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Strategic Alliances as a form of Coopetition and its impact on the Performance of Airlines

A Case Study analysis of Lufthansa, Finnair, and Alitalia

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ABSTRACT:

The research on coopetition (i.e., simultaneous cooperation and competition) has increased significantly over the last two decades. Noteworthy findings have been made, including the benefits that a firm gains from such a relationship. However, only limited studies centralize the impact on performance through coopetition. Existing studies on coopetition and the effect on performance show mixed outcomes, and researchers claim that the results depend on the firm's industry. Thus, it is relevant to analyze the impact of coopetition on market performance. The following study will examine the aforementioned research gap by looking into the airline industry where coopetition relationship has been practiced in the form of strategic alliances for more than 20 years. The empirical analysis was based on a multiple case study of three airlines, from three different countries, operating in three different alliances. That allowed to investigate similarities and differences among the diverse sized companies in terms of the performance impact. Primary data were collected through semi-structured interviews. Additionally, annual reports were used as secondary data and to enhance credibility through triangulation. Findings show that in general, coopetition through strategic alliances contributes positively to airlines. Nevertheless, the degree of how much airlines benefit from alliances depends on the position in the network and the airline's size. Airlines of small size gain most from the relationship, and airlines with a central position in the alliance give more to the strategic alliances than they get out. The findings reveal that airlines of large size gain less from alliances and increasingly form other types of partnerships like joint ventures that create a more balanced give and gain relationship. Notwithstanding, the COVID epidemic will have a crucial impact on airlines and increase the importance of strategic alliances and partnerships further.

KEYWORDS: coopetition, market performance, airline industry, strategic alliances

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1. Introduction

This chapter has the purpose of introducing the topic of the study. First, the background of the master's thesis will be presented. Second, the research question and its objectives will be introduced. This section also identifies the research gap. Finally, the delimitations, the main concepts, and the study's overall outline, will be displayed.

1.1. Background of the study

In today's business world, changes occur faster, competition has become more intense, and customers are more demanding and have endless opportunities. Thus, firms continuously need to analyze the market and adapt to be profitable and attract customers. To survive and stay competitive, firms not only compete with competitors anymore but have started to form cooperating relationships with them. This phenomenon of simultaneous cooperation and competition with competitors is termed coopetition. Cooperation with competitors has especially received much attention as a subject of investigation during the last two decades as the form of business relationship has become a vital factor for firms. Researchers discovered various benefits from cooperating with competitors, including access to knowledge and resources, cost-sharing, and uncertainty reduction. Even though it also leads to multiple challenges, coopetition allows firms to cooperate to create a bigger business pie while competing to divide it (Brandenburger & Nalebuff, 1996).

Researchers have used existing theories to describe the concept of coopetition. Brandenburger and Nalebuff (1996) explained the framework through the game theory. Bengtsson and Kock (2000) use the resource-based view to elaborate on rivals' simultaneous cooperation and competition. Another theory used to explain coopetition is the network theory (Gnyawali & Madhavan, 2001). And in recent years, the resource dependence theory has been applied to illustrate the concept of coopetition (Chiambaretto & Fernandez, 2016).

Nevertheless, research on coopetition still requires examination (Dagnino, 2009; Padula & Dagnino, 2007). The broadness and relative newness of the term leads to various knowledge gaps. Also, coopetition appears in multiple forms and industries, and academics describe it in narrow or broader terms. Therefore, a consensus on the general definition of coopetition has not been reached yet (Leite, Pahlberg, & Åberg, 2018). Moreover, researchers' primary focus area has been the relationship between a seller and buyer, while the relationship between competing firms lacks research. The studies carried out have focused mainly on defining the coopetition concept and explaining its nature (Bengtsson & Kock, 2000).

A topic related to coopetition that has been investigated to some extent is the performance outcome. Researchers argue that it should lead to firms' superior performance (Bengtsson & Kock, 2000; Brandenburger & Nalebuff, 1996; Gnyawali & Madhavan, 2001). Nevertheless, studies on performance and the impact through coopetition have shown mixed outcomes. Ritala (2012, p. 308) suggests that the success of coopetition depends on the industry and economy a firm is embedded in, as well as firm-specific factors. The retained results of studies analyzing the effect on market performance are contradictory due to diverse outcomes and still lack further research.

An industry where coopetition has been practiced for several decades is the aviation industry. The airline industry is dynamic, continuously changing, and highly uncertain. A form of horizontal coopetition in the airline industry is strategic alliances representing a network of several airlines. This form of partnership has emerged end of the 1990s', after the airline industry's deregulation. Moreover, it has become more important for full-service carriers to cooperate with competitors since the low-cost business model grew in size, gained considerable market share, and has become serious competition for some full-service carriers.

The findings of existing studies on whether or not strategic alliances contribute to an airline's performance are mixed (Kuzminykh & Zufan, 2012). While Min and Joo (2016) claim that alliances do not lead to performance changes, other benefits emerging from the coopetition are found, including cost-saving and economies of scale. However, the studies focusing on market performance through coopetition in the airline industry are limited. Thus, it is relevant to analyze how coopetition in the form of strategic alliances impacts the market performance of airlines.

The aspects mentioned above of coopetition, coopetition theory, the airline industry, and strategic alliances are used as a foundation for this thesis. Given the airline industry's dynamic and uncertain environment, this master's thesis targets to investigate the impact of coopetition in the form of strategic alliances on airlines' market performance. This research aims to fill a research gap and extends the knowledge of coopetition and performance.

1.2. Research question and objectives

The research of my master's thesis will focus on analyzing the impact of coopetition in the form of strategic alliances on airlines' market performance. By using theoretical frameworks, case studies, as well as empirical research, I aim to answer the research question:

How does coopetition in the form of strategic alliances impact the market performance of airlines?

Objectives help to give the writer an overview of the different aims that will be achieved in the thesis to answer the research question at the end. Moreover, they serve a fundamental purpose for the reader. The following objectives have been set and divided into theoretical and empirical goals to answer the research question.

The objectives of the thesis can be divided into theoretical objectives:

- Review of existing literature related to coopetition including its benefits and challenges, coopetition theories, as well as performance implications
- Examine existing literature on the airline industry including its history, emergence of different business models, as well as key aspects of strategic alliances
- Development of a theoretical framework that combines existing literature on coopetition and airline industry, and gives direction in identifying the impact on market performance

And empirical objectives:

- Analysis of three airlines each operating in a different strategic alliance
- Analysis of similarities and differences between the airlines and their strategic alliance belonging
- Analyzing the impact of coopetition through strategic airline alliances on market performance

To achieve the objectives of this thesis, I collect literature about coopetition and the airline industry. Both areas of literature combined to enable the study of the impact of coopetition in the form of strategic alliances on the airlines' performance. I adopt a deductive research approach that leads the empirical analysis part, as well as the case study analysis. The choice of the thee airlines, Lufthansa, Finnair, and Alitalia, as case companies are grounded on various reasons. First, it connects the two countries the master program is received from, Italy and Finland, as well as my home country, Germany. Second, these airlines operate each in one of the three strategic alliances, Star Alliance, oneworld, and SkyTeam. Another reason is the different operating sizes that allow me to analyze the impact of coopetition on airlines from different angles regarding size and position in the alliance.

The COVID-19 pandemic has a significant impact on the airlines starting from the year 2020. The data analyzed from the three case studies in the empirical part exclude the

year 2020. However, the result and impact of the pandemic are briefly discussed in the interviews. The COVID-19 epidemic began to spread and received more attention throughout Europe, starting in February 2020. While in China, it already began earlier in the year 2020. Moreover, in the United States, the pandemic was treated as a threat a bit later than in Europe. Each country has its regulations and restrictions. But in general, the virus caused the population to stay inside, which lead to a shutdown of the economy. The airline industry especially suffered from the pandemic because airlines had to keep most of their fleet on the ground for several months.

The study differs from earlier research in various ways. This thesis's novelty is the use of three airlines as case companies, which allows a more detailed analysis. Moreover, the interviews combined with the data analysis of each airline from the past seven years allow an in-depth focus. Additionally, the topic coopetition is relatively new and, therefore, contains knowledge gaps. It has been found that coopetition would substantially impact firm performance (Le Roy & Sanou, 2014). Previous work claims that coopetition positively affects performance (Morris, Koçak, & Özer, 2007; Cho & Lee, 2019). However, some disagreements and studies suggest that coopetition would weaken companies' performance (Ritala, Hallikas, & Sissonen, 2008; Crick, 2019). The research results have shown some confusion about whether the coopetition strategy can be successful for a firm's performance. Moreover, Gudergan et al. (2012) highlight that studies investigating the performance aspect of coopetition in specific industries lack, especially the impact on performance in an alliance formation.

An industry where coopetition has been practiced for more than 25 years is the airline industry (Le Roy & Czakon, 2016). However, the industry mentioned above has not been studied intensively in connection with coopetition. While various reports analyze the industry's motives and tensions, little has been studied about airlines' market performance from coopetition. According to Ritala (2018, p. 322), market performance generally offers the potential for future research. Furthermore, the airline industry is divided into three main strategic alliances, which act as a coopetitive network, but researchers

have paid little attention to the performance impact. Thus, this study aims to increase understanding of coopetition effects on airlines' market performance interacting in strategic alliances.

1.3. Delimitations

By defining the delimitations, it will provide the reader with the scope of the study. The topic of coopetition is broad and needs to be narrowed down. By describing the delimitations, it defines the boundaries of the research. First, coopetition occurs in various industries and at different levels, which allows multifaceted research options. However, this research is limited to the performance management of firms interacting in coopetition. By doing so, the aim is to answer the research question of how *coopetition in the form of strategic alliances impacts airlines' market performance.*

The focus of the study is to analyze coopetition in the alliances, specifically in the airline industry. Despite the concentration in the airline industry, the analysis of all airlines would exceed its length. Therefore, the attention is on three airlines that operate in one of the three largest strategic airline alliances. By concentrating on Lufthansa, Finnair, and Alitalia, the study will give a thorough insight into the impact that coopetition has on airlines' performance. Furthermore, the airlines are the national carrier of three different countries, Germany, Finland, and Italy, and operate in the alliances: Star Alliance, oneworld, and SkyTeam.

During the last two decades of intense research about the concept of coopetition, different theories have been applied to explain the phenomenon of simultaneous cooperation and competition of rivals. The utilized theories are diverse and range from game theory, resource-based view, network theory, and transaction cost economics to paradox theory and resource-dependence theory, to mention just a few. Therefore, it is crucial to narrow down the literature review on the essential theories for analyzing airlines

and alliance networks concerning performance management. Thus, the resource dependence theory, resource-based view, and network theory are centralized in this study.

In this study, a qualitative data collection method is utilized. Various academics that focus on coopetition have conducted quantitative techniques to extend the state of research. However, this paper obtains its primary data by conducting semi-structured interviews with experts from each airline. Before the interviews, data from each airline was gathered and analyzed to get a first impression of the past seven business years. The analysis of the three case companies holds vital information that contributes to answering the research question. This research design allows novelty and can be of significance in future research regarding the airline industry's coopetition.

1.4. Main concepts and definitions

The utilized key concepts in this thesis are briefly defined and presented below. The choice for each definition will be further explained in this thesis. These terms include competition, cooperation, coopetition, performance, and strategic alliance.

COMPETITION – “Firm’s orientation to achieve above-normal profits and conquer a competitive advantage over other firms” (Padula & Dagnino, 2007)

COOPERATION – “Acting together, in a coordinated way at work, leisure or in social relationships, in the pursuit of shared goals, the enjoyment of the joint activity or simply furthering the relationship” (Argyle, 1991, p. 4)

COOPETITION – The simultaneous competition and cooperation between two or more rivals competing in global markets (Luo, 2007, p. 130)

PERFORMANCE – ”The level/degree of goal achievement of an organization/department” (Samsonowa, 2012, p. 25)

STRATEGIC ALLIANCE – “Two or more firms that unite to pursue a set of agreed-upon goals remain independent subsequent to the formation of the alliance” (Mockler, Dologite, & Carnevali, 1997, p. 250)

1.5. Outline of the study

The *first chapter* of this thesis has the purpose of introducing the background of the study and the main concepts and definitions. Moreover, the research question, delimitations, and the theoretical, as well as empirical objectives, are presented. Additionally, this chapter provides an overall outline of the study.

The *second chapter* gives an overview of the coopetition concept, including reviewing the existing literature about the terminology itself and its benefits and challenges. The resource-based view, resource dependence theory, and network theory are examined as a theoretical approach to coopetition research. Finally, the performance implications concerning coopetition are analyzed.

The *third chapter* contains an overview of the airline industry. The first subsection begins by examining the history of the airline industry. Afterward, a general approach to the terminology “business models” is presented before focusing on airline business models. Furthermore, strategic alliances in the airline industry are analyzed. After discussing the different parts through an extensive literature review, a theoretical framework summarizes the results.

The outline of the methodology is in the *fourth chapter*. It presents the methodological approach and clarifies the research design. Following, the chosen data collection technique is explained to analyze the impact of coopetition on airline performance. Finally, the study's trustworthiness is elaborated, consisting of credibility, transferability, dependability, and confirmability.

The *fifth chapter* presents the empirical findings of the study and the case study analysis. For the case study, three airlines – Finnair, Lufthansa, and Alitalia are presented and analyzed. First, a single case study analysis is conducted, followed by a cross-case analysis.

The *final chapter* of the study includes a summary of the findings. Moreover, it is emphasized how the study contributes to existing theories of coopetition and the airline industry. Also, managerial implications are suggestions. Finally, limitations and recommendations for the future are discussed. The thesis structure is visualized in Figure 1 below.

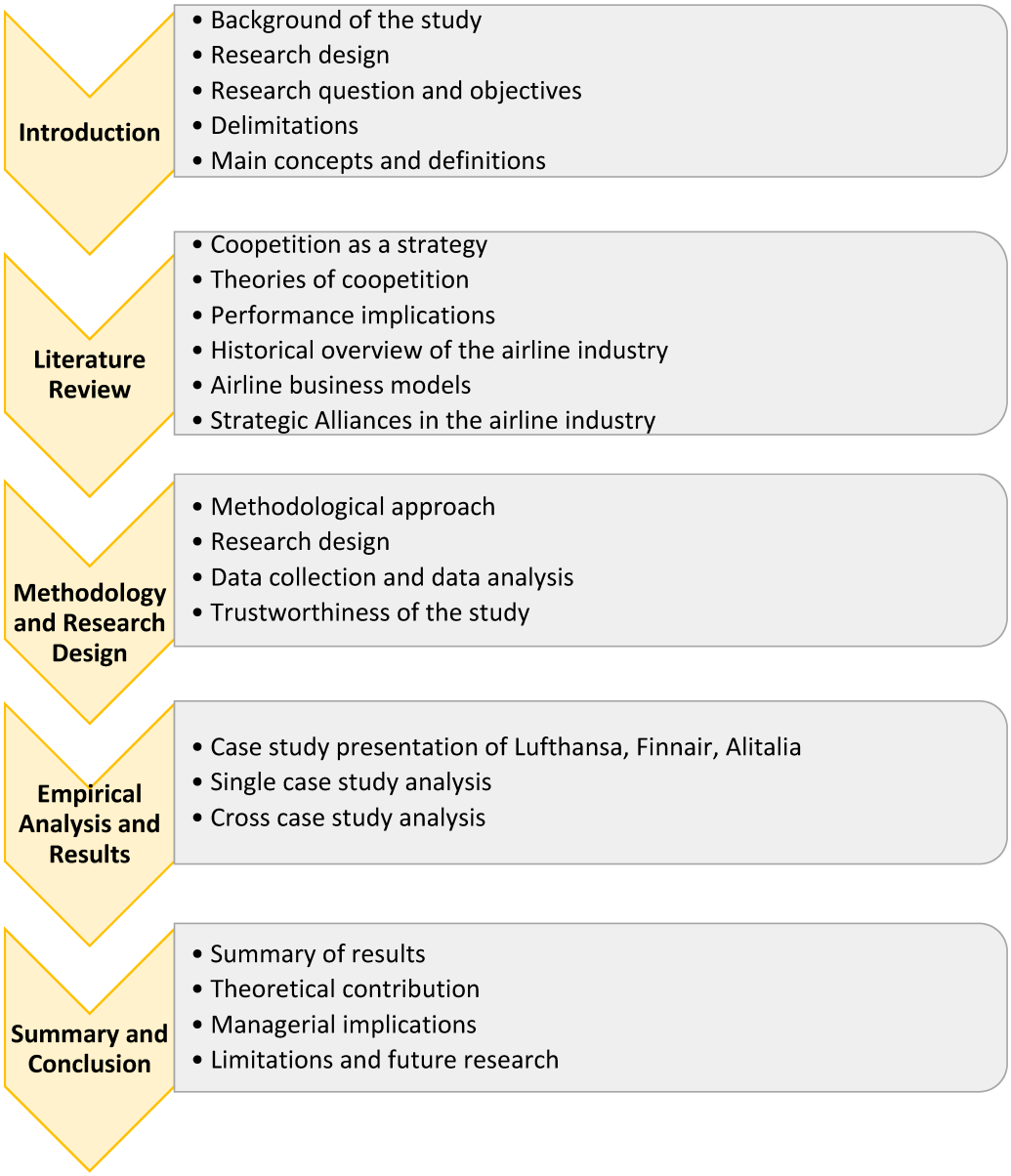

Figure 1. Structure of the Thesis

2. An Overview of the Concept of Coopetition

This chapter aims to introduce the concept of coopetition. Firstly, the term coopetition is defined along with its advantages and challenges that emerge from pursuing such a strategy. Secondly, theories that can be linked to the concept of coopetition are presented, highlighting the resource-based view, resource dependence theory, and network theory. The final part of this chapter analyzes performance implications concerning coopetition. The content presented in this chapter forms the first pillar of the theoretical background.

2.1. Coopetition as Strategy

Coopetition is a portmanteau word and combines the term cooperation and competition. The term coopetition was first used in the 1990s by the chief executive officer (CEO) of Novell to describe its firm's relationships (Fernandez, Chiambaretto, Le Roy, & Czakon, 2018, p. 1). In the late 1990s, Brandenburger and Nalebuff (1996) dedicated their seminal book on "Coo-petition". They were among the first to investigate the concept before it became a growing field of research in strategic management. Since then, academics have shown considerable interest in the topic and have studied in different directions and developed various theories (Le Roy & Czakon, 2016). Several papers indicate the multifaceted appearance of coopetition in various industries and diverse firm sizes and types. Moreover, cooperation with rivals takes place on different levels, including individual, organizational, and inter-firm/ network levels. The broad field of investigation and emergence of coopetition, leads to the fact that there is no clear definition of the terminology yet (Bengtsson, Eriksson, & Wincent, 2010; Gnyawali & Park, 2009; Gnyawali & Madhavan, 2001). Table 1 shows a collection of definitions from various researchers created at different points in time and indicates how the view of the coopetition concept has developed.

In general, coopetition is a paradox, and most scholars describe the term as simultaneous cooperation and competition of activities with rivals (Bengtsson & Kock, 2000; Kim & Parkhe, 2009; Luo, 2007). Until two decades ago, a vast amount of research has been done by focusing on cooperation and competition separately, instead of studying the concept as a whole. A definition that describes the term competition precisely is by Padula and Dagnino (2007): "Firm's orientation to achieve above-normal profits and conquer a competitive advantage over other firms". It contains the key aspects of competition: achieving high profits and an advantage compared to rival firms. While cooperation can be defined as "acting together, in a coordinated way at work, leisure or in social relationships, in the pursuit of shared goals, the enjoyment of the joint activity or simply furthering the relationship" (Argyle, 1991, p. 4). The definition includes the main aspects which are working together to achieve a common goal. Porter (1980) states in his book "competitive strategies" that all firms that provide similar products to similar customers must be seen as competitors. The literature about competition often neglects the possibility that cooperation can be a part of the relationship and is viewed "as a market imperfection" that hinders a firm from achieving a competitive advantage (Bengtsson et al., 2010, p. 195). Similarly, pure cooperation is widely studied and views competition only as a negative factor without considering positive impacts that can arise from it (Fernandez et al., 2018).

Table 1. Definitions of coopetition

Article	**Definition**
Brandenburger and Nalebuff (1996)	Business is cooperation when it comes to creating a pie and competition when it comes to dividing it up. In other words, business is war and peace
Lado, Boyd, and Hanlon (1997)	The notion of syncretic rent-seeking behavior to explain how firms can generate economic rents and achieve superior, long-run performance through simultaneous competition and cooperation
Bengtsson and Kock (2000)	The dyadic and paradoxical relationship that emerges when two firms cooperate in some activities, such as in a strategic alliance, and at the same time compete with each other in other activities

Gnyawali and Madhavan (2001)	Simultaneous cooperative and competitive behavior
Luo (2007)	The simultaneous competition and cooperation between two or more rivals competing in global markets
Padula and Dagnino (2007)	Firms interact on the basis of a partially convergent interest structure, and to explore the factors responsible for the intrusion of competitive issues (i.e., the drivers of the rise of coopetition) within a cooperative game structure
Bengtsson and Kock (2014)	A paradoxical relationship between two or more actors simultaneously involved in cooperative and competitive interactions, regardless of whether their relationship is horizontal or vertical

Preliminary research about coopetition was carried out by Brandenburger and Nalebuff (1996). They compare the concept with a business pie growing in size through cooperation, while actors simultaneously compete to get a bigger pie. They have a broader view and describe coopetition as connections in a value-net where firms are embedded in multiple relationships (Brandenburger & Nalebuff, 1995). The value-net includes the firm, customers, suppliers, competitors, and complementors (Brandenburger & Nalebuff, 1995). That implies that the relationship between members can be dyadic, triadic, or within a network, highlighting the firm's interdependence with its industry players that cooperate and compete simultaneously (Dagnino, 2009). The coopetition in a value-net is described as a win-win strategy (Brandenburger & Nalebuff, 1995).

Contrary, some researchers maintain a more narrow view of coopetition and focus on coopetition between a pair (Bengtsson & Kock, 2000; Gnyawali & Park 2011). Bengtsson and Kock (2000, p. 411) conclude that “the most complex, but also the most advantageous relationship between competitors, is “coopetition” where two competitors both compete and cooperate with each other”. Chen (2008) argues that coopetition is a contradiction and compares the term with yin and yang to emphasize the inverse relationship between cooperation and competition. In 2014, Bengtsson and Kock (2014, p. 182) reframed their coopetition definition since the market dynamics changed and evolved to be more challenging. They conclude that “coopetition is a paradoxical relationship

between two or more actors simultaneously involved in cooperative and competitive interactions, regardless of whether their relationship is horizontal or vertical" (Bengtsson & Kock, 2014, p. 182).

The growing interest in coopetition led to the creation of different research streams that analyze the concept on various levels (Bengtsson & Kock, 2014; Dorn, Schweiger, & Albers, 2016). Coopetition takes place at four different levels. First, coopetition can arise at the individual level, assuming that coopetition occurs between two individuals or groups of individuals. Secondly, coopetition can exist in internal companies and departments (Tidström, 2008). This level of coopetition describes the researcher Dagnino (2009) as a micro-level. It can also be described as the intra-organizational level and refers to relationships between employees, managers, or business units. Lin, Yuan-Hui and Yu-Fang (2010) found out that coopetition between team members can increase individual performance through a cooperative knowledge sharing attitude while also keeping a competitive mindset. However, the difficulty in balancing between the paradox of cooperation and competition often leads to tension and demand managers to act upon it, to avoid a negative impact (Bengtsson, Raza-Ullah, & Vanyushyn, 2016).

After Brandenburger and Nalebuff published their seminal book about "Co-opetition" (1996), managers and researchers started recognizing that a high number of business relations are based on the concept of cooperation with competitors. At the interfirm level, coopetition relationships can be horizontal, which refers to the cooperation between competing firms on the same activities, in the same market, and/ or the same products (Chiambaretto & Dumez, 2016). Contrary, interfirm relationships can be vertical, which refers to a supplier-retailer relationship, and coopetition occurs at different levels of the value chain (Chiambaretto & Dumez, 2016). Fourth, coopetition can take place between groups of companies or between companies operating in different sectors. This level is also known as macro-level (Dagnino, 2009). The coopetition phenomenon can appear in two forms: bilateral, a relationship between two firms, or multilateral, which refers to three or more firms such as a network or cluster (Cygler, Sroka, Solesvik,

& Debkowska, 2018). Padula and Dagnino (2007) point out that interfirm relations were only viewed separately either from the cooperation paradigm or the competition paradigm in the past. However, coopetition is a synthesis of the cooperation paradigm and the competition paradigm (Padula & Dagnino, 2007).

The mentioned definitions about coopetition highlight three central aspects. First, the simultaneous behavior of cooperation and competition, second, the number of actors involved, and third, where coopetition takes place that is often distinguished between vertical and horizontal interactions. Luo (2007) follows similar aspects as other researchers to define the concept of coopetition. However, his definition highlights the global market's occurrence and emphasizes that firms interact with major global rivals to achieve benefits through cooperation. Thus, the researcher describes coopetition as "the simultaneous competition and cooperation between two or more rivals competing in global markets" (Luo, 2007, p. 130). This definition is adopted as the central description of the term coopetition in this thesis.

A recent paper by Bengtsson and Raza-Ullah (2016) has reviewed various contributions to coopetition from the past. The researchers analyzed and summarized the findings and developed a multi-level model that gives insight into the drivers, processes, and coopetition outcomes. Drivers that push or pull firms to form coopetitive relationships can be either external, such as industry characteristics, internal, which includes vulnerability, or relational drivers, such as partner characteristics (Bengtsson & Raza-Ullah, 2016). Coopetitive relationships deal with processes that can be dynamic, challenging, and complex. The dynamic processes refer to changing interdependencies between actors and the paradox of the concepts of cooperation and competition. The complex nature of processes is about multiple and conflicting relationships with other firms in a network (Bengtsson & Raza-Ullah, 2016, p. 30). Moreover, coopetitive processes are challenging and often fail to achieve the desired outcome. Finally, coopetition can have different effects on innovation, knowledge, and relationship-related ones, and impact firm performance. A more simplified visualization of the DPO framework can be found in Figure 2.

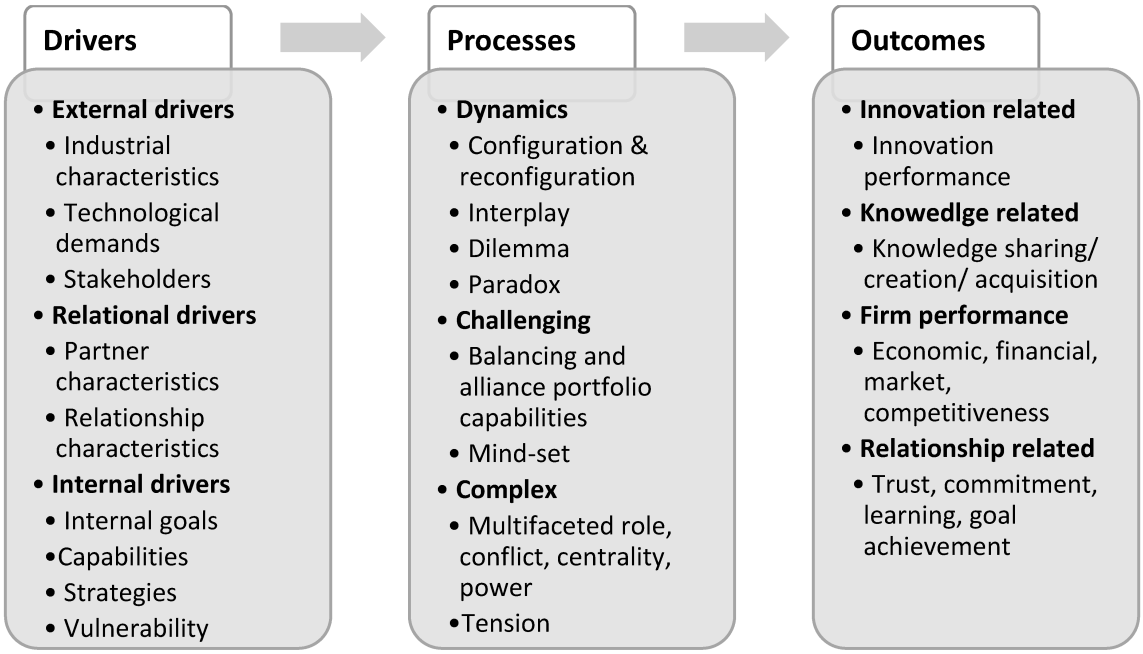

Figure 2. Multi-level model of coopetition (DPO Framework) (Bengtsson & Raza-Ullah, 2016)

2.1.1 Benefits of Coopetition

Various authors highlight the mutual benefits and advantages of coopetition on different levels and in multiple forms (Lado, Boyd, & Hanlon, 1997; Gnyawali & Park, 2009; Peng, Pike, Yang, & Roos, 2012). Especially in today's business world, coopetition is crucial (Lado et al., 1997). Already in 1996, Brandenburger and Nalebuff realized that cooperation with competitors could lead to more extensive value creation than operating on its own. They explain the concept with a pie: "Business is cooperation when it comes to creating a pie and competition when it comes to dividing it up" (Brandenburger & Nalebuff, 1996, p. 4). According to Bonel and Rocco (2007, p. 71), "coopetition emphasizes the mixed-motive nature of relationships in which two or more parties can create value by complementing each other's activity". And Gnyawali and Park (2011) claim that the paradox of cooperation and competition leads to value creation and appreciation.

Bengtsson and Kock (2000) highlight that each party has different core competencies that can be shared. Therefore, cooperating with competitors allows access to external knowledge and resources. Furthermore, the opportunity to take advantage of actors' resources and knowledge makes the firm more efficient than other players in the industry (Bengtsson & Kock, 2000). According to Morris et al. (2007), access to resources and capabilities from partners positively affects a firm's position in the market. Also, Ritala and Hurmelinna-Laukkanen (2009) argue that knowledge sharing and creation are often advantageous. The unique combination of knowledge and resources that actors of coopetitive relationships have given them an advantage that no other firm could be capable of on their own (Bengtsson et al., 2010).

Besides benefits in value creation and access to knowledge and resources, coopetition also creates economic benefits. Gnyawali and Park (2009) suggest that cooperating with competitors leads to economies of scale, reduction of uncertainty and risk, as well as increases speed in product development. Moreover, Luo (2007) underlines that many different costs can be shared and minimized, such as fewer expenses in R & D, marketing, technology, manufacturing, or other aspects. A study conducted by Peng et al. (2012) found that firms benefit from coopetition in various ways. Firms can speed up market entry, have access to new markets, as well as increase market power. However, their research also draws attention to performance outcomes, which increase for a certain period but not necessarily in the long-run. Peng et al. (2012, p. 548) conclude that the results from cooperating with competitors are "beyond to what would have been possible" alone. Kock et al. (2010) highlight the growing international opportunities that arise from coopetition, such as the increase in international recognition of the firm and the access to distribution networks.

The study of Chin, Chan and Lam (2008) proposes various success factors for coopetition. Those factors are management leadership, long-term commitment, organizational learning, trust, knowledge and risk sharing, information system support, and conflict management. They claim that coopetition "can reduce up-front costs, learning costs, and

increases effectiveness and efficiency" (Chin et al., 2008, p. 449). Moreover, a group of researchers analyzed horizontal airline alliances' impact on firm performance and whether it affects productivity and profitability (Oum, Park, Kim, & Yu, 2004). The outcome is that "horizontal alliances make a significant contribution to productivity gains, whereas they have no overall significant and positive impact on profitability" (Oum et al., 2004, p. 844).

Another advantage that can be taken from cooperating with competitors is the impact on performance. Various researchers investigate coopetition in relation to diverse performance implications (Le Roy & Czakon, 2016; Gnyawali & Madhavan, 2001). Le Roy and Czakon (2016) summarize that coopetition positively affects a firm's market share and productivity. Hence, it leads to an increase in financial performance (Le Roy & Czakon, 2016). Another benefit derived from coopetition is the positive impact on innovation performance, which derives from the fact that firms aim to keep up with their competitors (Park, Srivastava, & Gnyawali, 2014). Moreover, according to Bouncken and Fredrich (2012), cooperating with competitors has been found to improve a firm's ability to innovate.

2.1.2 Challenges of Coopetition

Even though the benefits mentioned above seem tempting to perform coopetitive behavior with competitors, there are tensions and challenges involved when devoting oneself to those relationships. Any relationship relies on communication, trust, and sharing of tangibles and intangibles (Chin et al., 2008). However, a coopetitive relationship is not only about cooperating but also competing, and therefore, these elements need to be balanced carefully (Bengtsson & Kock, 2014). Tidström (2018) describes tensions as "situations of conflict or incompatibility between firms involved in coopetition". Those tensions and challenges appear on an individual, organizational, and inter-firm level (Bengtsson & Kock, 2014).

Gnyawali and Park (2009) point out that coopetition leads to negative aspects that include loss of control and management challenges. Also, Bouncken and Fredrich (2012) emphasize that the paradoxical relationship only benefits if it is built on trust and interdependence. And the outcome of a temporary connection is often made on a low level of trust because the central aim is to achieve a goal after which the relationship is ended (Cygler et al., 2018). Further risks are mentioned by Ritala et al. (2008), who found out that coopetition in a strategic alliance with too many core competitors harms firm performance.

Tidström (2014, p. 261) summarizes four types of coopetitive tensions: role tension, knowledge tension, power and dependence, and opportunistic tension. Bengtsson and Kock (2000) investigated the tension that relates to roles and occurs on organizational and individual levels. Tidström (2014, p. 262) explains tension on the organizational level, as "an organization that cooperates with a competitor may perceive a tension between the goals of the organization and the goal of the cooperation". In comparison, individual tension appears, for example, when people within an organization interact as well as with members of the simultaneously cooperating and competing company. The second type of tension relates to knowledge and is about the balance between sharing an keeping information secret to avoid being outperformed by the competitor (Morris et al., 2007). Another tension is power and dependence and aims to point out that some firms in paradoxical relationships have the intention to exploit their "power (which may be financial, technical, or emotional power for example)" (Tidström, 2014, p. 263). Additionally, Tidström (2014) points out that tension often occurs in coopetitive relationships between small and large firms due to unbalance, such as resources and pricing policies.

Finally, opportunistic tension refers to the possibility that one firm exploits the other party because it feels threatened or has the chance to develop its business in the competitors area (Tidström, 2014). Another risk that arises from the relationship where individuals, firms or networks not only cooperate but also compete is the leakage of information by rivals (Hoffmann et al., 2018). Moreover, Gnyawali and Park (2009) highlight

that coopetition can lead to technological risks such as imitation. Hence, it is crucial to have the right balance between pooling strategic resources and protecting core competencies. Crick (2019) also claims in his paper “the dark side of coopetition”, that the right balance in a paradoxical relationship is crucial and otherwise could be harmful to the firm’s performance. He states that with too little coopetition “firms might struggle to survive within their markets, with an insufficient volume of resources and capabilities” and with too much coopetition “companies could experience increased tensions, potentially lose intellectual property and dilute their competitive advantages” (Crick, 2019, p. 318).

Figure 3. Summary: Benefits and Challenges of Coopetition

2.2. Theories of Coopetition

Coopetition is a relatively new terminology, and researchers have tried to explain the concept by using existing theories. One of the firsts to study coopetition were Brandenburger and Nalebuff (1996), who explained the framework through the game theory. Contrary, Bengtsson and Kock (2000) use the resource-based view to analyze and elaborate on rivals' simultaneous cooperation and competition. Furthermore, another

common theory used to explain coopetition is the network theory (Gnyawali & Madhavan, 2001). And in recent years, the resource dependence theory has been applied to explain the concept (Chiambaretto & Fernandez, 2016). Following, a brief inside about the game theory is provided. Afterward, a more detailed literature review about the resource-based view, resource dependence theory, and network theory is presented, which are relevant theories for this study.

The game theory, was one of the first theories to describe the strategic success of coopetition. The theory is based on the assumption that all players have the opportunity to achieve a benefit through coopetition, which is based on the positive-sum game (Cygler et al., 2018). This benefit would not be possible to achieve without the cooperation with competitors (Le Roy et al., 2018). Brandenburger and Nalebuff (1996) describe coopetition as a structure where firms interact with multiple competitors as a dynamic network. This is also emphasized by the game theory, where the outcome of the interaction depends on other actors. The game theory illustrates "how value can be created, divided, and potentially damaged when firms interact" (Charleton, Gnyawali, & Galavan, 2018, p. 24).

2.2.1. Resource-based view

The resource-based view (RBV) was developed by Barney (1991) who assumes that firms can create superior performance through resources. The managerial framework (Figure 4) describes how firms can achieve a sustainable competitive advantage through valuable, rare, inimitable, and substitutable strategic resources. In his article (Barney, 1991, p. 102), he defines a sustainable competitive advantage as firms who are "implementing a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of this strategy". The theory lies on two assumptions, first, firms or groups control heterogeneous resources, and second, "resources may not be perfectly mobile across firms, and thus heterogeneity can be long lasting" (Barney, 1991, p. 101). Thus, the differences in

strategic resources explain why firms in the same industry differ in terms of profits and performance.

Figure 4. Framework: Resource based view (Barney, 1991)

The resource-based view has been used by various researchers to explain the phenomenon of simultaneous cooperation with competitors (Bengtsson & Kock, 2000; Gnyawali & Park, 2009; Ritala, Golnam, & Wegmann, 2014). The firsts who explains coopetition through the RBV were Bengtsson and Kock (2000). They realized that firms are building relationships with rivals to get access to unique resources and share R & D activities. Gyawali and Park (2009) also use the resource-based view to highlight the advantages and the importance of coopetition. They emphasize that the concept allows firms or networks to access resources that would otherwise be inaccessible on their own. This way, firms can develop a competitive advantage. Furthermore, Luo (2007) highlights that resource asymmetry leads to cooperation between global competitors.

The resource-based view gives evidence about why competitors team up with each other and cooperate. Even if they have similar and complementary resources, it allows firms to take advantage of economies of scale and group learning (Gnyawali & Park, 2011). Various researchers highlight the benefits that stem from the resource-based view. Among the most mentioned are that additional value is created, learning is encouraged, and firms have access to resources that would otherwise be inaccessible (Bengtsson et al., 2010). Thus, according to the framework of the resource-based view, through the access to homogenous and strategic important resources of competitors, firms are able

to achieve a competitive advantage and increase performance (Barney, 1991). Additionally, the resources of competitors allow the firms to save costs and time (Gnyawali & Park, 2009).

2.2.2. Resource dependence theory

The resource dependence theory was developed by Pfeffer and Salancik (1978) and argued that firms do not have all essential resources and, therefore, have to engage with other actors and organizations in their environment. The three main aspects of the resource dependence theory are 1) social context matters, 2) actors have strategies that aim to seek autonomy and reach their goal, and 3) power is an important variable and explains relationships with other actors (Pfeffer & Salancik, 1978). A central assumption of the theory is that firms need access to resources because they do not control all resources required by themselves (Pfeffer & Salancik, 1978). Therefore, the social context, which refers to the system or network the firm is embedded in, is important for the performance and success. Since Pfeffer and Salancik (1978) findings, the theory has become one of the most important ones among organizational theories and strategic management (Hillman et al., 2009).

The authors Pfeffer and Salancik (1978, p. xiii) highlight in their seminal book that power is an important variable in the resource dependence theory and state “that some organizations had more power than others because of the particularities of their interdependence and their location in social space”. The firm that has best access to resources and best adapts to its environment can be most successful. According to Pfeffer and Salancik (2003), the relationship between actors is described as exchange relationship since both firms depend on each other. They claim that the interactions may positively affect the firms since it provides them with vital resources However, the dependency on actors can contribute negatively, as it is linked to uncertainty. Therefore, as Amalou-Döpke and Süß (2014) state, “the aim of the actors in a resource-dependent relationship is to reduce their own uncertainty with regard to the provision of critical resources, as well as to reduce their dependence or increase their own power”.

It has been emphasized that asymmetric relationships can contribute to stronger firms taking advantage of weaker ones (Pfeffer & Salancik, 2003). However, the advantage that one firm has control over a weaker part can not only be positive and create more value, it can also lead to destroying value (Gulati & Sytch, 2007). While some firms aim for the same resources in interfirm relationships, other firms can create a bigger pie through cooperation, and each actor seeks a different piece (Quintana-García & Benavides-Velasco, 2004). Moreover, Pfeffer and Salancik (2003) propose that firms who bring most resources to an alliance can also claim the highest benefits.

Five different options that reduce firms' environmental dependence have been introduced (Pfeffer & Salancik, 1978). One of these options is that firms can form mergers and vertical integration (Hillman et al., 2009). Reasons for the formation are to reduces competition, “to manage interdependence with either sources of input or purchasers of output by absorbing them; and third, to diversify operations and thereby lessen dependence on the present organizations with which it exchanges” (Hillman et al., 2009, p. 1405). Furthermore, the reason why firms form joint ventures and other inter-organizational relationships such as buyer-supplier relationships, R&D agreements, or strategic alliances can also be traced back to the resource dependence theory (Pfeffer & Salancik, 1978; Hillman et al., 2009).

The resource dependence theory has been used to explain the concept of coopetition. Aforementioned, Pfeffer and Salancik (1978, p. 41) claim that inter-organizational relationships can reduce dependence on external resources. To elaborate the interdependence further, they state “Interdependence existing between two social actors need not be either competitive or symbiotic-frequently, relationships contain both forms of interdependence simultaneously”. The simultaneous occurrence of symbiotic and competitive is highlighted by Gast et al. (2015) as the first explanation for cooperating with competitors. Also, Parkhe (1993) emphasizes that mutual interdependence is crucial in alliance formations because a lack would lead to a termination of the relationship. A study

conducted by Lechner et al. (2016) delivered insight into the impact of vertical coopetition on young and small firms. The outcome is that young and small firms gain from relationships to larger firms, positively affecting the sale growths. However, the researchers also point out that dependence on vertical partners, such as suppliers, subcontractors, or buyers, can also lead to negative impacts, which is when dependence is too high (Lechner et al., 2016).

Chiambaretto and Fernandez (2016) analyze the formation of alliances from a coopetitive perspective. As a base, they use the resource dependence theory and a case study of Air France to investigate the alliance composition and evolution over time during market uncertainty (Chiambaretto & Fernandez, 2016). The research outcome is that an increase in market uncertainty is not related “to a greater degree on collective strategies” (Chiambaretto & Fernandez, 2016, p. 81). Moreover, in uncertain market circumstances, firms prefer coopetitive alliances rather than collaboratives. Additionally, horizontal alliance formations are preferred compared to vertical ones (Chiambaretto & Fernandez, 2016).

2.2.3. Network theory

The network theory describes markets as networks of sustainable and long-lasting relationships (Johanson & Mattsson, 1988). The theory proposes that firms achieve an advantage by forming relationships with competitors with different but complementary resources and capabilities (Gnyawali & Madhavan, 2001). This allows them to get access to necessary resources and shape a firm’s performance. According to Czakon (2018, p. 47), a network ”refers to multiple actors' interaction involving various firms covering the whole value network”. The network is formed through numerous actors that represent nodes connected through ties that represent the relationship between them (Charleton et al., 2018). Through those ties, the flow of ”assets, information, and status” is possible (Gnyawali & Madhavan, 2001, p. 431).

As the market consists of many nodes and cumulative activities, it is important that firms have a certain market position that characterizes relations to others (Johanson & Mattsson, 1988, p. 472). These positions can be divided into micro-positions, representing the inter-personal relationships to other individual actors; and the macro-positions that describe the relations of parts or the whole network or cluster (Johanson & Mattsson, 1988, p. 472). By building those networks, the decision is not based on the geographical location but rather with whom to make connections (Persson, Mattsson, & Öberg, 2015). However, the construct of nodes and relations makes the firm vulnerable to unexpected changes, for example, if one firm is closing its operations, the relationship is breaking down, and the knowledge and resource flow is interrupted (Johanson & Mattsson, 1988).

The network theory can also be used to explain the phenomena of simultaneous cooperation and competition. The purpose of a coopetitive network is mutual value creation and individual value appropriation (Sanou, Le Roy, & Gnyawali, 2016). Czakon (2018, p. 47) mentions that various actors are involved in network coopetition that are part of the value net, such as “rivals, suppliers, customers and complementors”. Gnywali et al. (2006) define coopetitive networks as “cooperative relationships between intra-industry players [that] contributes to the emergence of intra-industry networks” (Sanou et al., 2016, p. 145). Furthermore, the relationship dynamics are characterized as a mixture of trust and distrust with the central purpose of achieving one’s own needs. Hence, actors are involved in a learning race (Fernandez et al., 2014).

Bengtsson et al. (2010) highlight that relationships in a network vary and consist of cooperative and competitive connections. This leads to a coopetitive network of actors. A study conducted by Gnywali and Madhavan (2001) claim, not all firms have the same benefits from a coopetitive network, but the structural embeddedness of a firm within the network impacts the competitive behavior. The firm with a central position acts more competitive, and ”firms with higher levels of structural autonomy undertake more diverse competitive actions” (Gnyawali et al., 2006, p. 509). Moreover, the higher the

number of firms interacting in the network, the more difficult the coordination and monitoring gets (Gnyawali & Madhavan, 2001).

Czakon (2018) assumes that the network coopetition leads to higher benefits and features compared to dyadic coopetition. The researchers Sanou et al. (2016) conclude that the outcome of a coopetitive network relationship can be either a win-win or a win-lose. Additionally, they point out that the formation only creates temporary advantages, and leads to risks of asymmetric learning (Sanou et al., 2016). Even though it is important with whom to make the coopetitive connections, Luo (2007), also emphasizes that the geographical location of the global rivals can be of importance. Actors in diverse geographical locations might offer access to specific resources and opportunities, increasing the degree of complementarity.

When firms do not have access to all necessary resources, they enter coopetitive relationships. The network theory emphasizes the cooperation and competition of multiple actors with the aim to have access to resources of rivals and increase performance (Gnyawali & Madhavan, 2001). One organizational option of coopetition between multiple actors is the formation of strategic alliances. Czakon and Dana (2013), analyzed coopetition in the airline industry and identified four phases since the deregulation of the industry. First, firms formed dyadic coopetitive relationships, and later in time, they started to build dynamic network alliances where firms simultaneously cooperate and compete within and between alliances. Aforementioned, a firms position in a network influences the competitive market behavior (Sanou et al., 2016; Gnyawali & Madhavan, 2001). According to Charleton et al. (2018, p. 30), this principle can also be applied to the position in a coopetitive alliance network. Therefore, opportunism is not constant but depends on the position in an alliance network.

2.3. Performance implications

Coopetition has been the topic of investigation for more than a decade. However, research on the relationship between coopetition and firm performance is still in its early stages (Le Roy & Sanou, 2014; Bouncken & Fredrich, 2012). Ritala (2018, p. 318) defines performance as the "firm's financial and economic outcomes". More specifically, it includes market share, profitability, sales growth, costs, and resource efficiency. Another researcher defines it as "the level/degree of goal achievement of an organization/department" (Samsonowa, 2012, p. 25). And Afuah and Tucci (2001, p. 3) define performance as "profits, cash flow, economic value added (EVA), market valuation, earnings per share, sales, return on sales, return on assets, return on equity, return on capital, economic rents, and so on". Venkatraman and Ramanujam (1986) distinguish between three categories of performance: financial performance (e.g. sales growth, profitability), operational performance (e.g. market-share, product quality, marketing effectiveness), and organizational effectiveness.

A more recent definition of firm performance comes from Richard, Devinney, Yip, and Johnson (2009). who organize performance outcome in three different areas: "financial performance (profits, return on assets, return on investment, etc.); product market performance (sales, market share, etc.); and shareholder return (total shareholder return, economic value added, etc.)" (Richard et al., 2009, p. 722). In this thesis, the definition "the level/degree of goal achievement of an organization/department" (Samsonowa, 2012, p. 25) is adopted as the central description for the term performance. Since this thesis examines airlines' performance in a strategic alliance, not only financial indicators are used but also airline-specific ones. Thus, the definition by Sasonowa allows a more general description of the term, which includes the goal attainment of the organization.

Table 2. Definitions of firm performance

Article	Definition
Venkatraman and Ramanujam (1986)	financial performance (e.g. sales growth, profitability), operational performance (e.g. market-share, product quality, marketing effectivenes), and organizational effectiveness
Afuah and Tucci (2001)	profits, cash flow, economic value added (EVA), market valuation, earnings per share, sales, return on sales, return on assets, return on equity, return on capital, economic rents, and so on
Richard et al. (2009)	financial performance (profits, return on assets, return on investment, etc.); product market performance (sales, market share, etc.); and shareholder return (total shareholder return, economic value added, etc.)
Samsonowa (2012)	the level/degree of goal achievement of an organization/department
Ritala (2018)	firm's financial and economic outcomes (market share, profitability, sales growth, costs, and resource efficiency)

The firm performance and competition aspects and cooperation have already been studied in-depth; however, mostly separately (Le Roy & Sanou, 2014; Lado, Boyd, & Hanlon, 1997). According to the cooperation perspective, companies improve their performance by pursuing jointly developed goals, e.g., by pooling their resources and knowledge. Thus, the strategy has a positive effect through the advantage of cooperation. Contrary, from a competitive perspective, a firm tries to improve its performance by developing its own resources to gain a significant competitive advantage at its competitors' expense. This strategy is only beneficial through pure aggressiveness. (Gnyawali & Madhavan, 2001).

Based on different researchers, separate cooperation and competition benefit a firm's performance either through the advantage of cooperative or aggressive behavior. Contrary, coopetition strategy is a combination of both, and thus, researchers argue that it should lead to superior performance for firms through the benefits of both advantages (Bengtsson & Kock, 2000; Brandenburger & Nalebuff, 1996; Gnyawali & Madhavan, 2001). However, studies on performance through the impact of coopetition have shown

mixed outcomes. Ritala (2012, p. 308) suggests that the success of coopetition depends on the industry and economy a firm is embedded in, as well as firm-specific factors. There is extensive evidence about the positive impact of coopetition on innovation performance, which has been provided in-depth through various studies. In contrast, the effect on market performance has shown diverse outcomes and still lacks further research.

According to Bouncken and Fredrich (2011), coopetition is like a double-edged sword. On the one side, cooperating with rivals allows companies to improve innovation performance, but on the other side, coopetition also leads to risks that can cause diminished performance. The study carried out by Bouncken and Fredrich (2011) claims that the effect of coopetition on performance mainly depends on trust and dependency between actors. Low trust leads to risks including opportunism, and possible misunderstandings between firms, information leaks, drift into a learning competition, inefficient allocation of resources, diverging strategic intentions and inefficient partners (Bouncken & Fredrich, 2011; 2012). According to Kim and Parkhe (2009), coopetition relationships are associated with risks that can ultimately lead to the failure of the relationship. However, the overall effect of cooperation between competitors on the companies' performance is positive despite the potential disruptions, as the coopetition enables the companies to access and use each other's resources. As aforementioned, the coopetition relationship also enables companies to find new resources more efficiently and develop their existing resources even better. (Bouncken & Fredrich, 2011; 2012).

Peng et al. (2012) conducted a study to investigate coopetition performance. To do so, they analyzed the performance of a Taiwanese supermarket for a period of 15 years. They conclude that performance through cooperation with competitors leads to better performance, at least for some time. The reason is, with coopetition more can be achieved, and more is possible than operating on its own. Moreover, the "adoption of coopetition changes the timeframe permitting the earlier achievement of higher performance" (Peng et al., 2012, p. 547). Also, Ritala et al. (2008) investigated the performance

of firms in coopetitive relationships The result is that coopetition can positively impact firms; however, only when firms minimize cooperating with only some of their key competitors.

The researcher Ritala (2012) aimed to clarify the effect on innovation and market performance through the coopetition strategy. For the study, 209 Finnish firms from different industries were investigated to provide information about when coopetition is successful and when it is not. To assess performance, Ritala bases its method on a scale developed by Delany and Huselid (1996). Four different variables are used: dependent variables, an explanatory variable, moderating variables, and two control variables (Figure 5). The dependent variables include sales growth, profitability, market share, and market growth. These factors are also mentioned by various researchers that defined performance (see Table 2) (Ritala, 2018; Richard et al., 2009; Venkatraman & Ramanujam, 1986).

The explanatory variable measures the degree of coopetition “by dividing the number of a firm’ alliances with competitors by its total number of alliances” (Ritala, 2012, p. 314). The moderating variables contain market uncertainty (change in customer needs, competition, product demand), network externalities (increase or decrease in value of the product when the number of users increases), and competition intensity (similarity of offering to competitors, number of competitors). The control variables measure firm’s sales during the year that is examined and “is used to control for the size of the firm”, while the age gives insight into “firm’s establishment in its industry over time” (Ritala, 2012, p. 315).

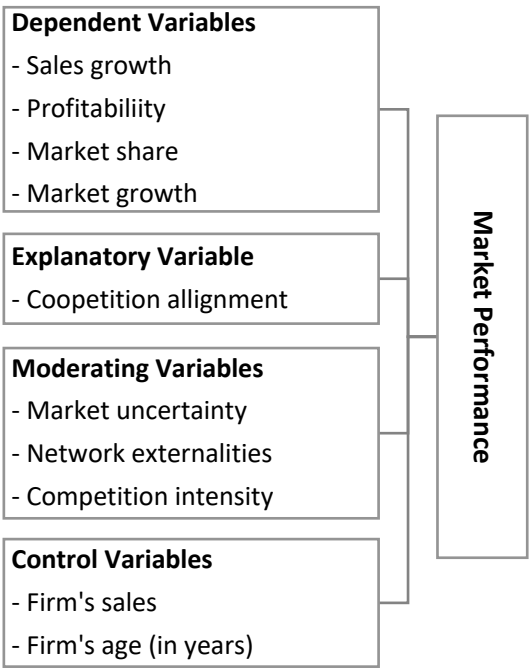

Figure 5. Assessment of market performance

The results show that coopetition has a positive effect on innovation and market performance. The study also investigates coopetition in relation to market conditions. The conclusion is that coopetition is beneficial when market conditions are highly uncertain, while firms do not achieve additional value when market uncertainty is low. Another result is that coopetition is most advantageous to innovation and market performance when competition intensity is relatively low. Also, the coopetition strategy is "beneficial in industries with only a few major players" (Ritala, 2012, p. 319). Therefore, firms that select only a few key competitors to cooperate with, achieve a better innovation and market performance than with a high number of cooperating rivals.

A recent study by Sanou et al. (2016) examines the influence of a firm's position in a network on market performance. The data stems from the mobile telephone industry between 2000 and 2006. The previous literature on networks suggests that a firm's position is an indicator of superior performance. A central position can lead to various benefits such as access to knowledge and resources, as well as surviving external shocks. Also, the study by Gnyawali et al. (2006) shows similar results and proves that a central

position within a network can lead to increased market performance. All in all, Ritala (2018) has highlighted that the reason for lack of investigation in the field of coopetition and market performance is because of missing data. Moreover, in his paper, it is also pointed out that results from existing research on coopetition present a positive as well as negative results on firm performance.

3. An Overview of the Airline Industry

In order to develop the second pillar of the theoretical background, theory about the airline industry must be considered. Firstly, this chapter gives a historical overview of the development in the airline industry. Following, the term business model is elaborated, and the differentiation between airline business models is presented.

3.1. The history and future of the airline industry

The airline industry underwent changes during the last decades, which influenced the way how airlines operate. In the past, the airline industry was regulated by the government who made decisions about the frequency of flights, the entry of new carriers, the pricing, and the production levels. This "limited any form of price or network competition" (Cento, 2009, p. 14). The International Civil Aviation Organization (ICAO) was responsible for regulating air transport between the two nations (Cento, 2009, p. 14). Before a National Carrier was allowed to operate in another country, the government of the two nations involved defined bilateral air service agreements (also known as 'bilaterals') to set the rights of operations (Doganis, 2005, p. 28). Those air service agreements (ASA) resulted in a strongly regulated market where entry barriers limited the number of carriers operating, which resulted in high ticket prices for passengers (Wang & Evans, 2002).

With the Deregulation Act in 1978, the United States was the first country that started to liberalize the aviation market and marks one of the most crucial events in the industry. The new liberal bilateral agreements are less government-controlled, allow the market to set prices more freely and compete more efficiently (Scharpenseel, 2001). Besides a domestic market liberalization, the United States demanded a less controlled international air market agreement. In 1992, the United States and the Netherland were the first to liberalize bilateral Air Service Agreements, and signed an open-skies agreement

(Fu, Oum, & Zhang, 2010). Other countries such as Canada, Australia, and the European Union followed and liberalized its domestic markets.

The European Union created three Aviation Liberalisation Packages that aimed at deregulating the air services within and between member states through a step approach (Janić, 1997). In 1987, the first agreement was adopted and marked the start of the liberalization, and the second package came into force in 1990, which made the market less regulated. The third liberalization package in 1997 "led to the creation of a single European aviation market" (Lieshout, Malighetti, Redondi, & Burghouwt, 2016, p. 68). Since 1992, various bilateral agreements have shifted to Open-Skies agreements. Among others, the Open Aviation Agreement (OAA) between the European Union and the United States that became effective in 2008 and has created a single aviation area consisting of two territories (Fu et al., 2010, p. 17). It includes that "European airlines can now fly without restrictions from any point in the EU to any point in the US" (Cento, 2009, p. 16). Other countries started negotiating with the aim to liberalize further the international airline market (Fu et al., 2010).

The increasing liberalization nationally and internationally has resulted in multiple changes in the aviation industry. The open skies agreements and loosely defined air service agreements revolutionized the whole industry and have increased competition in the markets (Fu & Oum, 2014). The era between 1994 and 2000 is marked by a growth of flag carriers and the hub system (Burghouwt & de Wit, 2015). Moreover, airlines have increased their frequency and implemented more routes as well as created frequent flier programs (Cento, 2009, pp. 14-15). Additionally, with an increase in carriers operating, the overall traffic volume and airline efficiency have increased (Fu et al., 2010). By removing price restrictions, airlines need to emphasize optimization and strategic decision-making due to low and aggressive pricing of competition (Lieshout et al., 2016). The open aviation area allows airlines to operate freely across European countries and primarily benefits dominant airlines that can strengthen their market position. Furthermore, the

effect of the open aviation area in Europe is that the number of passengers rapidly increased, resulting from competitive prices and the high number of destinations offered.

When the industry was still regulated, flag-scheduled carriers accounted for the official national carrier and received government protection and coverage of loss (Janić, 1997). In comparison, non-flag airlines that appeared later in time were privately owned and did not benefit from government protection nor reached the size of the flag airlines (Janić, 1997). Through the liberalization, government protection is limited, and the increase in traffic volume and competition caused a rise in airlines along with bankruptcies and mergers. Furthermore, another business model emerged through the deregulation and focused on low ticket prices by operating from secondary airports. According to Dobruszkes (2009), large airlines that served as its national carriers, such as KLM, British Airways, or Lufthansa, did not benefit directly from the liberalization.

The low-cost business model first emerged in the United States pioneered by Southwest Airlines. Therefore, growing competition and a decrease in prices are also called the "Southwest effect" (Fu & Oum, 2014, p. 19). The era of Low-cost carriers (LCC) was from 2001 to 2013, where the business model has become an intense competition for full-service carriers (FSC) due to the fact that they operate on the same routes but price more aggressively (Burghouwt & de Wit, 2015). The aforementioned is possible because first, they only served from secondary airports due to the lower airport charges, but recently started to operate also from primary airports (Lieshout et al., 2016). With its low fees, the business model makes it attractive for travelers to choose the low-cost provider over traditional carriers (Cento, 2009).

The consequences of the growth of low-cost carriers are that traffic volume has risen steeply, whereas the price level is continuously falling (Fu et al., 2010). Moreover, it caused a wave of mergers in the United States, resulting in three big merger blocks: United Airlines, Delta, and American Airlines (Bilotkach, 2019). Even after the September 11 attacks in 2001, the whole airline industry faced a severe crisis where passenger

numbers declined, and many companies went bankrupt. Instead, the low-cost carrier market did not experience any negative impact but continued to grow (Larsen, Gillick, & Sweeney, 2012, p. 1262). In 2008, the financial crisis affected the whole economy and led many companies to close, including airlines. That was a second-deep downturn after the 9/11 attacks. The crisis changed peoples' travel behavior who tend to travel less by air or choose cheaper alternatives. One cheaper alternative was the low-cost carriers that experienced a boom during this time, whereas network carriers underwent great losses (Goyal & Negi, 2014). Therefore, several traditional network carriers have adopted some aspects of the low cost business model, while others launched their own low-cost subsidiary to stay competitive (Lieshout et al., 2016).

Based on Statista, the number of passengers traveling by plane has grew substantially over the last 15 years (Mazareanu, 2020). In the year 2004, the number of passengers was 1.99 billion, and in 2007 already 2.45 billion people traveled through the air. During the year 2008 and especially 2009, the number did not increase, leading to the financial crisis. However, from 2010 onwards, the passenger numbers went up again, and in 2013, around 3.14 billion boarded a plane. In 2019, the number of passengers reached 4.54 billion. The reasons for air travel growth are the low-cost business model that offers cheap fare, air infrastructure development, as well as a larger middle class (Mazareanu, 2020).

The future and the external factors in such a dynamic industry are not foreseeable, and challenges are continuously faced. "Change can be sudden and overwhelming, or gradual and unnoticed; in either case, the result can be hard to manage – and sometimes fatal – for organizations not actively preparing for it" (International Air Transport Association, 2018, p. 1). Technology and digitalization have changed the industry in the past. And new and innovative ways is a tool to attract customers. Therefore, airlines have been focusing on more advanced technological processes to stay ahead, which will be an ongoing trend in the next few years (International Air Transport Association, 2018). Another current trend is the consolidation of airlines. According to a report by KMPG

(2018), consolidation could increase, and small airlines would not be able to stay competitive. They state, “Europe is a mature aviation market, which is considered to be in the early stages of a wave of consolidation that is expected to continue for the near term” (KPMG, 2018, p. 27). All in all, consolidation could result in a more stable airline economy in the long term.

One external event that has had an enormous influence on the airline industry is the COVID-19 pandemic. The crisis started to hit the industry in March 2020 and caused airlines to keep their fleet on the ground. According to the IATA (2020), the European airlines are at a loss of $21.5 billion in 2020. Moreover, passenger demand was reduced by more than half. Airlines, especially larger-sized companies, can get financial aid from their country, however, in the form of loans that need to be paid back. Thus, it puts a stop to new service investments, inflating employment numbers, and new aircrafts (IATA, 2020). Since the COVID-19 crisis is ongoing, it is unpredictable how the airline industry will develop because each airline is now concentrating on its own business to gain stability again.

Table 3. Key events in the Airline Industry

Year	**Event**
1978	Deregulation Act in the United States
1987	European Union adopted first agreement of three aviation liberalization packages
1990	Second liberalization package came into force in which made the market less regulated
1992	The United States and the Netherland were the first to liberalize bilateral Air Service Agreements and signed an open-skies agreement
1997	third liberalization package which led to the creation of a single European aviation market
Since 1992	Various bilateral agreements shifted to Open-Skies agreements
1994-2000	Growth of flag carriers, creation of strategic alliances

2008	Creation of the Open Aviation Agreement (OAA) between the European Union and the United States and has created a single aviation area
2001	The September 11 attacks lead to an airline crisis with low passenger numbers and companies going bankrupt
2001-2013	The era of the Low Cost Carrier
2010	Mergers in the US airline market
2020	COVID-19 epidemic forces airlines to keep most of their fleet on the ground

3.2. Airline business models

The term “business model” first appeared in 1957 in an academic article but only has gained significant attention in the mid-1990s (Osterwalder, Pigneur, & Tucci, 2005). The growing significance of the concept can be linked to the emergence of the internet boom, e-commerce, as well as the low-cost carriers (Amit & Zott, 2001; Sengur & Sengur, 2017). While the term grew of importance and businesses more frequently used it, it became clear that the phrase has been used to describe multiple meanings (Osterwalder et al., 2005). Various researchers state that it is difficult to find only one definition that describes business models due to the fact that the term has been viewed from diverse perspectives (Goyal, Kapoor, Esposito, & Sergi, 2017). Furthermore, Porter (2001, p. 73) states that “the definition of a business model is murky at best. Most often, it seems to refer to a loose conception of how a company does business and generates revenue”.

The article by Goyal et al. (2017, p. 103) points out key research areas of business models. Those research trends are definition, typologies, business model versus strategy, components and frameworks, emerging markets, metrics and leadership, innovation, and theoretical dimensions. Table 1 shows several definitions of the term business model, which indicate variance and transformation throughout the last years. One of the first researchers who attempted to classify the expression was Timmers (1998, p. 4), who denotes that a business model is a source of revenue and can acts as an “architecture

for the product, service and information flows, including a description of the various business actors and their roles“. Amit and Zott (2001, p. 511) focused their research on analyzing e-businesses and concluded that “a business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities”.

After the emergence of the term, most research about business models has been done concerning e-business, aviation, and Information technology, while later analysis centralized a more generic approach. Overall, most definitions focus either on the source of revenue, while other researchers emphasize the value proposition or means of product supply. A significant contribution comes from Magretta (2002, p. 92), who implies that the appearance of a new business model reshapes the industry. If it is hard to imitate, it can lead to creating a competitive advantage for the firm. Shafer, Smith and Linder (2005) examined several definitions to form one description that covers crucial characteristics. They define a business model as “a representation of a firm’s underlying core logic and strategic choices for creating and capturing value within a value network” (Shafer, Smith, & Linder, 2005). Furthermore, Osterwalder et al. (2005) describe a business model as an architecture that makes the business work and consists of multiple actors that form a network. The definition by Shafer et al. (2005) is further used as the central description for business models in this thesis.

A new form of business model emerged beginning from the year 2009. It is the open business model that centralizes the collaboration with outside actors. Frankenberger, Weiblen, & Gassmann (2013, p. 672) define the open business model as “value creation and value capture of a focal firm, whereby externally sourced activities contribute significantly to value creation”. During the last years, firms realized the need for a more sustainable economy. Therefore, the circular economy emerged and “is essentially an environmental change in response to the global need for an ecological economy” (Lahti, Wincent, & Parida, 2018, p. 3). It consists of three R’s principles: reduce, reuse, and recycle. Lahti et al. (2018, p. 3) define it as a business model that is “is designed to create

and capture value while helping achieve an ideal state of resource usage". The linear economy follows the *take, make, dispose* approach resulting in a high amount of waste. The profits are made through the sale of products, while the circular economy centralizes the profit generation through the flow of resources (Ellen MacArthur Foundation, 2014).

Table 4. Business model definitions

Article	**Definition**
Timmers (1998)	An architecture for the product, service and information flows, including a description of the various business actors and their roles. A description of the potential benefits for the various business actors. A description of the sources of revenues
Amit and Zott (2001)	A business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities
Afuah and Tucci (2001)	Method by which a firm builds and uses its resources to offer its customers better value than its competitors and to make money doing so
Chesbrough and Rosenbloom (2002)	The method of doing business by which a company can sustain itself—that is, generate revenue. How a company makes money by specifying where it is positioned in the value chain.
Magretta (2002)	Stories that explain how enterprises work
Shafer et al. (2005)	A representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network
Osterwalder et al. (2005)	A conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams
Osterwalder and Pigneur (2010)	blueprint for a strategy to be implemented through organisation structures, processes and systems

Frankenberger et al. (2013)	An open business model explains value creation and value capture of a focal firm, whereby externally sourced activities contribute significantly to value creation
Lahti et al. (2018)	A circular business model is designed to create and capture value while helping achieve an ideal state of resource usage

A business model describes how a firm creates, captures, and delivers value from a set of resources or services (Osterwalder, Pigneur, & Tucci, 2005; Richardson, 2008; Pisano, 2019). Nowadays, the term is utilized extensively and often used interchangeably with strategy. However, a business model and strategy are not identical (Magretta, 2002; Shafer et al., 2005). While a business model describes how the elements fit together, a strategy focuses on competition and includes how to dominate the game and how to be better than the competition either through cost leadership or differentiation (Porter, 2001; Magretta, 2002). A link between the business model and strategy was made by Osterwalder and Pigneur (2010, p. 14), who state that a business model is a "blueprint for a strategy to be implemented through organisation structures, processes and systems".

Researchers have classified different components and elements that are essential for a business model. According to a study by Shafer et al. (2005, p. 202), they identified four primary components of a business model, which are strategic choices, creative value, value network, and capture value. Alternative parts of business models are given by various authors, which vary in their number and content. Timmers (1998) mentions five elements that focus on e-commerce, Afuah and Tucci (2001) come up with eight components, and Chesbrough and Rosenbloom (2002) summarize six vital functions from a general perspective. Osterwalder and Pigneur (2010) analyzed different definitions and concluded that a business model could be best described through building blocks. Their framework is named "business model canvas" and proclaims to be "simple, relevant, and intuitively understandable, while not oversimplifying the complexities of how enterprises function" (Osterwalder & Pigneur, 2010, p. 15). The nine-building blocks are among the most accepted concepts and consist of value proposition, customer segment,

channels, customer relationship, key resources, key activities, key partners, cost structure, and revenue streams. The components cover four primary areas of business and have the purpose of connecting areas of the organization: product, customer, infrastructure, and financial infrastructure (Osterwalder & Pigneur, 2010).

When looking at the airline industry, it can be challenging to distinguish between airline business models, especially when considering the dynamic nature of the sector (Mason & Morrison, 2008). Aforementioned, a business model's objective is to create value, and to offer the right product or service to customers. Hence, airline business models give inside about the operation and how value is created for stakeholders (Sengur & Sengur, 2017, p. 146). Therefore, value chain activities, and product offerings for the specific target market need to be configurated to match the business model (Vatankhah, Zarra-Nezhad, & Amirnejad, 2019). The airline industry consists of four broad business model categories: Full-service carriers (FSC), Low-cost carriers (LCC), charter, and regional (Doganis, 2005; Gillen & Gados, 2008). However, in this paper, the focus is on full-service carriers, also known as network carriers.

Various researchers have studied airline business models and their differences, how they create and capture value as well as create a competitive advantage. According to Gillen and Gados (2008), one strategic difference between a full-service and low-cost carrier is that a FSC has a broader geographic area while the LCC operates on short-haul routes. During the last two decades, the low-cost business model has developed new ways in earning money and attract customers, primarily through low fares that can be enabled through the abandoning of additional services that the FSC provides (Gillen & Gados, 2008; Vidović, Štimac, & Vince, 2013). Furthermore, Wensveen and Leick (2009) contributed to the research on airline business models and identified 17 features that characterize low-cost and full-service carriers. The product features include aircraft usage, airport, Check-in, class segmentation, connection, customer service, fleet, frequent flyer program, target group, and turnaround time (Wensveen & Leick, 2009, p. 132).

Equally important is the study by Bieger and Wittmer (2006), who compared and identified success factors of business models. Based on their research, the success factor of network carriers is the extensive market coverage and the belonging to a strategic alliance. In contrast, low-cost carriers have an advantage through simple processes, cost efficiency, and strong traffic flows. Moreover, FSCs are driven by market share, compared to LCCs, which are driven by routes (Bieger & Wittmer, 2006). Additionally, it is assumed that customers make decisions about the airline based on price and schedule (Karwowski, 2015), as well as market access, which includes the geographic coverage and frequency (Gillen & Gados, 2008). Another contribution to the research on the topic comes from Mason and Morrison (2008), who develop a product and organizational architecture (POA) to compare airline business models and their key elements. One main finding shows that business models and strategies, especially among low-cost carriers, vary widely.

The full-service business model provides a wide range of services on board, including meals, drinks, and in-flight entertainment. They also offer different seating classes (Economy, Business, and First Class) and connecting flights (Vidović et al., 2013). A unique aspect of full-service carriers is belonging to a strategic alliance, which allows the airline to take advantage of code sharing and interlining (Bieger & Wittmer, 2006). The authors Vidović et al. (2013, p. 71) highlight in their paper that network carriers focus on hub-and-spoke connections (HS) due to the fact that “as the number of destinations is growing, so does the aircraft load factor, resulting in lower unit costs per passenger. If higher demand justifies the use of larger aircraft, the unit costs per seat also drop” (Vidović et al., 2013, p. 71).

The hub and spoke model is an important logistical system for FSCs, which connects a primary airport with a vast amount of small regions (Gillen & Gados, 2008). Based on the data, it can be explained why full-service carriers have a more diverse aircraft fleet. They use large aircrafts such as Boeing 747, and Airbus 380 between hub airports, contrary, smaller aircrafts are used between spoke and hub airports since the passenger load is

lower (Cento, 2008). According to Cook and Goodwin (2008, p. 53), HS structure has the advantage that fewer routes are needed to reach a destination because it is possible to fly “from anywhere to everywhere”. Through the hub-and-spoke structure, airlines can have an advantage in economies of scale, economies of scope, and economies of density. Economies of scope is achieved through the combination of passengers from multiple spoke cities in one aircraft that operates between the hub and the destination. Whereas, economies of density is reached by bundling flights to increase cost savings (Cento, 2009, p. 29). However, Franke (2004) emphasizes that this strategy also has negative aspects such as inconvenience for passengers, waves of high traffic volume at the airport, and risky connection times.

The full-service business model has complex yield management, which is about selling the right seat to the right customer at the right time for the right price to fill the aircraft. Donovan (2005, p. 12) elaborates that it is about managing the supply (number of seats) and the demand by increasing the price per seat when the demand is high and decreasing the rate when the demand is low. Different sales channels are used, which can be direct or indirect and either online or offline. Intermediate travel agencies perform indirect offline sales, and indirect online sales are conducted through electronic agents. The direct offline purchase can be made by calling the airline or airline city offices. In contrast, direct online sale is made by purchasing tickets on the airline’s official website (Cento, 2009, p. 19).

In recent years there has been considerable interest in the business model “Low-Cost Carrier”. It was first implemented in the United States in the 1970s by the airline southwest. In 1991, Ryanair, a former full-service carrier, was the first airline that copied the business model and applied it in the European market (Fu et al., 2010; Doganis, 2005). The low-cost business model achieves a competitive advantage through its strategy, which differs from full-service carriers by delivering “a unique value mix” (Gillen & Gados, 2008, p. 28). Gillen and Gados (2008) point out that the business model has a competitive advantage in terms of costs compared to FSCs since no in-flight services such as

meals or drinks are offered for free. Moreover, the class segmentation is kept simple, and in the earlier years, no frequent flyer programs were offered (Cento, 2009, pp. 19-20). Low-cost carriers focus on point-to-point (PP) networks with direct routes to the destination. A significant advantage of PP connections is a decrease in delays since there are no incoming “spoke flights” with delayed passengers and luggage for which the aircraft has to wait (Lordan, 2014).

Preliminary work reported that the low-cost model focuses mainly on secondary airports where the turnaround time is less than 30 minutes. The fees for slots are lower, which leads to higher aircraft utilization and helps the airline achieve economies of density (Doganis, 2005). However, more recent evidence (Burghouwt & de Wit, 2015), reveals that since the last years, low cost airlines increasingly move to hub airports. Moreover, the business model mainly uses the aircraft model Boeing 737 and Airbus 320 that hold a capacity of around 190 seats and fit to short and medium-haul flights (Vidović et al., 2013). Doing so, the LCC saves costs in training employees for various aircraft types and simplifying the storage of spare parts (Dobruszkes, 2009). Additionally, the sales channel is simplified by cutting out the intermediaries and only focusing on direct sales via the internet and phone. The confirmation and travel information of the purchase is directly sent via email (Cento, 2009, p. 20).

A recent review of literature on airline business models found out that some full-service carriers developed a way to respond to the threat of low-cost carriers. The competition between the two airline business models has increased over the last years, especially through the aggressive low-cost carriers that pressure full-service carriers to reduce costs, change their strategy and improve their efficiency (Pearson & Merkert, 2014). Therefore, in the last few years, various full-service operators have added a segment to their portfolio of business models (Hunter, 2006; Pearson & Merkert, 2014). These airlines operate with their premium brand, the full-service model, between hubs. Additionally, they compete with their own low-cost carrier to remain a player in the airline industry (Karwowski, 2015).

3.3. Strategic Alliances in the airline industry

Strategic alliances can be defined as an "agreement between two or more organizations to cooperate in a specific business activity, so that each benefits from the strengths of the other, and gains competitive advantage" (Išoraitė, 2009, p. 39). Mockler et al. (1997, p. 250) describe a strategic alliance as "two or more firms that unite to pursue a set of agreed-upon goals remain independent subsequent to the formation of the alliance". Moreover, Gulati (1998, p. 293) characterizes the relationship as "voluntary agreements between firms involving exchange, sharing, or co-development of products, technologies, or services". Oum et al. (2000, pp. 4-5) define airline alliances as "a long-term partnership of two or more firms that attempt to enhance their advantages collectively vis-à-vis their competitor by sharing scarce resources including brand assets and market access capabilities, enhancing service quality, and thereby improving profitability". All in all, the collection of definitions on strategic (airline) alliances mainly centralizes the voluntary agreement to work with one or more actors to share various resources while remaining independent. In this thesis, the definition by Mockler et al. (1997, p. 250) is adopted as the primary description of the concept of strategic alliances. It is chosen because it centralizes the independence of each firm even after the formation of the alliance.

Table 5. Definitions of strategic alliances

Article	**Definition**
Mockler et al. (1997)	"two or more firms that unite to pursue a set of agreed-upon goals remain independent subsequent to the formation of the alliance"
Gutali (1998)	"voluntary agreements between firms involving exchange, sharing, or co-development of products, technologies, or services"
Oum et al. (2000)	"a long-term partnership of two or more firms that attempt to enhance their advantages collectively vis-à-vis their competitor by sharing scarce resources including brand assets and market access capabilities, enhancing service quality, and thereby improving profitability"

Išoraitė (2009)	"agreement between two or more organizations to cooperate in a specific business activity, so that each benefits from the strengths of the other, and gains competitive advantage"

The airline industry contains three main multi-partner alliances: Star Alliance, oneworld, and SkyTeam (Table 6). "Such alliances are horizontal and therefore coopetition relationships where airlines are competing on some aspects and cooperating on other" (Gudmundsson & Lechner, 2006, p. 153). It is the most common form of alliance and a non-equity holding variety (Gudergan, Devinney, Richter, & Ellis, 2012). While airlines within an alliance cooperate and compete simultaneously with each other, the alliance also competes against other alliances like a single actor (Gudmundsson & Lechner, 2006). Moreover, an airline that is a member of one alliance cannot simultaneously belong to another alliance (Fan, Vigeant-Langlois, Geissler, Bosler, & Wilmking, 2001).

Table 6. Three main strategic airline alliances

Feature	**Star Alliance**	**oneworld**	**SkyTeam**
Date of formation	1997	1999	2000
Headquarter	Frankfurt, Germany	New York City, USA	Amsterdam, Netherlands
Number of Airlines	26 (see Appendix 1)	13 (see Appendix 2)	19 (see Appendix 3)
Countries served	195	170	170
Destinations	1,300	1,000	1,036
Fleet	5,013	3,300	3,054
Employees	431,500	360,000	n/d
Total revenue US$	179 billion	142 billion	152 billion
Annual passengers	762,27 million	535 million	676 million
Market share	21,7%	15,6%	16,1%

(Star Alliance, 2019; oneworld, 2020; SkyTeam, 2020; Mazareanu, 2019)

The importance of these strategic airline alliances occurred after the deregulation of the airline industry (Mockler et al., 1997). This is because they help to reduce costs since operational facilities are shared. Moreover, "long intercontinental flights need one or

more stop and require an interline journey provided by different airlines" (Cento, 2009, p. 15). That is not possible by one airline alone or would be time and cost consuming. Therefore, alliances have been increasingly used to stay competitive against the low-cost business model, which has become a serious rival. Various studies highlight that full-service carriers consolidate with their rivals to remain competitive. Especially during the last years, the airline industry has been under pressure due to the steadily growing number of airlines, overcapacity, and price competition (Zank, Chammem and Stäblein, 2018). As Zank et al. (2018, p. 3) point out, "the industry imbalance will not only hit the short-haul market […] but also the long-haul routes". This leads to the growing number of airline mergers and alliance formations with other full-service carriers to stay competitive and share costs.

Gudmundsson and Lechner (2006) highlight that airlines with unique resources have an advantage in alliances, which also emphasizes the resource-based view. The uniqueness in resources enables airlines to fill structural holes, which is "unserved space in a network that can be exploited as a result of brokering connections between disconnected segments generating social capital" (Gudmundsson & Lechner, 2006, p. 154). Moreover, airlines that do not have a central position within a network should look for opportunities where the resources are unique, leading to a more central position. Gudmundsson and Lechner (2006) use the example of Finnair, who joined the strategic alliance of oneworld rather than Star Alliance due to the fact that the Scandinavian airline SAS is already a member of that alliance. This would lead to overcapacity of geographical coverage and fewer opportunities for a central position.

One of the most critical assets of an airline is the customer base. The entry of an airline in a multi-partner alliance leads to the fact that member airlines can take advantage of the customers due to the same frequent flyer program. According to Gudmundsson and Lechner (2006, p. 157) "joining an alliance could mean that airlines lose some control over their most important assets by making them accessible to the other members of the alliance". Therefore, airlines with extensive customer network could have fewer

incentives in joining an alliance. Another essential asset is the route network, which can also be exploited by members when entering an alliance. And sharing the connections with other airlines in the alliance can also lead to loss of control and in gaining less from the coopetition relationship than members (Gudmundsson & Lechner, 2006). Also, Doganis (2005, p. 279) mentions that airlines need to analyze the benefits for one own and the partners. It could lead to the conclusion that the alliance would create imbalance and that "one partner feels it is getting much less out of the alliance than the other partner(s)" (Doganis, 2005, p. 279).

Klophaus and Lordan (2018) analyzed the vulnerability of the three largest airline alliances in case an airline would exit the alliance. This would lead to the deletion of routes if not covered by another member airline. The study's findings are that oneworld is the most vulnerable alliance, followed by SkyTeam and Star Alliance. Moreover, they point out that the schedule size of the airline is not necessarily important for the strength of the network but whether or not the routes are covered by another member airline. For example, Klophaus and Lordan (2018) mention that an exit of American carriers would greatly impact an alliance vulnerability because numerous routes would get lost.

After coopetition in the previous chapter and focusing on strategic alliances in this section, it is important to clarify the differences between the terms. Coopetition and strategic alliances are often misused and treated as they were synonym concepts. Coopetition describes the collaboration of competing firms. A strategic alliance on the other hand "a long-term partnership of two or more firms that attempt to enhance their advantages" (Oum et al., 2000, p. 4). With regards to strategic alliances, they can be formed by any actors, either competitors or non-competitors. Moreover, it needs to be distinguished between a vertical and horizontal strategic alliance. A vertical strategic alliance is formed, for example, by suppliers and buyers, and is not connected to coopetition. While an alliance that is formed between competitors can be referred to as a coopetitive alliance.

3.3.1. Potential benefits

There are several advantages when forming a strategic alliance with other companies from the industry. The involved companies can penetrate new foreign markets and new customer bases (Kale & Singh, 2009; Brueckner, 2001). It is especially valuable in today's fast-changing world where entering single markets and building relationships with customers takes a long time. Therefore, being part of an international strategic alliance is an alternative to achieve fast access to new markets and new customers (Pels, 2001). The partnership "can make the expansion into unfamiliar territory a lot easier and less stressful" (Elmuti and Kathawala, 2001: 206). Entering a new market is often connected with uncertainty, especially in unstable markets and airlines face risks in introducing new routes. The benefits of a multi-partner alliance are that "through code-sharing, joint network coverage and joint marketing initiatives (such as frequent flyer programmes), airlines are able to increase their utilization rates and offer an increased number of destinations" without taking the risks of low demand on those routes (Tjemkes, Burgers, & Vos, 2012, p. 229). A code-sharing agreement refers to an "airline who operates the flight allows the partner airline to also sell seats on their flight" (Goetz & Shapiro, 2012, p. 736).

Another aspect is that a diversified route network, convenient slots, and good connectivity are always related to high investments. Those costs can be shared and spread among the other partners when forming a strategic alliance (Gudmundsson & Lechner, 2006; Brueckner, 2001; Pels, 2001). Another factor in favor of a strategic alliance is that the airlines can share knowledge and expertise, which "can range from learning to deal with government regulations, product knowledge, or learning how to acquire resources" (Išoraitė, 2009, p. 42). Since many firms develop competencies in a particular area but lack expertise in others, knowledge sharing can lead to another benefit, which is the achievement of competitive advantage towards other airlines (Russo and Cesarani, 2017). This leads to a decrease in "risk of market entry, international expansion, research and development" (Išoraitė, 2009, p. 42). Therefore, forming a strategic alliance has the

advantage of sharing risks and significant investments. By entering a strategic alliance with another firm, those financial risks can be reduced (Išoraitė, 2009).

The multi-partner alliances create benefits for customers as well as members. According to Pels (2001), customers can take advantage of one frequent flyer program for all airlines within one alliance, as well as access to lounges, and better flight connectivity. Brueckner (2001, p. 1476) explains that “each carrier’s network seem like an extension of its partner’s route system, the airlines collaborate to provide ‘seamless’ service”. Also, Fan et al. (2001, p. 350) highlight the smooth connection between airlines during flights and state that airlines are “delivering ‘‘seamless’’ travel experience across the entire alliance network”. The seamless service also leads to the impression that customers travel on a single airline rather than multiple ones (Brueckner, 2001). Moreover, the code-sharing leads to lower fares for transfer flights. Airlines can also increase their value through the alliance by exploiting the uniqueness of each airline, such as destinations or “multiple centers of gravity” (Gudmundsson & Lechner, 2006, p. 155).

There are various services that airlines from the same alliance as other airlines can take advantage of, such as schedule coordination, baggage handling, ground maintenance, slot sharing, and joint marketing (Weber, 2005). Weber (2005) conducted a study to analyze what travelers value most about strategic airline alliances. The outcome was that the participants mainly value the increase in comfort and convenience, such as “the ease of transfers between flights, smoother baggage handling, and one- stop check-in” as well as the support in case of problems (Weber, 2005, p. 260). The study also concluded that the loyalty programs and the growth in route networks are less attractive.

3.3.2. Potential drawbacks

A Strategic alliance is an agreement that most airlines use to take advantage of competitors and access their resources that would not be possible to reach on their own. However, it is not clear yet that strategic alliances create value for an airline. Code sharing is a simple form of alliance and can bring benefits to an airline, as mentioned in the

previous section. However, code sharing leads to a number of considerable challenges for an airline and its passengers. The researchers Min and Joo (2016) point out several critical aspects of code share agreements. First, code sharing can cause confusion and uncertainty for passengers because they do not exactly know which airline will operate their flight. Moreover, it “forces the passengers to change their planes at different gates in connecting airports with additional security checkpoints and thus increases hassles for confused passengers” (Min & Joo, 2016, p. 100).

Second, code sharing can lead to route monopolies by one airline where passengers have no alternative options and are bound to the price and schedule of that one airline. Also, Elmuti and Kathawala (2001) highlight that strategic alliances can cause market isolation due to the presence of the other partner. As mentioned earlier, different services can be used by all members of the alliance and, thus, create benefits. However, these benefits of shared services can also lead to potential challenges. The researchers Min and Joo (2016) summarize that “code sharing complicates airline branding strategy, service differentiation strategy, pricing strategy, flight scheduling/routing, baggage handling, and frequent flyer reward systems.”

The members of a strategic alliance share a joint governance structure, limiting decision-making autonomy. Moreover, an airline in a strategic alliance might face interdependence and loss of flexibility (Min & Joo, 2016). Since a strategic airline alliance is a multi-partner formation, it is possible that some members may take advantage of a free-riding behavior. “Free-riding occurs when partners act opportunistically by not contributing to the alliance, while benefiting unequally from the outcomes of the alliance” (Tjemkes et al., 2012, p. 240). All in all, the increased complexity due to multiple firms involved can lead to inefficiency as well as coordination problems (Tjemkes et al., 2012). Therefore, it is questioned if a strategic alliance creates benefits for an airline.

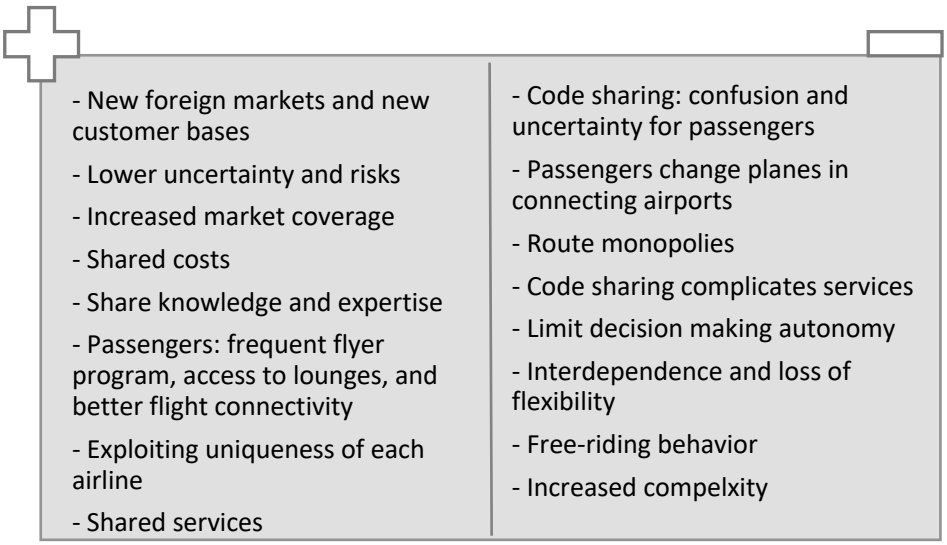

Figure 6. Summary: Benefits and Drawbacks of Strategic Alliances

3.4. Performance in the airline industry

The existing literature on performance in the airline industry is still limited. According to Gulati (1998), the performance of alliances has not been studied intensively due to the difficulty of measuring performance and collecting the required data for the study. Existing studies give no consensus on whether the formation of alliances leads to benefits for airlines. (Kuzminykh & Zufan, 2012). A study conducted by Min and Joo (2016, p. 109) examined “whether the code sharing practices as part of strategic alliances among airlines could be translated into the alliance participants' competitive advantage”. The study’s outcome is that an alliance’s potential benefits, such as cost savings through economies of scale, are not enough to increase an airlines’ competitiveness. Another result is that an alliance does not necessarily improve the operating efficiency however, cost-saving is indeed achieved through alliances (Min & Joo, 2016).

Even though most airlines belong to one of the three strategic alliances, several airlines are not members of any of those formations. According to the study by Min and Joo (2016), there is no change in airline performance before and after joining the alliance. The study by Min and Joo (2016) provides already results about whether or not an airline

can improve its performance through coopetition. However, it needs to be considered that the study is based on data until the year 2010 and therefore, does not provide reliability that the outcome would still be the same in the year 2020. This is because the airline industry is dynamic and constantly changing, especially over the last few years. Moreover, the analyzed variables are rather limited and vary to the ones that other researchers used for their analysis (Gudmundsson & Lechner, 2006). Furthermore, researchers highlight the importance of the actor's position within a network that has an impact on the performance (Gudmundsson & Lechner, 2006). Also, the uniqueness of resources that create a competitive advantage is essential for an airlines performance.

According to Park and Cho (1997), market share is one of the most important performance indicators and can be used as reasoning for the choice of strategy. Moreover, to measure the performance of airlines, specific industry indicators can be used. Park and Cho (1997) used revenue passenger miles (RPM) as a performance indicator. Also, the International Air Transport Association (IATA) conducts studies of the aviation industry on a regular base and uses revenue passenger kilometers (RPK) and available seat kilometers (ASK) as measurements (IATA, 2019). Those are among the most common terms to measure passenger airline traffic. RPK indicates the number of kilometers that paying passengers traveled. The outcome of the calculation gives information on the market demand. Additionally, ASK provides information on the passenger-carrying capacity. (Belobaba, Odoni, & Barnhart, 2015, p. 397).

Strategic alliances have been a form of cooperation and offer numerous benefits. Also, most of the network carriers belong to an alliance, one exception being, for example, Emirates (Bilotkach, 2019). Bilotkach (2019) highlights that another form of cooperation between airlines has grown in popularity. It is noticed that during the last decade, primarily joint ventures have been used increasingly. A joint venture is the "closest thing that the airlines could have to a merger in the current institutional and regulatory environment" (Bilotkach, 2019, p. 52).

3.5. Summarizing the theoretical framework of the master's thesis

This section summarizes the theoretical framework and presents the model that helps to study the impact of coopetition in the form of strategic alliances on airlines' market performance. The model in Figure 7 can be used as a base for the empirical analysis. It is developed from the existing literature reviewed and presented in the previous chapters of this thesis.

In the theoretical chapters, I explained the concept of coopetition and acknowledged three theories that explain the reason for forming relationships with competitors. The resource-based view emphasizes that firms are building relationships with rivals to access unique resources (Bengtsson & Kock, 2000). The resource dependence theory claims that firms do not have access to all resources required and, therefore, form inter-organizational relationships to reduce the dependence on external resources (Pfeffer & Salancik, 1978, p. 41). And the network theory points out that firms form relationships with multiple partners to create mutual value and individual value appropriation (Sanou et al., 2016). However, coopetition has its benefits and challenges. On one side, cooperation with competitors can lead to value creation, access to resources, cost-sharing, and market entry speed. On the other hand, the interaction with rivals can also cause challenges and risks such as dependence, loss of control, trust-building issues, and opportunism.

Even though the theories used to explain the reason why firms form coopetition relationships, there have been mixed results whether the formation has a positive or negative impact on performance. Ritala (2012, p. 308), for example, states that the success of coopetition depends on the industry. And that most advantageous for market performance is a rather low competition intensity (Ritala, 2012). Another study found that an increase in performance can be achieved when firms minimize cooperating with only some of their key competitors (Ritala et al., 2008). Moreover, researchers discovered that a central position within a network could lead to increased market performance

(Sanou et al., 2016). While there is already information about coopetition's performance outcome, results are mixed and remains an area with potential research.

In this thesis, the industry centralized is the airline industry that underwent notable changes during the 1990s and turned from a government-owned to a privatized industry. The development forced airlines to develop a competitive strategy to guarantee their survival. Low-cost carriers increased competition in the industry during the last years, and so has interactions with rival firms become a common strategy. A form of horizontal coopetition is the formation of strategic airline alliances. While potential benefits and challenges have been researched, the impact on member airlines' performance is under-researched.

Therefore, this research aims to understand the impact of coopetition on airlines' market performance. The proposed model in Figure 7 represents the research path and the measurements used to analyze the airlines and find the answer to the research question. The measurements are taken from different sources, aviation and non-aviation studies. The primary source is a study by Ritala (2012), where he analyzed innovation and market performance through the coopetition strategy of Finnish firms (Figure 5). Moreover, aviation measurements are added to increase the success of the study.

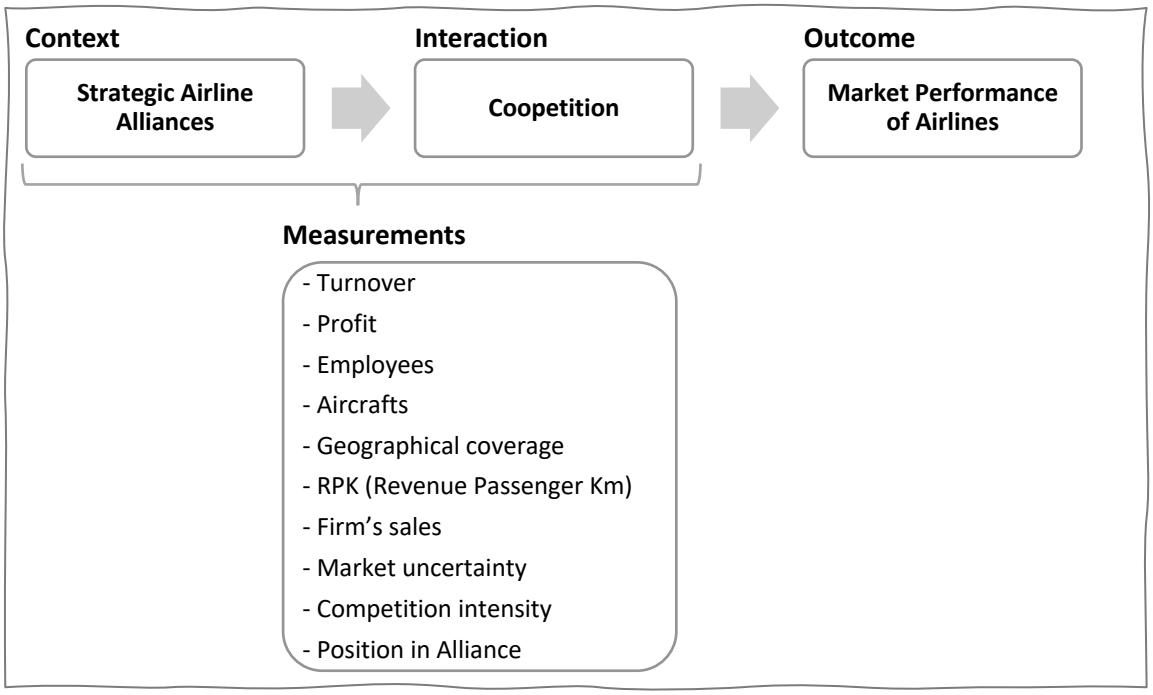

Figure 7. Theoretical Framework

4. Methodology and research design

This chapter provides an overview of the methodological procedures used for this Master's thesis. The focus in this section is the methodological approach, research design, as well as data collection techniques. Additionally, validity and credibility will follow. In their book, Saunders, Lewis, and Thornhill (2009, p. 108) present a "research onion" which gives an overview of the methodological choices that need to be considered before data collection and data analysis can occur. The onion layers, including the research choices and procedure chosen for this Master's thesis, are visualized in Figure 8. The different layers are further discussed in the following sections.

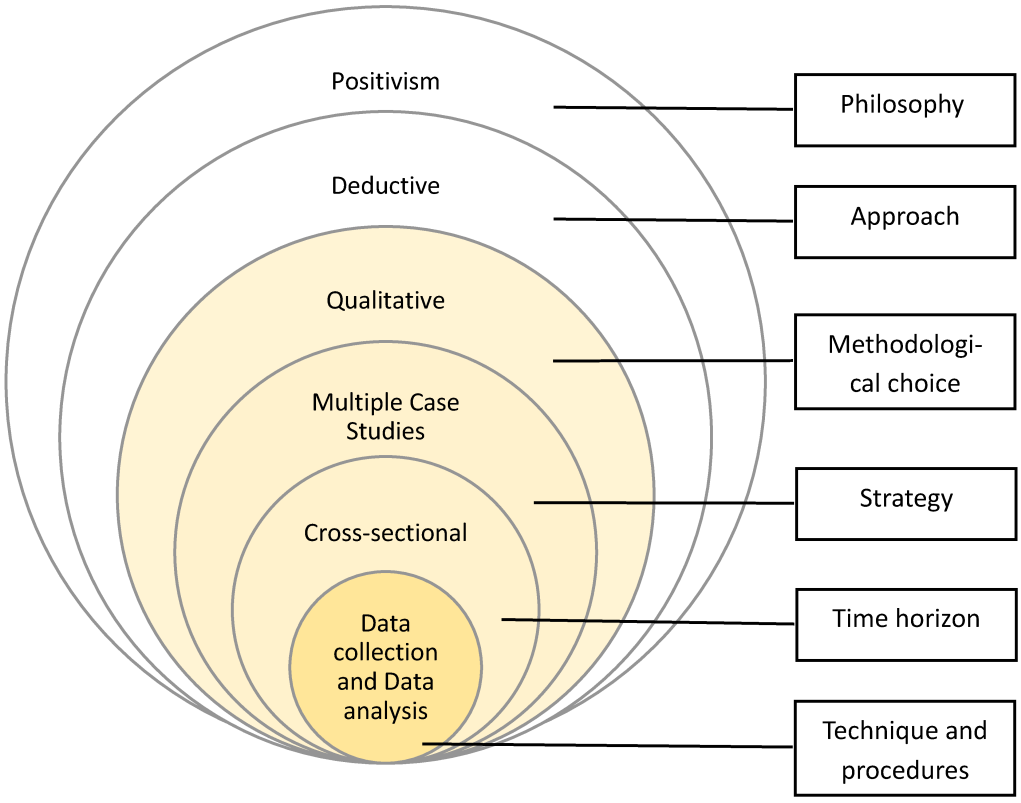

Figure 8. Choice of research design (Saunders et al., 2009, p. 138)

4.1. Research philosophy and methodological approach

The research philosophy is the first layer of the onion (see Figure 8) and provides the base for the research strategy and chosen methods. There are four main research philosophies identified, which are positivism, pragmatism, realism, and interpretivism. Each of these philosophies is grounded on different assumptions of the source, nature, and development of knowledge. Moreover, each philosophy can follow the view of ontology or epistemology, which are two different ways of thinking. (Saunders et al., 2009, pp. 108-109).

Ontology can be defined as being "concerned with the nature of reality" (Saunders et al., 2009, p. 110). More specifically, it reflects the view of the researcher about facts and how the world operates. The researcher's ontological position can be either objective or subjective. In this thesis, the ontological position is a subjective view. Subjectivism refers to the interdependence between the existence of business entities and social actions, while objectivism rejects its interdependence. According to the subjective continua, multiple realities exist, which is also true for this research (Saunders et al., 2009). Contrary, **epistemology** deals with the researcher's view on what knowledge constitutes as acceptable. It is concerned with the study of knowledge. It incorporates all elements essential to acquire knowledge, "ranging from numerical data to textual and visual data, from facts to interpretations, and including narratives, stories and even fictional accounts" (Saunders et al., 2009, p. 127).

This thesis has a research philosophy that is **positivist** in nature. Remenyi et al. (1998, p. 32) describe positivism as "working with an observable social reality and that the end product of such research can be law-like generalizations similar to those produced by the physical and natural scientists". Moreover, research that is positivist in nature is based on facts rather than impressions. Therefore, it is highlighted that a quantitative data collection technique is suitable to offer value-free results. However, Saunders et al. (2009) point out that in-depth interviews can also be applied to collect data when following a positivism research philosophy.

When deciding on the approach to theory development, there are three main logics to choose from: deduction, abduction, and induction (Maylor & Blackmon, 2005, pp. 150-152). An **inductive approach** has the logic to create a theory based on the collected data. The data is mainly from qualitative collection techniques used to develop a conceptual framework. Another characteristic of this approach is the structure from the specific to the general (Saunders et al., 2009, p. 127). The **abductive approach** is a combination of characteristics from the inductive approach and the deductive approach and increasingly used for scientific research. Thus, it is a constant movement of existing theoretical literature and empirical data (Dubois & Gadde, 2002). Dubois and Gadde (2002, p. 559) describe the approach as "fruitful if the researcher's objective is to discover new things — other variables and other relationships".

This thesis follows a **deductive research approach**, a top-down approach where the structure of the research paper is from the general to the specific. In the deductive approach, "a clear theoretical position is developed prior to the collection of data" (Saunders et al., 2009, p. 41). The theoretical framework is created based on the existing literature. After data is collected, it is used to evaluate the hypothesis based on existing theory (Saunders et al., 2009). According to the deductive approach, this thesis presents a detailed review of existing literature about the topic of coopetition and the airline industry. After the development of the theoretical framework, data will be collected and analyzed. The research combines and extends earlier studies to examine the impact of coopetition in strategic alliances on airlines' market performance.

4.2. Research Design

A research design is a "logical and systematic plan" about the preparation and direction of the research study that aims to answer the research question at the end (Krishnaswami & Satyaprasad, 2010, p. 41). Moreover, the research design acts like a plan or blueprint that provides information about the collection, analysis, and

interpretation of data. According to Krishnaswami and Satyaprasad (2010, p. 42), the research design is a complex concept and different perspectives need to be taken into consideration. According to Saunders et al. (2009, p. 136), the research design consists of the next three layers of the onion (Figure 8) which refers to the research choice, research strategy, and time horizons.

Saunders et al. (2009, p. 151) distinguish between two data collection techniques: qualitative and quantitative. A **qualitative** research choice is a synonym for interviews and data analysis processes that leads to non-numerical data. Contrary, a **quantitative** data collection technique is, for example, questionnaires, graphs, or statistics that use numerical data. (Saunders et al., 2009, p. 151). This thesis follows a qualitative research method. Qualitative research is particularly useful when aiming to gain insight into one's experience, background information, and standpoint (Hammarberg, Kirkman, & De Lacey, 2016). Moreover, existing studies on coopetition concerning performance and the result of the literature review indicate that interpretations mainly rely on quantitative data collection techniques (Ritala et al., 2008; Park & Cho, 1997). Therefore, in this thesis, semi-structured interviews with three different airlines are conducted. These three airlines are Lufthansa, Finnair, and Alitalia, and each belongs to a separate strategic alliance.

Moving further with the layers of the onion, the research strategy will be discussed next. According to Saunders et al. (2009, p. 141), different research strategies are often linked to a particular research approach. However, the main aim is to choose the research strategy that helps meet objectives and answers the research question. Possible strategies can be, for example, experiments, surveys, case studies, archival research, or action research. This thesis utilizes **case studies** as a research strategy. Case studies are especially useful when the aim is to answer research questions that focus on the 'what?' and 'how?' (Saunders et al., 2009, p. 146). In general, case study research can either be with a single case study or multiple case studies, as well as involve analysis of various levels (Yin, Case study research : design and methods, 2003).

Since I study the impact on three airlines' market performance in three different strategic alliances, this thesis relies on multiple case studies. The advantage of multiple case studies is that "cases which confirm the propositions enhance confidence in the validity of the concepts and their relationships; cases which disconfirm the relationships can provide an opportunity to refine the theory" (Hyde, 2000, p. 85). When using case studies as a research strategy, it is necessary to use the triangulation of data. According to Saunders et al. (2009, p. 146), triangulation "refers to the use of different data collection techniques within one study in order to ensure that the data are telling you what you think they are telling you". Yin (2003, p. 39) distinguishes between a single case study and multiple case studies, where the second one can be referred to as triangulation.

To study the impact of coopetitive strategic alliances on airlines' market performance in a proper context, the study considers different criteria. First, each airline chosen as a case company needs to be a member of a different strategic alliance. By studying the airlines Lufthansa, Finnair, and Alitalia, I will not only focus on three different airlines from three different countries within Europe but also cover three major strategic alliances: Star Alliance, oneworld, and SkyTeam. Second, each airline is of different size, which can lead to additional information about the impact of alliances. The confidence in the results to be interpreted is improved due to the fact that the research includes multiple case studies (Hyde, 2000, p. 85). Furthermore, each airline needs to have enough information available about the data to be analyzed.

All in all, the purpose of my research is of **exploratory** nature due to the aim of scoping "out the magnitude or extent of a particular phenomenon, problem, or behavior" (Bhattacherjee, 2012, p. 5). Saunders et al. (2009, p. 140) mention three ways to conduct exploratory research: reviewing existing literature, interviewing experts, or interviewing a focus group. Moreover, case studies are often used in exploratory research and combined with a data collection technique such as interviews.

The final decision to make regarding the research design is the time horizon. Research can be either a cross-sectional study or longitudinal study. According to Saunders et al. (2009, p. 155), cross-sectional studies can be described as a “Snapshot” of time, while longitudinal studies focus on change measured over-time. This thesis follows a **cross-sectional** time horizon, even though a longitudinal approach would allow more detailed information. However, the main reason being for this choice is time limitations.

4.3. Data collection and analysis

Aforementioned, I briefly described the data collection technique utilized in this thesis, which will be discussed more extensively in this chapter. This thesis applies **semi-structured interviews** as a form to collect data. Unstructured and semi-structured interviews are commonly used when following research that is of exploratory nature (Saunders et al., 2009, p. 323). To compare the results of the different interviews more closely and guarantee consistency, semi-structured interviews are preferred. This way, it can be ensured that all relevant matters are covered and discussed during the interview.

The semi-structured interviews lasted approximately 30 to 60 minutes and were fully transcribed, resulting in 38 pages of transcript. The interview participants were selected based on the belonging to the airlines and their position in the company. The interviewees have been in the company for multiple years, ensuring in-depth knowledge about the development throughout the last five to seven years. Moreover, the participants have a position in the department of alliance and partnership management, resulting in qualitative answers and in-depth knowledge about the airline’s cooperation and performance. Alitalia’s interviewee is not employed by Alitalia anymore but is now a partner at a large consulting firm, Bain & Company, responsible for Airlines and Transportation. As a former employee for Alitalia, he was the vice president of strategy and business development. Therefore, he was the ideal candidate for the interview, even though not employed at Alitalia anymore.

The case companies were selected using the **purposive sampling technique** based on the researcher's judgment. According to Saunders et al. (2009, p. 237), this method is often applied when dealing with a small sample size. Moreover, choosing the cases by oneself allows to critically evaluate which companies best serve to answer the research question. The cases are homogenous in some way, such as industry and company purpose. At the same time, they are also somewhat heterogeneous, and the companies vary significantly in size, geographical location, and financial situation. Those similarities and differences create strength and allow "to document uniqueness" (Saunders et al., 2009, p. 239).

The semi-structured interviews are conducted with three different companies from the airline industry. That ensures the collection of different points of view, experience, and outlook for the future. The data collection technique is a **multi-method qualitative case study**. That is, because, in addition to the collection of primary data, secondary data was also obtained through the use of annual reports of the different companies, articles, and the company's website. The annual reports contain information about the company, its vision, strategy, and financial indicators. Finnair and Lufthansa's reports had a similar structure and completeness, whereas Alitalia lacked annual reports of the last seven years. The material collected is useful and can be compared with primary data from the interviews. The primary data is also used to find answers to questions that could not be solved by inspecting annual reports. Moreover, secondary data was used in the interview guide-making-process and beneficial to prepare for the interviews with the experts. The study's trustworthiness can thus be ensured through the triangulation of data (Saunders et al., 2009, p. 154).

This thesis is empirically supported by primary qualitative data gathered through semi-structured interviews with experts from the airline industry, specifically with experts from Lufthansa German Airlines, Finnair, and Alitalia (Table 7). Semi-structured interviews allow the interviewee to express oneself more freely due to the open-ended questions. Thus, the obtained data is more significant and contains extended, in-depth

explanations (Saunders et al., 2009, p. 324). To conclude, primary data is collected through semi-structured interviews. While, secondary data, such as revenue, EBIT, number of aircrafts, is collected to get a first impression of the airline's development over the last seven years and to prepare the interview guide accurately.

Table 7. Respondent profiles

Company	Interviewee and Position	Interview method	Interview date	Duration of interview	Language
Lufthansa	Konstantin von Wedelstädt Manager Business Development Network & Partnership Management	Telephone	01.07.2020	00:49:19	German
Finnair	Iida Ketola Manager, Airline Partnerships & Alliances	MS Teams	09.07.2020	00:31:22	English
Bain & Company; Alitalia	Mauro Anastasi Partner at Bain: Airlines and Transportation; former vice president of strategy and business development at Alitalia	Zoom	21.07.2020	01:11:48	English

The interview guide was structured as followed. I began by introducing myself, the topic of my thesis, and the purpose of the interview. Then, I asked questions about the interviewee to collect information about its position in the company and responsibilities. Following, the questions focused on the airline's performance, including its market situation within Europe and international, how the competition affected the airline, and the market uncertainty. The extraordinary circumstances arising from the outbreak of the COVID-19 virus were also a focus area, including its effect on the whole airline industry, and the airline itself. The next part of the interview centralized the strategic alliances. I aimed to collect information about the benefits and challenges that the airline experiences from the strategic alliance, its position in the strategic alliance, and whether it is a win-win situation for all airlines within an alliance or rather a win-lose situation. The closing questions concentrated on the alliance's development and future and whether it has positively impacted the airline.

The interview with Lufthansa's employee was conducted in his native language, German, which avoided misunderstandings due to the language barrier. The other two interviews were carried out in English due to my Finnish and Italian skills' lack of proficiency. Nevertheless, it was the interviewee's and informant's second language; I could not notice any problems concerning the understanding and interpreting the conversation.

After transcribing the interviews, it is essential to analyze the data to make it useful and make sure that the answers' meaning is understood. Saunders et al. (2009, p. 490) highlight three different types of processes to analyze qualitative data: summarizing, categorizing, and structuring of meanings. I examined the interviews following a **categorizing data technique**. Categorizing data includes two processes, first, different categories need to be created, and second, the data from the interviews need to be connected to the developed categories (Saunders et al., 2009, p. 492). Additionally, I used the program MAXQDA to professionalize the analysis and, at the same time, make it more simple to review the categories and meaningful chunk of data. As Sanders et al. (2009, p. 492) describe, the labels are created based on the theoretical framework, the interview questions, and the data retrieved. Moreover, I used the same codes for the different interviews, which allowed me to make more districted comparisons. The program created a data card where the coded words, sentences, and paragraphs were summarized. That "has the effect of reducing and rearranging your data into a more manageable and comprehensible form" (Saunders et al., 2009, p. 493). Eisenhardt (1989) suggests that a successful tactic to search for cross-case patterns is creating categories and compare those across the cases in order to find similarities and differences. The data card helped me have the crucial data for the analysis available.

As an analytical technique, I chose to conduct a **single-case analysis** first. That allowed me to focus on each airline individually, as well as present and analyze the data collected. After the single-case analysis, a table that summarizes the findings from the analysis were used as a base for the **cross-case analysis**. According to Yin (2009), a cross-case

analysis is useful when dealing with more than one case study. It has the purpose of comparing the findings to come to a relevant conclusion—allowing me to write the single case analysis and cross-case analysis more focused. Additionally, with all relevant data in one file, it was more manageable to recognize the relationships between theory and new data.

4.4. Trustworthiness of the study

The standard measurements to characterize the quality of a research project are validity and reliability. However, qualitative researchers often question the compatibility of these two qualitative research criteria, who favor using different measures to distinguish from quantitative ones (Shenton, 2004). Lincoln and Guba (1985) present four criteria that can be applied to ensure trustworthiness in a qualitative study. Also, Shenton (2004) selects those criteria to describe how to assure preciseness in qualitative research. Therefore, in this thesis, I apply the following principles to examine the trustworthiness of this study: credibility, transferability, dependability, and confirmability.

According to Lincoln and Guba (1985), the first criterion is **credibility**, and one of the most important ones to ensure trustworthiness. It is concerned with the consistency of the research findings and reality. More specifically, it demonstrates the confidence that can be put in the truth-value of the research findings. The adoption of a well-established research method can enhance credibility. Therefore, different strategies, such as prolonged engagement, persistent observation, triangulation, or member check, can be utilized to ensure trustworthiness. To guarantee credibility in this thesis, I spend sufficient time summarizing the case companies' information and analyzing their data. This data was collected through annual reports, the company's website, as well as articles. The interpretation of the data is the base for the expert interviews with the case companies. Thus, this thesis contains triangulation as a research method and enhances credibility. Furthermore, this thesis's empirical analysis section includes multiple direct citations from interviews that evidences the “truth value” of the research.

The second criterion to be acknowledged is **transferability** and refers to the degree to which the study results can be applied and related to other contexts or settings (Shenton, 2004). This thesis relies on interviews as the primary research method and is conducted with interviewees from three different companies operating in the same industry. The interview questions are a mix of more general matters related to the industry and company-specific issues. Therefore, the possibility to draw generalized conclusions for the phenomenon is somewhat limited to the analyzed industry. However, "if practitioners believe their situations to be similar to that described in the study, they may relate the findings to their own positions" (Shenton, 2004, p. 69). Moreover, it needs to be noted that the airlines chosen for the case company are of different sizes. Therefore, the results can be applied not only for one type of airline but for a wide range of airlines, including small, medium, and large airlines. Nevertheless, each airline needs to evaluate their company's fit to the case companies' characteristics.

The third criterion to evaluate the **trustworthiness** of this thesis is dependability. Dependability is an essential element in qualitative research and refers to the study as repeatable and consistent. It characterizes a study where results would be the same if it were conducted again with the identical participants, in the same setting and the same research methods. According to Shenton (2004, p. 71), "in order to address the dependability issue more directly, the processes within the study should be reported in detail, thereby enabling a future researcher to repeat the work, if not necessarily to gain the same results". I evaluated the airlines' data from the years 2013 to 2019, and this can be done again because those data will not change. Also, it is possible to repeat the interviews with the selected participants. However, to achieve results for the same research topic in the future, the latest data should be chosen. During the interviews, one central issue was the current COVID epidemic that significantly impacted the airline industry. Conducting the study again in the future, the external factors influencing the industry might be different. Thus, even though the interviewees, setting, and methods are the same, the results might differ.

The fourth and last evaluation criterion that needs to be established to ensure trustworthiness is **confirmability**. Confirmability deals with the reliance that results are based on the interviewee's narratives rather than the researcher's bias. The researcher needs to ensure that the findings are shaped by the participants rather one's own opinion (Shenton, 2004). To ensure confirmability in my thesis, I use interviewees' names and include their statements in citations in my analysis and evaluation. The interviewing of one employee per company also improves the confirmability in the sense that the results are no figments but retrieved from data. Moreover, I re-veal the case companies' names and present essential information and data, which increases confirmability. Also, it needs to be acknowledged that I was not employed at any company during the research, which allows a more objective and holistic overview.

After discussing the four criteria that ensure the research study's trustworthiness, it is essential to draw attention to the research design's ethical issues. Saunders et al. (2009, p. 160) emphasize that the research data is collected with ethical consideration and thus, morally defendable. For this study, the interviewees' approval for their voluntary participation was asked; the permission for recording was requested. Participants were informed that a with-drawing from the interview questions is possible at any time. Those elements integrated into my thesis are examples of ethical practice in this study.

5. Empirical Analysis and Results

In this chapter, the companies Lufthansa, Finnair, and Alitalia will be presented in the form of a case study. The first section introduces each airline that was selected for this master's thesis. Moreover, data from each airline is collected, presented, and analyzed from the years 2013-2019. The data allows a first attempt in evaluating how well each airline is performing. In the second section, a single-case analysis will first be applied. A cross-case analysis will then be used to highlight the common characteristics, diversities, and outcomes regarding the performance of airlines through the coopetition in the form of strategic alliances.

5.1. Case Companies

Following, an introduction of the three case companies Lufthansa German Airlines, Finnair, and Alitalia. The company description also contains a brief overview of the key figures between 2013 and 2019.

5.1.1. Lufthansa German Airlines

Deutsche Lufthansa AG, commonly known as Lufthansa or Lufthansa German airlines, is the largest German aviation company that offers scheduled passenger transportation services. The full-service airline was established in 1953 and has been the German national carrier with its headquarters in Cologne, Germany. In 1997, the company was privatized to "increase the group's competitiveness, and contributed to Lufthansa's long-term strategy of developing into the world-wide leading provider of air travel and air travel contiguous services" (Lufthansa Group, 2020a). In the same year, Lufthansa, Air Canada, SAS, Thai Airways International, and United Airlines formed the first global alliance "Star Alliance" in Frankfurt, Germany. Since 2014, Carsten Spohr is the chairman of the executive board and CEO.

Lufthansa operates from two major hubs located in Munich, and Frankfurt am Main, Germany. Moreover, the airline has evolved into an aviation group that consists of network airlines (Austrian Airlines, SWISS, and Brussels), Eurowings, and aviation services. The segment of aviation services includes logistics, MRO (maintenance, repair and overhaul), IT services, flight training, and additional businesses and group functions (Lufthansa Group, 2020a). In 2017, Lufthansa received the reward as a five-star airline, making Lufthansa the first airline within Europe to receive the award while the other nine airlines are based in Asia. Besides being a founding airline of the strategic alliance, Lufthansa formed three joint ventures which allow a broad coverage of destinations. The transatlantic joint venture (A++) consists of United Airlines and Air Canada, the Europe-Japan joint venture is formed with All Nippon Airways (ANA), and the third joint venture is with Singapore Airlines (Lufthansa Group, 2019).

The corona pandemic has hit the airline industry heavily. Almost all airlines had to keep their fleet on the ground, influencing the turnover and financial stability. The crisis forced Lufthansa to accept a stabilization package offered by the economic stabilization fund of the federal republic of Germany. The deal includes a €9bn loan with the condition that the German government has a 20% stake, thus decreasing the airline's decision-making power. Moreover, the airline needs to give up slots to competitors at the Munich airport, and Frankfurt am Main airport (Lufthansa Group, 2020b).

The following key figures of the carrier present the financial results as well as traffic data from the years 2013 till 2019. It is the largest airline in Germany, and Lufthansa CityLine and Air Dolomiti regional airlines are part of Lufthansa German airlines. Therefore, the key figures are including regional partners.

Table 8. Key figures: Lufthansa German Airlines

	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Turnover and Result							
Revenue €m	17,302	17,098	17,944	15,409	16,441	15,917	16,119
Adjusted EBITDA €m	1,409	1,238	1,845	2,700	3,082	2,750	2,336

Adjusted EBIT €m	265	399	970	1,135	1,627	1,753	1,225
EBIT €m	n.d.	393	904	1,723	2,067	1,773	1,167
Traffic Data							
Passengers (thousands)	76,261	77,547	79,305	62,418	70,108	70,108	71,307
Employees	39,847	40,199	40,262	34,654	34,754	34,754	35,221
Aircrafts	396	400	414	350	357	351	364
Route Network	218	235	258	203	205	209	214
RPK (million)	153,334	156,826	162,173	145,878	152,750	160,074	168,085
ASK (million)	193,807	197,478	202,314	184,428	187,762	196,769	204,202

In 2013, Lufthansa generated 17.3bn Euros in revenue, and the adjusted EBIT came to EUR 265m (Figure 9). The year 2014 represents a downturn in revenues, which accounted for 17bn Euros and an adjusted EBIT of EUR 399m. The peak for Lufthansa was 2015, with revenues of 17.9bn Euros and a passenger number of almost 80 million (Figure 10). While the revenue and passengers declined significantly during 2016, the adjusted EBIT rose to 1.1bn Euros. The years 2017 and 2018 represent a high adjusted EBIT of EUR 1.6bn and EUR1.7bn. However, it indicates a decline in revenue from 16.4bn Euros to 15.9bn Euros. In 2019, the airline had to experience a decrease in adjusted EBIT of 30% to 1.2bn Euros, while the revenue increased slightly.

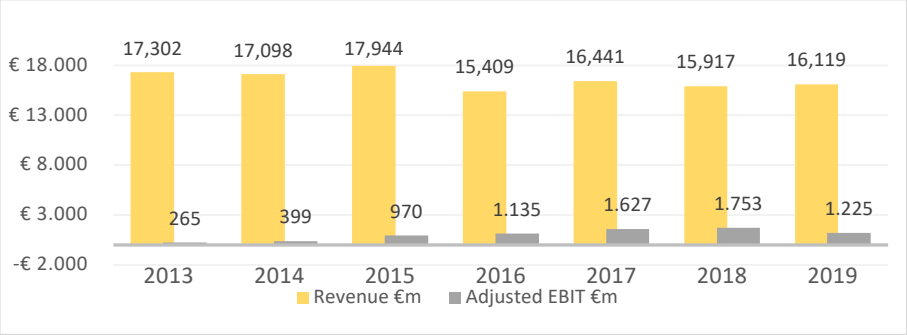

Figure 9. Lufthansa: Development of Revenue and Adjusted EBIT

Based on Figure 10, the passenger number increased during the years 2013 and 2015 to nearly 80 million. In the year 2016, the number of passengers dropped to 62 million. The decline can be linked to the reduction in Lufthansa's numbers of aircraft from 414 to 350 and the route network's reduction from 258 to 203 (Figure 11). From the year 2017

onwards, the number of passengers increased again to around 70 million. Also, the number of aircraft as well as the route network, have been raised again, however only slightly. According to Figure 11, in 2019, Lufthansa German airlines had a fleet of 364 and covered 214 destinations.

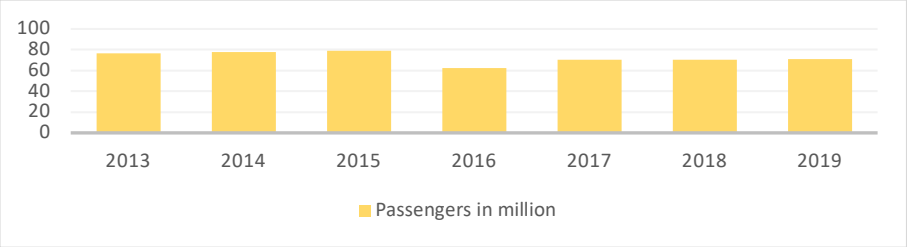

Figure 10. Lufthansa: Passengers in Million

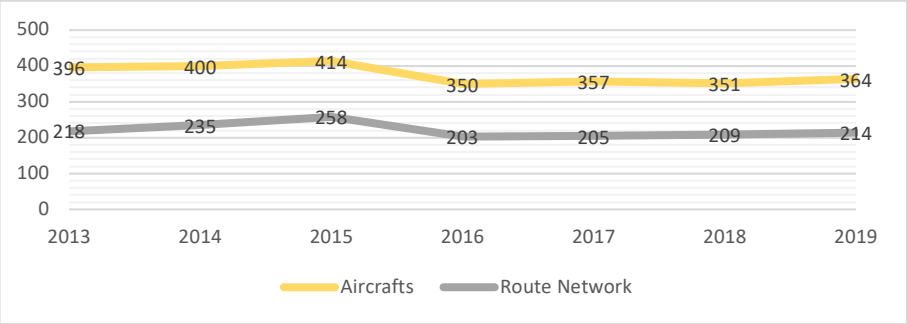

Figure 11. Lufthansa: Aircrafts and Route Network

The available seat kilometers (ASK) and revenue passenger kilometers (RPK) have a similar development over the years as the number of aircraft due to their relation to each other (Figure 12). The ASK can be used as a measurement for the passenger carrying capacity. It can be defined as the available seats for sale multiplied with the number of kilometers flown in 2013 was 193bn. The RPK indicates the number of kilometers that are flown by a paying passenger and was 153bn in 2013. That leads to a passenger load factor of 79%. In 2014 and 2015, the number of aircraft increased; so did the ASK and RPK with a passenger load factor of 79% and 80%. In 2016, the ASK decreased due to the fleet's reduction, which also limited the RPK, and the passenger load factor declined to 79%. Based on Figure 12, from 2017 onwards, the ASK increased again from 187bn to 204bn in 2019, as well as the RPK that rose from 153bn in 2017 to 168bn in 2019. The

passenger load factor was 82% in 2017, followed by a decrease of 1% in 2018, and increased to 82% again in 2019.

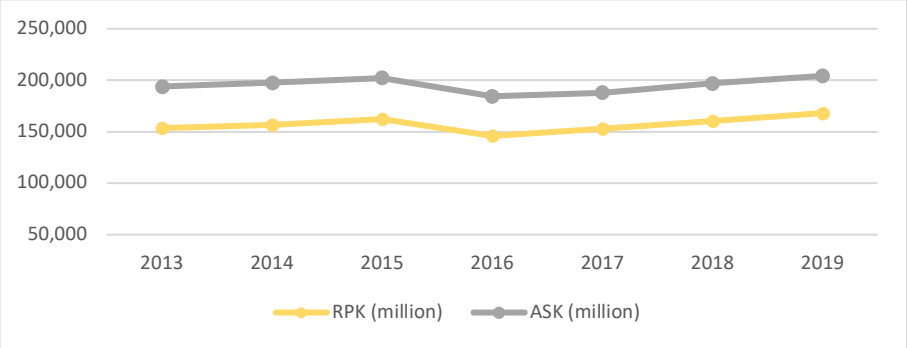

Figure 12. Lufthansa: Available seat kilometers (ASK) and revenue passenger kilometers (RPK)

All in all, based on the previous figures, data shows that Lufthansa changed between 2015 and 2016. The restructuring is demonstrated in a reduction of its business in terms of fleet and network. Also, the number of employees went down from 40.262 to 34.654. However, the adjusted EBIT increased again after the restructuring.

5.1.2. Finnair

Finnair Oyj, commonly known as Finnair, provides airline services, including passenger transportation, charter services, and cargo services domestically and internationally. The network carrier was established in 1923, then known as Aero, and is headquartered in Helsinki, Finland. The long history makes it one of the oldest operating airlines in the world. In 1992, the airline introduced its frequent flyer program “Finnair Plus” which is still active today. The year 1997 marks the airline’s entrance in the strategic alliance oneworld and joins as the first non-founding airline. In 2011, the airlines developed a cost-saving program to build a good base for future development. The 200 million saving and restructuring program was completed in 2014, and one year later, the airline turned into profit again (Finnair, n.d.). The major shareholder of Finnair is the government, with a share of 67,86% in 2020. And since 2019, the president and chief executive officer of the airline is Topi Manner (Finnair, 2019).

Finnair offers destinations domestically, within Europe, to North America, but is especially focused on transportation to Asian countries. In 2019, the airline provided 21 destinations in Asia. Passengers can enjoy non-stop routes between Europe and Asia, such as Nanjing, Hongkong, and different cities in Japan. Besides being a member of oneworld, Finnair formed joint ventures which allow a broad coverage of destinations. The airline participates in the Siberia joint business and an Atlantic joint business joint venture. (Finnair, 2019). Moreover, the airline is continuously listed as one of the safest airlines in the world. According to Finnair (2020), the partnerships "strengthen Finnair's market position and reduce the risks related to growth" as well as "have a significant contribution to Finnair's revenue".

Table 9. Key figures: Finnair

	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Turnover and Result							
Revenue €m	2,400.3	2,284.5	2,324.0	2,316.8	2,568.4	2,836.6	3,097.7
Adjusted EBITDA €m	210.1	176.6	231.2	270.4	436.2	512.6	488.3
Adjusted EBIT €m	11.9	-36.5	23.7	55.2	170.4	218.4	162.8
EBIT €m	7.9	-72.5	121.7	116.2	224.8	256.30	160.0
Net Result €m	22.9	-82.5	89.70	85.10	169.40	101.60	74.50
Traffic Data							
Passengers (thousands)	9,270	9,630	10,294	10,087	11,905	13,281	14,650
Employees	5,803	4,981	4,817	4,937	5,918	6,462	6,788
Aircrafts	70	67	72	73	79	81	83
Route Network	74	75	78	90	126	130	136
RPK (million)	24,776	24,772	25,592	27,065	30,750	34,660	38,534
ASK (million)	31,162	30,899	31,836	33,914	36,922	42,385	47,188

Between 2013 and 2016, the revenue was around 2.3bn Euros (Figure 13). In 2013, Finnair achieved an adjusted EBIT of EUR 12m but faced a downturn in 2014 with an adjusted EBIT of -37m Euros and a net result of -82.5m Euros. Based on Figure 13, from 2015 to 2018, Finnair improved the adjusted EBIT from 24m Euros in 2015 to 218m Euros in 2018. Since 2017, the revenue had increased significantly from 2.6bn to 3bn in 2019.

However, in 2019, the adjusted EBIT declined to 163m Euros, and the net result dropped from 101m Euros in 2018 to 74.5m Euros in 2019.

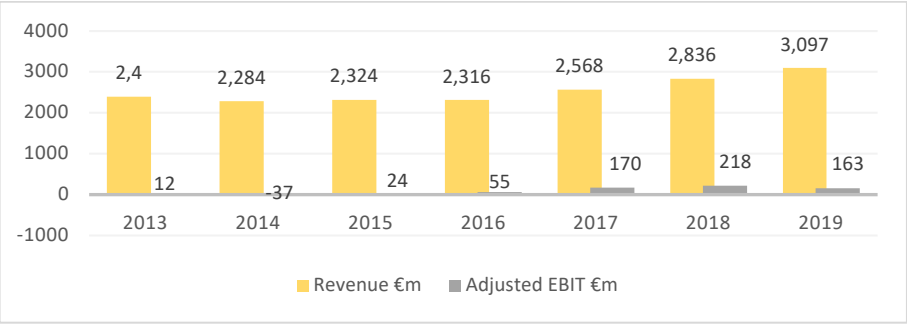

Figure 13. Finnair: Development of Revenue and Adjusted EBIT

The passenger numbers' development is equal to the revenue, which means that during 2013 and 2016, the number of passengers was around 9.8 million (Figure 14). That can be linked to the number of aircraft which did not change significantly during the period but remained about 71 aircraft (Figure 15). In 2016 the airline started to expand its route network from 78 to 90 destinations. According to Figure 15, the most significant increase in geographical coverage happened in 2017 when the route network expanded to 126 destinations and increased until 2019 to 136. The number of aircraft increased more substantially from 2017, where the airline had a fleet of 79 and in 2019, grew to 83 planes. The increase in fleet and route network also caused the number of passengers to rise significantly from 2017. Based on Figure 14, the airline had 11.9 million passengers in 2017, which reached in 2019 14.6 million.

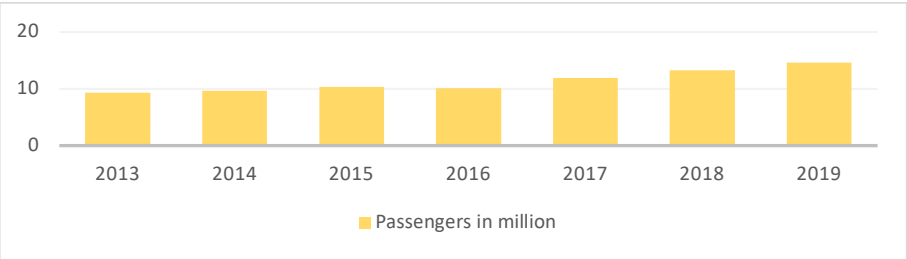

Figure 14. Finnair: Passengers in Million

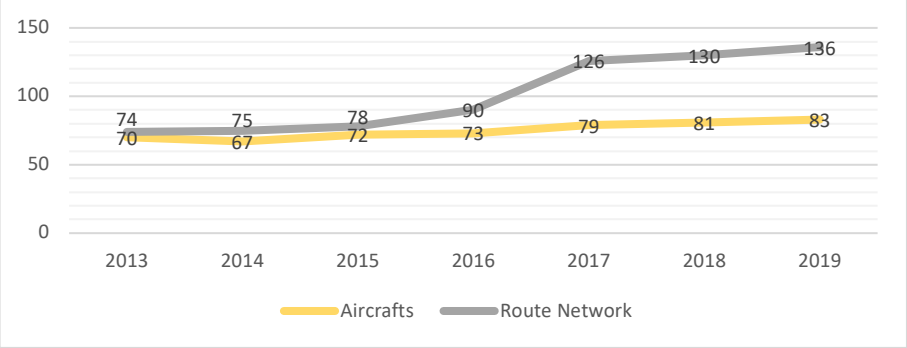

Figure 15. Finnair: Aircrafts and Route Network

The available seat kilometers (ASK) and revenue passenger kilometers (RPK) have the same development over the years as the number of aircraft due to their relation to each other (Figure 16). During the years 2013 and 2015, the passenger-carrying capacity and the RPK increased only slightly. In 2013, the ASK was 31.1bn and 31.8bn in 2015. Based on Figure 16, the RPK increased from 24.7bn to 35.5bn during the time. Also, the passenger load factor was constant from 2013 to 2015 and accounted for 80%. From 2016 onwards, the ASK and RPK had a more substantial increase. The ASK developed from 33.9bn in 2016 to 47.1bn in 2019. The kilometers that were flown by a paying passenger and were 27bn in 2016 and 38.5bn in 2019. During the period, the passenger load factor was 83% in 2017, 82% in 2018, and decreased to 81% in 2017.

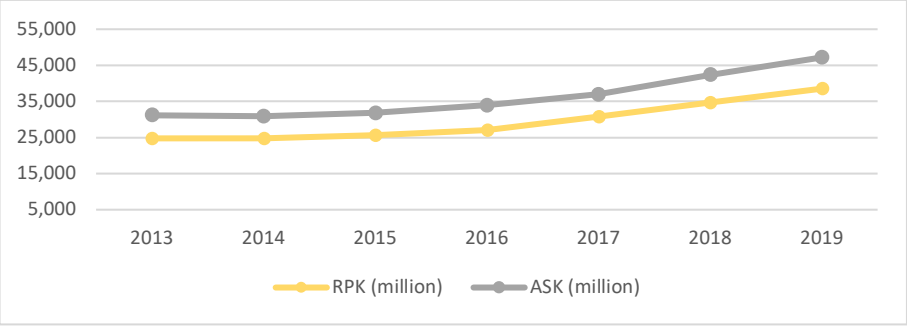

Figure 16. Finnair: Available seat kilometers (ASK) and revenue passenger kilometers (RPK)

Finnair developed, especially between 2016 to 2019, where its route network and fleet increased, resulting in more ASK and higher passenger numbers. Revenue and adjusted

EBIT increased compared to the period between 2013 and 2015. Also, the number of employees declined from 5.803 in 2013 to 4.817 in 2015 but has been growing since 2016 from 4.937 to 6.788 in 2019.

5.1.3. Alitalia

Alitalia Societa Aerea Italiana S.p.A., commonly known as Alitalia, is the Italian national carrier and offers passenger and cargo services across different destinations. The headquarter is located in Rome, where the airline has one of its main hubs. Moreover, the airline joined the SkyTeam alliance in 2001. Since the beginning of operating in 1947, Alitalia has had to face multiple crises (Di Marco, 2018). Until 1996 the airline enjoyed a monopolistic situation in the Italian market but started to face financial problems from 1997 due to the lack of a business plan—the airline received different funds to overcome their financial obstacles. Also, the increasing competition due to the European rules on the liberalization of the airline market put pressure on Alitalia. It forced airlines to develop a competitive strategy to guarantee their survival. In 2006, most of the routes in Italy were flown by foreign carriers, such as Ryanair.

End of 2006, the government wanted to sell its remaining shares from Alitalia. However, it “was not an attractive buy: its fleet was obsolete and diverse, its productivity low, its brand name nearly worthless and its finances far from sound” (Beria, Niemeier, & Fröhlich, 2011, p. 216). The only strengths of the airline were its slots and political protection. In 2007, the airline became private again and received another loan of €300 million. In 2008, investors formed the Compagnia Aerea Italiana (CAI) and bought, after permission by the government, Alitalia, and another bankrupted Italian airline AirOne. The new Alitalia started its operation in 2009. In the same year, the owners of CAI sold 25% of shares to Air France-KLM (Beria et al., 2011).

In 2015, Etihad Airways bought 49% of the stake, and the operations and names were changed to Alitalia-SAI. Two years later, the joint venture between Alitalia and Air France-KLM was canceled. Then in 2017, the airline filed for bankruptcy. After several

discussions and offers by different airlines, the government announced in April 2020, that they would take over Alitalia since it would not otherwise survive the corona pandemic. The new CEO of Alitalia is a former Emirates manager. According to an article from Forbes, “Alitalia has received financing worth €12 billion ($13.4 billion) since its foundation in 1974” (Dominioni, 2020). Since the airline has not published any annual reports from the last years, no key figures of Alitalia's performance are presented.

5.2. Single Case Analysis

To answer the research question and its objectives, there is the need to evaluate the interviewed companies' findings to analyze the impact of strategic alliances on the performance of the three airlines used as cases for this research. To do so, a single case study is conducted before comparing the companies' findings in a cross-case analysis. The single-case analysis follows a similar structure to the conducted interviews.

5.2.1. Lufthansa in the Star Alliance

Development of the Airline industry and the performance of Lufthansa

The interviewee, manager of business development network and partnership management of Lufthansa, has extensive knowledge about the industry as well as the company. He explains the development of the airline industry and the performance of Lufthansa during the last years. According to him, the air transportation has been doing well over the last ten years, internationally as well as within Europe. The interviewee describes the development of different competitor groups. The low cost carriers, especially Ryanair and EasyJet, have grown in size and started to operate from hub airports to compete with full-service carriers. However, the respondent highlights that Lufthansa could afford to act aggressively against the threat at their hub in Frankfurt am Main.

“Even the entry of Ryanair in Frankfurt has of course already frightened us. But we

> *have managed to slow down their further growth a little with suitable measures such as network control and pricing, at least on the operational side. I believe that the plans that Ryanair originally had here in Frankfurt could not be realized."*

The low-cost carriers not only started to move to hub airports but have also added long haul routes to their strategy. The interviewee points out Norwegian as an example, trying to compete on the long haul but failed. Therefore, low-cost carriers on the long haul do not account for a threat to Lufthansa. Moreover, the golf carriers such as Etihad, Emirates, and Qatar, a danger for Lufthansa, have not grown significantly over the last few years, which is a sign that they reached their limits. According to the interviewee, Turkish Airlines, an alliance partner and strong competitor for Lufthansa, is continue to grow after a crisis in Turkey. All in all, the number of airlines did not change significantly, though competition has been intense. As stated by the respondent, the next development would have been an airline consolidation. However, this did not take place in Europe yet but would have happened in the next years, if the COVID pandemic did not occur.

> *"Many smaller flag carriers would actually either join one of the larger groups or disappear from the market in the end. In the current situation, each country will of course support its own airline for now. But because state aid is now being used everywhere, airlines will not consolidate for some time in the future."*

Despite the high competition, Lufthansa was able to grow continuously. Especially 2017, 2018, and 2019 have been the best years for the airline, which the interviewee confirms and which is also visible in the data collected from the annual reports (Table 8). The interviewee highlights that Lufthansa with its two hubs in Germany, in Frankfurt am Main and Munich, is on a good performance level and describes its market position as number two in Europe, after IAG and before KLM-Air France.

> *"Despite all the competitive issues, where ten years ago one would have said golf career threat, low-cost carriers in Europe, we were able to improve our results continuously. And the last three years were the best for Lufthansa."*

After all, Lufthansa is a five-star airline; however, as per the interviewee, it's an airline that is not the first mover to adopt changes but observes the situation first before acting. It is pointed out that in a dynamic and continuously changing industry, it is crucial to keep up with the competition; otherwise, the airline will be behind quickly. One example is the implementation of the premium economy, which has developed to Lufthansa's most profitable seating class. That is because passengers are willing to pay more for more comfort; versus business travelers, who are no longer allowed to fly business class because of a tight company budget. This indicates changes in customer needs and a new trend in the airline industry.

> *"We like to observe a situation like this, then we think about it five times before it is implemented. But meanwhile we have Premium Economy almost everywhere. In many markets it has become very successful and perhaps a trend."*

Moreover, the interviewee was asked about the influences and changes for Lufthansa and the airline industry due to the Covid-19 epidemic. The interviewee claimed that:

> *"The demand will change, it will be lower, at least for the next three years. Also, the demand structure will change, less corporate travel will take place compared to leisure travel. The uncertainty leads to faster, and more short-term market changes and a more aggressive competitive behavior."*

Strategic Alliances and its performance

The interviewee was questioned about the benefits that Lufthansa receives through the Star Alliance. He mentions several advantages that can be divided into customer and airline benefits. Starting with the benefits for customers, Star Alliance allows customers to collect miles and have lounge access with partner airlines. Moreover, it creates a quality promise to the customer where all airlines, who are members of the alliance, have similar standards and quality levels around the world. Additionally, the alliance grants the customer to travel with multiple airlines seamlessly. The interviewee also mentions various benefits for Lufthansa being a member of Star Alliance. Now it is relatively

inexpensive. Furthermore, airlines can do their marketing together, even though the respondent points out that Lufthansa is already a strong brand itself. He explains another benefit of the alliance, which implies airlines are sharing costs in developing travel apps and digitalizing the travel chain together.

> *"Star Alliance can develop these things together. Instead of everyone having an individual solution. That's better for the customer, and it saves resources for the individual airlines. Even a large airline like Lufthansa can benefit from this."*

There are also challenges and disadvantages that arise from belonging to the alliance. He indicates that complexity and less freedom can result from partnerships, which is why Emirates is not a member of any strategic alliance. However, it is also emphasized by the interviewee that Lufthansa does not feel trapped considering the challenges.

An essential component for answering the research question and analyzing the impact of strategic alliances on airlines' performance is Lufthansa's position in the Star Alliance network. Already in the company description, it is highlighted that Lufthansa is a founding member of the Star Alliance. The interviewee confirms and highlights that Lufthansa and United are the two biggest Star Alliance members, with Air China being third. Also, Lufthansa and United have more weight in decision making. The respondent describes the position of Lufthansa in the alliance network as a central role.

> *"For the Star Alliance, the Lufthansa Group is the anchor in Europe. […] We see ourselves in the role of covering Europe for the Star Alliance and our hubs are the main access points and distribution points for Europe."*

According to the respondent, Lufthansa has a high share, which can be advantageous, especially for smaller airlines that can gain from Lufthansa's size, know-how, and brand name. However, the interviewee also states, that the alliance might be more beneficial for small airlines, compared to larger airlines as Lufthansa.

> *"I don't know whether the other way around it pays off completely for us."*

The interview also covered the topic concerning the performance and value of Star Alliance. The respondent highlights a crucial aspect that describes a shift and development of the strategic alliances:

> *"The meaning of "alliances", even though they are now of course large, and all major airlines belong to an alliance. But the meaning has declined relatively. They are still a good marketing tool for the customers. Alliances now have more of a B-to-C focus, because they offer customers tangible added value."*

When elaborating about the value of alliances further, he points out that the alliances are always supposed to be equally beneficial for all members. There are multiple airlines in each alliance, and an airline cooperates with some partners more extensively than with others. Moreover, Lufthansa is only cooperating to a minimum with Turkish Airlines, for example, since it is a strong competitor. Also, the partner airlines that are important for United Airlines might differ from the essential ones for Lufthansa. According to him, there should be a partner for everyone to cooperate with. Thus, the interviewee claims:

> *"So partnerships at this level are always supposed to be a win-win. In that sense, of course, it should still be positive at the end of the day. In this respect, I don't want to put it too negatively. I believe that it still makes sense overall, but it varies greatly from one airline to another."*

The interviewee illustrates that the strategic alliances are vital for Lufthansa and those airlines in the European market that aim to be successful. He compares it with one of the few airlines that is not a member of any alliance, Emirates. By contrasting the geographical setting of Lufthansa and Emirates, it becomes clear that Lufthansa has a relatively small domestic market; however, aiming to be globally present. Emirates, with its business model and location, is not reliant on any alliance. Moreover, he claims that airlines would not participate in a strategic alliance if it would not make sense.

Another question of the interview was about change within the alliance and its impact on Lufthansa. An example of a change within Star Alliance was explained. The change occurred in 2014, when US Airways left the Star Alliance due to a merger with American Airlines, which is a member of oneworld. In 2015 Lufthansa expanded its route network and fleet. The interviewee explains that this change in the alliance did not have a significant impact due to the fact that US Airways never was an important partner for Lufthansa, compared to United Airlines. Interestingly, the respondent highlights that:

> *"On the whole, US Airways was not so significant for us that it would have had any effect at all on our restructuring and our network. You might have noticed it in the results on one route or another. It would be different if United changed the camp or Singapore Airlines. It would be a different number, definitely."*

Moreover, he elaborates on the consequences for Lufthansa, if an indispensable partner leaves the alliance. That means that Lufthansa either needs to fly more themselves or, if the number of passengers decreases for the route, Lufthansa flies less. It can also result in losing passengers due to the lack of connecting flights. However, those decisions need to be discussed case-by-case and cannot be generalized. Furthermore, he claims that even if an airline is not in the same alliance, they can still work together, one example is the cooperation between Lufthansa and Cathay. Lufthansa considers Hongkong as a relevant market that they decided to work closely with Cathay. Contrary, it is also stated that if small European airlines such as SAS and LOT left the Star Alliance, it would not make any difference for Lufthansa. The interviewee mentions that the change within the alliance always depends on the individual airline, and he concludes:

> *"So a new partner has a rather positive effect, if we lose a partner it has a rather negative effect."*

Future of Alliances and alternative options

During the interview, the topic of joint ventures came up multiple times. Moreover, the question was asked whether the interviewee thought joint ventures would become

more dominant and might even replace strategic alliances. First, he points out that joint ventures have increased and the trend is going towards this direction. However, in contrast to strategic alliances, joint ventures are not visible to the customer. The respondent characterizes the joint ventures important for Lufthansa because pricing and planning capacity is more coordinated. Thus, joint ventures have more of a B2B focus.

Moreover, the interviewee explains that too many joint ventures might not make sense either. They are currently bilateral or trilateral agreements but he could see joint ventures from the same region being linked together. According to the respondent, it would be beneficial for Lufthansa, however, the Asian carriers are strong competitors even though they are in the same alliance. Thus, it will be in the distant future.

> *"We have, for example, three separate joint ventures to Asia, Air China only for China, with ANA only for Japan, and Singapore Airlines for South East Asia and Australia. For example, is there any way to bring these three joint ventures together."*

Another idea that the interviewee mentioned for the future, is a global airline holding, where, for example, United as an North American carrier, one Asian carrier, and Lufthansa for the European market would merge. By pointing out the decline in importance of strategic alliances, and the decrease in airlines moving in or out of alliances, the interviewee claims that this is the new trend, and the alliances are simply established now and states:

> *"The conclusion is that it's still nice to have but that the large entry in the future is now a mature product. But I do not think that this will allow us to have any more great fantasies for the future."*

5.2.2. Finnair in the oneworld Alliance

Development of the Airline industry and the performance of Finnair

According to Finnair's manager for airline partnerships and alliances, the competition within Europe has significantly increased, especially by existing carriers that add more

capacity. At the same time, competition on the long haul has been moderate. Additionally, low-cost airlines have become interested in the long haul routes, such as Norwegian. The interviewee describes the situation at Finnair's base airport in Helsinki, where the number of low-cost carriers has been relatively low compared to other airports in Europe. However, she also emphasized that there has been an increase in low-cost carriers in the last year through Ryanair and EasyJet offering routes.

Moreover, the interviewee confirms Finnair's performance as positive in recent years, which aligns with the data from their annual reports, which was collected before the interview (Table 9). The airline has been very profitable and has achieved a new record high in passenger numbers and revenues. According to the respondent, Finnair's primary market is Asia and the connecting traffic between Europe and Asia, where they have established an important role. While their share in Europe is relatively low. The interviewee claims that:

> *"If we only talk about the Europe market, in 2019, we were the twenty second biggest airline in terms of capacity in Europe. So obviously, in the intra-Europe market, we are capacity wise not that big. But when we start to talk about the traffic flows between Europe to Asia, we start to be globally and especially Europe wise one of the biggest ones."*

According to the interviewee, market conditions, including market uncertainty, customers' needs, and the change in demand, developed over the years. Customers are becoming more demanding due to the high number of choices available. Finnair is investing in the Premium Economy as a new seating group for the long haul routes, which will soon be available to cope with demanding customers. However, the interviewee also points out that due to the COVID-19 epidemic, customers' needs will move towards a different direction, focusing more on safety.

> *"Of course, now we will see then with COVID how it is going and what sort of preferences from customers we'll after this is more maybe not that much about the product itself, but maybe, the safety and the feeling secured with the carriers."*

Moreover, the interviewee was asked about influences and changes for Finnair and the airline industry due to the Covid-19 epidemic. She claims that the industry collapsed and that the industry is as political and restrictive as before the industry's privatization when regulations were still in place. Furthermore, before the outbreak, people used to travel at affordable prices frequently. However, the need and willingness to travel are now gone, or people travel for shorter distances, which will be a short-and medium-term trend. The interviewee also considers that airlines' key focus is now to guarantee safe travels for passengers.

> *"So maybe people want to call, like, you know, for shorter distances because it might feel unsafe to go, very far from home. So I think that the next few years, maybe we have this trends. But I still personally believe, at some point we will go back to what we have used to."*

Strategic Alliances and its performance

The interviewee was questioned about the benefits that Finnair receives through oneworld. She elaborates that the purpose of the alliance was to widen an airline's network, as it was relatedly small in the past. With the example of Finnair and Qantas, she emphasizes that those airlines do not compete on the same routes but create a more extensive network together, which is the original idea of the alliance. Furthermore, cost-sharing for different development projects with all members of the partnership indicates another benefit.

Nevertheless, the interviewee also outlines several challenges that arise from strategic alliances. First, when sharing costs for developments, all members need to agree with prior execution. This process would be too slow sometimes before everyone agrees. Second, the alliance can be restrictive, which forces some airlines to leave the alliance. However, leaving the alliance can also be challenging, as the respondent claims:

> *"Usually it's like there are heavy barriers to exit alliances because you have stream light some of your processes and your systems with alliances partners."*

An essential component for answering the research question and analyzing the impact of strategic alliances on airlines' performance is Finnair's position in the oneworld network. According to the respondent, the founding members of the alliance, such as Cathay, Qantas, and British Airways, are much bigger than Finnair, which gives insight into the airline's position within the network. Thus, it can be concluded that Finnair does not have a central role in the strategic alliance.

> *"So they much bigger than Finnair. So I guess that could be used as a measure to think about the relevance of each member in the alliance. So based on that, of course we are much more smaller, smaller player within that alliance than some of the others."*

The interview also covered the topic concerning the performance and value of oneworld. The respondent highlights a crucial aspect that describes a shift and the development of the strategic alliances. While in the past, competition in the alliance was low and airlines participated to widen their network, nowadays, airlines from the same alliances compete on the same routes. Alliances should be a win-win situation, but the interviewee claims that the airline's size is related to the degree in benefits. Especially smaller airlines benefit from the alliance and, therefore, brings many benefits for Finnair.

> *"I think for the carriers who have a smaller network they will benefit from the alliance a lot because they are able to offer much more origin destination pairs. […] So I think, it should be a win-win, but I think so what you get out of it might be a little bit different depending on your size."*

Even though the respondent agrees that smaller airlines get more out of the alliance than large airline companies, she also empathizes that large airlines can benefit from some small carriers. This is because they might operate routes to more unique destinations that large carriers would not serve.

Another question of the interview was how change within the alliance affect Finnair. The interviewee mentions the example of the Latin American airline LATAM, that exited oneworld recently. That has a significant effect on the alliance as it was the only airline covering the Latin American geographic location, and now creates a lack of network coverage. However, she also points out that although oneworld might not cover Latin America, the alliance's strength is to substantially cover the Australian – New Zealand region through Qantas, which might be less covered by other alliances.

Future of Alliances and alternative options

The final questions dealt with joint ventures and whether they would become more dominant in the future. The interviewee agrees that the number of joint ventures has increased significantly over the last years. Moreover, joint ventures characterize a more close form of cooperation where capacity and pricing can be discussed more concrete.

> *"I think so. We have seen a lot of joint ventures lately forming and with those you have the antitrust. […] So it's kind of the step forward what comes to cooperation. So, I would see the trend of JVs growing and going forward."*

According to the respondent, due to the COVID epidemic, the value and importance of alliances and other partnership types might increase because airlines operate on a smaller network and are more restricted. Thus, the interviewee claims that the outbreak might bring new forms or ideas of partnerships. She concludes that the airline's partnering will never vanish.

5.2.3. Alitalia in the SkyTeam Alliance

Development of the Airline industry and the performance of Alitalia

The interviewee, a former vice president of strategy and business development at Alitalia, and partner at Bain & Company for airlines and transportation, has extensive knowledge about the industry and the company. He explains the development of the airline industry

and the performance of Alitalia. According to the interviewee, during the last 16 years and especially in the previous six to seven years, low-cost carriers have grown extensively and become an intense competition for full-service carriers. They gained substantial market share in Italy as it's a market that consists mostly of inbound and leisure travels, which creates a suitable environment for the low-cost business model. The low-cost carriers offer lower fares and thus, create a more significant market share. Besides competition from low-cost airlines, also full-service carriers such as Lufthansa, Etihad, and Turkish airlines compete with Alitalia on intercontinental routes. The respondent claims that those carriers decrease the market share of Alitalia by absorbing traffic from the airline. In conclusion, Alitalia has to face intense competition in the domestic and intercontinental markets.

Furthermore, the interviewee predicts consolidation in the airline industry to occur. He claims that:

> *"From September in the next one, two years, a significant wave of consolidation of airlines, so many small airlines, will not survive. All the big ones will survive let's say the former flag carriers will survive because they have been bailed out by the government, including Alitalia. The big low cost carriers will survived so EasyJet, Ryanair and Wizz will survive because they have tons of cash."*

Concerning the performance of Alitalia, the respondent confirms that the airline has not been doing well over the last years. According to him, Alitalia's last close to break-even was in 2008, but the performance has been significantly negative since then. One reason for the losses is the failure to adapt to market needs, which are leisure tourism, inbound traffic, and short- and medium travels. This caused the airline to lose significant market share. The interviewee points out that Alitalia is a full-service carrier that failed the ability to market the intercontinental network. However, if Alitalia would restructure and change towards a low-cost operating model, they might be better in competing, grow, and be profitable.

Moreover, the interviewee describes the aviation industry as highly uncertain. He was asked about the influences and changes for Alitalia and the airline industry due to the Covid-19 epidemic. The interviewee describes that the trends about competition and low-cost carriers will exacerbate and that those trends will be more powerful due to the outbreak. Also, business travel will decline and moves toward low-cost carriers due to the cost-saving aspect. Furthermore, the loss of passenger share is significant, which might only recover in 2023 and 2024. He concludes that:

> *"Volume has been depressed, you will see a significant reduction of yields. And a kind of forced restructuring of a number of airlines, of the cost structure of a number of airlines. So if you look at 2024, you will get back with the healthy traffic probably above 2019, healthy airlines, lower yields, and lower cost structures and less airlines."*

Strategic Alliances and its performance

Another topic during the interview was the strategic alliance, its benefits, and its challenges. The interviewee was questioned about the benefits that Alitalia receives through SkyTeam. He elaborates that the airline can offer a more extensive network of routes to the customers. Furthermore, members of the alliance can share costs due to consolidated buying, which is particularly beneficial for smaller, less profitable airlines. The interviewee points out another advantage for Alitalia being a member of SkyTeam, which is the gain in shares on a flow. Alitalia and Air France operate on the same route. Instead of offering similar flight times, they cooperate and coordinate that one airline flies in the morning and the other one in the evening. This way, they have the ability to dominate on this route and avoid competition.

Nevertheless, the respondent also points out the challenges of being a member of the alliance. He centralizes the main problem being the loss of decision-making power. The decision-making process takes time and includes making sacrifices to reach a middle ground with other members. He claims that:

> *"If you want the alliance to really generate the benefit that we were discussing before, you actually need to coordinate those decisions. That's in practical terms, means that many times you need to take kind of suboptimal decisions for the sake of that alliance before in direct sake of your airline."*

An essential component for answering the research question and analyzing the impact of strategic alliances on airlines' performance is Alitalia's position in the SkyTeam network. The interviewee describes the position of Alitalia in the strategic alliance as extremely weak. The central role is to cover the Italian market where the airline's market share is relatively low, leading to a rather limited role in SkyTeam.

The interview also covered the topic concerning the performance and value of SkyTeam. He claims that the alliance is always supposed to be a win-win for everybody. Moreover, he highlights that it is a good way of coordination where a high number of airlines in an alliance are more beneficial than small alliances. However, he also mentions that if Alitalia is not a member of SkyTeam anymore, it would be a small airline with few connections and, thus, not attractive for anybody because it doesn't fly anywhere. According to the interviewee, as a small company, Alitalia is significantly benefiting from the alliance, while other member airlines only benefit from Alitalia when operating in the Italian market. It improves the performance and allows Alitalia to take advantage of the scale of bigger ones in buying and sharing services.

Another discussion was the impact of change within SkyTeam on Alitalia. The interviewee states, if a new airline enters the alliance, that:

> *"So it's by definition a positive addition to you. Can be a huge addition. Or it can be a very limited addition, depending how much your customer base uses the products that that airline is offering."*

Future of Alliances and alternative options

The final two questions dealt with developing other forms of partnerships such as joint ventures and the future of strategic alliances. The interviewee agrees that joint ventures have been growing in recent years and that it is a form of partnership that characterizes stronger cooperation between airlines. They will become more valuable and more important. Moreover, the respondent mentions a revolution for the future, which are shared services. Those services, such as Administration, or IT, would not be in every country, but the alliance would share one center responsible for all member airlines. According to the interviewee:

> *"So that again is gaining value from scale. To me, those would be fundamental elements for Alitalia, if they manage do it through Sky Team because they would overcome the limits of being small."*

Table 10. Results of Single Case Studies

	Lufthansa	**Finnair**	**Alitalia**
Development of the Airline industry and the performance of airlines			
Overall performance	Good; grew continuously from 2017 to 2019	Profitable; record high in passenger numbers and revenues	Bad; negative performance since 2008; failure to adapt
Geographical coverage	Globally present	Low market share in Europe; extensive coverage to Asia	Mostly Italian market
Market uncertainty	Adaption to new customer trends and to changes to stay competitive	More demanding customers, and high number of choices; adapt to market changes	Highly uncertain industry; customers demand low cost fares
Competition intensity	Intense competition of LCCs and FSCs but have not grown intense anymore; LH aggressively fights threats	Competition has increased, LCCs start operating from Helsinki airport	Intense competition from LCCs and FSCs that decrease market share of Alitalia; consolidation during next two years
COVID	Less demand and corporate travel, faster and more short-term market changes, aggressive competitive behavior	Political and restrictive industry; need to travel is gone or only short distance, more focus on safety	Depressed volume of passengers; forced restructuring of airlines' cost structure;

Strategic Alliances and its performance			
Position in Alliance	Central position; Anchor in Europe	Small position; founding members are bigger	Small and extremely weak role
Value of Alliance	Gives more to the alliance than receives; small airlines benefit more	Competition has increased; smaller airlines benefit most, beneficial for Finnair	Supposed to be win-win, small airline like Alitalia benefits from alliance
Change in Alliance	new partner has rather positive effect; exit has a rather negative effect	Depending on the airline, it can have a huge effect	New member is positive, can be a huge or a minimal addition
Future of Alliances and alternative options			
Future of Alliance	Partnership is vital in Europe; global airline holding, or regional JVs	Partnerships will never vanish; become more important due to COVID	Revolution: shared services and one center for all members
Alternative options	JVs is a trend, they are more coordinated and have increased	JVs have increased significantly; closer form of cooperation	JVs has grown, stronger cooperation; they become more important

5.3. Cross Case Analysis

To answer the research question, there is a need to compare the interviews' findings of the three case companies. The cross-case analysis follows a similar structure to the conducted interviews and single-case analysis. First, the focus is on the airline industry's analysis, its development, including the influence of the COVID-19 pandemic, and the performance of the case companies. Second, an analysis of the alliances is conducted, including the benefits and challenges, the airline's position in the alliance, as well as how change within the alliance impacts the airline's performance. Finally, the chapter closes with the analysis of the future of alliances and alternative options. All in all, the findings are examined and analyzed in connection with the theoretical framework.

5.3.1. Development of Airline industry and the performance of airlines

The airline industry has become more competitive over the last decade and is facing high uncertainty. Especially the low-cost business model has become a strong competition for full-service carriers. Furthermore, they do not only operate from secondary airports

anymore but have extended their network to hub airports (Lieshout et al., 2016). All interviewees confirm the development and growth of competition. However, the threat is viewed differently by the three interviewees. For Lufthansa, a large airline with a global presence, that had an excellent performance and grew continuously during the last three years, low-cost carriers are not seen as a considerable threat. That is because Lufthansa follows an aggressive strategy at its hubs to prevent competition from becoming too large. For Finnair, a relatively small airline with a low market share in Europe feels the threat of low-cost carriers increasingly since they started operating more routes from Helsinki airport. And for Alitalia, a small airline with a continuous negative performance during the last years and a geographical coverage mostly within the Italian market is attacked by low-cost carriers that decrease the airline's market share. Thus, market share not only functions as a performance indicator (Park and Cho 1997). But market share and airline size are also indicators of how competition and threats are viewed and impact the airline.

Aforementioned, Lufthansa has a global presence with an extended route network. Finnair, on the other hand, is relatively small within Europe. However, as the interviewee states, Finnair focuses on the route network from Europe to Asia, characterized by extensive coverage. Contrary, Alitalia has a rather small network and lost substantial market share on intercontinental and domestic routes and only has some market share on key routes from its hub in Rome. Gudmundsson and Lechner (2006) identify the route network as one essential asset for airlines. Moreover, according to Gudmundsson and Lechner (2006), the uniqueness of resources that create a competitive advantage is essential for an airline's performance. The researchers' findings align with the performance of the case studies, and makes Lufthansa and Finnair valuable airlines with unique assets, while Alitalia cannot achieve a competitive advantage.

Moreover, Finnair's and Lufthansa's interviewees point out that customers have become more demanding due to the high number of options available. According to Gudmundsson and Lechner (2006), the customer base is another critical asset of an

airline. Therefore, it is essential to adapt to market changes and customer needs to stay competitive and keep customers. Lufthansa already implemented the Premium Economy as a new seating class, and Finnair is currently integrating it. In contrast, Alitalia is not adapting to customer needs as the interviewee states. As Italy is an inbound market with tourists that focus on low-cost fares, Alitalia did not change its business model and thus, failed to react to the demand. Therefore, Finnair's and Lufthansa's overall excellent performance can be reasoned based on unique resources and success in adapting to market changes and customer needs. While on the other side, Alitalia could not create a competitive advantage by changing its strategy and business model to meet customer demands. Therefore, the lack of competitive advantage, a large customer base, and extensive network lead to a negative performance (Gudmundsson & Lechner, 2006).

All interviewees refer to the current COVID-19 epidemic and its extensive effects on the entire airline industry. The IATA (2020) also points out the enormous impact of the external environment and that, especially large airlines, the former national carriers can receive financial aid from the government. All interviewees forecast a lower demand, notably less business travel. Additionally, the uncertainty leads to faster, and more short-term market changes and a more aggressive competitive behavior, based on the Lufthansa interviewee. According to the interviewee of Alitalia, the crisis leads to a forced restructuring of the cost structure. Based on the interviewee's forecasts and the IATA's (2020) statement, the outcome of the COVID epidemic will have a similar effect on the airline industry as the financial crisis. During the financial crisis in 2008, low-cost carriers increased substantially and experienced a boom due to the change in travel behavior (Goyal & Negi, 2014). Due to the trends of not traveling long distances by plane and traveling less for business but more for leisure, it can lead to growing demand in low-cost carriers again.

Furthermore, a report by KPMG (2018) suggests that consolidation within the airline industry will increase in the next years. They state, "Europe is a mature aviation market, which is considered to be in the early stages of a wave of consolidation that is expected

to continue for the near term" (KPMG, 2018, p. 27). That is confirmed by Alitalia's interviewee, who predicts that the flag carriers will survive due to a bailout by the state. Also, the big low-cost carriers such as EasyJet and Ryanair will survive. However, small airlines will disappear or consolidate with existing airlines due to the epidemic, intense competition, and low fares. Nevertheless, according to Lufthansa's interviewee, during the next years, it will not be possible to have some flag carriers buy small airlines. That is because, Lufthansa, for example, received state aid during the epidemic and cannot afford to consolidate with another airline.

5.3.2. Strategic Alliances and its performance

Cooperating with competitors can have multiple advantages such as access to resources (Bengtsson & Kock, 2000), cost sharing (Luo, 2007), and according to Peng et al. (2012), it also increases the speed in market-entry and market share. Additionally, strategic alliances allow passengers to take advantage of a frequent flyer program, access to lounges, and seamless travel (Pels, 2001). Those are benefits that are also mentioned by the three interviewees. Lufthansa's interviewee also points out that it creates a quality promise for passengers where airlines have similar standards and quality levels. He also points out that combined marketing can be done. However, Lufthansa does not depend on that due to its strong brand itself. Contrary, Alitalia, as a smaller and less profitable airline, benefits extensively from cost-sharing, market share, and marketing. Even though Alitalia has those advantages from the alliance, it does not improve its operating efficiency, which aligns with Min and Joo (2016) results, who argues that it is not clear if strategic alliances create value for airlines.

All interviewees mention similar challenges of cooperating with competitors in the form of strategic alliances. They highlight the complexity of decision making and less freedom. However, Lufthansa indicates not feeling trapped in the alliance, while Finnair points out that the alliance can be restrictive, and Alitalia further emphasizes that being in an alliance includes making sacrifices to reach a decision. The difference in perceived challenges can be related to the position in the alliance. Lufthansa has a central role in the

alliance and is a founding member of Star Alliance. According to the interviewee of Lufthansa, they experience more decision-making power than other members. That contrasts to Finnair and Alitalia and thus, reasons the different perceptions. This matches with the findings by Sanou et al. (2016), who emphasize that a central position leads to various benefits.

Aforementioned, Lufthansa has a central position in the alliance. It is the anchor in Europe, and the hubs are the primary access and distribution points in Europe for the Star Alliance. Contrary, Finnair has a small position in oneworld compared to the founding members, which are bigger in size. Furthermore, Alitalia has an extremely weak and minor role in SkyTeam. The study by Sanou et al. (2016) examines the influence of a firm's position in a network on market performance. The findings show that a firm's position is an indicator of superior performance. Also, Gudmundsson and Lechner (2006) highlight the importance of the actor's position within a network that impacts performance. The findings align with Lufthansa's and Alitalia's position and corresponding performance. The central position of Lufthansa indicates superior performance, and vice versa, the weak position of Alitalia shows a low performance. However, Finnair has a small position in the alliance, but an overall good market performance.

According to Lufthansa and Finnair, strategic alliances have changed since its emergence and describe different developments. Lufthansa's interviewee mentions that strategic alliances now have more of a B2C focus, which functions as a useful marketing tool for customers, such as the frequent flyer programs and lounge accesses. At the same time, the meaning of alliances has declined. Finnair's interviewee describes a different development, which is that the founding purpose is not centralized anymore. Nowadays, airlines compete on the same routes with alliance members, while the intended goal was to collaborate with competitors to broaden the route network. The development can be explained with the resource-based view. According to the resource-based view, firms are building relationships with rivals in order to get access to unique resources (Bengtsson & Kock, 2000). Also, Gyawali and Park (2009) emphasize that firms or

networks get access to resources that would otherwise be inaccessible on their own. This way, firms can develop a competitive advantage. This reasons the grounding purpose of the alliance.

However, Gnyawali and Park (2011) point out that even if they have similar and complementary resources, in this case, the same routes, it allows firms to take advantage of economies of scale. Additionally, competitors' resources enable firms to save costs and time (Gnyawali & Park, 2009). This aligns with the example the interviewee of Alitalia mentioned. Alitalia and Air France operate on the same route. Instead of offering similar flight times, they cooperate and coordinate that one airline flies in the morning and the other one in the evening. This way, they have the ability to dominate on this route and avoid competition. That argument can be used to explain the development that Finnair experiences, where members of the same alliance cover the same route.

The alliance network consists of multiple airlines that aim for mutual value creation and individual value appropriation (Sanou et al., 2016). Bengtsson et al. (2010) describe that those network relationships vary and can be cooperative or competitive connections. That corresponds with Lufthansa's interviewee statement, who explains that some airlines in the alliance network cooperate extensively, while other airlines avoid cooperating with specific airlines. For example, Lufthansa keeps the cooperation with Turkish Airlines to a minimum as it a strong competitor.

All interviewees claim that the strategic alliance is a win-win situation for all members. However, when further discussing the topic of whether the alliance benefits all airlines equally, they highlight that the size of the airline is connected to the additional benefits received from alliances. Lufthansa points out that small airlines can benefit from their size, know-how, and brand name. Additionally, Lufthansa states: *"I don't know whether the other way around it pays off completely for us."* Finnair explains that small airlines can access to a broader network, and that Finnair itself benefits a lot from the alliance. Also, the interviewee of Alitalia emphasizes that small airlines like Alitalia significantly

benefit from the alliance. He points out that if Alitalia is not a member of SkyTeam anymore, it would be a small airline with few connections and, thus, not attractive for anybody because it does not fly anywhere.

Based on the statements by the interviewees of the three case companies, alliances are supposed to be a win-win, but small airlines, such as Finnair and Alitalia, get more out of the alliance than large airlines like Lufthansa. That corresponds to a study by Gnywali and Madhavan (2001), who claim that not all firms have the same benefits from a coopetitive network. However, their result is that the firm's structural embeddedness within the network impacts competitive behaviour. Notwithstanding, this might be true, but in this case, an airline's structural embeddedness in the alliance affects the benefits that can be drawn up from other members. Furthermore, also Doganis (2005, p. 279) concluded that alliances would create imbalance and that “one partner feels it is getting much less out of the alliance than the other partner(s)”. Additionally, the resource dependence theory explains that firms form coopetitive relations to get access to resources they do not control by themselves. According to a study conducted by Lechner et al. (2016), young and small firms gain from vertical coopetition relationships to larger firms. Based on the interviewee’s responses, this is true not only for vertical coopetition but also for horizontal coopetition.

According to Ritala (2012), coopetition is beneficial when market conditions are highly uncertain. This aligns with Finnair's statement, who points out that the importance of the strategic alliance and other partnerships could increase again due to the COVID epidemic. However, Ritala (2012) also claims that firms do not achieve additional value in coopetition relationships when market uncertainty is low. This is not the case for the airline industry. Airlines achieve additional value through cooperation with competitors. However, it needs to be pointed out that the airline industry is highly dynamic. Thus, airlines continuously need to face changes and external influences, and therefore, the airline industry's uncertainty is never low.

Although the interviewees describe that there has not been much movement of carriers joining or exiting the alliances during the last years, some changes occurred, and they had different impacts on the airlines. In the Star Alliance, US Airways, an American carrier, left the alliance, which was not a strong cooperating partner for Lufthansa. Thus, the impact on Lufthansa was rather low. However, the interviewee also mentions that if a strong cooperating partner such as United or Singapore left the Star Alliance, it would have a massive impact on Lufthansa. This corresponds to the findings of Johanson and Mattsson (1988), which are that the construct of nodes and relations makes the firm vulnerable to unexpected changes. For example, if one firm is closing its operations, the relationship is breaking down, and the knowledge and resource flow is interrupted.

The Latin American airline LATAM recently left oneworld, which creates a structural hole in the Latin American region for the alliance. It indicates the importance of specific airlines for the alliance that brings unique resources to the network. That equals Luo's (2007) findings, who emphasizes that the geographical location of the global rivals can be crucial. Actors in diverse geographic areas might offer access to specific resources. That links to Gudmundsson's and Lechner's (2016, p. 154) findings that the uniqueness in resources enables airlines to fill structural holes, which is "unserved space in a network that can be exploited as a result of brokering connections between disconnected segments generating social capital".

The lack of unique resources and the inability to fill a structural hole in the network leads to Alitalia's negative market share and performance. Their only responsibility in SkyTeam is to cover the Italian market since they do not have other unique resources. The aforementioned low-cost carriers have a significant market share in Italy due to the inbound traffic for leisure. According to the interviewee of Alitalia, long haul traffic from Italy is mostly from Milan, where passengers can take intercontinental flights from Malpensa airport, which is one hour from Milan. The other option is a point-to-point connection from the Milan city airport, Linate, to Frankfurt, for example, entering the intercontinental flight there. The interviewee mentions that time is the same. Thus, as the interviewee

states, without SkyTeam, Alitalia would be a small and unimportant airline, which is why every new partner is somewhat favorable for the airline.

The three interviewees come to the same conclusion about the impact of change within an alliance when an airline enters the alliance or a member exits. They agree that a new partner has a positive effect, and the leaving of an airline is rather negative for the other members. However, as the interviewee of Finnair states, it always depends on the airline if it has a vast or limited effect. Suppose it was a valuable partner with essential connections. In that case, it has a great impact on the airline, and if it were a partner, the airline had limited cooperation with, the effect would be relatively limited. Also, Alitalia's interviewee explains that a new member is, in general, positive and can be a huge or a minimal addition to the airline.

Klophaus and Lordan (2018) analysed the vulnerability of the three largest airline alliances if an airline would exit the alliance. That would lead to the deletion of routes if not covered by another member airline. The study's findings are that oneworld is the most vulnerable alliance, followed by SkyTeam and Star Alliance. According to the example mentioned, where LATAM leaves oneworld and creates a structural hole in the network's geographical coverage, it can be argued that oneworld is the most vulnerable alliance. However, based on Lufthansa's interview, if an airline leaves the alliance it does not necessarily mean that the route must be deleted from the network, but that the airlines need to fly more themselves. Nevertheless, if the number of passengers decreases for the route, the airline flies less. It can also result in losing passengers due to the lack of connecting flights.

Something that has been noticed during the interviews is the diverse importance of strategic alliances. Additionally, it created the perception that airlines get different performance benefits out of the alliance. Based on the interviews, the more central the airline's position is within the alliance network, the lower the additional benefits for the

airline. Also, a central position leads to giving more to other member airlines than getting out of the partnership. The key facts are summarized and presented in Table 11.

Table 11. Evaluation of Strategic Alliances based on interviewed companies

	Lufthansa	**Finnair**	**Alitalia**
Position in Alliance	Central	Small-medium	Small
Benefits of Alliance	Medium-low	High	High
Importance of Alliance	Decreasing	High	High
Value of Joint Ventures	Increasing	Increasing	Increasing

According to the interviewees, strategic alliances are essential, especially for smaller airlines with a less central position in the network. Thus, Finnair and Alitalia can take different benefits from the alliance, such as cost-sharing, market share, and brand awareness. Contrary, for Lufthansa, the strategic alliance's value has declined, and other forms of partnerships have become more crucial, such as joint ventures. The relation between the importance of strategic alliances and the size of airlines is visualized in Figure 17.

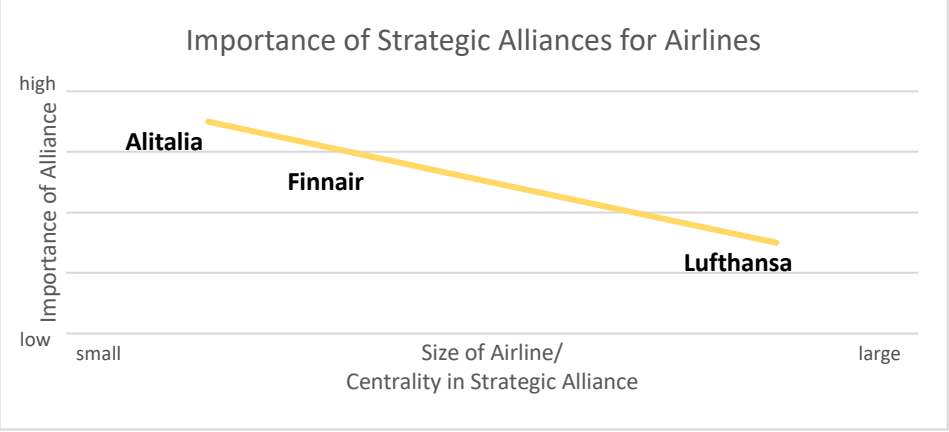

Figure 17. Importance of Strategic Alliances for Airlines

5.3.3. Future of alliances and alternative options

Strategic alliances exist for more than 20 years and characterize a network of nodes and ties in which members form coopetitive relationships. However, the three interviewees

agree that, during the last years, another form of partnership, joint ventures, has become more dominant. According to them, due to the growth of joint ventures, it indicates a new trend. Their perception aligns with the one from Bilotkach (2019), who also highlights that another form of cooperation between airlines has grown in popularity. He noticed that during the last decade, primarily joint ventures had been used. Finnair's and Alitalia's interviewees point out that this partnership represents more close cooperation where specific points can be discussed, such as pricing and capacity. A joint venture is the "closest thing that the airlines could have to a merger in the current institutional and regulatory environment" (Bilotkach, 2019, p. 52). Additionally, joint ventures have a more B2B function com-pared to alliances that developed to a rather B2C tool.

As joint ventures become more powerful and more relevant, Lufthansa's interviewee also indicates that too many joint venture agreements do not make sense. According to Ritala (2012), firms that select only a few key competitors to cooperate with, achieve a better market performance than with a high number of cooperating rivals. This is only true for a large airline like Lufthansa, which gives more to the alliance than gain from it. However, based on the interviews, for Alitalia and Finnair, rather small airlines, coopetition with many airlines is more beneficial.

Currently, there are mostly bilateral and trilateral joint venture agreements, with an exception being the Atlantic joint venture. For Lufthansa, further development of joint ventures would be if the individual joint ventures from the same region would be linked together. For example, Lufthansa has joint ventures with Air China, ANA in Japan, and Singapore airlines, and could see them join together to form one Asia joint venture.

Aforementioned, strategic alliances are especially beneficial for small airlines such as Finnair and Alitalia. However, as a large airline, Lufthansa can also benefit from alliances due to its relatively small home market. He denotes that airlines within Europe are more dependent on strategic alliances than airlines with a unique geographical location such as Emirates. The interviewee of Lufthansa mentions a formation that would benefit the

large airline mostly. It is the idea of a global airline holding where the large airlines from each region merge, for example, United as a North American carrier, one Asian carrier, and Lufthansa for the European market. Alitalia's interviewee points out another revolution of cooperation with competitors. All members of an alliance could share services and only have one IT or Admin center for the entire alliance. He claims that this would overcome the limitations of being a small airline, as Alitalia.

Especially the interviewee of Lufthansa highlights the decline and importance of strategic alliances and sees them as established now. Finnair's interviewee points out that airline partnerships will never disappear. The value of alliances and other forms of partnership could substantially increase in value due to the COVID epidemic. That is because the airline industry has become more restrictive during the outbreak of the virus. Thus, airlines can take advantage of coopetitive relationships to still offer customers routes across the globe.

5.4. Revised Theoretical Model

Based on the previous analysis, a revised theoretical model has been created to include the research findings and complement the framework regarding the impact of coopetition in the form of strategic alliances on airlines' market performance. As illustrated, the airline industry is dynamic, characterized by intense competition, and cooperation with other airlines is practiced. Previous studies about the impact of strategic alliances on airlines' performance show mixed outcomes. By using different variables as measurements for the data collection and interviews, the effect of coopetition on airlines' market performance could be evaluated. This thesis's key findings are added to the framework and include that overall strategic alliances are positively for airlines, especially within Europe, where the domestic market is limited. However, small airlines benefit the most rather than large carriers. Moreover, the current COVID epidemic has not been considered in previous studies since it's spread in 2020. The virus is a considerable negative external factor that has a massive impact on airlines and the entire airline industry. Based

on the interviewees, it can also foster coopetition and increase the value of alliances, and thus, has been added to the revised theoretical framework.

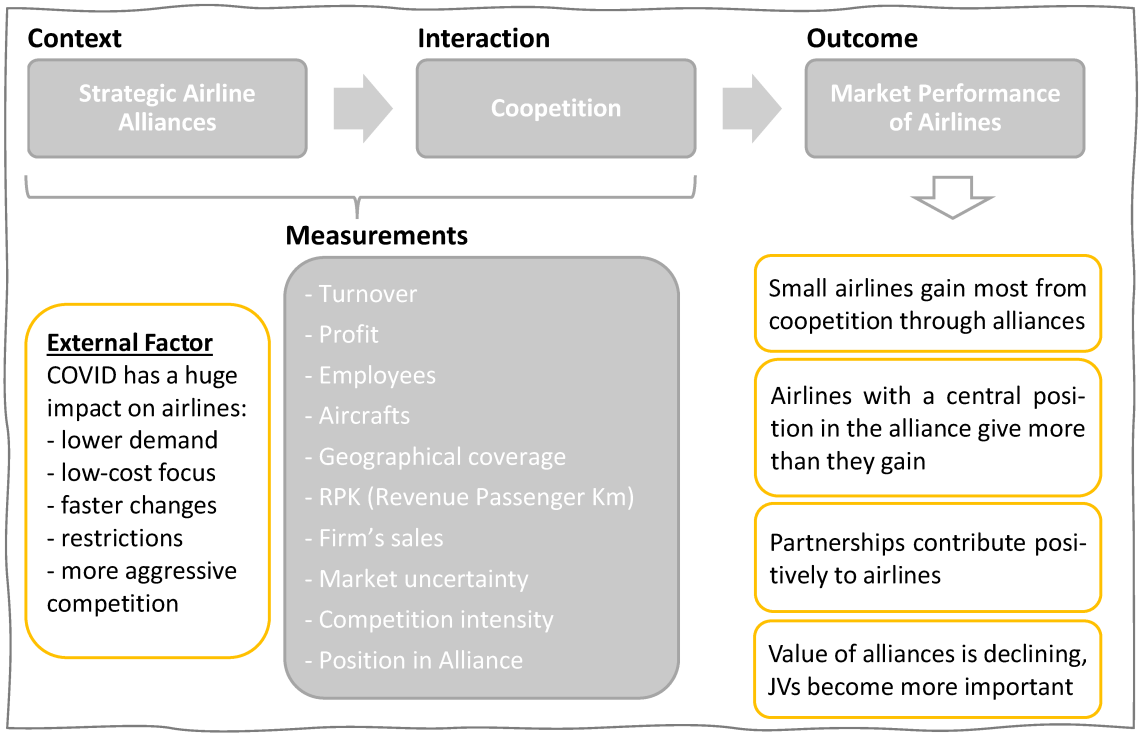

Figure 18. Revised Theoretical Framework (own interpretation based on literature review and empirical results)

6. Summary and Conclusions

This chapter aims to summarize the master's thesis's findings and delineate the theoretical contribution. The results centralize the impact of coopetition in the form of strategic alliances on airlines' market performance. Nevertheless, the findings on the development and future of the airline industry and partnerships are also outlined. Moreover, this section proposes theoretical and managerial implications. Finally, this chapter points out the limitations and proposes possible future research avenues in the field of coopetition, strategic alliances, and the airline industry.

6.1. Summary of results and theoretical contribution

This thesis aimed to increase the understanding of the impact of coopetition in the form of strategic alliances on airlines' market performance. For this study, three airlines, Lufthansa, Finnair, and Alitalia, have been used as case companies that are located within Europe. The aim was to answer the research question: "How does coopetition in the form of strategic alliances impact the market performance of airlines?"

Lufthansa, Finnair, and Alitalia are three airlines within Europe, each operating in a different alliance. Moreover, these airlines differ in size and geographical coverage. The German carrier Lufthansa has unique resources due to its global presence, and the extensive route network allows for a competitive advantage. Furthermore, the last three years have been one of the best in terms of performance. On the contrary, Finnair is a relatively small airline within Europe but offers essential assets by focusing its network on routes between Asia and Europe. During the last few years, the high revenue and passenger numbers have led to the best performance in the carrier's history. Alitalia, also a small airline, has had a negative performance over the past decade and is losing market share to other full-service carriers and low-cost carriers. The airline is not able to meet customer needs and to develop unique resources. The empirical results confirm Gudmundsson and Lechner (2006) findings on the uniqueness of resources that create a

competitive advantage and are essential for an airline's performance. The researchers' findings align with the case companies' performance and make Lufthansa and Finnair valuable airlines with unique assets, while Alitalia cannot achieve a competitive advantage.

Concluding statement 1: *Partnerships contribute positively to airlines*

The empirical findings characterize cooperating with competitors in strategic alliances as positive by pointing out various benefits such as cost-sharing, joint development, and similar standards. This is consistent with the findings of previous studies concerning the advantages and disadvantages of strategic alliances. Even though Min and Joo (2016), argue that it is not clear if strategic alliances create value for airlines, further analysis showed that especially small airlines get benefits out of the partnership with larger airlines. This study provides additional support for advantages through economies of scale when operating on the same routes with alliance partners. This matches Gnyawali and Park (2009) findings, who claim that competitors' resources enable firms to save costs and time. By operating on the same route with coopetitors, airlines from the same alliance can dominate the route, save costs, and avoid other competitors.

Moreover, it is crucial to note that large airlines with a relatively small domestic market, like Lufthansa, benefit from alliances. This demonstrates how vital strategic alliances, or other partnerships, are for airlines within Europe. Those airlines are more dependent on strategic alliances than airlines with a unique geographical location such as Emirates.

This study provides considerable insight into the impact of change within a strategic alliance on airlines. As indicated by Johanson and Mattson (1988), a network of nodes and relations make firms vulnerable to unexpected changes. This corresponds to the empirical findings where the exit from the alliance of a strong cooperating partner has a massive impact on the airline. That is because actors from diverse geographical are-as offer access to specific resources. The empirical results highlight that a new partner in the strategic alliance positively affects the other member airlines, while an airline's leaving

is rather negative. Nevertheless, it needs to be considered that it always depends on the airline, whether it has a vast or limited effect. The findings can be extended by the outcome of a member leaving the alliance. It does not need to harm the airline's route network. However, airlines need to fly more themselves. The worst-case scenario would be if the number of passengers decreases for the route, the airline needs to fly less or loses passengers due to the lack of connecting flights.

Concluding statement 2: *Small airlines gain most from coopetition through alliances*

Concluding statement 2 a: *Airlines with a central position in the alliance give more than they gain*

The empirical findings are in line with previous results by Gnywali and Madhavan (2001), who claim that not all firms have the same benefits from coopetitive networks. Further analysis showed that the size of an airline is connected to additional benefits received from alliances. More precisely, small airlines can benefit from large airlines within the same strategic alliance, including size, know-how, and brand name. That extends Lechner et al. (2016) findings, which state that small firms gain from vertical coopetition relationships to larger firms. This study's findings widen the knowledge that small firms also gain from horizontal coopetition relation-ships. Small firms gain more from coopetition relationships than large carriers because they access resources they do not control themselves.

Interestingly, based on the analysis and empirical findings, the more central the airline's position is within the alliance network, the lower the airline's additional benefits. While a central role in the alliance allows for more decision making power, it also leads to giving more to other alliance members than getting out of the partnership. Although Gnywali and Madhavan (2001) found that not all firms have the same benefits from a coopetitive network. Their result is that the firm's structural embeddedness within the network impacts competitive behavior. That could not be confirmed in this thesis, but in this case,

an airline's structural embeddedness in the alliance affects the benefits that can be drawn up from other members. As proposed by Sanou et al. (2016), a firm's position indicates superior performance. Gudmundsson and Lechner (2006) also point out the importance of an actor's position within a network that impacts the performance. These findings correlate well with those empirical findings, where an airline with a central role represents better performance.

Concluding statement 3: *Value of alliances is declining, and JVs become more important*

The empirical findings offer unique evidence that strategic alliances have become less valuable for large airlines with a central position in the alliance network. Those airlines focus increasingly on joint ventures characterized as a B2B tool, whereas strategic alliances turned to a rather B2C tool that benefits passengers more than the airlines itself. The shift towards joint ventures as a tool to cooperate with competitors has also been noted by Bilotkach (2019). Nevertheless, this research also found out that small airlines with a less central position in the alliance favor strategic alliances because the higher the number of partners, the wider their network and thus, create more offers for customers. All in all, airlines have different ideas on how the types of partnerships could develop in the future, from a single administration center for the entire alliance or a global airline holding. But the results underline that partnerships in the airline industry will never disappear, especially not within Europe.

Concluding statement 4: *External impact: COVID*

This study allowed to obtain comprehensive results on the impact of external factors on the airline industry. Based on the empirical findings, the current COVID epidemic impacts the airline industry heavily and causes lower demand in traveling, focus on low-cost carriers, and extensive restrictions for passengers and airlines. Furthermore, according to the interviewees, it leads to faster industry changes and more aggressive competition. Since the airline industry has been characterised as highly uncertain and

continuously changing, coopetition is beneficial (Ritala, 2012). The findings of this thesis suggests that the low-cost business model will have its second boom due to the crisis. Also, an airline consolidation will take place, because small airlines go bankrupt in the COVID crisis and disappear.

6.2. Managerial implications

This thesis has revealed that coopetition through strategic alliances in the airline industry is crucial, even though the airlines' level of importance varies. The findings of this thesis have considerable managerial implications. The airline industry is highly competitive, even though the number of players did not change significantly over the past few years. First, an important managerial implication is that the customer base and the route network are crucial assets for an airline, making it attractive for cooperating airlines. It is vital for airlines to continuously evaluate and meet customers' needs to offer unique resources to achieve good performance. Without a competitive advantage and unique resources, it can lead to loss of market share and negatively affect performance.

Second, in a highly uncertain industry like the airline industry, partnerships of any kind are crucial. The type of partnership for the specific airline might vary from either a high number of coopetitors to only a few members. That is related to the size of the airline and its resources. It needs to be evaluated what unique resources an airline owns and which are lacking. Large airlines obtain the most crucial resources on their own, while small airlines are dependent on competitors. Thus, airlines need to assess whether to share unique resources with many other players or focus on a few airlines as partners to keep some of the competitive advantages.

This thesis has revealed that the current COVID crisis has hit the airline industry heavily, and the recovery will take several years. It will cause several changes within airline companies as well as the whole industry. Managers need to expect less demand for long-haul flights, less corporate travel and need to consider safety regulations. Moreover, full-

service carriers offer additional value, which comes at a higher price compared to low-cost carriers. Due to the epidemic, it is expected that travelers focus on lower fare prices and, thus, choose the low-cost business model over the full-service business model. Even though network carriers cannot offer as low fares as low-cost carriers, it is recommended to have special offers to increase passenger numbers and stay competitive against low-cost carriers.

6.3. Limitations and Future research

The interpretation of the presented results of this master's thesis has to be seen in the light of several limitations. First, the focus is on the airline industry in an international setting. Thus, the generalization of the literature on coopetition needs to be assessed carefully. Second, the case study is conducted with three airlines of different sizes, from three different countries (Germany, Finland, and Italy), and which operate in three different alliances. Nevertheless, the empirical results should be applied with caution to other airlines from different geographical regions as the setting might be different than in the European airline market.

Another limitation concerns the access to suitable candidates for the empirical data collection through semi-structured interviews. The crisis caused by COVID did not allow me to find more than one qualified candidate for the interviews. Even though the candidates were professionals with many years of industry experience, a second interviewee per airline would have strengthened their statements. Furthermore, as Italian law does not require companies to publish their annual financial statements and key figures. It resulted in only limited data being available for the Italian carrier Alitalia. That did not allow to create a table with key figures as for the German and Finnish airlines. Also, it hindered comparing the statements mentioned by the interviewee of Alitalia with the key figures of the annual report, including revenue and EBIT.

The interviewees' subjectivity could have influenced the empirical collection technique in the form of semi-structured interviews. Nevertheless, information collected through primary sources is consistent with the data available and gathered beforehand. When interviewing people, subjectivity is expected, and it may be considered an unintentional human cognitive bias.

This study is the first step towards enhancing the understanding of the impact of coopetition on airlines' market performance as well as whether strategic alliances are a coopetition tool that has future potential. This research has raised some questions in need of further investigation about joint ventures. According to the interviewees, joint ventures are increasing as a tool for cooperating with competitors more closely. Future studies should thoroughly examine the benefits and disadvantages of joint ventures for airlines compared to strategic alliances. Moreover, the value that airlines gain from joint ventures in contrast to strategic alliances should be further investigated. This also includes the possibility that joint ventures could replace strategic alliances in the future.

An interesting issue to resolve for future studies is the impact of the COVID epidemic and how far this has changed the airline industry in various matters. For example, interviewees pointed out that the virus and related travel restrictions could increase the importance of alliances and other forms of partnerships because airlines cannot travel far. Moreover, passengers are not traveling as far and looking for cheaper options. Based on interviewees' statements, this could lead to the next low-cost carrier boom. Thus, this can be a future development and requires further research.

The results of this thesis are encouraging and should be validated by larger sample size. Moreover, to fully understand the relationship between large airlines and the low importance of strategic alliances in contrast to small airlines and increasing the significance of alliance partnerships, further research should focus on samples where the airlines are of similar size and in the same geographical area. This is suggested to verify the results of this thesis.

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Appendices

Appendix 1. Star Alliance Members

Member	Destinations	Countries	Annual Passengers	Fleet Size
Aegean Airlines	134	44	7.19m	49
Air Canada	218	63	50,9m	397
Air China	189	42	33,14m	397
Air India	123	31	21,8m	127
Air New Zealand	51	17	17m	113
ANA	98	23	53,9m (FY2017)	266
Asiana Airlines	76	22	18,9m	84
Austrian	130	58	13,9m	83
Avianca	102	27	30,5m	190
Brussels Airlines	118	49	10m	48
Copa Airlines	81	33	14,3m	104
Croatia Airlines	39	24	2,17m	12
EGYPTAIR	72	47	7,54m	69
Ethiopian Airlines	126	75	10,63m	108
EVA Air	58	18	12,5m	79
LOT Polish Airlines	90	50	9m	75
Lufthansa	214	75	70,1m	351
Scandinavian Airlines	126	>30	30m	156
Shenzhen Airlines	84	10	31,32m	215
Singapore Airlines	63	32	19,51m	112
South African Airways	32	22	6,8m	46
SWISS	>100	44	17,9m	90
TAP Air Portugal	93	36	16m	99
Thai Airways International	76	31	25m	102
Turkish Airlines (TK)	311	124	75,17m	335

United Airlines (UA)	353	58	158m	1,329

(Star Alliance, 2019)

Appendix 2. oneworld Members

Member	Destinations	Countries	Annual Passengers	Fleet Size
American Airlines	370	61	215m	1,547
British Airways	240	85	48m	333
Cathay Pacific	106	35	35m	201
Fiji Airways	36	14	2m	11
Finnair	136	46	15m	85
Iberia	145	46	22m	152
Japan Airlines	84	21	44m	216
Malaysia Airlines	80	22	14m	84
Qantas	85	17	31m	235
Qatar Airways	165	79	30m	223
Royal Air Maroc	105	51	8m	59
Royal Jordanian	46	30	3m	25
S7 Airlines	148	34	16m	99
SriLankan Airlines	40	20	6m	26

(oneworld, 2020)

Appendix 3. SkyTeam Members

Member	Destinations	Countries	Annual Passengers	Fleet Size
Aeroflot	163	56	35,8m	250
Aerolineas Argentinas	57	13	12,9m	82
Aero Mexico	88	24	21,8m	121

AirEuropa	59	24	11,8m	59
Air France	195	91	101,4m	302
Alitalia	100	41	21,5m	117
China Airlines	160	29	15,6m	88
China Eastern	272	36	112,9m	640
Czech Airlines	31	21	2,6m	14
DELTA	304	52	190m	800
Garuda Indonesia	70	12	19,6m	142
Kenya Airways	56	44	4,8m	41
KLM	164	73	32,7m	204
Korean air	125	44	26,8m	169
MEA	32	23	3,1m	18
Saudia	95	39	-	170
Tarom	38	25	2,8m	25
Vietnam Airlines	52	17	22m	98
Xiamen Air	92	16	29,83m	173

(SkyTeam, 2020)