviation market makes certain low-cost aspects hard to implement (Kittilaksanawong and Perrin, 2016).

the model was not conceptualized to minimize cannibalization. Furthermore, Go, advertised its close connection to British Airways, adding to brand dilution on both ends.

Continental Lite lasted for roughly two years after encountering losses of over US$120 million. Gillen and Gados (2008) opine that Continental Airlines did not integrate the budget subsidiary's point-to-point flight schedule into its system. Allegedly, 70% of Continental Lite's losses are attributed to unprofitable linear trips. Moreover, Continental Lite operated point-to-point and hub-and-spoke operations simultaneously, while incorporating various FSC features such as checked baggage, multiple aircraft types and a high dependency on travel agents to retail tickets (Graham and Vowles, 2006). This example undoubtedly shows the tremendous need for a clear conceptualization of the network and separation of the two business models within one grouping. Furthermore, Gillen and Gados (2008) find that US legacy carriers have done little to close the cost and productivity gap to the low-cost competition, despite some US carriers operating own LCC subsidiaries.

A further North American attempt to compete with the low-cost threat was the introduction of Tango by Air Canada. As the attempt had failed, the low-cost airline was re-integrated into the mainline operations in 2003. To carry on the low-cost measure, a new fare class was introduced, laying the ground for matching strategies, as mentioned further above. In Europe, SAS also abandoned its low-cost subsidiary, Snowflake, and instead downgraded it to a new fare class (Graham and Vowles, 2006).

As such, the failure of budget airlines within existing groupings can be concluded with a comment made about Air Berlin: Its unprofitability is explained by being a low-cost carrier without low-cost structures (Zeit, 2016; Wirtschaftswoche, 2009). Important to note is that Air Berlin is a separate entity and not a daughter company. It is thus even more important for latter to correctly implement the low-cost model to not jeopardize the mainline business. Section 3.2 will elaborate

critical success factors and suggest control mechanisms to ensure a better compatibility of both models within the same grouping.

On a note, Gillen and Gados (2008) as well as Graf (2005) point out that the US laws on labor impose several restrictions on companies within companies, such that low-cost subsidiaries in that geographical market are much more likely to fail. In the European Union, for example, subsidiaries can set up entities that do not have to comply with the parent's labor laws[19]. Furthermore, the uncertainties arising after 9/11 and an overall recession of the American aviation industry forced airlines to shut down side operations as *"emergency measures"* to contain the decline in air traffic (Graham and Vowles, 2006).

3.2 Feasibility of The Carrier Within Carrier Model

In order to create a sustainable airline within airline model[20], companies must fine-tune multiple mechanisms. Three major categories are identified and further elaborated in this section.

First, if an airline decides to adopt a low-cost model, it must assure the correct application of it (Graf, 2005). Usually, the incumbent airline engages in offering premium products and must then operate in the exact opposite manner. Klophaus, Conrady and Fichert (2012) show that successful LCCs resemble closely the original low-cost model, coined by Southwest in the 1970's. Cost leadership is the key strategy LCCs follow in contrast to FSCs. This is a critical fact network carriers must realize because low cost principles are rather not compatible with premium amenities, such as on-board entertainment and meals, expensive labor force or high landing fees at primary airports (Graf, 2005). As a result, the cost structure must be in-line with the low-cost competition, especially regarding operational expenses and costs per available seat kilometer.

[19] See Eurowings in Austria and Lufthansa in Germany (Welt, 2015)
[20] Singapore Airlines, for example, operates four separate airlines under the group, see Appendix 7 for a brief explanation

Second, the low-cost unit must have a high degree of autonomy (Graf, 2005). Only this can ensure growth incentives. A high level of autonomy, though, can only be granted if there is a clear separation between the two airlines. In other words, the operations must be independent of each other to avoid cannibalization effects. This is best achieved by clearly segmenting the customer segments and geographical markets (Graf, 2005). Graham and Vowles (2006) suggest the LCC subsidiary to address leisure and tourism routes to protect the mainline operation's yields.

Singapore Airlines, for example, operates a successful multi-brand strategy, *"[ensuring] no dilution of focus"*, as Deshpande and Lau (2016) explain. Each entity has an independent management team on the operational level, so that cannibalization effects are minimized. Even though, the company has some competing routes within its airlines, it has also segregated the geographical reach. Scoot, for instance, flies exclusive routes that cannot be served lucratively by the full-service operator (Deshpande and Lau, 2016). Furthermore, Qantas appears to be the only company worldwide, able to successfully combine a premium airline with a low-cost carrier for a series of years. Jetstar targets the competitive economy customer segment, whereas Qantas focusses on the business class passengers (Gillen and Gados, 2008). Graham and Vowles (2006) elaborate that Qantas has *"ringfenced"* its carrier within carrier operations to minimize interlining. With 'Jetstar Asia', Qantas, is even targeting a completely different market that is not focus of the flagship airline. Based in Singapore it profits from the rapidly growing Southeast Asian market (segmentation in geographical markets) (Graham and Vowles, 2006).

Third, and closely connected to a high degree of autonomy are branding efforts and corporate communication (Graf 2005). The low-cost unit must operate under a different brand to not endanger the parent's reputation. The low-cost brand must convey a separate corporate identity and eliminate ambiguities that might arise when considering both the LCC and FSC. Key is to diminish confusion among the customers (Graf, 2005), thus the similarities must be minimized and the

differences clearly highlighted. Gillen and Gados (2008) commend Lufthansa and Qantas on being disciplined to not create brand confusion. Just so, Singapore Airlines made great efforts to separately brand its low-cost entity, Scoot, long before the initial ticket sale. The group decided on a young and fresh appearance, contrasting to the parent's devotion to classiness and service excellence (Financial Times, 2014).

It must be noted that synergies can and should be drawn from back-office operations that are not visible to passengers, these typically include accounting and controlling, purchasing and employee training tasks (Graf, 2005). Such an approach can be beneficial as it allows the pooling of costs, ultimately also lowering the parent's operational costs.

Viewing the first issue from a different perspective, it seems as if a *"premium low-cost carrier",* as Graf (2005) describes, now becomes more viable. Different consumer preferences and the changed perception of affordable flying options make hybrid models more popular, such as described in section 2.3. This paper wants to argue that the probability of successful hybrid models today is higher than in former times, as the market was not demanding such a product then. This can be justified by the fact that British Airways is now striving for a second entry into the LCC market with 'Level' (Financial Times, 2017a), whereas Lufthansa is completely repositioning its Eurowings subsidiary. Eurowings will be operating all Lufthansa short-haul flights that do not serve as feeders for international long-haul routes (Lufthansa, 2016). Nonetheless, an appropriate low-cost structure that accounts for premium amenities must be established to meet the unit costs.

4. Assessing the Best Strategy

The previous sections have assessed low-cost carriers and explained efforts of incumbent airlines to compete in the new market. Section 3.2 highlighted crucial aspects to ensure a viable carrier within carrier model. It is now to identify the best approach. To do so, a comparative assessment

with qualitative arguments will be conducted. After concluding the findings of this paper, limitations and suggestions for further research will be mentioned.

4.1 Subsidiary or From Scratch?

Arguments in favor of creating a subsidiary consist mainly of financial backup (Graf, 2005) and know-how of the industry, where experienced managers are usually in charge of setting up the new company. Furthermore, a low-cost subsidiary can help cut costs – especially the labor force – to compete with other LCCs (Graham and Vowles, 2006). Graf (2005) mentions that synergies in back-office operations can lead to higher efficiency in both, the parent and the subsidiary. Deshpande and Lau (2016) emphasize that routes unattractive for FSCs can be operated by low-cost airlines and thus create an extra feeder for the parent's long-haul flights (see Singapore Airlines and Scoot). A separate low-cost carrier can also pose a better product for leisure or hub-bypass routes, allowing for a better market segmentation by the FSC (Graham and Vowles, 2006).

A not sufficiently independent and maybe too corporate environment poses the main aspect against a low-cost subsidiary. Especially regarding cost structures, the two business models differ to a great extent, and an incautious separation implicates the immediate failure of the subsidiary. The problem arises if too many structures from the parent are adopted, which are simply not suitable for a budget airline (Graham and Vowles, 2006; Gillen and Gados, 2008). Overall, this paper wants to raise the concern that an airline within airline model might never reach the competitiveness level a detached and different company would (i.e. competition built from scratch). It appears that the ties to the parent company are too strong and, thus, there will never be enough room for the subsidiary to grow excessively and maybe directly compete with the parent, unless there is a liberal mentality setting in the management of both entities. Graf (2005) highlights that a subsidiary strategy might not be the best option striving for a long-term sustainability. Taking

the inherent cannibalization and incompatibilities into consideration, a low-cost subsidiary might generate more negative effects than benefits, as seen in various previous attempts (Gillen and Gados, 2008). Yet, a Qantas executive reasons it is better to *"rather cannibalize itself than be cannibalized"* (Airline Business, 2004).

As Gillen and Gados (2008) point out, it is crucial to understand that LCCs were originally not initiated to compete with FSCs. They were merely established to attract customers that would otherwise not have flown. Thus, a new market was created and only later the potential of competition was realized. Having said that, building from scratch brings various advantages regarding costs with it (Graf, 2005). First, managers will handle monetary issues more responsibly as the risk of failure without backup is much higher. Second, the independence and ability to set up a business model where employee relations are contained and the influence of unions are limited offers a huge competitive advantage, FSCs do not possess (Gillen and Gados, 2008). Furthermore, the business model can be designed simple and without many 'frills'. Legacy airlines usually operate many co-operations ranging from partner contracts to codeshare agreements. Gillen and Gados (2008) claim that if there is no need for such collaborations, a 'from scratch' approach is the better alternative.

4.2 Conclusion

Published research on the subject does not support evidence of a clearly dominant strategy. Both approaches have shown success and failure, whereas latter is more concentrated in airline within airline models. Building from scratch, on the one hand, has the highest chances of success if the company is a pioneer, as seen with Southwest, Ryanair, EasyJet and AirAsia. On the other hand, if a market is too saturated and an incumbent airline has already taken cost-cutting measures, market entry might be difficult.

Nevertheless, the assessed cases of low-cost carriers from scratch[21] seem more convincing and sustainable than dual strategies. Thus, this paper wants to conclude that *true low-cost airlines are best built from scratch,* as they can avoid common pitfalls encountered in many legacy airlines (i.e. high labor costs, inhomogeneous fleets or complex operating networks). This statement is strengthened by the fact that 59% of LCC attempts that failed are associated with existing airlines (Budd et al., 2014). In fact, as a stand-alone, the whole business model can be constructed according to common low-cost principles and depending on demand even adjusted. Budd et al. (2014) mention that FSCs experience difficulties in integrating the two models or simply cannot handle a successful subsidiary (see Go and British Airways). Furthermore, the market today seems to be ready for *"premium low-cost carriers"* such as JetBlue in the USA or Azul Linhas Aereas in Brazil (Airline Business, 2004), which gives a new company more space for individualization.

A common criticality for either strategy, though, is *execution*. A clear strategy must be dictated for the project to succeed. Thus, if an incumbent airline is to set up a low-cost subsidiary it shall properly assess the segmentation and enforce low-cost structures. Equally, a new company must thoroughly plan and evaluate the feasibility of its low-cost undertaking.

Even though this paper identifies a 'building from scratch' strategy as the best approach to creating a budget carrier, it is not said that the carrier within carrier model cannot work. Research, such as Graham and Vowles (2006) has revealed that an important factor for the success of such, are of geographical relevance. The authors state that in Europe distance are not as far, and thus people are willing to drive longer distances to reach airports where they can take advantages of LCC services. Qantas and Singapore Airlines were successful with their model, as their domestic markets are naturally limited and thus different regions were targeted.

[21] Note that completely transformed airlines such as Ryanair, AirAsia or Aer Lingus count into this term as well

Moreover, as mentioned in chapter 4.1, a low-cost subsidiary might not be the best approach for legacy carriers (Gillen and Gados, 2008; Graf, 2005). Gillen and Gados (2008) suggest that in some cases a complete transformation might be more suitable, such as Aer Lingus – from a FSC to a LCC. *"Stretching the brand"*, as Graham and Vowles (2006) describe, might also be a more lucrative option for legacy carriers fancying the entry into the low-cost segment. McKinsey (2017b) follows the same argumentation logic, by suggesting a *"structural reform"* first, before attempting an in-house LCC. The consultancy even argues that the chances of success with implementing LCC features in the mainline brand are much higher, naming American Airlines and Malaysia Airlines as examples (see Appendix 8 for identified cost reduction possibilities for FSCs).

In fact, today's economy classes from many carriers are at low-cost standards with additional baggage fees or exclusive meals. Putting it in AirAsia CEO's words, legacy carriers already *"have a low-cost carrier […] at the back of their planes"* (Airline Business, 2004). If operating costs can then be cut, there is not really a need to form a separate low-cost facility. Air Canada apparently succeeded in cutting employment costs by making serious threats of bankruptcy to their unions until significant wage cuts were accepted (Graham and Vowles, 2006). Furthermore, the aviation industry has given plenty of experiments for incumbent airlines to learn from.

4.3 Limitations and Suggestions for Further Research

Given the imposed constraints of this work, the assessed sample in size and depth had to be adapted. The mentioned examples, though, deliver a comprehensive view of the situation. An extension of the study might reveal additional features that contribute to the main findings of this paper.

The work is mostly based on qualitative aspects, whereas quantitative data is used to support statements about market size and growth. Following a semi-quantitative approach in form of a scorecard that weighs different qualitative aspects according to their importance can possibly

strengthen the significance of the results. Alamdari and Fagan (2005) have followed a similar approach when assessing the adherence of present budget carriers to the original low-cost model.

A further vital source are market experts. Conducting interviews with responsible people in airlines or market experts from consultancies or universities pose a great source of knowledge, especially in determining future trends and details of airline within airline business models. Graf (2005) obtained data through interviews – a similar study over ten years later will result in interesting findings that might shed another light to the research question. Especially considering that the landscape has changed to quite some extent.

5. The Future of The Aviation Industry

Discussing the future of the aviation industry is a topic of its own but broaching this subject is beneficial to obtain a more comprehensive picture of the assessed issue. Firstly, the tremendous need for cost-cutting has already been identified by major airlines. McKinsey (2016) reports that just in Europe, Aer Lingus, TAP Portugal and Iberia could reduce unit costs by 46% in 4 years, 17% in 8 years and 16% in 3 years, respectively. This indicates that the potential is there and legacy carriers must find a way of pursuing so.

Second and connected to cost-cutting, is the mentioned business model conversion of LCCs and FSCs on short haul routes (McKinsey, 2016; Klophaus, Conrady and Fichert, 2012). A two-class cabin is still viable, where the economy fare class essentially becomes a low-cost product (see Lufthansa, 2015 and TAP, 2016). Budget carriers have moved to a hybrid form as well, where more business products are offered (see Ryanair, 2017b).

Third, consolidation has been an ongoing trend. Europe for now is yet the least consolidated market, where the top three carriers only have a share of 31% as compared to 75% in the USA or 67% in Latin America in 2014. To compare, the figures in 2002 were 21% for Europe, 67% for the

USA and 34% for Latin America (McKinsey, 2016). McKinsey (2016) believes that consolidation will continue and some airlines might prepare their sale with favorable terms. More flexible international agreements that change conditions of foreign ownership can accelerate consolidation rapidly (Gillen and Gados, 2008). Exemplary is Etihad Airways, with its non-controlling stakes in Alitalia or Air Berlin (McKinsey, 2016). Governments are to realize a higher degree of openness, whereby Alitalia's immense financial troubles might lead the way for a complete acquisition or liquidation (ARD, 2017).

McKinsey (2016) idealizes the dynamic of long-haul vs. short-haul, assuming the short-haul product converges to a hybrid model, as explained above. Ultra-long range planes, such as the Airbus A350-900ULR or the Boeing 777-9X, can fly up to 19 hours (Airbus, 2015) and therefore bypass hubs, facilitating the way towards a more point-to-point aligned network structure. Singapore Airlines, for instance is re-instating its Singapore – New York route and Qantas will be directly flying from Australia to London (Bloomberg, 2017). Incumbent long-haul carriers that previously operated connecting hubs, such as Emirates, Qatar or Lufthansa, might face additional challenges. LCCs might thereby find attractive flight segments to enter the long-haul market.

Other plane manufactures such as Chinese Comac or Brazilian Embraer are currently working on competing products to Boeing 737 or Airbus A320 families (Financial Times, 2017b; Embraer, 2017). Their planes might be a cheaper alternative to the existing options and thus stimulate market entry or fleet adaptation (BBC, 2017b). Embraer even advocates the E195-E2 as the *"most efficient next-generation commercial jet in the world"* (Embraer, 2017).

Budd et al. (2014) argue that the European market is saturated and growth and market entry will rather be seen in other geographies such as Africa, Middle East or Asia. Their air transportation spaces are in the initial phases of deregulation. Nonetheless, this presents a great opportunity for existing airlines to expand and take on new ventures.

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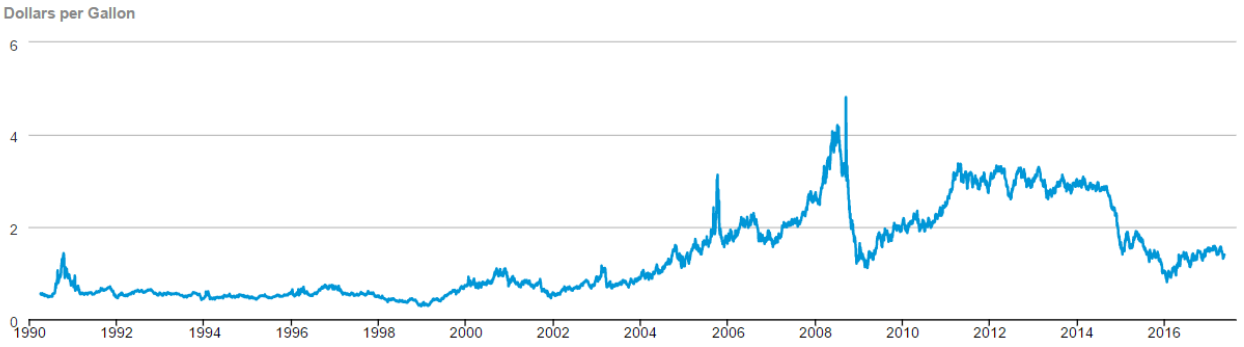
Appendix

Appendix 1: U.S. Gulf Coast Kerosene-Type Jet Fuel Spot Price FOB in dollars per gallon



(EIA, 2017)

Appendix 2: List of assessed Airlines and low-cost subsidiaries

Parent Airline	Low-Cost Subsidiary	Year	Country
Air Canada	Tango	2001-2003	Canada
All Nippon Airways	Vanilla Air	2013-current	Japan
British Airways	Go[1]	1995-2001	United Kingdom
British Airways	Level	2017-current	United Kingdom
Continental Airlines	Continental Lite	1993-1995	USA
KLM Royal Dutch	Transavia[2]	1965-current	Netherlands
KLM Royal Dutch	Buzz	1999-2003	Netherlands/ United Kingdom
Lufthansa	Eurowings[3]	1993-current	Germany/Austria
Qantas	Jetstar	2003-current	Australia
Qantas	Jetstar Asia	2004-current	Singapore
SAS	Snowflake	2003-2004	Denmark/Sweden/Norway
Singapore Airlines	Tigerair[4]	2004-current	Singapore
Singapore Airlines	Scoot[4]	2011-current	Singapore
Thai Airways	Nok Air	2004-current	Thailand
United Airlines	Shuttle	1994-2001	USA

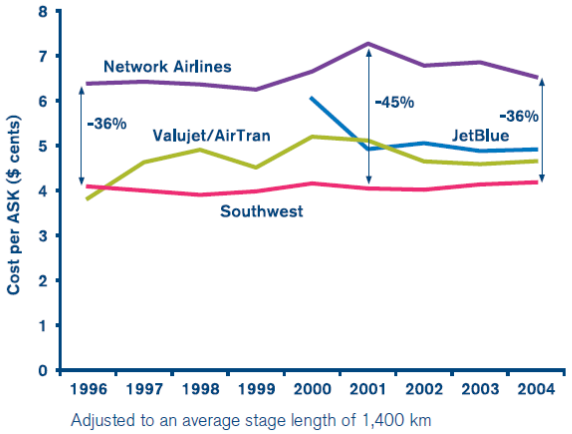
[1] sold to EasyJet in 2002; [2] fully taken over by KLM in 2004; [3] fully taken over by Lufthansa in 2011; [4] merged into one company 'Scoot' in 2016

Other discussed airlines include:

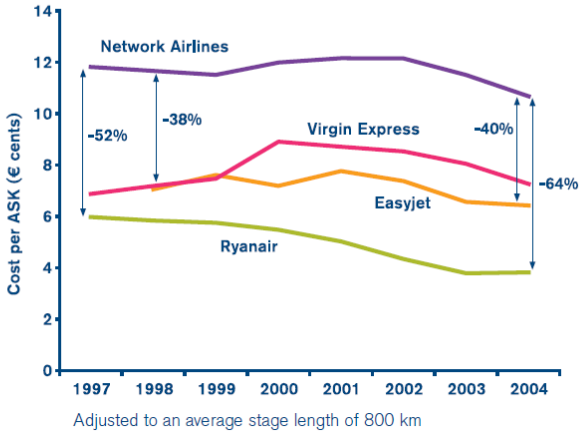
AirAsia, Air Berlin, Aer Lingus, Alitalia, American Airlines, Azul Linhas Aereas, EasyJet, Emirates, Etihad Airways, JetBlue, Malaysia Airlines, Malindo Air, Norwegian Airshuttle, Qatar Airways, Ryanair, Southwest, Spirit Airlines, TAP Portugal, VietJet

Appendix 3: Comparison of unit costs / available seat kilometer

1.1: Adjusted Cost per ASK for US airlines, 1996 – 2004[5]



1.2: Adjusted Cost per ASK for European airlines, 1997 – 2004



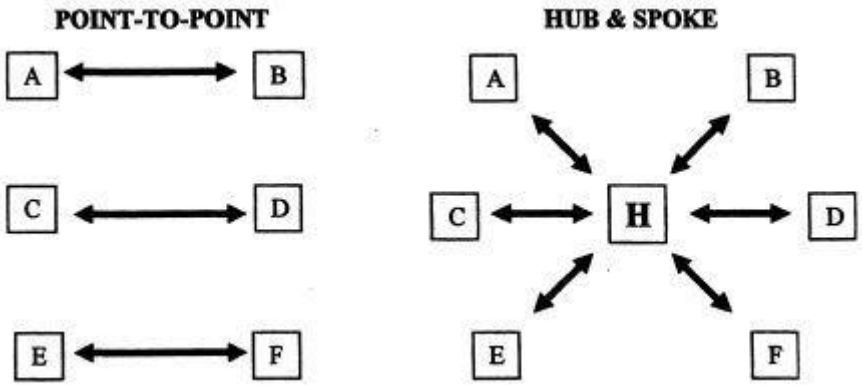
Due to the age of the study, the graphs are not explicitly itemized in the paper but give a hint as to the emerging cost gap (IATA, 2006, pp.6). More recent figures and taken actions imply a closer gap between LCCs and FSCs. Singapore Airlines (SIA), for instance, is considered one of the most profitable FSCs that operate with relatively low unit costs. SIA's cost per available seat kilometer are 8.5 cents in 2015 (Deshpande and Lau, 2016).

The following graph illustrates unit costs per available seat kilometer (ASK) for selected airlines:

Airline	Type	Cost/ASK in USD	Year
Singapore Airlines[1]	Full-Service	8.5 cents	2015/2016
Silk Air[1]	Full-Service	9.0 cents	2015/2016
Tigerair[1]	Low-Cost	5.8 cents	2015/2016
Scoot[1]	Low-Cost	4.7 cents	2015/2016
Lufthansa[2]	Full-Service	14.6 cents	2003/2004
British Airways[2]	Full-Service	12.5 cents	2003/2004
EasyJet[2]	Low-Cost	6.9 cents	2003/2004
Ryanair[2]	Low-Cost	4.8 cents	2003/2004

[1] Deshpande and Lau, 2016 , [2] Heracleous and Wirtz, 2009

Appendix 4: Point-to-Point vs. Hub-and-Spoke Networks



Point-to-Point:
- Many decentralized routes
- Used by LCC

Hub-and-Spoke:
- Centralized transportation with simplified network of routes
- Traditionally used by FSC

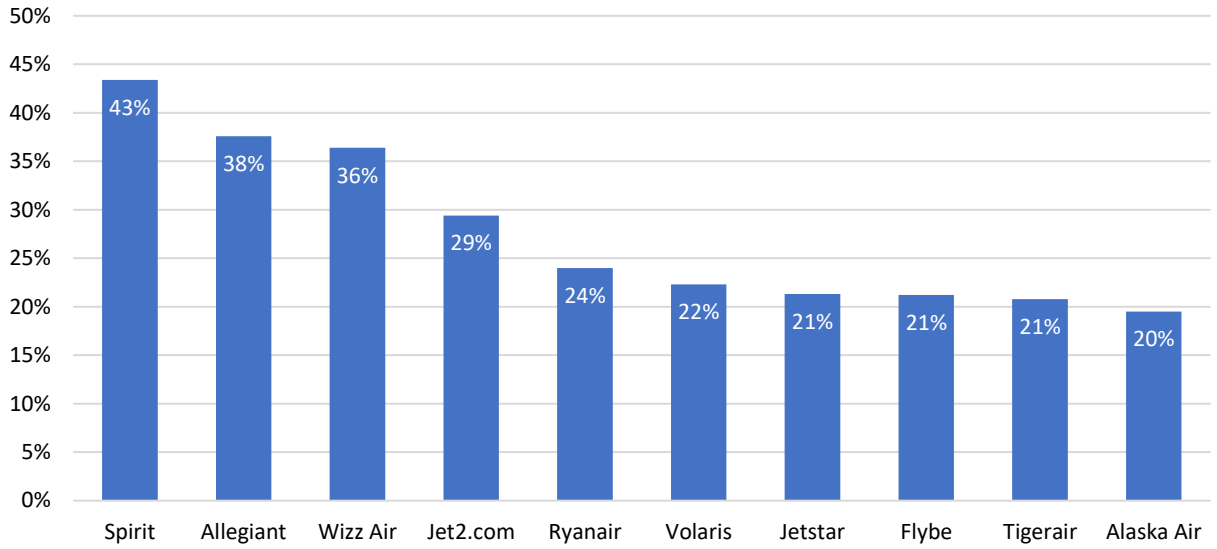
Source:
Cook, G.N. and Goodwin, J. (2008). 'Airline Networks: A Comparison of Hub-and-Spoke and Point-to-Point Systems Airline Networks: A Comparison of Hub-and-Spoke and Point-to-Point Systems.' Journal of Aviation/Aerospace Education & Research, 17(2)

Appendix 5: Load Factor Overview 2015

		Actual Load Factor	**Break Even Load Factor**
Full Service Carrier	Domestic	86.9%	73%
	International	80.8%	68.7%
Low Cost Carrier	Domestic	85.3%	86.6%
	International	82.1%	62.3%

Figures are for US carriers and are obtained from A.T. Kearney (2016)

Appendix 6: Ancillary Revenues as Share of Overall Revenue



Airlines with the highest ancillary revenue as a share of total revenue in 2015 (Statista, 2016)

Appendix 7: Singapore Airlines (SIA) Portfolio

SIA follows a portfolio strategy serving short-, medium and long-haul flights in full-service and budget segments. The group consists of four brands, Singapore Airlines, Silk Air, Tiger Air and Scoot. *Silk Air* serves the short haul segment usually flying to secondary airports where wide-body aircraft would not be filled enough. Some routes are shared with SIA, providing additional frequency and once a route demand grows sufficiently, SIA would take over, substituting Silk Air's narrow-body aircraft. *Tiger Air* is SIA's short-haul low-cost subsidiary that initially started as an independent entity listed in the Singapore Stock Exchange but was delisted in May 2016 as SIA took full ownership to fully integrate it in the group. *Scoot* typically serves flights 5 to 9 hours out of Singapore to Japan, Australia or China. Many routes were simply not viable for SIA but beyond of the short-haul range of Tiger Air. The rationale was to stimulate new demand and gain market share from competitors (Deshpande and Lau, 2016).

Appendix 8: Structural and product-related cost reductions of FSCs

	Category	Share of total FSC[1] expenses[2] Percent	Savings Potential Percent	Rationale
Structural costs	Fuel	27	0	No additional leverage beyond mainline contracts
	Wages	25	25–45	Lower pay scales, additional flexibility and productivity
	Aircraft ownership (depreciation, amortization, rentals)	13	0	No additional leverage beyond mainline contracts
	General and administrative, overhead, other	8	0–20	Leaner overhead, simpler business
	Maintenance, repair, and overhaul	7	0–15	Simpler cabin product, new line-maintenance contracts
	Subtotal, structural costs	**79**	6–14	Total cost savings based on structural costs
Product-related costs	Airport, navigation, and handling	15	10–30	Simpler handling, low-cost terminal at airport
	Sales and distribution	4	0–50	Shift toward more-direct channels
	Onboard service	2	25–75	More-basic meal and drink service, elimination of blankets and pillows
	Subtotal, product-related costs	**21**	7–23	~2–8% total cost savings based on shown product factors, additional ~5–15% for seat density

(McKinsey, 2017b)