

BI Norwegian Business School
Master Thesis

Structural Effects on Alliance Performance

A Case Study of Airline Alliances

Deadline:
01.09.2011

BI Campus:
BI Oslo

Examination Code and Name:
GRA 19002 – Master Thesis

Programme:
MSc Business and Economics
Major in Strategy

Supervisor: Gabriel R.G. Benito

Student: Christoffer Giske
Student: Torbjørn Gloppen

”This thesis is a part of the MSc programme at BI Norwegian Business School. The school takes no responsibility for the methods used, results found and conclusions drawn.”

Table of Contents

ACKNOWLEDGMENTS.....	IV
EXECUTIVE SUMMARY	V
1.0 INTRODUCTION.....	1
2.0 RESEARCH ISSUES.....	3
2.1 RESEARCH STATEMENT.....	4
2.2 RESEARCH QUESTION	4
2.3 RESEARCH OBJECTIVES.....	4
2.4 CASE SELECTION	5
3.0 THEORETICAL FRAMEWORK.....	7
3.1 STRATEGIC ALLIANCES.....	7
3.2 DEFINITION	7
3.3 GENERAL DIFFERENCES	7
3.4 OWNERSHIP STRUCTURES	10
3.5 WHY COOPERATE THROUGH STRATEGIC ALLIANCES?.....	12
3.6 EVOLUTION OF AN ALLIANCE	15
3.7 ALLIANCE SUCCESS FACTORS.....	17
3.8 ALLIANCE RISKS.....	20
3.9 MEASURING PERFORMANCE IN ALLIANCES	22
4.0 METHODOLOGY.....	25
4.1 DIAGNOSIS OF THE PROBLEM SITUATION	25
4.2 CHOICE OF RESEARCH DESIGN.....	25
4.3 CHOICE OF DATA COLLECTION	27
4.4 SELECTION PROCEDURE AND FIELDWORK.....	28
4.5 ANALYSIS AND INTERPRETATION OF THE DATA	30
5.0 THE AIRLINE INDUSTRY	32
5.1 INTRODUCTION	32
5.2 A RETROSPECTIVE LOOK AT THE AIRLINE INDUSTRY	32
5.3 IMPORTANT FEATURES OF THE AIRLINE INDUSTRY	33
5.3.1 <i>The hub-and-spoke network system</i>	33
5.3.2 <i>Low cost carriers</i>	34

5.3.3 Grandfather rights.....	34
5.3.4 Labor Unions.....	35
5.3.5 IT-systems.....	35
5.4 MARKET DEVELOPMENTS.....	37
5.5 LIBERALIZATION OF THE INDUSTRY.....	39
5.6 FROM “FLAG CARRIERS” TOWARDS PRIVATIZATION.....	39
5.7 BILATERAL AIR SERVICE AGREEMENTS.....	40
5.8 OPEN SKIES.....	41
5.9 MERGERS AND ACQUISITIONS.....	42
5.10 ALLIANCES IN THE INDUSTRY.....	43
5.11 ALLIANCE ACTIVITIES.....	44
5.12 ADVANTAGES AND DISADVANTAGES OF ALLIANCE MEMBERSHIP.....	46
5.13 THE FUTURE OF ALLIANCES IN THE INDUSTRY.....	48
6.0 STRUCTURE OF THE AIRLINE ALLIANCES.....	50
6.1 ONEWORLD.....	50
6.2 SKYTEAM.....	52
6.3 STAR ALLIANCE.....	54
7.0 ANALYSIS AND DISCUSSION.....	58
7.1 SELECTING STRUCTURAL ISSUES FOR FURTHER ANALYSIS.....	58
7.2 DATA PRESENTATION.....	59
7.3 CENTRALIZED MANAGEMENT.....	63
7.4 EQUITY-BASED OWNERSHIP.....	66
7.5 IT-SYSTEMS.....	69
8.0 CONCLUDING REMARKS.....	73
8.1 CONCLUSION.....	73
8.2 MANAGERIAL IMPLICATIONS.....	74
8.3 LIMITATIONS.....	75
8.4 SUGGESTIONS FOR FURTHER RESEARCH.....	76
REFERENCES.....	78
EXHIBIT.....	89
EXHIBIT 1.....	89
EXHIBIT 2.....	89
EXHIBIT 3.....	90
EXHIBIT 4.....	90
EXHIBIT 5.....	91

EXHIBIT 6.....	91
EXHIBIT 7.....	92
EXHIBIT 8 (OPERATING REVENUE, ONEWORLD).....	93
EXHIBIT 9 (RPK, ONEWORLD).....	94
EXHIBIT 10 (ASK, ONEWORLD)	95
EXHIBIT 11 (PLF, ONEWORLD).....	96
EXHIBIT 12 (OPERATING REVENUE, SKYTEAM)	97
EXHIBIT 13 (RPK, SKYTEAM).....	98
EXHIBIT 14 (ASK, SKYTEAM).....	99
EXHIBIT 15 (PLF, SKYTEAM)	100
EXHIBIT 16 (OPERATING REVENUE, STAR ALLIANCE).....	101
EXHIBIT 17 (RPK, STAR ALLIANCE).....	102
EXHIBIT 18 (ASK, STAR ALLIANCE)	103
EXHIBIT 19 (PLF, STAR ALLIANCE).....	104
EXHIBIT 20 (EXACT FIGURES: MEAN OPERATING REVENUE CHANGES)	105
EXHIBIT 21 (EXACT FIGURES: MEAN RPK CHANGES)	105
EXHIBIT 22 (EXACT FIGURES: MEAN ASK CHANGES)	105
EXHIBIT 23 (EXACT FIGURES: MEAN PLF)	106
EXHIBIT 24 (INDUSTRY (IATA) RPK, ASK AND PLF)	107
EXHIBIT 25 (INDUSTRY (IATA) REVENUE AND NUMBER OF MEMBERS)	108
APPENDIX.....	109
APPENDIX 1: PRELIMINARY THESIS REPORT.....	109

Acknowledgments

The work with this thesis has been both challenging and rewarding, and we would like to express our gratitude to those who have supported us during this process. A special thanks goes to Gabriel R.G. Benito for being our master thesis supervisor. We would also like to thank our families, friends and fellow students for their support during our entire period at the Norwegian Business School. Christoffer would also like to give a special thanks to his girlfriend Hanne, who is an inspiration each and every day. We definitely think that the support we have received from all of you have made the process of conducting the thesis easier for us.

Oslo, 30.08.2011

Christoffer Giske and Torbjørn Gloppen

Executive Summary

The objective of this thesis is to study the connection between the structure of strategic alliances and their realized performance. In order to determine how performance is affected by structural characteristics, an explorative multiple case-study of the three largest airline alliances is conducted. Data obtained from sources ranging from news articles to books and annual reports is analyzed and compared with theory from the strategic field of alliances. The potential impact of structural factors is analyzed based on previously existing theory and implications are compared to actual performance of the alliances over time.

The analysis reveals certain indications that there is a link between structural factors and realized performance, but does not give definitive answers. The thesis concludes by suggesting possible implications for managers and implications for further research.

1.0 Introduction

The current globalization has impacted the strategic posture, organizational structure, processes and performance of firms (Venaik, Midgley and Devinney, 2005). The tremendous possibilities that the global market represents are tempting firms to internationalize their businesses. Once the decision to internationalize is made, there is a wide range of options to choose from on how the firms can go about their foreign investments. One possible method is to cooperate with other firms by creating an alliance. If the alliance is formed to solve a major strategic challenge, it is often referred to as a strategic alliance (Yoshino and Rangan, 1995). As strategic alliances have become an increasingly common sight in the business world, the importance of acquiring knowledge about them has increased proportionally (Vaara, Kleymann and Seristö, 2004). This thesis will aim to provide the reader with some of that knowledge, as we will explain and discuss some of the more important aspects of strategic alliances.

To cooperate in a strategic alliance may not always be easy, and conflicts between the partners can obviously occur. Thus managers are spending much of their time and effort to create an effective and suitable structure when creating a new strategic alliance (Yoshino and Rangan, 1995). One of the objectives of this thesis is to look at how the structural characteristics of a strategic alliance can affect performance. The structure can be one of the factors that set the standards for how well the alliance members can cooperate. A bad structure might lead to irritation and can distract from the actual tasks of the partnership. The industry that we have selected to study the connections between performance and alliance structure is the airline industry. This is a global and dynamic industry where many of the companies are partners in strategic alliances with other companies from the same industry.

“The quickest way to become a millionaire is to be a billionaire and then buy an airline” – Common quote, often attributed to Sir Richard Branson.

The quote above illustrates the fact that many airlines have struggled to make a profit (IATA, 2010). Thus the need for consolidation to get economies of scale

and scope has been prominent in the industry, making strategic alliances a natural choice for many of the airlines because of internal and external factors. As the competition is fierce in the airline industry today, the alliances must plan ahead in order to respond quickly and correctly to market changes and threats. The challenge is now how they should position themselves towards the future. In order to do that it could be wise to have a closer look at the past.

2.0 Research Issues

The airline industry in general is experiencing troubling times. According to the International Air Traffic Association (IATA, 2010), only two of the past 10 years have given positive net results for the industry. These results come in spite of the fact that demands for air transportation, both for cargo and passenger, have increased steadily until the effects of the economic recession hit the industry in 2008 (IATA, 2010). Airline executives cite increasing costs and diminishing returns caused by intensive competition as the main reason for poor industry results (Iatrou, 2004). This intensive competition is partly due to the nature of the airline industry as an important institution in our society.

While the development of most industries often includes a period of consolidation as the industry matures, the global airline industry has never had a distinct period of major consolidation. Historically, airlines have been viewed as national symbols and carriers are closely tied to a national heritage. The term “flag carrier” is commonly used in the industry to describe an airline of specific descent. This national identity, along with concerns regarding security of transportation and competition, has led to an industry with strict regulations (Iatrou, 2004). Regulations include, amongst other things, restrictions regarding nationality of airline owners and domestic traffic rights. Government bodies and competitive authorities have, in other words, effectively restricted carriers’ ability to consolidate.

In the absence of consolidation, actors in the industry have resorted to inter-firm cooperation in order to increase overall margins and revenue. Meanwhile, what once started out as simple short-term cooperative agreements has evolved through the decades into dynamic and complex alliances with several members (Vaara, Kleymann and Seristö, 2004). As the alliances have evolved, their structure has changed several times. Airline executives argue that this is to facilitate optimal performance, but to what degree are these decisions accurate reflections of reality? With massive deficits and bankruptcy filings of major transportation institutions as very real potential consequences, it is important that these alliances are structured to maximize benefits.

2.1 Research statement

In this thesis we will explore the connection between the structural characteristics of strategic alliances and their realized performance in the context of the airline industry. As mentioned earlier, these alliances have an increasingly important position in the industry. Managing alliances of such importance to the partners requires careful deliberation and accurate decisions. We therefore aim to gain insight into how these alliances are actually affected by their structural characteristics by applying theory on alliances and inter-firm cooperation.

2.2 Research question

Based on the issues mentioned above and a deliberation of the issues central to the topic, we have formulated the following research question:

How do structural characteristics affect performance in strategic alliances?

This thesis will attempt to provide answers by studying this question in relation to the alliances already present in the airline industry.

2.3 Research objectives

Answering the stated research question involves a process with many steps. In order to outline this process we have identified several steps below. These steps can be referred to as research objectives.

- Analyze and develop a thorough understanding of the industry
- Examine the roles played by airline alliances and their primary reasons of existence
- Analyze the history of the three alliances in question with focus on their structural characteristics
- Analyze the performance of the three alliances over time
- Compare and interpret findings on alliance performance with changes or variations in alliance structure

The first objective of any case study is to develop an understanding of the industry and the concepts and issues related to it. This also includes developing an understanding of the framework of the alliances and their functions in the industry. This is primarily accomplished through a thorough review of industry literature and available information on the airlines.

After a deeper understanding of the industry and the framework has been established, we will collect and analyze data on the three alliances and their structures. Based on a preliminary review of the literature as well as a run-through of some of the major changes in the three alliances, five main structural characteristics have been identified. These are alliances' ownership structure, scope of activities, processes of decision making, organizational structure and criteria for membership. Yin (2009) states that case studies are likely to adapt as the researcher gains a better understanding and insight into the issues at hand. This list of factors will therefore be subject to further analysis once we have analyzed the alliances' structure. Factors which are alike between the three alliances and maintain constant throughout their history are unlikely to contribute to our study and will therefore be rejected. On the other hand, structural characteristics that vary between the alliances or change over time will be included in the study.

Following the analysis of the structural characteristics of the alliances, we will collect data and perform an analysis of their performance.

One of the final steps of our study is to compare and interpret the findings in performance with the changes or variations in the alliances' structural factors. This is essentially the analysis through which we hope to discover possible answers to our research question and formulate hypotheses.

2.4 Case selection

The primary goal of our study was to examine how firms can structure their cooperative partnerships in order to facilitate performance. Although cooperative partnerships and alliances are currently common in almost all industries, the airline industry seemed unique. Financial performance in the industry has been

poor in recent times and several domestic mergers have been profiled in the media. In addition, the fact that the industry uses alliances to enhance performance in core operations and that cooperation seems so crucial to the performance of the partners made the industry interesting. The three largest alliances; Oneworld, SkyTeam and Star Alliance have also been part of the industry for a long time, giving us a basis for conducting comparisons and data to study their evolution. According to industry executives, the industry will be forced to improve performance quickly and the most likely way to do this is through cooperation. In our opinion, these characteristics make the industry a choice which will suit our study well.

3.0 Theoretical Framework

3.1 Strategic Alliances

In this section of the thesis we will have a closer look at the existing theory concerning strategic alliances. We start out by defining the term “strategic alliance”. We then go through the major differences between different sorts of alliances and explain why they are formed in the first place. Thereafter we describe typical phases, success factors and risks that managers need to be aware of. Finally, we have a closer look at the relationship between structure and performance in strategic alliances. This theoretical framework will be important for the reader in order to understand the rest of the thesis.

3.2 Definition

There are many definitions of an alliance and little consensus about which is the right one. Our definition of an alliance is based on Contractor and Lorange (2002) that defines an alliance as “*any inter-firm cooperation that falls between the extremes of discrete, short-term contracts and the complete merger of two or more organizations*”. Another example of a definition could for instance be the one made by Welch, Benito and Petersen (2007) which defines a strategic alliance as “*an arrangement where two or more companies engage in collaborative activity, while remaining as independent organizations and result in foreign market operations*”. Since there are so many definitions of alliances, it can be difficult to separate what an alliance is and what it is not. In the next sections of this theoretical framework, we will look at differences and explain carefully what an alliance implies. One could also note, as stated in the introduction, that if the alliance is formed to solve a major strategic challenge it is often referred to as a strategic alliance (Yoshino and Rangan, 1995).

3.3 General differences

There are many ways in which firms can collaborate through alliances. Thus the structure of the alliance and how it is managed can vary greatly from one alliance to another. Previous research has given us several ways to classify and separate

different types of alliances. Managers must be aware of these differences, and also know what they imply in order to facilitate best possible performance for their firms and alliances. In this part of the thesis we will present some of the elementary differences between different sorts of alliances.

One way to classify alliances is to separate between horizontal and vertical alliances. While horizontal alliances are a common way of increasing the participant's scope and scale, a vertical alliance typically tries to decrease costs by streamlining the value chain (Shiva, 1997). These forms of alliances are also often referred to as complementary and parallel/scale alliances. Airline alliances are for instance usually horizontal/parallel alliances, because of their objective to gain new routes and markets and thus increasing scope. In addition to vertical and horizontal alliances, there could also be "hybrid" alliances that are a mix of both vertical and horizontal cooperation (Zhang, 2005).

Focus has also been put into the competitiveness among the alliance members. Yoshino and Rangan (1995) have created a matrix, showing potential levels of internal competitiveness. Depending on the extent of organizational interaction and conflict potential, there are four different classifications of competitiveness in their model. The model, which can be seen in exhibit 1, nicely illustrates that direct competitors can also take part in the same alliance. Note that companies in a "competitive alliance" are actually not only producers of a similar product or service, but they are direct competitors in the same market as well. An example mentioned by Yoshino and Rangan (1995) is the cooperation between General Motors and Toyota, which cooperated to produce cars while at the same time competing in the same geographical markets.

According to Hamel, Doz and Prahalad (1989), cooperation with competitors can be very successful as long as the information flow is monitored carefully. A difficult task one might say, because the managers often would have to control the information flow on many levels. An example of this is for instance the communication between engineers, salesmen and line managers from the different firms. However, the effect of collaboration would likely be poor if neither part refuses to give away information to the other (Hamel, Doz, and Prahalad, 1989). Thus an important objective for firms in an alliance could be to learn as much as

possible from the partner(s) without revealing too much information itself (Hamel, Doz, and Prahalad, 1989). We will now have a closer look at some of the most important objectives for firms in alliances.

The structure of alliances might also vary because of the different strategic objectives firms have for their alliance. Yoshino and Rangan (1995) mention four broad categories of strategic objectives for firms in alliances. The first one is to maintain flexibility, or in other words, trying to avoid high dependency on the other partners. At the same time as it is important to build a good and trustful relationship between allies, one must also keep in mind that not having a backup plan might be very dangerous. Large irresolvable conflicts may arise, jeopardizing the business if no alternative options are at hand.

The second strategic objective is the importance of protecting the firm's core competences. As mentioned previously this might be very difficult to do, and especially in the combination with the third strategic objective which is to learn from partners (Hamel, Doz, and Prahalad, 1989). This is a trade-off situation, and communication has to be handled properly so that the core competences are protected at the same time as less strategically important information goes back and forth between the firms. A lack of information flow between the involved parties could bring the alliance to an end relatively fast. However, a firm that gives away too much information might even risk losing their competitive advantage.

The fourth and final strategic objective mentioned by Yoshino and Rangan (1995) is to add value to an activity. If a company could achieve the same value by doing it themselves, then there would simply be no need for the alliance to exist (Yoshino and Rangan, 1995). Yoshino and Rangan also, in the same book, classify the first two objectives as defensive and the two last objectives as positive. This brings us to the next point on how we can classify alliances.

Alliances can be formed in a defensive or offensive manner according to Garette and Dussauge (2000). By defensive they mean that the alliance is formed in order to reduce the amount of competition, and gaining scale advantages they would not have if they operated on their own. An alliance formed in an offensive manner, on

the other hand, is created so that the member firms can learn from each other in order to come up with new and better technologies and solutions (Garette and Dussauge, 2000).

3.4 Ownership Structures

The ownership structure of the alliances themselves can take several shapes. Depending on the issues discussed above, as well as several other factors, the structure can be anything from for instance “relational contracts” to “equity joint ventures” (Contractor and Lorange, 2002). Some of the most well known cooperative arrangements are illustrated in figure 1. Figure 1 also defines alliances as something between “one-time very short arms-length contracts” and “complete merger, acquisition or green-field subsidiary” like we mentioned previously.

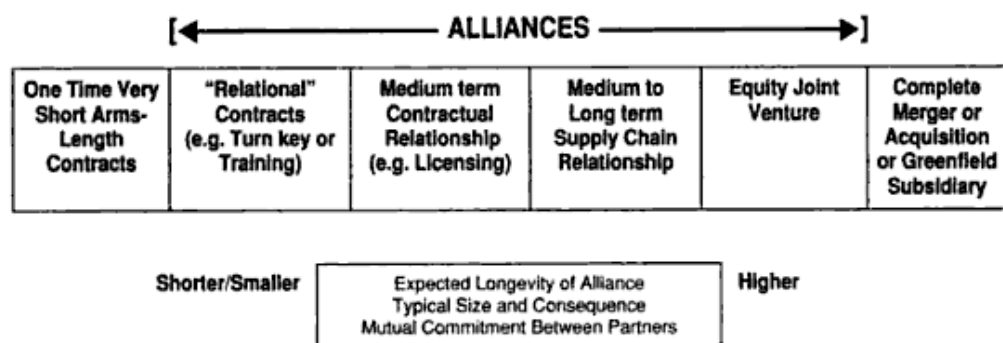


Figure 1 Defining alliances (Contractor and Lorange, 2002)

Although these are defined categories, most alliances are structured as a combination of contracts and equity arrangements (Yoshino and Rangan, 1995). Thus the combinations of ownership structures are many. In the next paragraph we will describe shortly the examples in figure 1.

“Relational contracts” are usually temporary and tend to last for only a few years (Contractor and Lorange, 2002). Thus the category is located towards the left-hand side of the scale for alliances in figure 1. A “medium term contractual relationship” such as licensing, however, is often expected to last a bit longer than “relational contracts” and have a higher degree of size, consequence and mutual commitment (Contractor and Lorange, 2002). A “medium to long term supply chain relationship” tends then naturally to last even longer. What typically is

common for these three examples of cooperation is that the members cooperate directly from their own organization, without establishing a joint entity (Gulati and Singh, 1998). The fourth example that is mentioned, however, equity joint venture, is all about creating a new joint entity (Contractor and Lorange, 2002). All involved firms would then have an equity stake in the new firm, thus creating a higher level of commitment for the participants. Hence this example is located towards the right hand side of the scale in figure 1.

Contractor and Lorange (2002) mentioned, as we saw in figure 1, four examples of alliance categories. However these four categories can also be divided into two broader categories. The first one is alliances where there is no equity involvement. Typically, these are contractual alliances where there is no sharing of equity and no creation of new organizational entities (Gulati and Singh, 1998). The detail-level of the contracts can obviously vary a lot from one alliance to another.

The second broad category is alliances that do involve equity. According to Gulati and Singh (1998) this could be any agreement where the involved parties create a new entity together or that one of the firms invests in one of the other firms. However, the investment in the partner must not be so great that it gets classified as a complete merger or acquisition. If so it would no longer be an alliance because mergers, takeovers and acquisitions are not alliances (Yoshino and Rangan, 1995).

There are several pros and cons with both contractual partnerships and partnerships involving equity. Degree of control, resource commitment and dissemination risk are good examples of factors that need to be considered (Hill, Hwang, and Kim, 1990). Hill, Hwang and Kim's study of international entry modes can contribute to our understanding of why the structures of strategic alliances are taking different shapes. Some firms want to have a high degree of control. Others, due to risk, are more concerned about how much resources they would have to commit to the alliance. Choosing the alliance structure therefore tends to involve some sort of trade-off. For instance there is a trade-off between wanting to have a low commitment of resources and at the same time wanting to have a high degree of control. Figure 2 shows the characteristics of different entry modes/strategic agreements.

Table 1. The characteristics of different entry modes

Entry mode	Constructs		
	Control	Resource commitment	Dissemination risk
Licensing	Low	Low	High
Joint venturing	Medium	Medium	Medium
Wholly owned subsidiary	High	High	Low

Figure 2 The characteristics of different entry modes (Hill, Hwang and Kim, 1990)

Although the issue of ownership structure is important, managers tend to be too focused on the ownership structure when creating an alliance (Hamel, Doz, and Prahalad, 1989). Does this mean that the structural issues should simply be ignored? Well, to ignore the importance of structural issues is “misleading at best and dangerous at worst” according to Yoshino and Rangan (1995). They argue that if the structural issues were unimportant, managers would not spend so much time on it. In addition structural issues creates an environment for communication, and it also to some degree determines future options for the firms involved because of for instance different levels of flexibility depending on the agreement (Yoshino and Rangan, 1995). Thus it seems to us that the structure of an alliance seems to be relatively important. And a good structure could at least improve the changes of the alliance to be successful compared to not taking the structural issues seriously (Yoshino and Rangan, 1995).

3.5 Why cooperate through strategic alliances?

Now that we have summarized how to classify and separate between different types of alliances, we can have a closer look at why firms want to be involved in an alliance in the first place. A good alliance is likely to create synergies making participation mutually beneficial for the involved parties. The basic idea is simply to cooperate in order to increase the performance. An effective alliance might to some degree level off the effects of turbulent times as well. So what does existing theory say about why alliances are formed? Well, there are at least seven reasons for this (Contractor and Lorange, 1988). Note that the points are relatively overlapping as well according to Contractor and Lorange.

- Risk reduction
- Economies of scale and/or rationalization
- Technology exchanges
- Co-opting or blocking competition
- Overcoming government-mandated trade or investment barriers
- Facilitating initial international expansion of inexperienced firms
- Vertical quasi-integration advantages of linking the complementary contributions of the partners in a “value chain”

Reducing risk is the first reason that is mentioned on their list. Risk could be reduced in an alliance by the fact that the risk can be spread out on the cooperating firms (Contractor and Lorange, 1988). In this way one firm does not have to bear the entire risk on its own. This could lead to more projects being initiated, if the firms see the reduced risk as more beneficial than having to share the gains of success with others. Other potential benefits that can reduce risk is the increased diversification of products the cooperation might give, quicker entry into new markets, shorter payback time for projects and a lower cost to the alliance than the investment cost for each individual firm (Contractor and Lorange, 1988).

Economies of scale and/or rationalization make up the next point on the list of reasons for forming alliances. By joining forces, moving production to the most efficient facilities and increasing volumes partners in alliances could gain a scale advantage over non-member firms. The larger volume that could give the alliance a scale benefit will in addition also help the alliance in accumulating knowledge. Increased learning can lead to a progressive reduction of cost, which gives the alliance an even more significant advantage (Ghoshal, 1987).

Learning is also very much a part of the next reason on the list of why firms should cooperate through alliances. *Technology exchanges* are often an important part of alliances, and might decide the failure or success of the alliance (Hamel, Doz, and Prahalad, 1989). Firms that are able to learn from each other might create cooperation that is of mutual benefit. By bringing together knowledge and patents, the firms expect to get a superior product (Contractor and Lorange, 1988).

Co-opting or blocking competition is also included in the list of reasons why firm form alliances. This could be a defensive strategic move, but it could also be an offensive strategic move in order to put pressure on the profits and market shares of competitors (Contractor and Lorange, 1988).

However, it is also important to keep in mind that not all cooperation will be allowed by local governments. Thus, another reason why alliances are formed is because firms use it as a way of *overcoming government-mandated trade or investment barriers*. In Norway for example we have the Norwegian competition authority “konkurransetilsynet” which can forbid mergers and acquisitions that limits competition and affect businesses, end users, industry and the governmental administrative sector negatively (Konkurransetilsynet, 2011). If we want to be more industry specific, we know that the airline industry has been guided towards the use of alliances partly because of the regulatory restrictions by local governments that are made to protect national interests (Iatrou and Alamdari, 2005).

Facilitating initial international expansion of inexperienced firms is the next point on the list made by Contractor and Lorange on why firms form alliances. The initial international expansion can often be to markets that are culturally similar to the home market of the firm (Ellis, 2007). This indirectly indicates that managers tend to be careful about rushing into new and foreign markets. The scepticism from managers towards internationalization of their firms might be eased if they cooperate with a local company that knows the targeted market well. Thus the first international expansion of a firm tends to be a joint venture (Contractor and Lorange, 1988). For the service providing firms especially, this seems to be fairly in line with the “Uppsala School” of internationalization, which basically says that firms internationalize incrementally because of perceived uncertainty (Johanson and Vahlne, 1977). However, product producing firms will often start out by using direct export to the new market in the initial phase (Johanson and Vahlne, 1977).

Cooperation through alliances could help create *vertical quasi-integration advantages of linking the complementary contributions of the partners in a “value*

chain". There are several advantages for firms creating a vertical integration or quasi-integration according to Contractor and Lorange (1988). By quasi it is meant that the integration is somewhere between pure contractual cooperation and full integration (Contractor and Lorange, 1988). Advantages that are mentioned are reduced transaction costs, gaining economies of scale/lower costs, internalizing abilities, increased understanding of strategy within the industry and a faster implementation of technology changes (Contractor and Lorange, 1988). However, there are some downsides of vertical integration as well. These are especially prevalent if one firm wants to have the complete ownership over several phases of the value chain, thus integrating by acquiring the other firms. If so, then high capital investment costs for the acquiring firm, increased fixed costs and higher requirements of market access, contacts with large buyers and brand recognition could be potential drawbacks (Contractor and Lorange, 1988).

3.6 Evolution of an alliance

Although a wide range of research has been published on the strategic field of inter-firm cooperation and alliances, it was not until the 1990's that focus was placed on the development processes of the alliances and the process orientation was fully introduced (Das and Teng, 2002). The processes through which alliances are formed, operated and evaluated have, in other words, been neglected in early research. Alliances are usually formed and controlled by two or more pre-existing entities. This creates unique characteristics with regard to formation processes and evolutionary stages. These characteristics suggest that the development processes of single organizations are not necessarily valid for strategic alliances. Understanding the reasons for changes in an alliance and the developmental stages that these go through could provide a valuable asset in managing strategic alliances.

Das and Teng (2002) review the research on alliance process models as split into three different approaches. The first and most commonly used approach is models that focus on the developmental stages of alliances. This approach aims to accurately portray the stages that an alliance goes through as it moves from initiation to operation and eventually evaluation or termination. Many researchers have suggested models indicating the precise stages that an alliance goes through.

Each of these models describes stages and a flow from one stage to another as the alliance moves through its life cycle. However, each model differs slightly from the others and there is not a universal agreement as to which is the most accurate. For example, Brouters and Brouters (1997) portray a model with five stages; selecting mode of operation, choosing partners, negotiation, managing the alliance and evaluating performance. Das and Teng (1997), on the other hand, suggest that the process should be divided into seven stages; choosing an alliance strategy, selecting partners, negotiation, setting up the alliance, operation, evaluation and modification. These models are fairly similar. They both share many of the same stages and they both include a flow from one stage to another. However, Das and Teng (1997) choose to include a feedback to the overall alliance strategy of the participants. Kanter (1994) chooses to illustrate the evolution of an alliance by comparing it to a romance. She argues that, much like human relationships, no two alliances develop exactly the same. However, she states that alliances generally evolve through five overlapping stages; selection and courtship, getting engaged, setting up housekeeping, learning to collaborate and changing within.

Ring and Van de Ven (1994), however, suggest that the alliance evolution is not a single process moving from A to B. It is rather a repetitive process which moves through four different stages; negotiation, commitment, execution and assessment. While the model moves through the different stages, there is also a continuous process of assessment at each stage.

The second approach identified by Das and Teng (2002) includes alliance conditions. The approach emphasizes these conditions as the underlying reasons for an alliance transitioning from one stage to another. Inkpen and Beamish (1997) is one of the examples of such an approach. In their article, they argue that the alliance condition of learning curves may greatly influence the developmental process of an alliance through changes in bargaining power. Doz (1996) argues that alliance development is affected by a series of conditions including bargaining power, learning abilities and degree of interdependency. He further states that these conditions are dynamic and that alliance development is best monitored by examining alliance conditions.

Das and Teng's (2002) third and final category of approach to alliance process models is a wholly integrated view which includes a factor of co-evolution between the alliance and its environment. The approach essentially assumes that alliance development is affected by the external environment, but alliance activities also affect the internal alliance environment. Das and Teng (2002) state that this approach has only recently come into focus, but may provide an important understanding of the way alliances develop.

In conclusion, there is disagreement among researchers as to the number of stages that should be included in an accurate portrayal of the alliance development process. There is also disagreement with regard to whether or not the evolution goes through a single process or a series of repetitive processes and exactly which factors influence the processes. However, common for all three approaches is the view that an alliance process consists of three main stages; formation, operation and evaluation.

The formation stage is essentially the stage where the need for and potential of an alliance is discovered by the parties involved. This stage is also where partner selection and negotiation between the partners occurs. This negotiation leads to a formalization of the alliance and an agreement to collaborate. Once the agreement is in place, the alliance moves on to the operation stage in which the collaboration officially starts. The main component in the operation stage is alliance management and adaptation. Once the collaboration is at the stage of operation, the alliance can evolve to the stage of outcome which essentially consists of an evaluation of the alliance with resulting implications for the alliance itself and the partners involved.

3.7 Alliance success factors

The success factors of alliances are perhaps the most central topic in alliance research. Finding the secrets to successful alliances is one of the main reasons for studying them. However, researchers have found that success factors vary and different factors may require prioritization at different times (Anand and Khanna, 2000). This seems logical due to the vast internal variety within the concept of alliances. Studies have suggested that success factors for any given alliance will

be largely dependent upon the alliance conditions and its environment. Which factors are critical will vary along with alliance type, governance structure and industry characteristics (Anand and Khanna, 2000). Research also suggests that factors change in importance as the alliance evolves through the different stages mentioned earlier (Gulati, 1998). Some researchers go as far as to indicate that the alliance will not evolve to another stage without certain factors being fulfilled.

Kale and Singh (2009) discuss success factors for an alliance in terms of three different stages of the alliance; alliance formation and partner selection, alliance governance and design and postformation alliance management. As illustrated in figure 3, the authors argue that alliance success is determined by a series of critical factors for each stage.

A Single Alliance: Key Success Factors

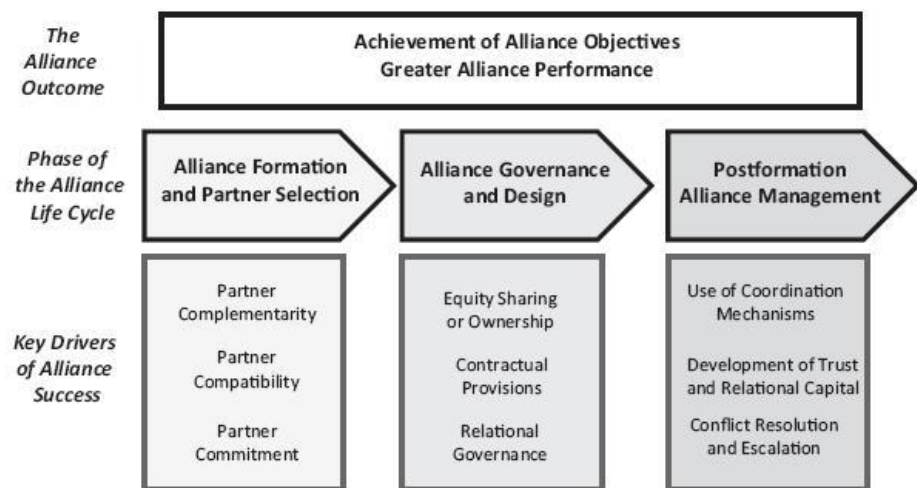


Figure 3: Key Success Factors (Kale and Singh, 2009)

As illustrated, the first phase of the alliance is focused on factors related to partner selection. The first factor, partner complementarity, is defined as “*the extent to which a partner contributes non-overlapping resources to the relationship*” (Kale and Singh, 2009: 47). The essence of this is that each company brings resources the other lacks, resulting in a greater variety of capabilities and therefore a greater chance of success. Several studies show that greater partner complementarity gives greater chance of alliance success (Kale and Singh, 2009).

Another important success factor regarding partner selection is termed partner compatibility. This factor is concerned with the degree to which the business

cultures and routines of the partner firms are compatible with each other. Partners with working styles that can easily be integrated will experience greater success than those which require assimilation (Kale and Singh, 2009). The final factor in the first stage is partner commitment. This factor refers to the willingness of each firm to contribute resources to the alliance and to commit to long-term goals. Alliances with committed partners will experience greater chance of success.

The phase of alliance governance and design also carries three important success factors. The first, equity sharing/ownership, is a mechanism related to risk management. Alliances generally experience greater success when governance mechanisms such as equity-based ownership are implied in the alliance. Kale and Singh (2009) suggest that this is because equity investments help mitigate the risk of opportunistic behaviour and helps guide day-to-day monitoring and hierarchical structures. This factor is supported by the second factor, which is contractual provision. Contractual provisions in the alliance agreement are a success factor because they can provide clarity regarding alliance responsibilities and resource commitments. The final factor in this phase is relational governance. Relational governance is the degree to which alliance partners can control the alliance through trust and goodwill. Greater relational governance increases the alliances' chance of success because of the reduction in monitoring and contracting costs this implies.

The final phase is concerned with actual alliance management after the alliance has been formed. The first factor considered in this phase is the degree to which the alliance applies coordination mechanisms. Coordination mechanisms help to ensure that the alliance is working efficiently by reducing overlap. Correct implementation of coordination mechanisms should therefore result in greater chance of alliance success. Kale and Singh (2009) suggest three different coordination mechanisms that can be applied within the alliance in order to improve coordination and performance; programming, hierarchy and feedback. Programming relies on developing clear guidelines in which partners are given specific tasks and timetables for performing these. Hierarchy, on the other hand, refers to the development of a formal structure for alliance tasks. Feedback is a coordination mechanism in which the partners develop communication systems

and arrange regular meetings to inform each other and periodically evaluate progress (Kale and Singh, 2009).

The second factor, development of trust and relational capital, is essential to alliance success according to several studies. Trust between partners facilitates alliance governance and helps partners cooperate more efficiently (Kale and Singh, 2009). Alliances which can develop trust and relational capital quickly are therefore more likely to succeed.

The final factor is conflict resolution and escalation. Alliances usually include two or more partners with interests that can diverge, it is therefore logical that conflicts may arise over the course of an alliance. How these conflicts are handled by the alliance is therefore an important factor which can greatly influence the likelihood of success.

In theory, paying attention to and fulfilling these success factors at the different phases of the alliance should lead to success in terms of fulfilment of the alliance objectives and enhanced alliance performance. However, several studies suggest other factors as crucial to alliance success as well. Anand and Khenna (2000) find that previous alliance experience and learning abilities are critical success factors for partners in an alliance. They also find that the degrees to which these factors affect alliance success are dependent on the type of the alliance.

In conclusion, alliance success factors are largely dependent upon the type of alliance and the stated objectives. There are many different success factors which should be paid attention to, but which ones are the most crucial varies from alliance to alliance and may also vary throughout the alliance.

3.8 Alliance risks

Although cooperation in alliances can give firms great rewards in the form of superior performance, alliances undoubtedly also carry some risks. Alliances are unique as a business setting in the fact that they depend on inter-firm cooperation. Partners in an alliance usually only have partially overlapping goals and cooperation cannot be taken for granted (Das and Teng, 1996). In other words,

partners in an alliance may have somewhat diverging goals or hidden intentions which could lead to conflicts of interest. Assuming real-world conditions with information asymmetry, we see that entering into an alliance therefore carries a certain amount of risk.

Das and Teng (1996) analyze the risks involved in inter-firm cooperation and distinguish between two main categories; relational risk and performance risk. Relational risk is defined as “*the concern that firms may not work toward the mutual interests of the partners and that they may not cooperate in a manner specified in the alliance arrangement or as expected by their partners*” (Das and Teng, 1996: 831). These types of risks are unique to alliances as a business form due to the existence of several separate (parent) entities. One such risk is the risk of over sharing or “dissemination risk”. Partners in an alliance may unintentionally share or relinquish control of technology or knowledge resulting in a loss of competitive advantage. Hagedoorn (1993) argues that one of the main motives for inter-firm cooperation could be to gain insight into other firms’ technology or knowledge and to integrate these to form a competitive advantage. Sharing knowledge or technology with potential competitors obviously poses a risk for firms, but alliances are unlikely to succeed if partners refuse to contribute resources or are overprotective of their knowledge. Another relational risk is control or power in the alliance. Conflicts of interest such as preferences in work methods are likely to arise in an alliance. If bargaining power or control is unequally distributed among the alliance partners, one of the partners is likely to lose such conflicts repeatedly. This risk is related to the main problem of relational risk, namely opportunistic behaviour. Das and Teng (1996) argue that most relational risks can be mitigated by decreased likelihood of opportunistic behaviour through trust and experience.

The other type of risk, performance risk, is present in all ventures and as such is not unique to the issue of alliances. Many researchers have actually found that performance risk could be a motive for creating an alliance (Das and Teng, 1996). When firms evaluate risk of an attractive strategy as too high, they may seek partners to share the risk in order to develop that strategy. However, uncertainties regarding performance can be higher as several firms come together in an alliance.

Investments that are specific to the alliance can give increased costs for firms and therefore increase the performance uncertainty (Das and Teng, 1996).

Das and Teng (1996) argue that risks and their impact on alliances will vary with the type of alliance and the alliance activities. Mitigating and balancing these risks based on the projected rewards of the alliance is an important aspect of alliance management. Awareness of the risks involved and the tools and management skill set required to overcome them is an essential part of managing the alliance.

3.9 Measuring performance in alliances

Performance is in itself an ambiguous term. In order to evaluate performance as good or bad, one must be able to compare it to something, such as a set of specified criteria, goals or other performances. In other words, performance is open to interpretation. For example, Kanter (1994) argues that how we measure performance and interpret success is influenced by cultural and political factors. In her study of intercompany relationships involving intercultural collaboration and companies from several continents, Kanter finds that performance indicators and prioritization of these vary along with the companies' environment. North American companies displayed a tendency to evaluate alliances strictly in financial terms, while Asian companies viewed relationship building and collaboration as almost equally important. Obtaining an objective measure of performance can therefore be difficult in alliances.

In addition to the difficulties related to determining what constitutes good performance, there is the difficulty in determining which performance indicators can give an accurate picture of how the alliance is functioning. Olk (2002) suggests that the difficulty in defining and evaluating alliance performance is related to the difficulty in defining organizational effectiveness. Researchers have been unable to agree upon a universal definition of organizational effectiveness and thus have not managed to find universal indicators of performance. Olk (2002) also argues that alliance characteristics, such as a hybrid structure, additional stakeholders and a transitional nature, adds to the complexity involved in determining alliance performance. He therefore proposes that alliance performance should be viewed as a multidimensional construct when deciding on

appropriate evaluation criteria. One dimension of the construct is related to the perspective from which one wishes to evaluate performance. Olk (2002) argues that there are two different perspectives involved in alliance performance; the alliance itself and the partners of the alliance. The first is concerned with the performance of the alliance as an entity, while the second attempts to measure the added benefits the alliance brings to its partners.

The second dimension of the construct is linked to the purpose of the evaluation and can be split into four main approaches (Olk, 2002). The first approach is optimization. This approach typically uses a single, objective criterion for evaluation and the goal of management is to maximize the value in order to improve performance. The second approach is a strategic interest approach. As with the optimization approach, a single goal is used for performance. However, several measures may be used to reflect that goal. The third approach is a multi-interest approach which measures several evaluators. This approach does not prefer one single criterion and aims to capture trade-offs between criteria. The final approach is a sequential perspective. This approach uses several criteria for evaluation, but assumes that they are related.

Lunnan and Haugland (2008) state that performance measures used in evaluating alliance performance can generally be split into three groups; financial, operational and effectiveness. Financial measures are typically concerned with the short-term effects of alliances, such as fluctuations in stock market value of the partner companies. These measures typically capture the short-term effects an alliance has on its partners. Operational measures, on the other hand, are concerned with alliance duration, termination and stability. These indicators may measure long-term performance through the assumption that good performance should result in long-lasting alliances and no abrupt termination. However, it is important to consider that market conditions may change or the alliance may be terminated due to the fact that it has served its purpose. Effectiveness measures are the most commonly used indicators of alliance performance (Lunnan and Haugland, 2008). These measures are generally concerned with an alliance's ability to fulfil strategic goals. Effectiveness measures may provide a good proxy for measuring performance, but it can be difficult to establish objective indicators as to what degree an alliance fulfils its goals.

In conclusion, it is important to determine the goal of an evaluation and to be aware of what the performance indicators are actually able to capture.

4.0 Methodology

Research methodology should act as a framework which guides the research process and justifies the way that results are obtained throughout the study (Yin, 2009). In order to properly outline the methodology of our thesis and to ensure we have included all stages of the study, we have applied a research framework published by Churchill (1999). The framework separates the process of conducting a study into different stages. These will be discussed in detail below.

4.1 Diagnosis of the problem situation

The problem situation of our study is focused on the relationship between the structural characteristics of strategic alliances and performance. More specifically, the problem we wish to answer is how performance can be enhanced or hindered by altering specific structural factors of the strategic alliance. Our study will be focused on the airline industry and the three largest alliances therein.

In our thesis we will conduct a comparison of the structures of the three airline alliances, both by comparing them to each other, but also by comparing and contrasting the structure of each alliance as it changes over time. By conducting these comparisons and seeing these in combination with timelines of performance, we aim to identify possible linkages between the structural aspects of the three strategic alliances and their performance.

Linkages between structural aspects of the three alliances and their performance over their last decade of existence are likely to uncover implications for future structuring of strategic alliances. These implications will hopefully contribute to the strategic field of research on alliances and help provide managers with an accurate idea of the relationship between structure and performance in alliances.

4.2 Choice of research design

The choice of research design should always be guided by the nature of the question one seeks to answer (Yin, 2009). Yin further states that questions related to *how* or *why* are best investigated by employing a qualitative methodological

approach to the study. Seeing as our research question is concerned with how structure affects performance in strategic alliances, this seems a valid reason to focus on taking a qualitative approach. A qualitative approach implies conducting an analysis of data which is primarily non-numerical (Saunders, Lewis and Thornhill, 2009). This seems to coincide well with the properties of the study we aim to conduct as data on the structural characteristics of alliances are primarily non-numerical.

Creswell (2009) discusses the utilization of a case study approach and states that the main purpose of a case study is to explore factors which may contribute knowledge. This seems well aligned with our stated objective of exploring the factors that influence alliance performance. The case study method also offers a good way of studying processes in the context where they occur (Saunders, Lewis and Thornhill, 2009). This is particularly relevant to us as we aim to adopt an inductive approach by analysing data from the industry and to use these insights to formulate hypotheses. Studying these processes in the context in which they occur seems vital to conducting a thorough and valid analysis. We have therefore chosen to employ the case study approach to our thesis. Choosing airline alliances as a basis for our case is reasoned for earlier. The airline industry essentially represents one of the industries in which we would argue that the structural characteristics of the alliances should display substantial effects on performance. The industry also includes certain characteristics that should contribute to making the implications of the study interesting. We therefore feel justified in deeming the airline alliances a solid case study for our purposes.

Yin (2009) distinguishes between single case and multiple case study strategies stating that a researcher should only employ a single case strategy in studies where the nature of the study strongly supports this. Yin further argues that employing a multiple case strategy can act as a way to ensure and improve the degree of validity of the research. Studying multiple cases ensures that conclusions drawn from analysing one case can be found in other cases as well and therefore promotes the ability to generalise findings. The underlying logic of employing multiple case studies is therefore that each of the selected cases should either predict similar results contributing to the validity or predict contrasting results stemming from anticipated reasons (Yin, 2009).

The unit of analysis for our study will naturally be the airline alliances. We have chosen to incorporate the three largest airline alliances as this should contribute to a better understanding of the phenomena we are researching as well as providing a background for deductions of validity and generalizability. The fact that all three alliances conduct their operations in the same industry and a similar environment leads us to believe that structural factors deemed to affect performance in one alliance should also affect performance in the other alliances. According to IATA WATS 2010 the three airline alliances currently cover approximately 70 % of the total market share in the industry (IATA, Annual issues 2001-2010). We therefore predict similar results in all three cases which would provide us with a replication of results. This leads us to adopt the view that conclusions drawn from the study should be generalizable for the industry as a whole.

Yin (2009) argues that case studies are, contrary to popular belief, one of the most difficult research strategies to undertake. This is largely due to the lack of standardized procedures as case studies vary greatly based on the case in question. Case studies often evolve as the research process proceeds and the researcher gains a better understanding of the subject at hand. Establishing routine procedures and guidelines is therefore very difficult. In order to compensate for the lack of standardized procedures for case studies, Yin argues that it is essential for researchers using this approach to exhibit a specific set of skills. Firstly, researchers should always approach the research with an open and inquiring mind and maintain the ability to perform an unbiased analysis of the data. Furthermore, conducting a good study is contingent on the researcher's ability to handle unanticipated results or changes in the direction of the research. Lastly, it is important that the researcher develops a thorough understanding of the issues being researched. These skills formed a guiding framework for our thesis which we attempted to keep in mind throughout our study.

4.3 Choice of data collection

Saunders, Lewis and Thornhill (2009) state that data collection techniques employed in a case study vary greatly. The method of data collection appropriate for use in a case study may vary from interviews to observations or documentary

analysis. One could also use a combination of several different methods of data collection. The main data collection method we have chosen is documentary analysis. This is largely due to the natural restrictions of access that apply due to the fact that we have no previously established contacts in the alliance organizations. Certain information regarding alliance structures is considered confidential information by the airline alliances. Gaining access to information that is not already public is therefore very difficult.

Basing the main part of the study on secondary data could act as a limitation as the data included will be limited by factors such as access to databases and search abilities. However, the amount of information available on the industry, the airlines and the alliances is vast. Data is available through several different sources such as academic journals, published books, annual reports and industry analyses. We therefore conclude that although the study is based primarily on secondary data, this should not severely limit or bias our study as data can be corroborated through several sources.

4.4 Selection procedure and fieldwork

The fieldwork of our thesis was largely composed of the search for literature and data relevant to our study. This essentially meant that there we conducted a continuous screening process throughout the process in which validity and accuracy of the data found was evaluated. The process of evaluating information was demanding as we sought to corroborate data through several sources and to establish the reliability of these sources.

The initial selection procedure involved in this thesis was mainly focused on determining which structural characteristics were relevant for our study and which indicators to use for performance. A preliminary review of literature on the topic of strategic alliances, success factors as well as industry literature gave five structural factors which seemed to warrant further study. These five factors were scope of joint activities, organizational structure, ownership structure, criteria for membership and decision-making processes. These were the main factors we focused on when conducting our information search on the alliances.

The definition of performance varies greatly and is entirely dependent on the stated objective of the alliance. The selection procedure for performance therefore required careful deliberation. The theoretical framework suggested several different categories of relevant proxies for determining alliance performance. Prior studies conducted on airline alliances have used performance indicators ranging from survival or duration to cost structures and member satisfaction. However, because all three alliances have a stated objective of improving sales volumes for member airlines, we have identified the indicators of operating revenue, available seat kilometers (ASK) revenue passenger kilometers (RPK) and passenger load factor (PLF). Operating revenue is quite simply the value generated by operations in each company. ASK is the total distance a carrier has flown multiplied by the number of seats available, otherwise referred to as the capacity of the airline. RPK illustrates the number of kilometers flown by paying passengers. PLF is a measure of effectiveness as it is composed of RPK divided by ASK to indicate the degree to which the airline filled its capacity.

The choice of these indicators is further supported by the literature as generally accepted proxies for performance in the industry (Kleymann and Seristö, 2004). The industry organizations and airlines themselves also describe these numbers as key performance indicators (KPI) in their annual reports.

The thesis required two main data collection processes; one collecting data on the structural characteristics of the airline alliances and another collecting data on their performance. Data relating to structure was collected from a variety of sources including web pages of the alliances, news articles, research articles, presentations given by alliance executives, published books and industry reports. We continuously sought to corroborate all information gathered by comparing data from different sources. Gathering data on performance differed slightly from this process as we conducted an initial screening of the potential sources. We determined the period from 2000 through 2009 as the period relevant for our study. The selection of this period came naturally as all of the alliances had been formed by the year 2000, while not all companies had presented their results for 2010 due to differing fiscal years and reporting procedures.

Data on the four different performance indicators were available through a variety of sources. However, numbers varied slightly between sources and we therefore felt it was necessary to evaluate each source and establish clear guidelines as to which sources were reliable. Our screening of the different sources resulted in a combination of three different sources. The International Air Traffic Association's World Air Transport Statistics (IATA WATS) became the primary source for performance data. This was mainly due to the fact that IATA serves as a neutral industry organization and could deliver accurate numbers throughout the period. However, because of differing fiscal years not all airlines were represented in the statistics published. We have therefore resorted to numbers drawn from annual airline alliance surveys conducted by Airline Business Magazine. Values missing from these two sources have been retrieved from individual companies' annual reports. Numbers retrieved from annual reports have been converted to US dollars using historical currency exchange rates. Annual reports were placed last in our prioritization of sources mainly due to varieties in reporting standards and differences in availability.

Although collecting data from three sources is not ideal, this was deemed necessary as no source contained a complete set of comparable figures for all members throughout the entire period. In order to ensure that this would not severely limit our study, we sought to confirm all numbers by corroborating between different sources and reviewing the numbers once they were placed in context.

4.5 Analysis and interpretation of the data

Although there is a vast amount of data available on the focus of our study, the three major airline alliances, we have not been able to find studies conducting the same type of comparison and research we have undertaken. Analysis and interpretation was therefore one of the most important stages of our thesis.

As mentioned earlier, one of the implications of case study as a research design is continuous evaluation and interpretation of data. After collecting all data and formulating our theoretical framework, we therefore conducted an evaluation and decided to narrow the scope of our study to three structural factors. We decided to

focus our analysis on the effects of centralized management teams, equity-based ownership and IT systems. This was based on a consideration of a combination of the information collected on the alliance structures, the theoretical framework and the relevant performance indicators.

In order to eliminate the effects of member fluctuations, we determined that only alliance partners who had been present for the entire period should be included in the detailed analysis. Furthermore, to eliminate size differences and give grounds for a comprehensible comparison between the alliances we focused on growth in percent from one year to another in each of the four indicators. Another operation performed was to determine figures for non-alliance airlines in order to generate industry indicators and a control group. The resulting information from both performance and structure is analyzed carefully in order to determine possible links between the two.

5.0 The Airline Industry

5.1 Introduction

The commercial airline industry, referred to as the airline industry in this thesis, is a dynamic and fascinating industry. It is indeed a very international industry, and it is also a very good industry to use as an example when studying strategic alliances. This is partly so due to the extensive use of such alliances in the industry, and the dynamic and international environment they operate in. We will now have a close look at the airline industry. Thus providing the necessary background for our analysis and pursue the research objective of getting to know the industry better.

This industry section of the thesis will introduce the reader to the modern airline industry. After a short retrospective look at the history we will advance by explain some of the distinct and fundamental features of the airline industry, such as the hub-and-spoke network system and the power of labor unions. The features are explained because they contribute to the understanding of the global strategic alliances and the rest of the industry as well. Next we will have a look at the market developments both in the past and the outlook for the future. Then we will explain why the liberalization of the industry has been so influential for the development of global airline alliances and why this knowledge is needed in order to understand the dynamics in international aviation. After that we have a look at the positive and negative sides of being an alliance member, mainly from the airlines point of view. Finally, we look ahead and summarize what other researchers have found in terms of what the next development will be in cooperation between airlines. Along the way we also explain some of the most important terms used in the industry.

5.2 A retrospective look at the airline industry

The history of aviation goes back at least to 1903 when Orville- and Wilbur Wright made the first motorized and controlled flight with an airplane that was heavier than air (Abzug and Larrabee, 2002). Since then there has been a tremendous development into what we know as the modern commercial airline

industry of today. One of the most important breakthroughs was the invention of the jet engine, which became introduced on passenger airplanes in 1958 (Smithsonian, 2011). This meant that people could be transported much faster and longer, which in turn lead to a higher demand for air travel (Geels, 2006). Other inventions such as the computer and later on the Internet have also changed the industry, creating immense opportunities for both the companies and the consumers. It is definitely fair to say that the airline industry has contributed significantly to the globalization, bringing people together for leisure and vacations as well as work.

5.3 Important features of the airline industry

As the industry develops, we will see new business models and smart solutions bringing the industry to another level. In order to make the reader understand some of the basic elements of today's airline industry and why it is structured the way it is, we will present and explain some of its key features.

5.3.1 The hub-and-spoke network system

The hub-and-spoke network system is the system that most of the world's largest airlines use for their operations. This form of business model is absolutely essential for the global airline alliances, because it creates tremendous opportunities for cooperation. The main idea is illustrated in figure 4. Here we can see that point A gets traffic from the smaller points j, z, y and x, and thus the utilization of seats on the longer flight from A to B would increase (higher load factor). The same goes from point B to point A, as point a, b, c and i work as "feeders" to point B. In other words, the system is designed to increase the load factor¹ for airlines connected in such a network and also to increase the scope of the route network (Button, 2009). In this way the revenue income should increase for companies working together in such a system. However, the system also needs some standby capacity in order to work, thus creating some uncertainty and increased costs compared to "point-to-point airlines". Airport A and B are called hubs and are typically large, placed near a big city and very important for the airlines. While x, y and z are typically smaller airports and thus not quite as

¹ Load factor: Utilized seat capacity divided by available seat capacity.

important for the airlines as the “hubs”. The different alliances fight to keep their domination over their hubs, and they also fight to gain additional important hubs. However, the alliances must be careful not to focus on and dominate one hub too much because of the likely involvement of regulators.

K. Button / Journal of Air Transport Management 15 (2009) 59–71

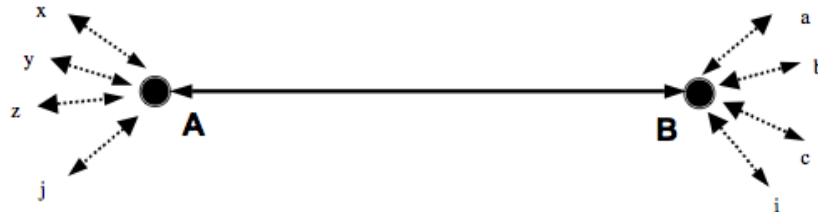


Fig. 4. The “dog-bone” international hub-and-spoke network.

Figure 4 Hub-and-spoke network (Button, 2009)

5.3.2 Low cost carriers

A “low cost carrier” (LCC) is one of the terms used to describe an airline that due to its business model usually just flies from point to point (E.g. x to A in figure z), and tends not to provide services that connect you to another flight (to point c as an example). Because of this the LCCs save a lot of effort and costs because they then do not have to coordinate with other companies in order to get the customer to point c. If a route operated by a LCC is non-profitable it will probably get closed. On the other hand, if a route operated by a “network-carrier” is non-profitable, it might very well be kept running because it could hurt the overall network even more to close it. For example, half empty flight from a non-profitable route can be kept running because they contain passengers who are connecting onto a very lucrative route with high profit margins.

5.3.3 Grandfather rights

An important feature that works in favor for the alliances based on the hub-and-spoke network system, is the “grandfather rights”. According to Button (2009), this means that if an airline has used a slot in 2010, the same airline has the right to use that slot also in 2011. This definitely helps the alliances to keep control over many of their important hubs, especially because the new and available

capacity at the largest and most important airports are often very limited (Iatrou, 2004).

5.3.4 Labor Unions

Another typical feature with the airline industry is that the labor unions for the airline employees have been quite powerful. Especially the pilots, who can seek support from their local unions, nation-wide unions, unions inside the alliance and even across the alliances through IFALPA² (Airline_Leader, 2011). The fact that the organized employees have such power, can be a disadvantage for the airlines belonging to an alliance because labor unions might argue for equal salaries across the alliance (Iatrou, 2004). To know that other pilots or crew members in the alliance receives a higher salary can definitely create conflicts which might be problematic to solve. Therefore all mergers, acquisitions and alliances must handle labor issues very carefully and make sure that the employees agree with the decision.

5.3.5 IT-systems

Information Technology systems are actually a crucial part of the operations for the airlines. And especially computer reservation systems (CRS) and the later global distribution system (GDS), which will be our two areas of focus regarding IT-systems in this thesis. A GDS is a development of the CRS and can usually be used to book hotels and rental cars in addition to flights from multiple airlines (Videcom, 2011). In this section we will have a closer look at these systems by describing briefly their history, explaining their benefits for the airlines and how they caused regulators to intervene with how they were used.

The history of using computers to handle reservations started in the late 1950s when American Airlines and IBM launched a joint project to automate flight reservations because of increased demand for air travel (Copeland and McKenney, 1988). Previously, reservations had been made manually in a system which relied on extensive use of phone calls in order to book a flight (Copeland and McKenney, 1988). Now in 2011 however the situation is completely changed. As

² IFALPA is an abbreviation for the International Federation of Airline Pilots Association.

of today the typical role of a CRS is to contain continuously updated records of flight schedules, code-sharing information, seat assignments, flight inventory, passenger information, frequent flyer information and fare tariffs to mention a few (Amadeus, 2011; Sabre, 2011). Modern GDS also makes for example car rental and hotel bookings available for the consumers through the same system as we mentioned earlier. This makes the comparison of prices and selection process much easier for the consumers, who increasingly tend to purchase their ticket by using the Internet (Pemberton, Stonehouse, and Barber, 2001). This usually happens either directly at the airlines web page or by using providers of GDS's such as expedia.com or orbitz.com. Thus we can say that the Internet has basically revolutionized how airlines sell their services.

The computer reservation systems represented a powerful tool for the airlines when it got introduced, with increased revenues as one of the most important benefit. An illustration of the benefits provided by CRSs can be viewed in exhibit 2. Systems with yield management software, such as Amadeus and Sabre which are two of the largest systems, can help the airlines to increase their load factor and revenue income (Hopper, 1990). Yield management is basically about allocating seats and creating different prices in order to maximize revenue according to Hopper (1990). Without yield management a lot of seats could risk not being sold, since it is not very normal in the airline industry to change the airplane type on short notice due to low or high demand. The airlines thus started using the computers systems to sell "the right seats to the right customers at the right prices" (Smith, Leimkuhler, and Darrow, 1992). Timing is an issue in this game of price discrimination, as the systems monitor the reservations continuously and make possible discounts available if a seat is likely not to be sold at the current price.

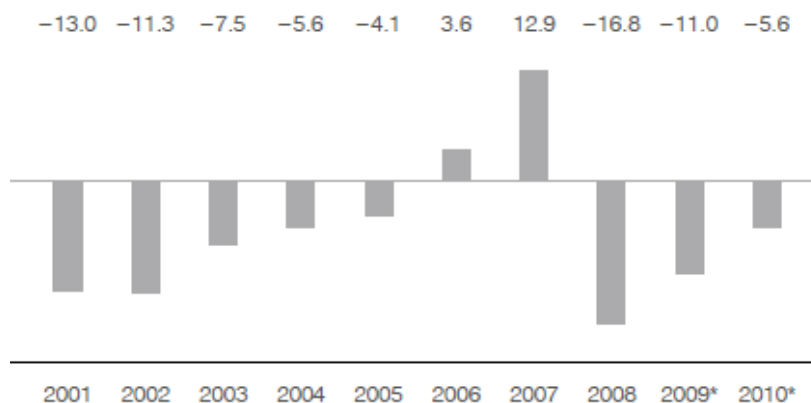
As ownership over the CRS's tended to be dominated by the large airlines that could afford to buy or develop such a system, the systems tended to favor the owner's flights so they would appear at the top of the search results. This form of "display bias" was actually very important because most flights at that time used to be booked through travel agencies, which in turn tended to book one of the flights appearing on the top or at the first site of the search results (Evans, 2001). Another type of bias that was common in the early days because of the airlines

ownership in the reservation systems was “architectural bias”. This occurred when the system operator, which usually was an airline, deliberately made it easier to access data or in other ways favored their own airline so travel agents would prefer their flights (Morrison and Winston, 1995). The preference of the travel agencies to book flights on the airline that owned the CRS used by the agencies is also referred to as the “Halo effect” (Pemberton, Stonehouse, and Barber, 2001). Because of the biased information in the CRS, the Civil Aeronautics Board made laws in 1984 that were to prevent this from happening. Today most of the CRS or global distribution systems (GDS) as many of them have become, should be less exposed for biases as the airlines have divested much of their ownership in such companies (McNulty, 2007).

5.4 Market developments

The commercial airline industry has recently been facing the worst cyclical downturn since the 1930s according to the International Air Traffic Association (IATA) annual report for 2010. The terrorist attacks in September 2001, the SARS disease, the financial crisis in the late 2000s and the volcano ash crisis on Iceland are some of the things that have taken its toll on the industry in general the last decade. However, there are still signs of optimism among the airlines. Technological innovations that save costs and also further economic growth in emerging markets such as the domestic market in China (See exhibit 3) are some of the things that give the industry new hopes and positive expectations for the future.

Development of sector net result in USD billion



Source: IATA Industry Times 01/2010. * Forecast.

Figure 5 Development of sector net result (Lufthansa, 2009)

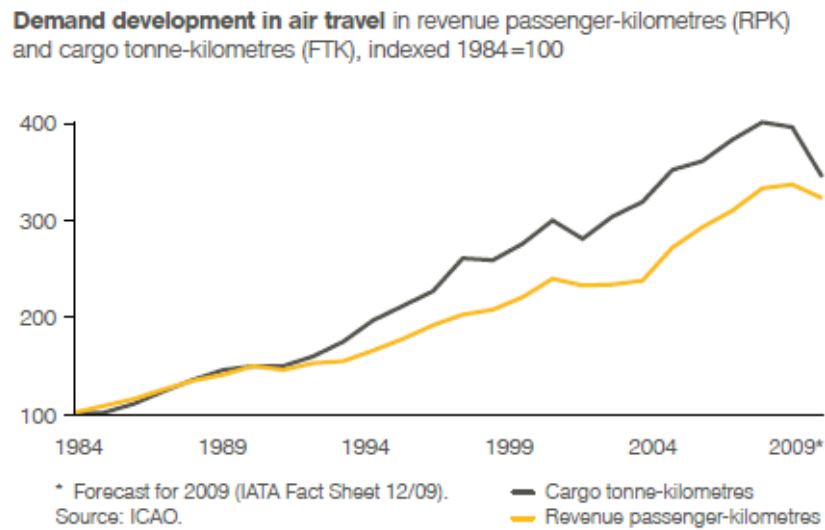


Figure 6 Demand development in air travel (Lufthansa, 2009)

The net results published by the airline sector since 2001 have not been very good (See figure 5). The market managed to recover after the tragic events of September 2001, and combined with a general economic upturn this eventually led to positive net results in 2006 and 2007. However, the financial crisis in the late 2000s changed this dramatically. “*The revenue fall of airlines after September 2001 was just nearly one quarter compared to what happened in 2009*” (IATA, 2010). However, IATA also reported that the forecasted loss of 11 billion USD in 2009 turned out to be a loss of 9,9 billion USD. Better than expected, but still very dramatic numbers for the industry in general. In figure 6 we see that there has been significant growth in demand for air travel since 1984. What we also see is that the table confirms what we saw in figure 1, namely the huge negative impact of the financial crisis on the airline industry. The demand for business class seats did especially decrease dramatically (See exhibit 4).

The future market for the airline industry seems to be characterized by predictions about strong passenger growth. Airplane producer Boeing has predicted that the annual growth rate for number of passengers to year 2030 will be 4.2 percent. More predictions from Boeing can be found in exhibit 5. As mentioned previously the market that is predicted to have the largest growth is the domestic market in China. As we can see from exhibit 3 this market is estimated to have an annual

growth of passengers by 7 percent. This is followed by the Europe-Asia market with an annual growth of almost 6 percent.

5.5 Liberalization of the industry

To understand the background for why global alliances have become such a phenomenon in the modern airline industry, we think that it is absolutely necessary to include a part in this thesis about the liberalization of the industry. This will provide some of the answers to not only the reasoning and popularity of the alliances, but also give the reader a better understanding of the strategic implications the liberalization has led to.

Often when two firms want to cooperate closely they choose to merge, or one of the firms simply acquires the other in order to take control of it. In the international part of the airline industry however, firms have tended towards strategic alliances rather than cross-border mergers and acquisitions (See for example (Button, 2009), (Evans, 2001)). This is by many believed to have been so due to regulations, competition authorities and complexity (ICAO, 2006). In 2011 there are still regulations preventing or at least complicating the process and formation of cross-border mergers and acquisitions in this industry. As an example it is required by the US congress, that no more than 25 percent of the voting interests in an US airline are controlled by foreign citizens (Button, 2009). So even in the perhaps most liberalized economy in the world there are still restrictions protecting or maybe preventing the industry to some degree. Depending on whom you ask. One reason for still regulating the market might be due to the strong positions “flag carriers”, or “national carriers” as they sometimes are called, have enjoyed in the past.

5.6 From “flag carriers” towards privatization

Flag carriers have been important for many countries, including Norway, because they are believed to have created some sort of predictable “public service” of air transportation (Iatrou, 2004). Previously, flag carriers tended to be wholly or at least partly government owned and some of them, like for example SAS or Singapore Airlines, still are. In this way the state can have a say in the

development, and it might make it easier to subsidize routes that are not necessarily profitable. This effectively secures nation-wide coverage of fast and efficient transportation. This is often important from a national interest point of view. Regions with low population but with highly important industries could be used as an example. The industries, e.g. exporting companies, in the area might for example be dependent on quick transportation methods to the capital or abroad in order to be competitive internationally. Also an important aspect regarding the flag carriers is that there seems to be strong emotions and pride in having a national airline (Duval, 2005; Iatrou, 2004).

However, the privatization of flag carriers has been going for a long time. From the mid 1980s to 2006 “*about 135 governments announced privatization plans or expressed their intentions of privatization for approximately 206 State-owned airlines. During this period, 126 of these targeted airlines have achieved privatization goals to some degree.*” (ICAO, 2006).

5.7 Bilateral air service agreements

“*No scheduled international air service may be operated over or into the territory of a contracting state except with the special permission or authorization of that state*” (Keller, 2000). This is basically the law that has regulated international air traffic officially since the Chicago convention in 1944. It is also the foundation for the first and basic right in what is referred to as “freedoms of the air”, which is a gathering of commercial aviation rights (See exhibit 6 for a complete list of the “freedoms”). There are nine such “freedoms”, but only the first five are officially recognized by international treaty (ICAO, 2011). However the rest of the freedoms are also in use due to bilateral or multilateral air service agreements (Boeing, 2009).

Because of the law accepted in 1944 and the freedoms of the air, airlines who want to carry passengers to foreign countries are dependent on their home countries to sign an agreement with other involved countries in order to pass or land in their territory (Keller, 2000). Although some countries have cooperated in groups to negotiate agreements with other groups of countries (multilateral), direct agreements between two countries (bilateral) are still the most common way to

trade international air service rights (Australian_Government, 2009). Thus there exists a very large number of bilateral agreements, which also have to be renegotiated every once in a while when the contract period comes to an end.

The agreements can contain several aspects, depending on what the parties decides. Usual terms that could be a part of the deal could concern for example routes, number of flights, number of passengers, number of airlines, foreign ownership restrictions, prices on tickets, safety and other issues as well if necessary (Australian_Government, 2009).

5.8 Open skies

The latest development in bilateral and multilateral air service agreements is referred to as “open skies” and where started in 1992, when the first of these agreements where concluded between the US and the Netherlands (ICAO, 2006). The term “open skies” are used on bilateral or multilateral agreements that sets no restrictions on third, fourth and fifth freedom of the air (Keller, 2000). From this it also follows that airlines from member countries of such an agreement usually can enjoy full market access with no limitations on designations, route rights, capacity, frequencies, code-sharing and tariffs (ICAO, 2006).

The United States of America has been involved in a lot of the open skies-agreements that has taken place. In fact the US were an involved part in over 60 percent of such agreements in the period 1992-2006 (ICAO, 2006). But it lasted until March 30, 2008 before there were established an open skies-agreement between the US and the EU (Button, 2009). Until then only some of the countries from the EU had created such a deal with the US. Countries such as the UK, Greece, Ireland and Spain for example were amongst those (11 countries) who had only limited or no deal at all with the US (Button, 2009). The official deal between the US and the EU put an end to for example the very restrictive situation on flights between Heathrow airport in London and destinations in the US. Before the open skies-agreement these routes were limited to two American airlines (American Airlines and United Airlines) and two British airlines (British Airways and Virgin Atlantic) due to the “Bermuda II” agreement between the two

countries (Button, 2009). Now however, if you can get hold of a slot³, there is free competition on transatlantic flights from Heathrow and other airports in the EU and the US as well.

“Open skies-agreements” do not necessarily mean that there is absolute free competition with no regulations anymore. The airline industry is slowly becoming increasingly liberalized. This process could take many years before we can say that we have free competition globally. Even after the “open skies-agreements” there are still quite extensive regulations in many markets. As an example, airlines from the EU cannot create routes domestically (cabotage) in the US, while the US airlines can do that inside the EU (IACA, 2007). The US and the EU market are perhaps even the two most liberalized air transportation markets in the world. This shows that globally the airline industry has yet to be completely liberalized in terms of competition.

5.9 Mergers and acquisitions

The laws and regulations still existing can perhaps explain partly why there are still very few cross-border mergers and acquisitions. However, it seems that regulations do not explain everything in relation to mergers and acquisitions. Asked about what the most serious problem a merger initiative might face, 31 airlines from SkyTeam, Oneworld and Star Alliance answered that competition authorities would be the biggest problem followed by labor issues and IT compatibility (Iatrou, 2006). Interestingly enough 53 percent also said in the same survey that they did not believe that regulation has been the reason why airlines have not used mergers to a larger extent. This shows that there are other issues as well, preventing the airlines from merging or acquire other airlines.

The KLM and Air France merger is perhaps the most famous merger between two airlines for European citizens, because they are both such dominant players in this market. The way the two companies have organized the merger is that they have created a new holding company that is the owner (Air_France_KLM, 2006). In this way both companies could keep their individual brand names and logos,

³ An airport slot (or a “slot”) is a permission given by a coordinator for a planned operation to use the full range of airport infrastructure necessary to arrive or depart at a (Level 3) airport on a specific date and time. (IATA, 2011)

which is important for preventing a loss of identity. This is probably not the last time we will see such a merger between two or more airlines. The strategic alliances also play an important role here, because 68 percent of the asked airlines in Iatrou's survey said that future mergers would likely be between airlines from the same alliance (Iatrou, 2006). So if the competition authorities allows, we can see many more mergers between alliance partners wanting to cooperate even closer in the future.

5.10 Alliances in the industry

To some degree, inter-firm cooperation between airlines has existed virtually since the start of the modern day airline industry. For example, Air France was involved in setting up operations with African carriers such as Air Afrique and Tunisair already in the late 1940s (Vaara, Kleymann, and Seristö, 2004). Bilateral agreements including coordination of flight schedules to facilitate connections as well as cooperation with regard to purchasing and maintenance could be found in the industry as early as the 1950s (Iatrou, 2004). However, the first airline alliances as we know them today, with several partners and global networks did not become a phenomenon in the industry until the late 1980s.

A trend of alliances began to surface in the industry at the very end of the 1980s. Scandinavian Airlines Systems was one of the first proponents for alliances between carriers. In the 1980s SAS executives argued that smaller airlines needed to cooperate in order to overcome the increasingly tough competition they were facing from the largest carriers (Vaara, Kleymann, and Seristö, 2004). Another of the first drivers of the alliance-trend, Swissair, opted to pursue an international expansion strategy in order to ensure future growth. The airline realized its domestic market carried limited potential and the cost of Swiss labour was high (Iatrou, 2004). Direct foreign investment opportunities were also limited due to regulations, particularly so since Switzerland was not a member of the European Union. Based on these realizations, Swissair began to form partnerships with other players in the industry. Swissair, along with SAS, Austrian Airlines and Finnair formed the European Quality Alliance (EQA) in 1989. The alliance focused on increasing performance through joint operations with code sharing and coordinated customer loyalty programmes. At the same time, Swissair also

participated in the formation of the first global airline alliance. Global Excellence, a partnership between Delta Air Lines, Swissair and Singapore Airlines, was launched in 1989 and included coordinated operations and a range of bilateral agreements between the airlines (Iatrou, 2004).

Throughout the 1990s, cooperation in the industry intensified and the integration of alliance activities rapidly increased. The number of bilateral agreements and partnerships increased every year going from approximately 170 in 1990 to over five hundred in 2001 (Vaara, Kleymann and Seristö, 2004). Activities in the EQA were integrated into the Global Excellence alliance providing the partners with an intercontinental hub-and-spoke network. This network led to an increased presence in Europe, United States and Asia and the alliance can be seen as a forerunner to the global alliances in the industry today. Towards the end of the 1990s, however, the alliance disintegrated as partners left the alliance in favour of more beneficial partner constellations.

Singapore Airlines left the Global Excellence alliance in 1997 to form a new partnership with Lufthansa. This partnership led to the creation of one of the three major alliances in the industry today, namely Star Alliance. The formation and success of these major global alliances towards the end of the 1990s eventually led to the three alliances we see today. As the intensification of cooperation continued in the industry, Star Alliance was founded in 1997, quickly followed by Oneworld in 1999 and SkyTeam in 2000. In 2009, the three alliances accounted for approximately 70 % of all IATA (International Air Traffic Association) traffic according to the 2010 issue of WATS (IATA, Annual issues 2001-2010).

5.11 Alliance activities

Activities performed in airline alliances vary to a great degree along with alliance type and characteristics of the partners. The degree to which partners perform activities together and the range of activities they collaborate on are not a set list. However, a generalized list of main areas of cooperation in the airline industry can be composed as follows (Oum, Park, and Zhang, 2000):

-
- Joint operations – generally refer to code sharing agreements. Code share is an industry term meaning that although one airline is designated as an operator of a flight, customers may purchase valid tickets through other partner carriers.

 - Customer loyalty programmes – coordinated such that customer loyalty benefits earned at one airline are valid for all partner airlines. A common example is frequent flyer points (FFP).

 - Ground facilities and handling – alliance partners can share sales offices, terminals, lounges etc. Responsibility for ground services such as check-in, baggage handling, maintenance and ticketing can also be shared through mutual ground crews and staff.

 - Flight schedule coordination – flight schedules are coordinated between the partners to increase available connecting flights and decrease connection time for passengers.

 - Joint marketing – marketing efforts can be combined by marketing the alliance brand and visualizing partners as part of the alliance.

 - IT sharing and development – technology such as computer reservation systems, communication systems, onboard technology and databases can be shared and developed with alliance partners.

 - Joint purchasing – alliance partners can combine their purchasing power to reach beneficial purchasing agreements. Most commonly utilized in the purchase of fuel, IT equipment etc.

 - Exchange of crew – training programmes and facilities can be shared and cabin crew can operate flights for different partners within the alliance.

Alliances may cover some or all of these areas to varying degrees. Activities performed may also vary from partner to partner as additional bilateral agreements between partners within the alliances are common.

5.12 Advantages and disadvantages of alliance membership

As mentioned in the theoretical framework, reasons for entering into an alliance can be varied. This also holds true for the global airline alliances. While it is clear that most partners enter an alliance with motives of expansion and benefits in the form of superior financial performance, there are several possible alternative motives for joining an alliance. Joining an alliance will undoubtedly lead to certain advantages as well as certain disadvantages that are important for management to be aware of.

The advantages of entering into an airline alliance can be separated into three main categories; economies of scale, economies of scope and strategic advantages.

The first category, economies of scale, is essentially the ability to take advantage of the increase in size in order to lower operating costs. Iatrou (2004) argues that economies of scale in the airline industry can be said to occur if an airline can serve the same amount of traffic at lower costs due to an increase in size. In airline terms, this means a decrease in cost per kilometre flown as a result of the (virtual) increase in traffic reached by entering the alliance. Airline alliances clearly facilitate economies of scale as they enable airlines to increase efficiency by streamlining operations. Depending on the joint activities performed by partners, alliances can effectively eliminate duplication of activities through such cooperation as sharing of ground staff, joint marketing, common sales offices and common personnel training programmes (Iatrou, 2004). Alliances can also take advantage of the increase in size by combining purchasing power in order to obtain quantum discounts and more beneficial terms from suppliers. Another point in this category is the ability of carriers to coordinate schedules giving higher load factors which result in lower costs per passenger.

Iatrou (2004) states that the second main category, economies of scope, can be seen as a function of the number of points an airline serves. He further argues that economies of scope are achieved because of consumer demand for travel services between more than one city-pair. Therefore, alliances enable airlines to induce economies of scope by extending their marketable network. The fact that alliances

are global also ensures that marketing campaigns can be far more efficient as they can reach a far wider audience.

The final category, strategic advantages, is one of the major reasons that the alliances became a trend in the industry. Alliances can strengthen the competitive position of a carrier due to several strategic factors. Entering an alliance can enable an airline to increase its control of strategically important airports. Airports acting as international hubs generally have a very limited number of available slots for airlines. Because membership in an alliance can help direct traffic through strategic hubs, partners in an alliance are able to increase control over such strategic airports by increasing traffic on pre-existing routes. This results in limited available spaces for competitors and strengthens the airlines' competitive position in the area. Strategic moves such as this effectively raise entry barriers and prevent competing airlines from entering the market. Alliances can also raise entry barriers through customer loyalty programmes. Linking programmes between partners by making for example frequent flyer points valid for all carriers effectively raise the price of demand for competitors. Alliances can also serve as an effective way of launching an expansion strategy. Airlines effectively enter new markets by joining an alliance and acquiring partner connections. Alliances can therefore act as a low-risk expansion strategy seeing as the airline does not have to invest heavily in additional equipment, traffic rights and offices. However, one of the most central advantages to the notion of alliances as an expansion strategy is the ability to circumvent the strict regulations. Participation in an alliance is still subject to approval by competition authorities and national governments. However, companies are far more likely to be granted permission to invest small equity stakes and cooperate with each other than they are to have a downright acquisition approved.

Just as there are advantages of alliances, there are also certain disadvantages. One of the main disadvantages of entering an alliance is the degree of coordination required. Partners may not always share views on strategy, they may have ulterior motives or their work methods and business cultures may differ. Iatrou (2004) states that cooperation between the airlines has proven to give varying degrees of success and coordination has often been proven to be more difficult than the carriers first thought.

Entering an alliance can also tarnish the brand value, identity and independence of an airline. Depending on the degree of required cooperation and alliance strategy, airlines may be forced to pursue marketing efforts, pricing strategies and service levels that change their public image (Iatrou, 2004). For example, Knorr and Arndt (2004) find that Swissair's alliance strategy led them into partnerships which undermined their reputation as a high-quality carrier and eventually forced the airline to lower prices. Another important disadvantage to keep in mind is that entering an alliance usually does not come for free. Alliances will generally demand certain standards from potential members. Implementation of IT systems, investments in equity, change of suppliers and conforming to safety standards are all examples of demands an alliance could require partners to fulfil. Meeting these requirements may prove costly for a potential partner and could tie up large amounts of capital in the carrier's first years of alliance operations. It is important for airlines to carefully evaluate advantages and disadvantages of alliance participation before entering.

5.13 The future of alliances in the industry

There can be little doubt that alliances have gained importance in the industry throughout the last decades. The scope of activities has also increased over the years as alliances moved from mere marketing alliances to more advanced and integrated activities such as joint fuel purchasing, fuel hedging and ground handling. The past few years have also seen alliances shifting focus from cooperation which can generate increases in traffic and revenue to activities aimed at reducing costs (Vaara, Kleymann, and Seristö, 2004). However, there is widespread disagreement as to the future of the alliances and the industry.

Iatrou (2004) finds in a survey of airline executives that management is generally satisfied with alliance performance, citing revenue increases and network expansions as consequences of alliance participation. Many executives adopt a view of alliances as the final stage of evolution in the industry. However, many executives feel that the cost level in the industry is too high and cost reduction is necessary in order to make the industry profitable in the long run. Several industry analysts and airline officials argue that the best way to cut costs is for the industry

to go through a period of consolidation. As mentioned previously, mergers and acquisitions are strictly regulated by authorities on both a national (individual governments) and continental (European Union) level. Regulations and the individual governments' insistence upon retaining some form of control over such a vital asset as air transportation have thus far prevented the industry from major trends of consolidation.

High costs and weak results have recently forced major players in the industry to consolidate (f. ex. United and Continental, Delta and Northwest). Although there are also rumoured negotiations between other major airlines (f. ex. SAS and Lufthansa), consolidation has rarely occurred between carriers of different nationalities and intercontinental consolidation is even more rare. The few international mergers that have occurred have been severely restricted by regulations. For instance, the merger between Air France and KLM resulted in both airlines keeping their separate identities in order to retain traffic rights. However, analysts expect deregulation both on the part of the European Union and the United States Department of Transportation in the near future. Such deregulation could revolutionize the industry and result in massive consolidations from which intercontinental giants emerge. In such cases, it is likely that alliances will still play a role, but to a lesser degree than the current major alliances. In short, the future of the industry and the role of the alliances are uncertain and entirely dependent on future market developments.

6.0 Structure of the Airline Alliances

In this section of the thesis we will go through and describe the three largest global airline alliances Oneworld, SkyTeam and Star Alliance in further detail. Our focus has been on gathering as much information as possible from available sources about criteria for membership, scope of joint activities, ownership structure, organizational structure and the alliance decision-making process. Because of limited information available the extent of information can vary extensively between the described categories and also from one alliance to another. The purpose of this section is to make the reader aware of:

- How the alliances cooperate.
- Differences and similarities between the alliances.
- When major changes occurred.

6.1 Oneworld

Introduction to Oneworld

Some say that the Oneworld alliance was founded as two clusters evolving around the major airlines British Airways and American Airlines (Kleymann and Seristö, 2004). In addition Cathay Pacific, Canadian Airlines and Qantas were also among the founding members of Oneworld in 1999 (Oneworld, 2011). Together their vision is “To generate more value for customers, shareholders and employees than any airline can achieve by itself, by:

- Making global travel smoother, easier, better value and more rewarding.
- Offering travel solutions beyond the reach of any airline’s individual network.
- Providing a common commitment to high standards of quality, service and safety.
- Creating a world where customers always feel at home, wherever their journey may take them.
- Delivering its airlines with savings and benefits greater than any can achieve by itself.”

(Oneworld, 2011)

As of August 2011, the Oneworld alliance counts 12 member airlines (Oneworld, 2011). For more facts about the alliance, see exhibit 7. And for a complete list of members of Oneworld, see exhibit 8.

Criteria for Membership

The criteria for becoming an Oneworld member airline are being kept secret for the public. However, representatives from the alliance itself have said that the requirements are demanding (Oneworld, 2010).

Scope of Joint Activities

Among those things that the alliance members cooperate on we can find e.g. training programs for personnel, code-sharing, cargo, engineering, maintenance, flight operations training, revenue accounting, bulk buying and sharing of aircraft parts, policies and procedures, sharing of best practices, shared third-party service suppliers, fuel purchasing, lounges, frequent flyer programs, shared terminals and shared livery on some of the planes (Oneworld, 2011).

Oneworld has really taken the task of cooperating in order to cut costs very seriously. This is possible largely due to their few members (8 at the time of the interview referred to) and because of the relationships between the members according to the former managing partner Peter Buecking (Oneworld, 2002). He also said that this would be done without impacting their employees and with safety as their main concern. However, one of the things Oneworld has not been able to do is to create a fully integrated IT-system handling reservations, inventory etc (ATW, 2006; Oneworld, 2011).

Ownership Structure

The Oneworld alliance is completely owned by the member airlines (Oneworld, 2011). The alliance brand is also owned by the member airlines instead of the management company, and the equity invested in the brand by each member are depicted by the size of that member (Morschett, Schramm-Klein, and Zentes, 2010).

Organizational Structure

The Oneworld alliance was the first global airline alliance to create a centralized management, when they established the Oneworld Management Company (oMC) (Oneworld, 2011). The management company was originally based in Vancouver in Canada, but are being moved to New York now during 2011 (Oneworld, 2011). To govern the management company, a board consisting of the CEOs from each of the member airlines has been established (Morschett, Schramm-Klein, and Zentes, 2010). In addition to meet on a regular basis to decide the strategy and follow the progress, the board also receives reports from the CEO Bruce Ashby (Oneworld, 2011). According to their website there are about 25 persons who are working in the centralized management company, in close cooperation with executives from each of the member airlines. Their job is to take care of areas such as commercial, airports and customer experience, membership, operations, IT, cost reduction and corporate communication (Oneworld, 2011). The role of the central management company has been described as “a forum for communication and a coordinator for cross-airline working groups”, because of the consensus seeking approach the alliance has chosen (Morschett, Schramm-Klein, and Zentes, 2010).

Process of Decision-Making

The consensus seeking and democratic approach to decision-making in the alliance is quite interesting. According to Morschett, Schramm-Klein and Zentes (2010), the members of the Oneworld alliance is not as bound to the exclusivity stipulations as e.g. members of Star Alliance. The alliance has also been described as “too democratic” (Vaara, Kleymann, and Seristö, 2004).

6.2 SkyTeam

Introduction to SkyTeam

Aeromexico, Air France, Delta Air Lines and Korean Air was the founding members of the global airline alliance SkyTeam, which became a reality in June 2000 (SkyTeam, 2011). Their mission is to deliver exemplary customer service, extend the market strength of all partners and produce excellent profitability and stakeholder returns (Oretti, 2009). The alliance has grown extensively since the start, and is in 2011 (august) considered to be the second largest global airline

alliance with its 14 members (see exhibit 7 for more facts). For a complete list of members of SkyTeam, see exhibit 12.

Criteria for Membership

To become a member of SkyTeam a potential member must meet over 100 requirements (ATW, 2011). Most specific requirements are not published but SkyTeam has said that their teams of expert auditors are focused on e.g.:

- Safety - potential member have to register in the International Air Transport Association (IATA) operational safety audit (IOSA).
- Quality
- IT
- Customer service standards – such as lounge access and elite recognition.

(SkyTeam, 2011)

Scope of Joint Activities

The alliance members cooperate on a wide range of products, services and processes. Amongst these are frequent flyer programs, lounges, global passes, shared kiosks, shared staff on the ground, shared terminals, exchange of best practices, code sharing, knowledge sharing, marketing agreements with for example Coca-Cola, recycling and carbon offset programs, energy saving initiatives and about 1 percent of the total fleet has SkyTeam livery (Aeroflot, 2009; Aviationweek, 2008; SkyTeam, 2011). Some of the members have also created a joint venture between the involved firms and the airline pilots unions, in order to secure a fair distribution of pilots between the companies and increase the communication between the parties (Center_For_Aviation, 2010).

An interesting thing about SkyTeam when it comes to cooperation is that they have not been very interested in exploiting the potential of joint purchasing so far. This is because it could, according to the chairman Leo Van Wijk, “overwhelm the suppliers” (Aviationweek, 2008). In addition they have not yet created an integrated IT-system in order to handle reservations for example (ATW, 2006). However, Air-France KLM switched to the system called “Amadeus” in 2010, and because of their size and influence in the alliance it is not unlikely that other members will follow their lead (Amadeus, 2010).

Ownership Structure

SkyTeam has been driven as a virtual entity since the beginning of the alliance and until 2009. That year the “SkyTeam Airline Alliane Management Coöperatie U.A” was established as a legal entity in Amsterdam, and thus under Dutch law and regulations (Oretti, 2009).

Organizational Structure

As mentioned previously the alliance was driven as a virtual entity in the beginning. The way it was structured in the start was that there existed a board with all the chairmen and CEOs and there also existed a “steering committee”. The steering committee was in charge of monitoring and managing the alliance (Aviainform, 2010). While the board met two times a year to approve initiatives and compose strategies and goals (Kleymann and Seristö, 2004). In 2007 the board appointed Leo Van Wijk to become the first chairman of the governing board. From there it took two years until the alliance introduced a centralized management team with its base at Schipol airport in Amsterdam. The management team is in charge of monitoring the daily operations of the alliance, thus handling marketing, sales, airport synergies and transfer product, cargo, advertising and brand, alliance operations, finance, corporate communications and alliance administration (SkyTeam, 2011).

Process of Decision-Making

The decision-making process in SkyTeam is based on collective decision-making and consensus. One group of employees from each of the member airlines is responsible for the gathering of information, making of plans and implementation. However, each project must be accepted at three different levels. The projects first go through the director(s) who are responsible for the project group. Secondly, through the senior vice president for the steering committee and finally through the management committee CEO (Auairs, 2010).

6.3 Star Alliance

Introduction to Star Alliance

Star Alliance was established in 1997 with Air Canada, Lufthansa, SAS, Thai Airways International and United Airlines as the founding members of the first global airline alliance (Star_Alliance, 2009). Their mission is “to contribute to the long-term profitability of its members beyond their individual capabilities” (Star_Alliance, 2009). Interestingly, the alliance was established in the same year as regulation in Europe allowed cabotage⁴ for European airlines (Marchand et al., 2000). This could perhaps explain some of the reasons why exactly 1997 were chosen for the startup of the alliance.

Today Star Alliance is the largest global airline alliance in the world with 27 member airlines around the world (Star_Alliance, 2011). For more facts about Star Alliance, see exhibit 7. And for a complete list of members of Star Alliance, see exhibit 16.

Criteria for Membership

The specific membership criteria for airlines to join the Star Alliance are not published publicly. However there is said to be a list of at least 80 requirements that has to be fulfilled in order to become a member (NYT, 2011). For a “typical” airline it has been said that it takes about one year to gain the level of standard as the Star Alliance members have (Marchand et al., 2000). One of the most important requirements is that a potential member must have an existing partnership with the member airlines in order to be included as a new member (Marchand et al., 2000).

Scope of Joint Activities

The members of Star Alliance cooperate closely and in many different ways. Frequent flyer programs, lounges, training of personnel, shared IT-systems, code sharing, routes, round the world tickets, self service kiosks, baggage service, flight status- and connections surveillance teams, shared terminals, shared livery on some of the planes and purchasing of fuel, advertising, network bandwidth, telecom, aircraft parts, economy class seats, in-flight service material, and tires are

⁴ Cabotage is the right to provide air services within a foreign country (Park, Park, and Zhang, 2003)

amongst those things member airlines cooperate- or have cooperated on (Star_Alliance, 2009; Marchand et al., 2000; Andal-Ancion et al., 2005; Grossman, 2007)

Even though the alliance members are standardizing a lot of the processes, services and products there are a policy in the alliance that the member airlines should try to keep their own cultural identity and on-board services (Grossman, 2007). In that way the services offered by Star Alliance are a mix of standardization and local adaptation.

Star Alliance seems also to have the most integrated IT-systems of the three global alliances. The reason is that they introduced “Amadeus” as the common IT-platform for the alliance in 2005, although no members were forced to join the system (ATW, 2006). Before that the members were communicating through a system called “StarNet” which was introduced in 2000 in order to link the different systems of the members (Star_Alliance, 2010; ATW, 2006).

Ownership Structure

Star Alliance started out as a very informal agreement, with only four pages in the contract between the founding members (Marchand et al., 2000). This loose structure could have been selected also to make sure that the alliance could get hold of an antitrust immunity⁵ in the US, which it did (Marchand et al., 2000). The members also decided that the alliance should be an independent identity. To develop it further into a separate legal entity however, took quite a long time and did not become a fact until 2002 (Andal-Anicon and Yip, 2005). The same year as the Star Alliance Services GmbH management company were established in Frankfurt, which we also will describe in further details in the section about organizational structure. After the establishment of the management company, the ownership structure became more formal, with each of the member airlines as equal shareholders (Andal-Anicon and Yip, 2005).

Organizational Structure

⁵ Antitrust immunity, by US standards, means that airlines can cooperate on pricing, scheduling, capacity provision and service quality (Iatrou and Alamdari, 2005)

Because the founding members wanted a loose and informal way of running the alliance, they organized and ran the alliance as a virtual organization staffed by employees from the member airlines (Andal-Ancion et al., 2005). The next step of the structural evolution was to create a fulltime alliance management team and hire a CEO in 2000 and 2001 respectively (Star_Alliance, 2010). And as previously mentioned they created a management company in 2002. The new and Frankfurt based management team got the responsibility of strategy, product development, marketing and administration (Andal-Anicon and Yip, 2005; SAS, 2002). Today the administration of Star Alliance counts about 75 people from over 25 different countries (Star_Alliance, 2011)

Process of Decision-Making

In the early days of the alliance, the member airlines decided that each member would have the same voting power and that decisions should not be made if they did not reach consensus. This approach was used because they feared that a majority voting system would create cliques and conflicts internally in the alliance. However, this system was not optimal as the alliance got bigger and lead the decision making process to become too slow and inefficient (Andal-Anicon and Yip, 2005)

Today the decision-making is in the hands of the centralized management, but in close cooperation with the member airlines as well (Andal-Anicon and Yip, 2005). The different levels the process must go through can be seen below in figure 6.



Figure 6 Structure of decision making (Star_Alliance, 2009)

7.0 Analysis and Discussion

In this part of the thesis we will analyze and discuss structural issues in the three alliances, explain how structure might have affected the performance by looking at the three alliances abilities to fulfill strategic goals and use previous research to provide support for our opinions and arguments. This section is closely linked to both the theoretical framework and the section about the airline industry, as the alliances are analyzed and discussed in the light of these two sections.

7.1 Selecting structural issues for further analysis

As we learned more about the airline industry and the theoretical aspects of strategic alliances, we identified three structure-related issues that we decided to pay closer attention to in this analysis. The first one is centralized management. The second issue is whether the ownership structure in the alliance involves equity or not. And the third and final issue is to look at the level of integration in regards to common IT-systems.

There are four reasons why we choose these specific issues. First, they appeared naturally as three of the most central issues regarding strategic alliances as we got to know the airline industry better. These three issues also seemed to us to be the ones that would have the most effect on performance indicators and therefore would be interesting to analyze. Second, they summarize large parts of our study because of their close connection with the other structural issues we looked at. Organizational structure, ownership structure, scope of joint activities and decision-making processes are all included or can be related to the three aspects that we have chosen. So the exemption is criteria for membership, but the alliances are so secretive about this that it made sense to not analyze it further. The third reason is that it also made sense because of the data we found, which were largely concentrated around these three issues. Thus they can give us a basis for finding out whether or not there exist any connection between structure and performance in these cases. The fourth and final reason is that these three structural issues seem to be important when it comes to study the connection between structure and performance. That is because they are so closely connected to the alliance success factors that are described in the theoretical framework.

In the following section we will present graphically some of the data we have found. As new graphs are presented they are carefully explained both in terms of how they were made and their actual content.

7.2 Data presentation

In order to compare the data on performance indicators in a proper way we selected only those alliance members that had been members for the entire period 2000-2009. Thus the performance indicators would no longer be directly affected by new members coming into the alliance, or by members leaving the alliance. The numbers of airlines who have been consistent members of Star Alliance, Oneworld and SkyTeam the entire period are respectively nine, seven and four. We also selected the members of the International Air Transport Association (IATA) to represent the industry, in order to measure alliance performance against a control group. IATA members cover 93 percent of all scheduled traffic today, thus representing nearly the entire industry (IATA, 2011). To improve the data so that they would be more comparable with the three alliances, we subtracted data for the IATA members who were also members of Star Alliance, Oneworld or SkyTeam. In this way the remaining data on IATA members represent the majority of airlines that are not part of any of the three alliances. Even though companies with membership in one of the three alliances represent a very large portion of the IATA members, these were subtracted to ensure a valid reference group. Including data for alliance members in the reference group would give false indications of traffic and revenue fluctuations and would not give good grounds for comparisons.

All the graphs presented in the analysis section are based on data that went through the process described above. To compare the performance indicators RPK, ASK, and operating revenue we also used mean values to adjust for the size differences, and looked at change in percentage from year to year. Thus the changes are illustrating the average changes to the “consistent alliance members” and the IATA members who are not part of any of the three alliances. We feel that this is a better way to compare the alliances against each other and also against the industry, as change in percent seems more comparable than the actual

performance indicator figures themselves. We therefore emphasize the importance of viewing the graphs as yearly changes.

The first graph we will present, figure 7, is based on the operating revenue.

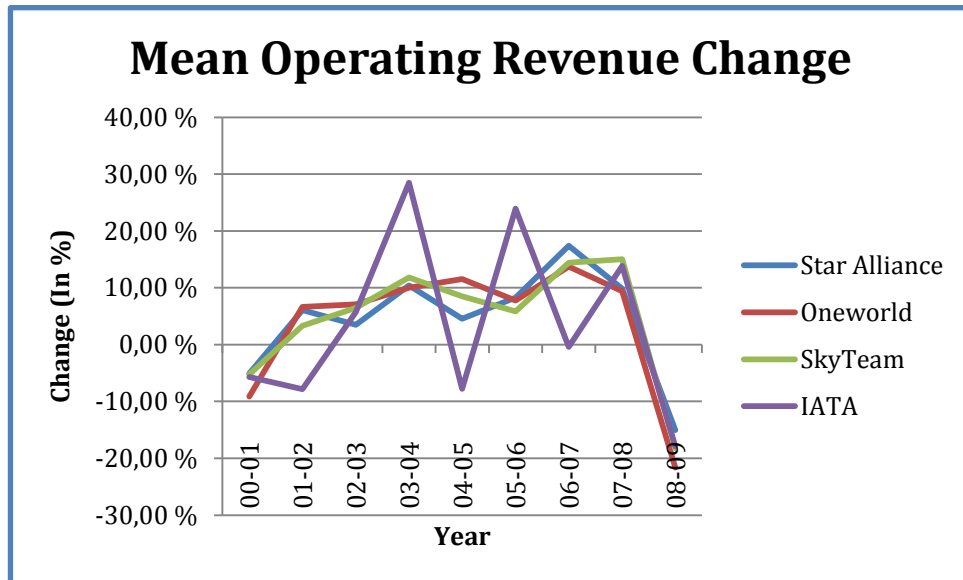


Figure 7 Mean operating revenue change

As figure 7 shows, the mean operating revenue for the three alliances have developed quite similarly. Steady increases from year to year seem to have been common for the alliances from 2002 and all the way up to 2008 where the dramatic effects of the financial crisis can be seen. What is interesting to observe is that the IATA members (excluding members of the three alliances) have a much higher variation from one year to another than the alliance members. This variation could perhaps be explained partly by the change in IATA members, both those who join one of the alliances and thus are being removed from the data, as well as those leaving or joining IATA for various other reasons.

The second graph that is presented, figure 8, is based on revenue passenger kilometer flown (RPK).

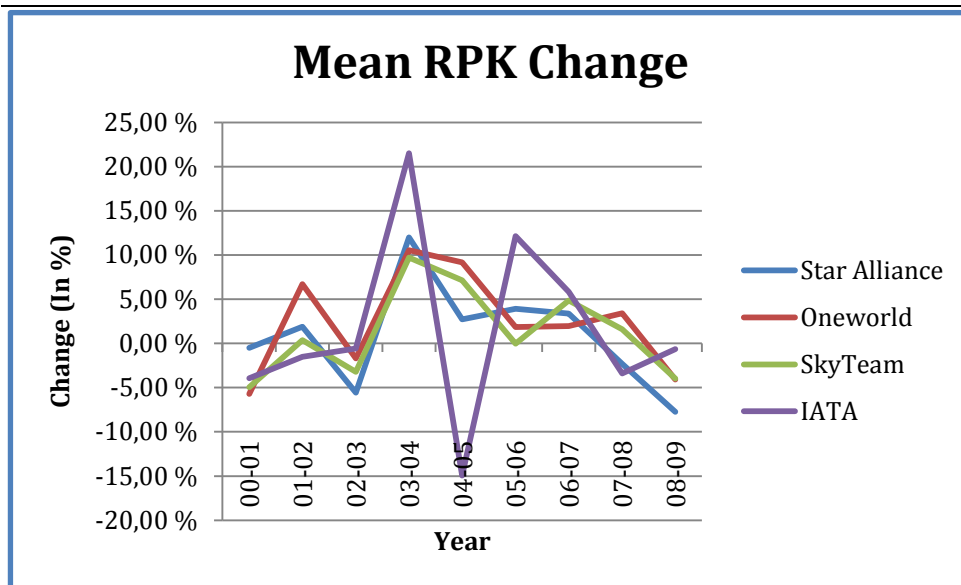


Figure 8 Mean RPK change

Figure 8 tells us basically the same as the graph about mean operating revenue, namely that the yearly change has been quite similar for the three alliances. However, the founding Oneworld members seem to have slightly higher growth rates in mean RPK than their competitors in Star Alliance and SkyTeam if we look at the entire period overall. This can especially be observed from year 2001 to 2002. The difference is maybe too small to be interesting, and thus we can only conclude that the mean RPK change have been fairly similar in the alliances. The IATA members have a higher variation in their change compared to the alliances here as well. And interestingly enough we observe that they have almost kept their RPK levels from 2008 in 2009 (-0,63 % change). This is much better than Star Alliance (- 7,76 %), Oneworld (-4,07 %) and SkyTeam (-3,97 %) that decreased their RPK levels significantly.

The third graph, figure 9, illustrates the changes in capacity from year to year as the graph is based on available seat kilometers (ASK).

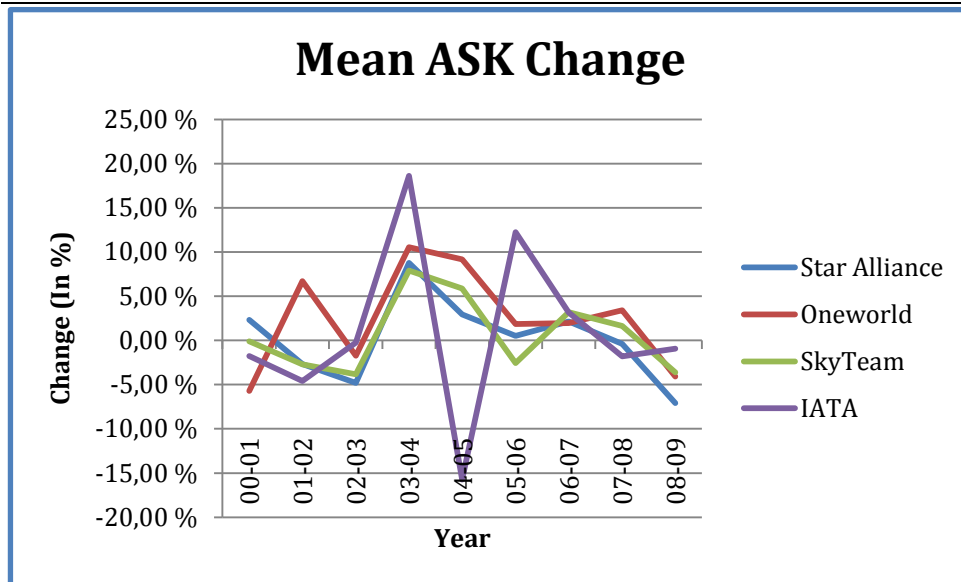


Figure 9 Mean ASK Change

The average capacity has developed very similar to the development in RPK. However, there seems to be an interesting difference in the years 2000-2002 for Star Alliance, SkyTeam and the IATA members. They have clearly reduced their capacity from 2001 to 2002, while in figure 8 we saw that the RPK for Star Alliance, SkyTeam and IATA were almost unchanged from 2001 to 2002. Or in other words, they reduced their capacity but transported almost the same amount of people a certain distance.

Oneworld on the other hand had a very similar development in RPK and ASK in the same period from 2000-2002, and went from about five percent reduction in 2001 to about five percent increase in 2002 for both RPK and ASK. We also observe that IATA managed to keep the capacity relatively unchanged in 2008-2009 (-0,94 %) compared to Star Alliance (-7,09 %), Oneworld (-4,07 %) and SkyTeam (-3,61 %).

The fourth and final graph we will present in this analysis, figure 10, illustrates the average passenger load factor (PLF) for Star Alliance, Oneworld, SkyTeam and IATA members. Data regarding the members of the three alliances have been taken out of the IATA data, as usual for this analysis, because of the factors explained previously. As load factor is very comparable independent of the size of the airline, the data is presented as the actual percentage and not the percentage of change as we did with operating revenue, RPK and ASK. Again we would like to

emphasize that the data for the alliances are the average for those airlines that have been members for the entire period of year 2000-2009.

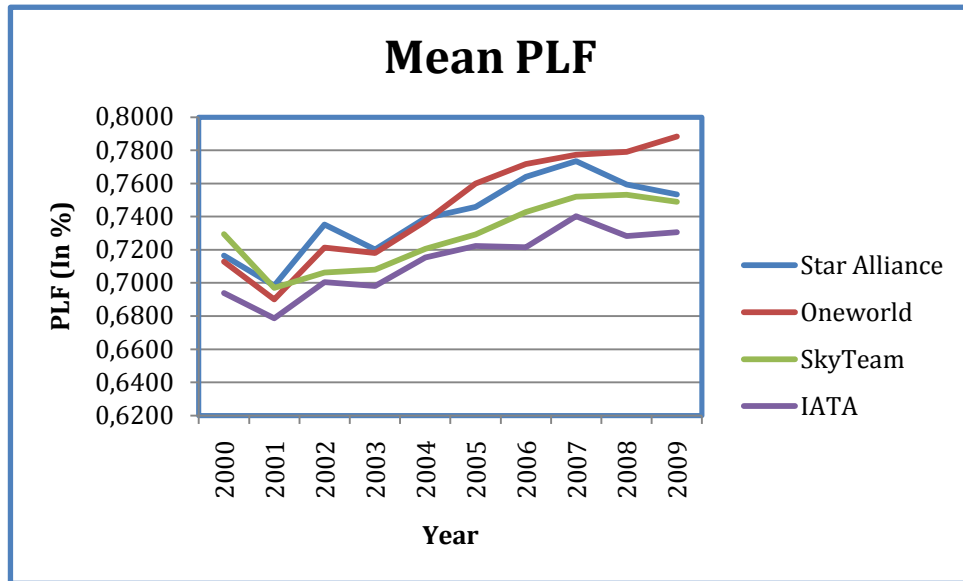


Figure 10 Mean PLF

In figure 10 it is easy to see that there is a clear tendency towards the alliances having a higher PLF than the rest of the IATA members. This should not come as a surprise since the alliance members cooperate closely with their hub-and-spoke network system, as mentioned in the industry section of the thesis, in order to increase their passenger load factor. If we compare the three alliances, we see that Oneworld have developed from having the worst PLF in 2000 to having the best in 2009. SkyTeam has gone the opposite way and have gone from having the best average PLF in 2000 to having the worst in 2009.

We will now present the three structural issues and have a closer look at how Star Alliance, Oneworld and SkyTeam have structured themselves, how this can explain performance and see if existing theory supports our findings.

7.3 Centralized management

A strategic alliance can choose from a range of options on how to manage its operations. This could for example be either by direct contact between the involved parties or perhaps to establish a centralized management. The management itself could for example be employees from the alliance members,

but it could also be external experts who get hired in to do the job. Usually the responsibilities could for example be to take care of daily alliance-related tasks, communication between the members, joint marketing efforts and monitoring of activities, contributions and performance. According to Dyer, Kale and Singh (2001) a good dedicated management function “improves knowledge-management efforts, increases external visibility, provides internal coordination, and eliminates both accountability problems and intervention problems”.

The dedicated alliance management can get the authority to make decisions for the entire alliance. This could be beneficial in terms of making the process of decision-making faster, by not having to gather all the executives from each member in order to make a joint decision. However, one must also be aware that centralized decisions may not be to every member’s liking and thus it might create conflicts internally in the alliance (Kleymann, 2005). This is an issue that needs to be monitored and balanced in order to facilitate a good environment for cooperation. Researchers have also suggested that for alliances with few members it could be more beneficial to be dependent on the parent companies instead of creating an independent entity for the alliance function (Andal-Anicon and Yip, 2005).

In the theoretical framework we presented Kale and Singh’s (2009) three suggestions for coordination mechanisms in order to improve coordination and performance. The notion of “hierarchy” as suggested by Kale and Singh (2009) refers to the formation of a formal structure, and thus their theory should be applicable to study centralized management in alliances. The basic predictions about creating a centralized management, if we follow the logic of Kale and Singh, is that this should increase performance by increasing coordination and thus reducing overlap. Another study showed that the long-term success rates for firms with dedicated functions to handle their alliances was 25 percent higher compared to those who did not have such a function (Dyer, Kale, and Singh, 2001). Therefore we expected that if any significant changes were found in performance indicators they would be positive after the creation of centralized management in Star Alliance, Oneworld and SkyTeam.

As a centralized management in theory should increase coordination and reduce overlap as argued by Kale and Singh (2009), the most likely performance indicator to change is in our opinion PLF. This performance indicator is closely connected to the degree of coordination because it is based on how well the airlines can cooperate to get the RPK as close as possible to the ASK. Better coordination should get the airlines to adjust their capacity better to the markets, thus increasing their PLF. The establishment of formal hierarchy in the form of a centralized management could as we previously mentioned improve the speed of the decision-making process by making the process more streamlined. Thus it follows from this logic that alliances with such a function are predicted to respond faster to market changes.

In order to clarify all the relevant information for the analysis, we have included a short summary of how the alliances have structured themselves in regards to centralized management. Star Alliance created a centralized management in year 2000, three years after the creation of the alliance. Thus the alliance has had a centralized management in 11 out of 14 years of existence. The management is located in Frankfurt and has about 75 employees. Oneworld also created their centralized management in 2000, but this was only one year after their founding of the alliance. Their location was Vancouver until now in 2011, when they are relocating their offices and about 25 employees to New York. The SkyTeam alliance chose another strategy and structure than the two other alliances, because even though they started in 2000 they did not create a dedicated centralized management until 2009. The SkyTeam management is located in Amsterdam and has about 30 employees (SkyTeam, 2011).

Since Star Alliance and Oneworld created management teams in 2000 while SkyTeam waited until 2009, we expected that Star Alliance and Oneworld should have better performance indicator values for 2000-2009 than SkyTeam if the theory by Kale and Singh (2009) holds. There seems to be very little differences between the three alliances in terms of changes in operating revenue, RPK and ASK. However, as predicted by looking at existing theory it is interesting to observe what has happened to the mean PLF in figure 10. Here we observe that SkyTeam started out as the alliance with the best average PLF but has since then been passed by both Star Alliance and Oneworld. This seems to indicate initial

support for the assumption that centralized management improves performance. However, it is important to keep in mind that without further empirical investigation, one cannot determine that management is the only factor responsible for the increase. This goes for the analysis of equity-based ownership and IT-systems as well.

7.4 Equity-based ownership

As mentioned earlier in the theoretical framework, there are a wide range of possibilities with regards to the ownership structure and governance of an alliance. These can range from relational contracts at one end of the scale to equity joint ventures at the other. An equity-based ownership structure in an alliance essentially implies that partners of the alliance invest money into a formal ownership interest. In practice, this can be executed in two ways. Partners in the alliance can either invest in an equity stake in each other or they can create a new independent entity in which all partners take a stake (Kale and Singh, 2009).

Transaction costs theory indicates equity ownership as an effective governance mechanism in alliances (Kale and Singh, 2009). Transaction costs, defined as “costs of running the economic system” (Williamson, 1985), can in this case be understood as the costs of running the alliances. More specifically, these can be viewed as the costs of interaction between the partners with regards to management of the alliance. Kale and Singh (2009) suggest that transaction costs involved in alliances are typically high due to the nature of alliances as an organizational form. As mentioned earlier, a partner can always be subject to opportunistic behavior by the other partners in the alliance. Safeguarding against such behavior often includes complex formal contracts which can cover any eventuality. Drafting and negotiating such contracts would involve high transaction costs making equity-based ownership an effective alternative. Kale and Singh (2009) argue that equity can function as a “mutual hostage” as all partners would share the interest of seeing returns on their investment.

Kale and Singh (2009) continue by stating that equity-based ownership has two further governance properties which can help address risks in alliances. Firstly, introducing equity helps facilitate a clear hierarchical structure in the alliance.

This can help determine a clear decision making process and therefore ease the monitoring process of day-to-day functions. In this way, equity can also help determine a clear decision making process for unforeseen contingencies. Equity-based ownership is often associated with centralized management and we see that there may be synergy benefits where both are applied as equity may help to create and reinforce a clear hierarchical structure.

The final governance-based property of equity-based ownership is that it creates a formal basis to ensure each partner is guaranteed a share of the returns from the alliance. These three governance properties of equity-based ownership are supported by several researchers studying the validity of transaction cost economics. Equity has therefore been found to be an effective governance mechanism in alliances (David and Han, 2004).

Contractor and Lorange (2002) suggest that a move towards equity-based ownership indicates that the alliance carries a higher degree of consequence for the individual partner. Furthermore, they argue that equity represents a higher degree of mutual commitment to the alliance by the partners. In light of this, as well as the governance properties of equity described above, we would expect to see certain performance effects of an equity-based ownership structure in alliances.

Related to our specific case, the higher degree of mutual commitment and consequence should reflect further integration of alliance activities between the airline companies. Logically, this would be reflected by an increase in efforts such as alliance branding (joint marketing activities) and a further integration and expansion of the alliance route network. We would therefore expect to see an increase in revenue and revenue passenger kilometers for alliance members following a shift to an equity-based ownership structure. We would also expect the increased degree of coordination to be reflected in our performance indicators. Increases in communication and information flows between the alliance airlines should lead to improved estimations and adjustments to demand. We therefore expect to see available seat kilometers closer to revenue seat kilometers in instances where alliances shift to equity-based ownership. This change would be best illustrated by increases in passenger load factors.

We include a short summary of the alliances with regards to their ownership structures in order to clarify the relevant information for analysis. Equity-based ownership was introduced in the early stages of the alliance for Oneworld as the alliance created a separate company, Oneworld Management Company, in May 2000. Ownership and equity invested in the company was decided to correspond with the size of the individual partner. Companies therefore invested according to their available seat kilometers at the time. Two years later, in January 2002, Star Alliance followed suit by introducing equity through the establishment of Star Alliance Services GmbH. Ownership in the company was decided to be equal for all members and the investment was therefore equal for all partners. SkyTeam, on the other hand, did not introduce equity until 2009, when they formed a separate entity named SkyTeam Airline Alliance Management Coöperatie.

Studying developments in revenue for the alliances in the period (figure 7) reveals a sharp upturn in revenue for Oneworld in the years following their implementation of equity-based ownership. This upturn stabilizes around 2003 indicating a yearly increase of approximately 10 % until the effects of the financial crisis become evident towards the end of the period. Star Alliance, however, does not show any clear effects from their implication of equity. Because SkyTeam introduced equity in 2009, we are unlikely to observe any effects on the data collected. However, when studying the three alliances together, it would appear that they all develop fairly similarly throughout the period. This contradicts the expectation that equity would lead to higher revenues. In other words, a clear relationship cannot be established between revenue and equity based on the developments in the alliances.

Developments in RPK for the period (figure 8) show some of the same tendencies as revenue developments. Oneworld shows higher increases in RPK following their implementation of equity, while Star Alliance shows no clear tendencies. However, the positive changes shown by Oneworld are not long-lasting and the alliances appear to show approximately the same developmental trends throughout the period. It is therefore difficult to see a clear effect from equity on RPK.

When it comes to mean PLF for the period (figure 10), a possible link seems to emerge. Oneworld shows no immediate effects of their implementation of equity, but Star Alliance appear to experience a significant increase less than a year after implementation. Examining the three alliances together also reveals that Oneworld and Star Alliance have a significantly higher PLF than SkyTeam for most of the period. We note that this occurs when both alliances have implemented equity-based ownership while SkyTeam still has not. This could indicate that equity as a structural factor influences PLF.

In conclusion, the data shows indications that equity may positively influence PLF. However, there seem to be no clear indications of links from equity to revenue and RPK. It seems that equity may affect coordination in an alliance stronger than the actual activity level. Another reason that equity may have had a smaller impact than expected is that there is disagreement as to the relationship between formal governance (such as equity) and relational governance (based on trust etc.). Kale and Singh (2009) state that researchers disagree as to whether or not the two governance forms are complementary or mutually exclusive. There is therefore a degree of uncertainty tied to the effects of moving from relational governance to formal governance.

7.5 IT-systems

As stated in the industry part of the thesis, the IT-systems are an important part of the airline operations. To cooperate using the hub-and-spoke network system demands a high level of coordination between all the involved parties in order for the system to be fully functional. Thus IT-systems are being used to increase fast and efficient coordination between involved parties such as airlines, travel agencies and the customers. These three parties have all enjoyed the tremendous benefits that the computer reservation systems (CRS) and global distribution systems (GDS) have provided throughout their years of existence. What we wonder now is if the various degrees of integrated IT-systems have provided any significant changes in performance in Star Alliance, Oneworld and SkyTeam. To answer this we have taken a closer look at the existing theory, in order to know what should be expected of firms integrating their IT-systems.

Again we can look to Kale and Singh's (2009) three suggestions for coordination mechanisms in order to improve coordination and performance. They use the notion of feedback to illustrate a coordination mechanism where the alliance partners create communication systems. Such systems should be able to increase coordination and thus reducing overlap, increase efficiency and then according to Kale and Singh (2009) increase the chances for alliance success. The increased coordination could for example mean that the alliances are able to react faster to market changes, provided that they all receive the same information from the systems simultaneously.

However, when exchanging technology and information there is often a risk that core knowledge and skills can be appropriated by the alliance partners (Norman, 2002). Airlines could for example have customized IT-systems that they believe give them a competitive advantage. To share this information with the rest of the alliance members might not be that easy, if the airline fears that this would affect their own performance negatively. Perhaps especially if there is little trust between the alliance partners, and the different airlines still view their partners as competitors. If their systems are perceived as a core competence by the firm, it is likely not to be shared with the alliance partners as the protection of core competences are an important strategic objective in alliances (Yoshino and Rangan, 1995). As we mentioned in the theoretical framework this is a trade-off situation between sharing information and the protection of vital information. This was probably a bigger problem before, in the period where the large airlines created their own systems. Today the airlines have divested a lot of their ownership in CRSs/GDSs as we mentioned in the industry section of the thesis, and thus most airlines use common available systems alternatively with minor individual adaptations. Because of this, only the individual adaptations are usually subject for protection as the rest of the systems can potentially be bought by anyone. Thus the reasons for why the alliances have not integrated their systems to a higher degree might be explained by protection of information, individual preferences by the airlines and other individual reasons

Due to the predictions by Kale and Singh (2009), we assume that deeper integration of IT-systems in the airline alliances could lead to higher coordination, reduced overlap and thus increased performance. As we explained previously,

PLF is probably the most closely linked operational performance indicator to coordination. Thus we predict that the alliance with the highest level of IT-system integration can show to the best PLF, which is a reflection of how close the RPK and ASK are. We also predict that the integration of IT-systems will have a positive effect on operational revenue, as a closer degree of integration should in theory enable the alliances to streamline their operations in a better way.

In order to clarify the relevant information for analysis, we have included a short summary of the findings regarding CRSs/GDSs in Star Alliance, Oneworld and SkyTeam. Star Alliance introduced a system called “StarNet” in 2000. However this was not a common and fully integrated system, as StarNet only linked the different systems used by the airlines (Star_Alliance, 2010; ATW, 2006). In 2005 Star Alliance took the integration a step further when they officially named the existing system “Amadeus” as the alliance common platform (Amadeus, 2010). The integration was still limited though, since none of the members were forced over to the new common platform. Oneworld has not introduced a common IT-platform in terms of CRS/GDS (ATW, 2006). However the alliance do have a virtual common platform so that the different systems in use can be linked (ATW, 2006). SkyTeam also have no common platform, although the large constellation of Air-France KLM started to use Amadeus as their common platform in 2010, and thus it is probably likely that other alliance partners might follow soon (Amadeus, 2010). From these data we can assume that Star Alliance is the alliance that has taken the integration of IT-systems most seriously, followed by Oneworld and SkyTeam that seem less integrated. The following analysis is based on this assumption, although we would have liked to have more detailed information about the integration level of IT-systems to base our findings on.

If we start by looking at the development of mean operating revenue in figure 7, we observe that there do not seem to be any significant difference in the development between the different alliances up to 2005. This could be due to the fact that none of the alliances had especially integrated systems until then. In 2005 however Star Alliance introduced a common IT-platform, and we can observe that Star Alliance have increased their mean operating revenue more than the two other alliances in the period from 2005-2006 (+ 8,28 %) and 2006-2007 (+ 17,42

%). This could potentially give a small indication that more integrated IT-systems have a positive effect on operating revenue, although the results are not very clear.

Looking at RPK (figure 8) and ASK (figure 9), we cannot observe any significant differences in the development between the alliances. Although Star Alliance increased their RPK more than Oneworld and SkyTeam in 2005-2006 the difference and length is too small in our opinion to be an indication of increased performance due to increased integration in Star Alliance IT-systems in 2005.

The PLF (figure 10) that we by using theory predicted should be a good performance indicator to measure effects in coordination does show us some small indications supporting the theoretical predictions. Before 2005 it is hard to say anything about the development. This is because the alliances seemed more similar in terms of integration level up until 2005 where Star Alliance from that point in time stands out as the alliance with the most integrated IT-system. From 2005-2007 we see that Star Alliance has a steeper increase in mean PLF than Oneworld and SkyTeam. Thus giving an indication that the higher level of integration in Star Alliance might have affected the performance indicator mean PLF in a positive way. However, from 2007 we observe that Star Alliance had a steeper decrease in mean PLF than the two other alliances. This could indicate that there is either no support for saying that a higher integration level have provided better performance, or it might indicate that the potential effect were on a short-term basis.

In conclusion, we have observed only small indications that an integrated IT-system could provide better results in the performance indicators, than an IT-system with a lower degree of integration. The operating revenue and PLF could give small indications that Star Alliance, which seems to be the most integrated in terms of IT-systems, had better performance in these two areas after their introduction of a integrated system in 2005. However the effects seem to be fairly small or short lasting, and thus we cannot really conclude that the data indicates higher performance for more integrated systems.

8.0 Concluding Remarks

In the following section we will summarize our findings. In addition we will also present the managerial implications these findings imply. After that we will have a look at the limitations of the study and finally come with suggestions for further research.

8.1 Conclusion

In this thesis we have studied how structural characteristics can affect performance in strategic alliances. We selected the three largest global strategic alliances in the airline industry, Star Alliance, Oneworld and SkyTeam, as our units of analysis. As a part of conducting the research, we made a literature review on theory concerning strategic alliances as well as a thorough introduction to the airline industry. These two sections of the thesis served as a good foundation for the analysis. The analysis provided us with several interesting findings.

In the beginning of the analysis we narrowed the focus down to three structural issues in strategic alliances that we wanted to study further. Centralized management, equity-based ownership and IT-systems were selected. In order to analyze these three structural issues we presented the data that we had collected, which represented the airlines that had been members in one of the alliances for the entire period of 2000-2009. The data we collected were statistics on operating revenue, passenger load factor (PLF), revenue passenger kilometers (RPK) and available seat kilometers (ASK). Data for the remaining airlines in the International Air Transport Association (IATA) were presented as well in order to compare the performance of the three selected strategic alliances with almost the rest of the industry.

When comparing the three alliances with the rest of the industry, we found that the airlines that did not belong to any of the three alliances had much greater variations in their performance indicators RPK, ASK and operating revenue. The changes from year to year were higher, thus indicating that being an alliance member might provide more stable performance than being a non-alliance member. The comparison between the alliances and the rest of the industry also

provided reasons to believe that alliance members have higher PLF than non-alliance members. This is believed to be so due to the close cooperation between the airlines internally in the alliances, providing each other with passengers through the hub-and-spoke network system.

The analysis also found support in the PLF data for that the two strategic alliances with centralized management (Star Alliance and Oneworld) had better performance than the one alliance without such a structure (SkyTeam). This was in line with the presented theory, which suggested that a centralized unit would create higher cooperation, reduce overlap and thus increase performance (Kale and Singh, 2009). However, the data showed no conclusive tendencies when we analyzed centralized management with regards to operating revenue, RPK and ASK.

The PLF data also gave reasons to believe that equity-based ownership had contributed to higher performance, as the two alliances with such an ownership structure (Star Alliance and Oneworld) showed slightly better PLFs than the one alliance (SkyTeam) without equity involved. And just as with centralized management we found no link from operating revenue, RPK and ASK to the structural issue at hand (equity-based ownership) here either.

IT-systems were the third and final structural issue we analyzed. Here we found only slim to none support for the prediction that a higher integration level in IT-systems would lead to better performance. This was when we looked at operating revenue and PLF. And as RPK and ASK did neither show any specific tendencies we thus concluded that the data did not show clear enough tendencies in order to support the predictions in one way or the other.

8.2 Managerial implications

These results indicate support for the suggestion that managers in strategic alliances should regard structure as an important factor, as the study indicates some degree of support for the link between structure and performance. This is in compliance with the statement from Yoshino and Rangan (1995) who argue that managers would not spend so much time on structuring the alliances if it was

unimportant. It seems that having a good structure could facilitate good performance by the alliances. The results also support that managers should consider creating a centralized management and having equity-based ownership, as these things seem to affect performance positively for the alliances overall. The data for IT-systems were perhaps too inconclusive to draw any conclusion on whether an integrated system leads to better performance than a less integrated system.

8.3 Limitations

In a study like this there are some limitations that need to be taken into account. Due to the difficulties researchers have with finding a good way to measure performance in strategic alliances there are many different ways the analysis could have been done (Lunnan and Haugland, 2008). The first limitation is that in this case study we only analyzed three different strategic alliances in one single industry. If we had selected a larger number of strategic alliances from a range of industries the results would have been more generalizable to all strategic alliances. One important issue that should be mentioned is that the effects of the structural changes might not be reflected in the results right away. There might be long-term effects, short-term effects or there might be no effects at all. In our study we have taken the assumption that changes in performance indicators would be due to the structural changes, although we do not know how fast they were implemented throughout the alliances.

The data we used for the analysis also carries certain limitations. First of all we had to limit the analysis down to airlines that had been consistent members of one alliance for the entire period 2000-2009. We did this in order to get consistent groups for comparison, and limit the effects of airlines coming in and going out of the alliances. However, this reduced the number of airlines in the alliances down to 9, 7 and 4. Ideally we would have liked these numbers to be higher. The industry data presented for comparison with the alliances represent only a minor part of the industry. This is due to the fact that we removed alliance-members in the data even though they represent a large part of the industry in order for better comparison between alliance- and non-alliance members. In addition, not all airlines were represented in the data in the first place as for example today IATA

members only represent 93 % of the market (IATA, 2011). As explained previously this, in addition to the fluctuations in numbers of members, might have reduced the comparability of the data. The limited access to information we had through secondary data can also be regarded as a limitation, and ideally we would have liked to have access to more alliance information that could have improved our study.

The final limitation that we would like to discuss is the effects of changes in the external environment. The airline industry is a very cyclical industry that is heavily affected by changes in the economy (Czipura and Jolly, 2007). Other factors such as oil prices have also been cited as contributing reasons for airlines on the verge of bankruptcy. Thus there is a large possibility that the external environment has affected the alliances performance more than the internal structural changes. This is why we included a comparison between alliance members and non-alliance members, in order to see if there were any particular differences in their performance.

8.4 Suggestions for further research

Our first suggestion for further research is linked with the last point in our discussion about limitations. A study that provided in-depth information about how much the external environment influences alliance performance would help when studying internal structural changes like we have done. In this way the results could hopefully describe even how much the structural changes have affected performance, and not only if they have affected performance or not.

Second, as we have focused only on the revenue and operational sides of the performance, it would be natural for future research to include the cost side as well. By doing this, one could get a better overview of how the strategic alliances have actually performed. The cost saving aspects of the alliances seem to be increasingly important, and thus a study that took this into consideration would depict the performance of the strategic alliances in a more accurate way.

Lastly, it would be interesting to see a study that focused on structural changes and performance in the airline industry and had access to information and data

that are not publicly available. This could make the study even more interesting, as a more complete range of data would be provided thus increasing the accuracy of the study.

References

- Abzug, Malcom J., and E. Eugene Larrabee. 2002. *Airplane Stability and Control, Second Edition. A History of the Technologies That Made Aviation Possible*. Cambridge, UK: Cambridge University Press.
- Aeroflot. 2011. *Spotlight on SkyTeam Sustainability 2009* [cited 04.08. 2011]. Available from http://www.aeroflot.ru/cms/en/skyteam_news_item/3357.
- Air_France_KLM. 2006. Sustainable Development Report 2005-06. Available at: <http://www.airfranceklm-finance.com/en/Financial-information/Annual-documents>.
- Airline_Leader. 2011. Global Airline Alliances, Transformed by antitrust-immunity but confronted by uncertainty. *Airline Leader* (7):32-43.
- Amadeus. 2011. *Air France, KLM and their partners successfully complete migration to Amadeus' Altéa Inventory Systemz*. Amadeus 2010 [cited 17.08. 2011]. Available from <http://www.amadeus.com/cca/x190033.html>.
- . 2011. 2011 [cited 17.07. 2011]. Available from www.amadeus.com.
- Anand, A. N., and T. Khanna. 2000. Do Firms Learn to Create Value? The Case of Alliances. *Strategic Management Journal* 21 (3):295-315.
- Andal-Ancion, Angela, George Yip, Ben Kedia, Somnath Lahiri, Al Lovvorn, and Dermot Williamson. 2005. *Insights on alliance management, accountability, Sarbanes-Oxley, marketing theory and leadership competencies*. Findarticles.com 2005 [cited 02.08.2011 2005]. Available from http://findarticles.com/p/articles/mi_hb4779/is_21/ai_n29197906/.
- Andal-Anicon, Angela, and George Yip. 2005. Smarter ways to do business with the competition. *European Business Forum* (21):32-26.

-
- ATW. 2011. *When to Tie the Knot*. Air Transport World 2006 [cited 15.08. 2011]. Available from <http://atwonline.com/it-distribution/article/when-tie-knot-0309>.
- . 2011. *Wisbrun to replace Male as SkyTeam managing director*. Air Transport World 2011 [cited 04.08. 2011]. Available from <http://atwonline.com/airline-finance-data/news/wisbrun-replace-male-skyteam-managing-director-0406>.
- Auairs. 2011. *The future development of SkyTeam*. Aviation News 2010 [cited 05.08. 2011]. Available from http://www.auairs.com/html/87796_The-future-development-of-SkyTeam.html.
- Australian_Government. 2011. *The Bilateral System - how international air services work*. Australian Government, Department of Infrastructure and Transport 2009 [cited 26.07. 2011]. Available from http://www.infrastructure.gov.au/aviation/international/bilateral_system.aspx.
- Aviainform. 2011. *Interview Marie-Joseph Male, Managing director - SkyTeam*. Air Transport News 2010 [cited 05.08. 2011]. Available from <http://www.aviainform.org/industrynews/14-industrynews/737-interview-marie-joseph-male-managing-director-skyteam.html>.
- Aviationweek. 2011. *Oneworld, SkyTeam target different strategies to help members* 2008 [cited 04.08. 2011]. Available from http://www.aviationweek.com/aw/generic/story_channel.jsp?channel=comm&id=news/ALLIex.xml.
- Boeing. 2009. International Traffic Rights "The Freedoms of the Air". Available at: www.boeing.com/commercial/startup/pdf/operating/StartupBoeing_Freedoms_of_the_Air.pdf.
- . 2011. Current Market Outlook 2011-2030. Available from: www.boeing.com/commercial/cmo/.
-

-
- Brouthers, K.D., and L. E. Brouthers. 1997. The Five Stages of the Co-operative Venture Strategy Process. *Journal of General Management* 23 (1):39-52.
- Button, Kenneth. 2009. The impact of US-EU "Open Skies" agreement on airline market structures and airline networks. *Journal of Air Transport Management* 15 (2):59-71.
- Center_For_Aviation. 2011. *SkyTeam triples membership in fist decade, upgrades three airlines, signs pilot JV* 2010 [cited 04.08 2011]. Available from <http://www.centreforaviation.com/news/2010/06/23/skyteam-triples-membership-in-first-decade-upgrades-three-airlines-signs-pilot-jv/page1>
- Contractor, F.J, and P Lorange. 2002. The Growth of Alliances in the Knowledge-based Economy. In *Cooperative Strategies and Alliances* Oxford: Elsevier Science.
- Contractor, F.J., and P. Lorange. 1988. Why should firms cooperate? The strategy and economics basis for cooperative ventures. In *Cooperative strategies in international business: joint ventures and technology partnerships between firms*. Oxford: Elsevier Science.
- Copeland, Duncan G., and James L. McKenney. 1988. Airline Reservation Systems: Lesson From History. *MIS Quarterly* (September):352-370.
- Czipura, Christian, and Dominique R. Jolly. 2007. Global airline alliances: sparking profitability for a troubled industry. *Journal of Business Strategy* 28 (2):57-64.
- Das, T. K., and B. Teng. 1996. Risk Types and Inter-firm Alliance Structures. *Journal of Management Studies* 33 (6):827-843.
- . 1997. Sustaining Strategic Alliances: Options and Guidelines. *Journal of General Management* 22 (4):49-64.
- . 2002. The Dynamics of Alliance Conditions in the Alliance Development Process. *Journal of Management Studies* 39 (5):725-746.
-

-
- David, R. J., and S. K. Han. 2004. A Systematic Assessment of the Empirical Support for Transaction Cost Economics. *Strategic Management Journal* 25 (1):39-58.
- Doz, Y. L. 1996. The Evolution of Cooperation in Strategic Alliances: Initial Conditions or Learning Processes? *Strategic Management Journal* 17 (Special Issue):55-83.
- Duval, David Timothy. 2005. Public/stakeholder perceptions of airline alliances: The New Zealand experience. *Journal of Air Transport Management* 11 (6):448-454.
- Dyer, Jeffrey H., Prashant Kale, and Harbir Singh. 2001. How To Make Strategic Alliances Work. *MITSloan Management Review* 42 (4):37-43.
- Ellis, Paul D. 2007. Paths to foreign markets: Does distance to market affect firm internationalisation? *International Business Review* 16:573-593.
- Evans, Nigel. 2001. Collaborative strategy: : an analysis of the changing world of international airline alliances. *Tourism Management* 22 (3):229-243.
- Garette, Bernard, and Pierre Dussauge. 2000. Alliances versus acquisitions: choosing the right option. *European Management Journal* 18 (1):63-69.
- Geels, F.W. 2006. Co-evolutionary and multi-level dynamics in transitions: The transformation of aviation systems and the shift from propeller to turbojet (1930–1970). *Technovation* 26:999-1016.
- Ghoshal, S. 1987. Global Strategy: An Organizing Framework. *Strategic Management Journal* 8:425-440.
- Grossman, David. *Airline alliances aim for integration*. USA Today 2007 [cited 02.08.2011. Available from http://www.usatoday.com/travel/columnist/grossman/2007-03-25-star-alliance_N.htm.

-
- Gulati, R. 1998. Alliances and Networks. *Strategic Management Journal* 19 (4):293-317.
- Gulati, Ranjay, and Harbir Singh. 1998. The Architecture of Cooperation: Managing Coordination Costs and Appropriation Concerns in Strategic Alliances. *Administrative Science Quarterly* 43 (4):781-814.
- Hagedoorn, J. 1993. Understanding the Rationale of Strategic Technology Partnering – Interorganizational Modes of Cooperation and Sectoral Differences. *Strategic Management Journal* 14 (5):371-385.
- Hamel, Gary, Yves L. Doz, and C.K Prahalad. 1989. Collaborate With Your Competitors- And Win. *Harvard Business Review* January-February:190-196.
- Hill, Charles W.L., Peter Hwang, and W. Chan Kim. 1990. An Eclectic Theory of the Choice of International Entry Mode *Strategic Management Journal* 11:117-128.
- Hopper, Max D. 1990. Rattling SABRE- New ways to compete on information. *Harvard Business Review* (May-June):118-125.
- IACA. 2011. *EU-US Open Skies Deal - Not So Open for European Airlines* 2007 [cited 31.07.2011 2011]. Available from <http://www.iaca.be/index.cfm?79FD0308-BDBE-2776-0614-E6942D8F1AB5>.
- IATA. 2010. Annual Report. *International Air Transportation Association*. Available from: www.iata.org.
- . 2011. 2011 [cited 10.06. 2011]. Available from www.iata.org.
- . 2011. Worldwide Slot Guidelines. Montreal: International Air Transportation Association. Available from: www.iata.org/wsg.

-
- . Annual issues 2001-2010. *World Air Transport Statistics (WATS)*: The International Air Transport Association
- Iatrou, Kostas. 2004. The Impact of Airline Alliances on Partners' Traffic, Air Transport Group, Cranfield University (PhD thesis).
- . 2006. Airline choices for the future: From Alliances to Mergers. In *Global Symposium on Air Transport Liberalization*. ICAO Dubai, UAE.
- Iatrou, Kostas, and Fariba Alamdari. 2005. The empirical analysis of the impact of alliances on airline operations. *Journal of Air Transport Management* 11 (3):127-134.
- ICAO. 2006. Regulatory and Industry Overview. Information Paper: International Civil Aviation Organization. Available from:
<http://www.icao.int/icao/en/atb/meetings/2006/dubai2006/RegulatoryIndustryOverview.pdf>.
- . 2011. *Freedoms of the Air* 2011 [cited 27.07. 2011]. Available from
http://www.icao.int/icao/en/trivia/freedoms_air.htm
- Inkpen, A. C., and P. W. Beamish. 1997. Knowledge, Bargaining Power, and the Instability of International Joint Ventures. *Academy of Management Review* 22 (1):177-202.
- Johanson, Jan, and Jan-Erik Vahlne. 1977. The internationalization process of the firm- A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies* 8 (1):23-32.
- Kale, P., and H. Singh. 2009. Managing Strategic Alliances: What Do We Know Now, and Where Do We Go From Here? *Academy of Management Perspectives* 23 (3):45-62.
- Kanter, R. M. 1994. Collaborative Advantage – The Art of Alliances. *Harvard Business Review* 72 (4):96-108.

-
- Keller, Klaus. 2000. *Regulatory Aspects of Airline Alliances - A Case Study of Star Alliance*, Institute of Air and Space Law, McGill University, Montréal.
- Kleymann, Birgit. 2005. The dynamics of multilateral allying: a process perspective on airline alliances. *Journal of Air Transport Management* 11 (3):135-147.
- Kleymann, Birgit, and Hannu Seristö. 2004. *Managing Strategic Airline Alliances*. Hampshire: Ashgate Publishing Limited.
- Knorr, A., and A. Arndt. 2004. Alliance Strategy and the Fall of Swissair: A Comment. *Journal of Air Transport Management* 10 (2):119-123.
- Konkurransetilsynet. 2011. *About 2011* [cited 20.05 2011]. Available from <http://www.konkurransetilsynet.no/en/about/>.
- Lufthansa. 2009. Annual Report - Group Management Report. In *Available from:* <http://reports.lufthansa.com>.
- Lunnan, R., and S.A. Haugland. 2008. Predicting and Measuring Alliance Performance: A Multidimensional Analysis. *Strategic Management Journal* 29 (5):545-556.
- Marchand, Sarah, Benjamin Gomes-Casseres, Guillaume Hery, Igor Pruniaux, and Thomas Ostergaard. 2000. *Star Alliance, 2000. Case for class discussion*. Waltham: Brandeis University. International Business School.
- McNulty, Mary Ann. 2011. *Companies: Some EU CRS Rules Needed*. Business Travel News 2007 [cited 05.06. 2011]. Available from <http://www.businesstravelnews.com/Business-Globalization/Companies--Some-EU-CRS-Rules-Needed/?a=trans>.
- Morrison, Steven, and Clifford Winston. 1995. *The Evolution of the Airline Industry*. Edited by T. B. Institution. Washinton, D.C: The Brookings Institution.
-

Morschett, Dirk, Hanna Schramm-Klein, and Joachim Zentes. 2010. *Strategic International Management Text and Cases 2nd Edition*. Gabler Verlag.

Norman, Patricia M. 2002. Protecting Knowledge in Strategic Alliances. Resource and Relational Characteristics. *Journal of High Technology Management Research* 13:177-202.

NYT. 2011. *Air India Faces Hurdles in Joining Alliance*. New York Times 2011 [cited 09.08. 2011]. Available from http://www.nytimes.com/2011/05/31/business/global/31air.html?_r=3.

Olk, P. 2002. Evaluating strategic alliance performance. In *Cooperative Strategies in International Business*, edited by F. J. Contractor and P. Lorange. Lexington, MA: Lexington Books.

Oneworld. 2011. *oneworld airlines agree to develop common engineering specifications as value from alliance passes US\$2 billion 2002* [cited 05.08. 2011]. Available from <http://www.oneworld.com/ow/news/details?objectID=1620>.

———. 2011. *India's Kingfisher Airlines set to join oneworld alliance 2010* [cited 09.08. 2011]. Available from <http://www.oneworld.com/ow/news/details?objectID=20873>.

———. 2011. *Fact Sheets 2011* [cited 05.08. 2011]. Available from <http://www.oneworld.com/ow/news-and-information/fact-sheets>.

———. 2011. Media information. An introduction to oneworld: The alliance that revolves around you. Available at: <http://www.oneworld.com/ow/news-and-information/fact-sheets>.

Oretti, Mauro. 2009. Reach for the Sky! A SkyTeam Perspective. In *Nevi Congress*. De Efteling. Available at: www.nevi.nl/images/Skyeam_1_tcm563-539595.pdf.

-
- Oum, T.H, J. H. Park, and A. Zhang. 2000. *Globalization and Strategic Alliances: The Case of the Airline Industry*. Amsterdam: Pergamon.
- Park, Jong-Hun, Namgyoo K. Park, and Anming Zhang. 2003. The impact of international alliances on rival firm value: a study of the British Airways/USAir Alliance. *Transportation Research Part E: Logistics and Transportation Review* 39 (1):1-18.
- Pemberton, J.D, G.H. Stonehouse, and C.E Barber. 2001. Competing With CRS-generated Information in the Airline Industry. *Journal of Strategic Information Systems* 10:59-76.
- Ring, Peter Smith, and Andrew H. Van de Ven. 1994. Developmental Processes of Cooperative Interorganizational Relationships. *Academy of Management Review* 19 (1):90-118.
- Sabre. 2011. 2011 [cited 17.07. 2011]. Available from www.sabreairlinesolutions.com.
- SAS. 2002. Annual Report. Available at: www.sasgroup.net.
- . 2009. Annual Report. Available from: www.sasgroup.net.
- Shiva, R.S. 1997. *Strategic alliances : building network relationships for mutual gain*. New Dehli: Response Books.
- SkyTeam. 2011. *History* 2011 [cited 04.08. 2011]. Available from <http://www.skyteam.com/en/About-us/Organization/History/>.
- . 2011. *Management*. SkyTeam Airline Alliane Management Coöperatie U.A 2011 [cited 05.08. 2011]. Available from <http://www.skyteam.com/en/About-us/Organization/Management/>.
- . 2011. *SkyTeam Airline Member Benefits* 2011 [cited 04.08. 2011]. Available from <http://www.skyteam.com/en/About-us/Press/Facts-and-Figures/>.
-

Smith, Barry C., John F. Leimkuhler, and Ross M. Darrow. 1992. Yield Management at American Airlines. *Interfaces* 22 (1):8-31.

Smithsonian. 2011. *The Jet Age, 1958 -Today*. Smithsonian National Air and Space Museum 2011 [cited 15.08. 2011]. Available from <http://www.nasm.si.edu/americanbyair/jetage/index.cfm>.

Star_Alliance. 2009. Strategic Alliances in Aviation. Available from: <http://www.staralliance.com/en/press/media-library/speeches-presentations/>.

———. 2010. A Chronological History.

———. 2011. *Member Airlines* 2011 [cited 02.08. 2011]. Available from <http://www.staralliance.com/en/about/airlines/>.

———. *Star Alliance Services GmbH* 2011. Available from <http://www.staralliance.com/en/about/organisation/>.

Vaara, Eero, Birgit Kleymann, and Hannu Seristö. 2004. Strategies as Discursive Constructions: The Case of Airline Alliances. *Journal of Management Studies* 41 (1):1-35.

Videcom. 2011. *General Overview* 2011 [cited 24.07. 2011]. Available from http://www.videcom.com/general_overview.htm.

Wikipedia. 2011. *Freedoms of the Air* 2011 [cited 25.07. 2011]. Available from http://en.wikipedia.org/wiki/Freedoms_of_the_air

Williamson, O. 1985. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. New York: Free Press.

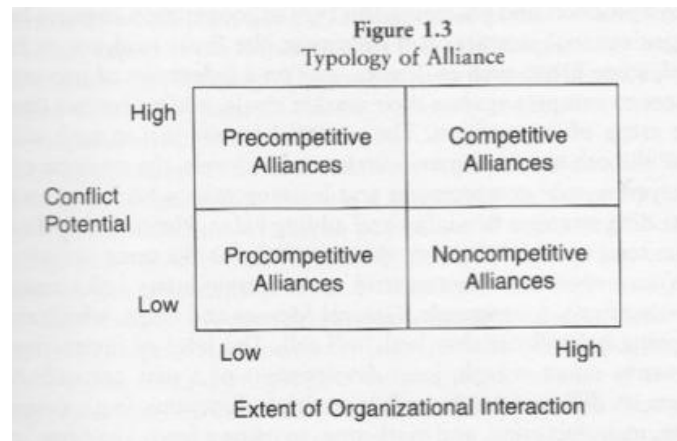
Yin, Robert K. 2009. *Case Study Research: Design and Methods*. Los Angeles, CA: SAGE Publications.

Yoshino, Michael Y, and U.Srinivasa Rangan. 1995. *Strategic Alliances, An Entrepreneurial Approach to Globalization*. Boston: Harvard Business School Press.

Zhang, Anming. 2005. Competition Models of Strategic Alliances. *Research in Transportation Economics* 13:75-100.

Exhibit

Exhibit 1



Source: (Yoshino and Rangan, 1995)

Exhibit 2

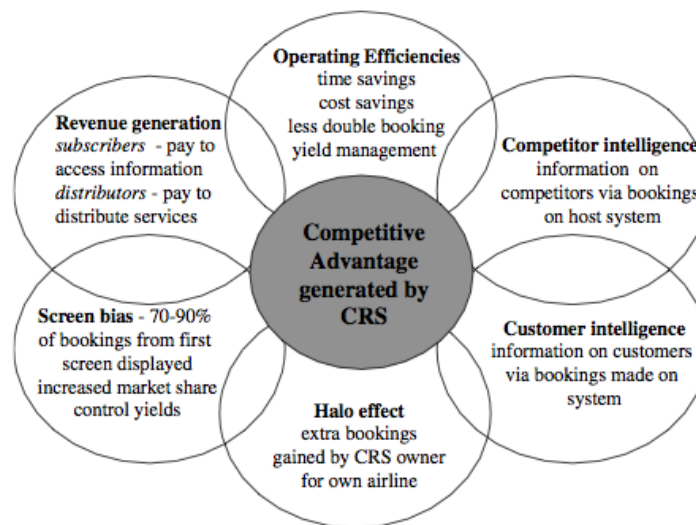
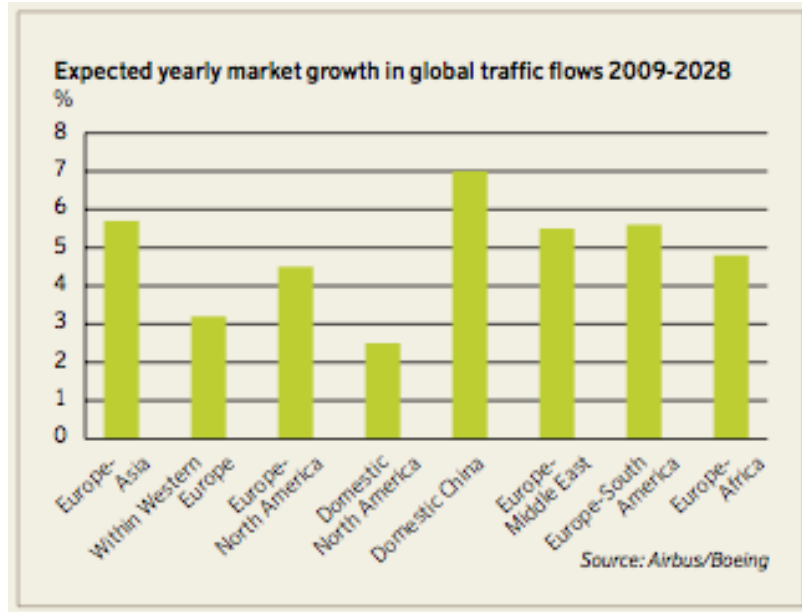


Fig. 1. CRSs and sources of competitive advantage.

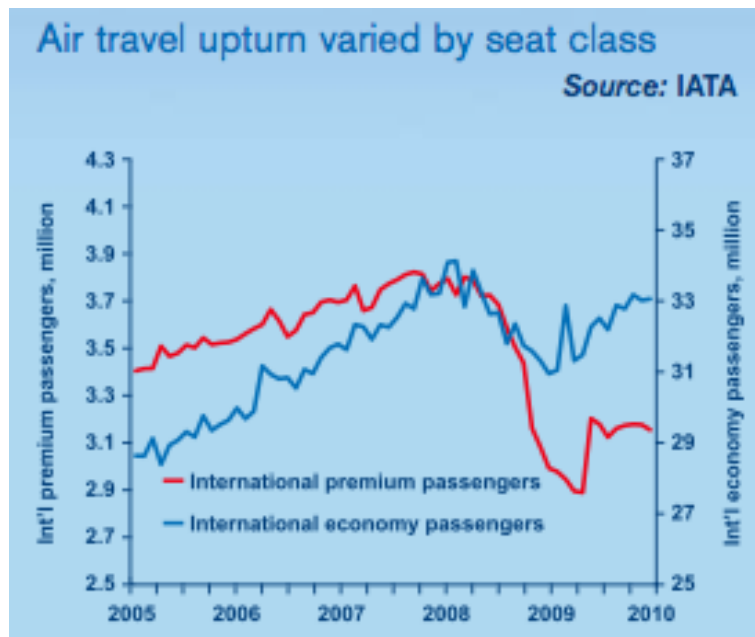
Source: (Pemberton, Stonehouse, and Barber, 2001)

Exhibit 3



Source: (SAS, 2009)

Exhibit 4



Source: (IATA, 2010)

Exhibit 5



Source: (Boeing, 2011)

Exhibit 6

Freedom	Description	Example
1st	the right to fly over a foreign country, without landing there ^[3]	Toronto - Mexico City, as a Canadian company, overflying the United States.
2nd	the right to refuel or carry out maintenance in a foreign country on the way to another country ^[3]	Toronto - Mexico City, as a Canadian company, but stopping for fuel in the United States.
3rd	the right to fly from one's own country to another ^[3]	Toronto - Chicago, as a Canadian company
4th	the right to fly from another country to one's own ^[3]	Toronto - Chicago, as an American company
5th	the right to fly between two foreign countries during flights while the flight originates or ends in one's own country ^[3]	Toronto - Chicago - Mexico City, as a Canadian company
6th	the right to fly from a foreign country to another one while stopping in one's own country for non-technical reasons ^[3]	Toronto - Chicago - Mexico City, as an American company
7th	the right to fly between two foreign countries while not offering flights to one's own country ^[3]	Toronto - Mexico City, as an American company
8th	the right to fly between two or more airports in a foreign country while continuing service to one's own country ^[3]	Chicago - New York - Toronto, as a Canadian company
9th	the right to fly inside a foreign country without continuing service to one's own country ^[3]	Chicago - New York, as a Canadian company

Source: (Wikipedia, 2011)

Exhibit 7

	Star Alliance	Oneworld	SkyTeam
Established	1997	1999	2000
Member Airlines	27	12	14
Aircraft	4 023	2 500	2 364 (+1104)
Employees	402 208	311 830	388 723
Passengers per Year	603,8 million	335,7 million	474 million
Sales Revenue in US \$	150,7 billion	91,27 billion	Approx. 88,9 billion (estimate)
Daily Departures	21 000	9 381	14 000
Number of Airports	1 160	901	916
Number of Lounges	Over 970	550	465
Countries Served	181	145	169

As of August 2011. Source: staralliance.com/oneworld.com/skyteam.com

Exhibit 8 (Operating Revenue, Oneworld)

Revenue ('000 USD)	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Oneworld										
Aer Lingus (joined jun 2000, exited apr 2007)				1 643 685	1 093 000	1 119 000	1 000 000	1 105 855	1 267 000	
American Airlines	19 898 241	23 696 099	22 832 757	22 374 581	20 657 147	18 607 553	17 440 000	17 420 479	15 638 792	17 256 584
British Airways	12 595 000	17 317 000	17 120 000	15 730 000	15 122 000	13 745 000	12 619 000	11 552 332	11 946 712	14 114 000
Cathay Pacific	8 586 923	11 097 821	9 276 923	5 841 713	5 366 511	4 737 918	3 800 000	4 242 308	3 570 770	4 425 848
Finnair	2 636 450	3 360 941	3 304 346	2 510 000	2 317 000	2 132 000	1 804 000	1 606 742	1 506 000	1 082 000
Iberia	6 172 340	8 084 553	7 470 732	6 327 830	5 862 738	5 549 577	5 256 000	4 438 302	4 105 584	4 005 007
Japan Airlines (joined apr 2007)	16 421 000	19 453 000	19 641 000	3 034 000	2 506 000	2 093 000	1 639 000	1 452 434	1 428 341	1 425 154
LAN (joined may 1999)	3 655 512	4 534 282	3 524 923	850 000						
Malév (joined apr 2007)	485 461	724 391								
Mexicana (joined nov 2009, ceased operations aug 2010)	10 850 701	14 094 961	11 609 869	10 235 571	9 448 780	8 067 599	7 369 000	5 897 188	5 516 827	5 780 994
Qantas	842 620	990 795	765 043							
Royal Jordanian (joined apr 2007)										
S7 Airlines (joined nov 2010)										
Sum	82 152 248	103 353 843	96 395 593	67 697 380	62 373 176	56 051 647	50 927 000	47 715 640	44 980 026	48 089 587
Number of members	10	10	10	8	8	8	8	8	8	7
Average	8 215 325	10 335 384	9 639 559	8 462 173	7 796 647	7 006 456	6 365 875	5 964 455	5 622 503	6 869 941
Median	7 379 632	9 591 187	8 373 828	6 084 772	5 614 625	5 143 748	4 528 000	4 340 305	3 838 177	4 425 848

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 9 (RPK, Oneworld)

Revenue Passenger KM (millions)	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Oneworld										
Aer Lingus (joined Jun 2000, exited apr 2007)	196 939	211 987	222 760	13 362	12 561	11 136	9 963	8 413	8 901	
American Airlines	111 995	115 734	113 273	224 330	222 691	209 256	193 135	195 815	170 853	187 542
British Airways	81 086	83 542	74 987	114 896	107 892	106 501	100 426	99 123	103 374	118 890
Cathay Pacific	15 567	16 984	15 563	72 939	65 110	57 224	42 727	49 011	44 751	47 097
Finnair	49 556	52 846	54 197	12 653	16 735	10 476	8 642	8 462	7 933	7 460
Iberia	72 727	80 941	85 102	52 424	49 060	45 766	41 956	40 420	41 265	40 015
Japan Airlines (joined apr 2007)	30 370	27 803	24 785	20 222	17 491	15 670	13 255	11 521	11 280	9 931
LAN (joined may 1999)	3 528	4 062	4 435							
Malev (joined apr 2007)										
Mexicana (joined nov 2009, ceased operations aug 2010)	97 488	98 864	82 124	78 986	86 986	73 586	68 923	72 891	67 822	63 495
Qantas	6 708	7 299	6 446							
Royal Jordanian (joined apr 2007)										
S7 Airlines (joined nov 2010)										
Sum	665 964	700 062	683 672	589 812	578 526	529 615	479 027	485 656	456 179	474 430
Number of members	10	10	10	8	8	8	8	8	8	7
Average	66 596	70 006	68 367	73 727	72 316	66 202	59 878	60 707	57 022	67 776
Median	61 142	66 894	64 552	62 682	57 085	51 495	42 342	44 716	43 008	47 097

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 10 (ASK, Oneworld)

Available Seat KM (millions)										
Oneworld	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Aer Lingus (joined jun 2000, exited apr 2007)				17226	15 440	13589	12271	10751	12393	
American Airlines	244 145	263 099	273 358	279 930	283 425	279 754	265 199	276 949	246 133	258 991
British Airways	143 419	149 513	149 870	150 701	144 189	143 407	137 843	136 226	149 229	167 133
Cathay Pacific	99 387	104 667	92 506	91 769	82 766	73 987	59 224	63 018	62 746	61 847
Finnair	21 136	23 545	21 205	17 477	23 038	15 804	13 792	12 933	13 063	12 399
Iberia	62 083	66 043	66 419	65 715	63 628	60 843	55 930	55 367	58 549	54 294
Japan Airlines (joined apr 2007)	111 592	122 237	123 517							
LAN (joined may 1999)	39 476	36 234	35 512	27 283	23 687	21 774	19 013	17 547	16 902	14 413
Malev (joined apr 2007)	5 155	6 053	6 423							
Mexicana (joined nov 2009, ceased operations aug 2010)	120 289	125 689	101 263							
Qantas	9 788	10 105	9 089							
Royal Jordanian (joined apr 2007)					114 003	96 665	89 064	91 703	90 225	83 037
S7 Airlines (joined nov 2010)										
Sum	856 470	907 185	879 162	751 198	750 176	705 823	652 336	664 494	649 240	652 114
Number of members	10	10	10	8	8	8	8	8	8	7
Average	85 647	90 719	87 916	93 900	93 772	88 228	81 542	83 062	81 155	93 159
Median	80 735	85 355	79 463	78 742	73 197	67 415	57 577	59 193	60 648	61 847

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 11 (PLF, Oneworld)

Passenger Load Factor (%)	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Oneworld										
Aer Lingus (joined jun 2000, exited apr 2007)	80.7 %	80.6 %	81.5 %	77.6 %	81.4 %	82.0 %	81.2 %	78.3 %	71.8 %	72.4 %
American Airlines	78.1 %	77.4 %	75.6 %	80.1 %	78.6 %	74.8 %	72.8 %	70.7 %	69.4 %	72.4 %
British Airways	81.6 %	79.8 %	81.1 %	76.2 %	74.8 %	74.3 %	72.9 %	72.8 %	69.3 %	71.1 %
Cathay Pacific	73.7 %	72.1 %	73.4 %	79.5 %	78.7 %	77.3 %	72.1 %	77.8 %	71.3 %	76.2 %
Finnair	79.8 %	80.0 %	81.6 %	72.4 %	72.6 %	66.3 %	62.7 %	65.4 %	60.7 %	60.2 %
Iberia	65.2 %	66.2 %	68.9 %	79.8 %	77.1 %	75.2 %	75.0 %	73.0 %	70.5 %	73.7 %
Japan Airlines (joined apr 2007)	76.9 %	76.7 %	69.8 %	74.1 %	73.8 %	72.0 %	69.7 %	65.7 %	66.7 %	68.9 %
LAN (joined may 1999)	68.4 %	67.1 %	69.1 %							
Malev (joined apr 2007)										
Mexicana (joined nov 2009, ceased operations aug 2010)	81.0 %	78.7 %	81.1 %	78.1 %	76.3 %	76.1 %	77.4 %	79.5 %	75.2 %	76.5 %
Qantas	68.5 %	72.2 %	70.9 %							
Royal Jordanian (joined apr 2007)										
S7 Airlines (joined nov 2010)										
Number of members	10	10	10	8	8	8	8	8	8	7
Average	75.4 %	75.1 %	75.3 %	77.2 %	76.7 %	74.8 %	73.0 %	72.9 %	69.4 %	71.3 %
Median	77.5 %	77.1 %	74.5 %	77.9 %	76.7 %	75.0 %	72.9 %	72.9 %	70.0 %	72.4 %

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 12 (Operating Revenue, SkyTeam)

	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Revenue ('000 USD)										
Skyteam										
Aeroflot (joined april 2006)	2 732 570	3 872 713	3 026 457	2 628 000						
Aeromexico	1 155 092	1 691 104	1 628 000	1 616 999	1 612 952	1 450 805	1 286 000	1 500 000	1 442 929	1 511 827
Air Europe (joined sept 2007)	1 523 069	1 770 949								
Air France	19 828 912	24 688 859	19 705 326	16 566 808	16 206 230	15 231 000	14 287 000	11 981 858	11 373 000	11 036 652
Alitalia (joined Jul 2001, bankrupt 2008, relauched 2009) *	4 865 000		6 669 000	5 960 000	5 940 000	5 068 000	4 916 000	4 573 826		
China Eastern (joined Jun 2011)		6 622 000	7 583 000							
China Southern (joined nov 2007)		14 778 412	13 763 582	13 128 000	11 208 000					
Continental Airlines (joined sept 2004, exited oct 2009)	1 080 891	1 448 756	1 201 968	1 048 000	953 530	696 778	583 000	386 904	381 857	
Czech Airlines (joined march 2001)	18 046 579	21 723 658	19 238 801	17 126 731	16 111 714	15 154 479	13 303 000	13 879 000	15 888 000	
Delta Air Lines	1 008 400	933 400								
Kenya Airways (joined sept 2007)	10 888 601	12 693 875	10 252 203	8 716 124	8 350 078					
KLM (joined sept 2004, merged with Air France 2005)	8 045 309	9 468 515	9 479 538	8 434 217	7 396 210	6 254 431	5 140 000	5 206 348	4 276 123	4 250 000
Korean Air	10 016 421	10 501 000	12 538 000	12 558 000	12 216 000					
Northwest Airlines (joined sept 2004, merged with Delta 2009)										
TAGGNY (joined Jun 2010)										
Vietnam Airlines (joined Jun 2010)										
Sum	98 998 844	111 554 241	97 492 875	87 792 899	80 064 714	43 854 993	39 535 000	36 947 936	31 352 909	32 686 279
Number of member values	13	12	10	10	9	6	6	6	5	4
Average	7 615 296	9 296 187	9 749 288	8 779 290	8 896 079	7 309 166	6 589 167	6 157 989	6 270 582	8 171 570
Median	8 022 000	8 725 758	9 865 871	8 575 171	8 350 078	5 661 216	5 048 000	4 890 087	4 276 123	7 643 226

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

* Alitalia Lines Aeree Italiane bankrupt 2008

Exhibit 13 (RPK, SkyTeam)

	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Revenue Passenger KM (millions)										
Skyteam										
Aeroflot (joined april 2006)	25 669	27 090	24 569	22 212						
Aeromexico	12 230	13 653	14 382	13 867						
Air Europa (joined sept 2007)	14 093	14 616		14 956						
Air France	126 415	131 845	128 934	123 458	116 490	107 364	99 122	98 541	94 822	91 801
Alitalia (joined jul 2001, bankrupt 2008, relaunch 2009) *	219 320	*	38 090	37 740	37 969	30 247	28 170	29 619		
China Eastern (joined jun 2011)		93 370								
China Southern (joined nov 2007)	125 048	129 433	130 965	122 712	114 683					
Continental Airlines (joined sept 2004, exited oct 2009)	5 813	5 952	6 051	6 388	7 817	5 703	4 784	3 841	3 566	
Czech Airlines (joined march 2001)	161 904	169 895	166 209	158 952	166 957	157 781	143 478	152 061	156 549	173 411
Delta Air Lines	8 061	7 824								
Kenya Airways (joined sept 2007)	73 472	77 556	74 496	71 769	72 763					
KLM (joined sept 2004, merged with Air France 2005)	54 763	54 614	54 743	51 308	49 046	45 354	39 936	41 439	38 191	40 467
Korean Air	100 152	114 608	117 357	116 845	122 020					
Northwest Airlines (joined sept 2004, merged with Delta 2009)										
TAROM (joined jun 2010)										
Vietnam Airlines (joined jun 2010)										
Sum	829 310	829 695	755 776	725 051	702 701	360 202	328 472	338 829	307 824	320 069
Number of member values	13	12	10	10	9	6	6	6	5	4
Average	63 793	69 141	75 578	72 505	78 078	60 034	54 745	56 472	61 565	80 017
Median	54 763	66 085	64 620	61 489	72 763	37 801	34 053	35 529	38 191	66 134
* Alitalia-Lines Aegee Italiane bankrupt 2008										

Normal: numbers from IATA'S
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 14 (ASK, SkyTeam)

Available Seat KM (millions)	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Skyteam										
Aeroflot (joined april 2006)	37 002	38 182	34 964	31 661						
Aeromexico	17 768	19 633	21 511	20 927	22 323	20 957	19 965	20 099	20 781	21 223
Air Europa (joined sept 2007)	17 578	18 590								
Air France	160 400	165 787	160 927	155 575	153 687	141 647	131 719	129 523	128 038	117 622
Alitalia (joined Jul 2001, bankrupt 2008, relaunch 2009) *	44 602		51 167	51 284	53 108	42 103	39 023	41 696		
China Eastern (joined Jun 2011)		122 617								
China Southern (joined nov 2007)		151 684	159 420	150 490	144 273					
Continental Airlines (joined sept 2004, exited oct 2009)	8 839	9 215	9 156	9 161	11 151	8 148	6 622	5 444	5 122	
Czech Airlines (joined march 2001)	196 619	207 017	204 904	201 329	215 549	208 350	192 975	210 643	226 340	236 577
Delta Air Lines	11 386	10 351								
Kenya Airways (joined sept 2007)	90 320	94 001	89 317	85 698	80 982					
KLM (joined sept 2004, merged with Air France 2005)	78 527	76 634	75 321	70 588	68 659	63 795	58 284	58 666	55 494	55 661
Korean Air	119 591	134 991	138 629	137 761	147 698					
Northwest Airlines (joined sept 2004, merged with Delta 2009)										
TAROM (joined Jun 2010)										
Vietnam Airlines (joined Jun 2010)										
Sum	1 056 933	1 047 165	945 316	914 474	897 430	485 000	448 588	466 071	435 755	431 083
Number of member values	13	12	10	10	9	6	6	6	6	4
Average	81 303	87 264	94 532	91 447	99 714	80 833	74 765	77 679	72 626	107 771
Median	78 527	85 518	82 319	78 143	80 982	52 949	48 654	50 181	55 494	86 642

* Alitalia-Lines Aeree Italiane bankrupt 2008

Exhibit 15 (PLF, SkyTeam)

Passenger Load Factor (%)	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Skyteam										
Aeroflot (joined april 2006)	69.4 %	71.0 %	70.3 %	70.2 %	67.0 %	65.6 %	65.0 %	63.3 %	65.9 %	67.8 %
Aeromexico	68.8 %	68.8 %	66.9 %	66.3 %	67.0 %	65.6 %	65.0 %	63.3 %	65.9 %	67.8 %
Air Europa (joined sept 2007)	80.2 %	79.5 %	66.9 %	66.3 %	67.0 %	65.6 %	65.0 %	63.3 %	65.9 %	67.8 %
Air France	78.8 %	79.1 %	80.1 %	79.4 %	75.8 %	75.8 %	75.3 %	76.1 %	74.9 %	78.0 %
Alitalia (joined Jul 2001, bankrupt 2008, relaunch 2009) *	65.7 %	74.4 %	74.4 %	73.6 %	71.5 %	71.8 %	72.2 %	71.0 %		
China Eastern (joined Jun 2011)										
China Southern (joined nov 2007)	75.3 %	73.8 %	82.2 %	81.5 %	79.5 %	70.0 %	72.2 %	70.6 %	69.6 %	73.3 %
Continental Airlines (joined sept 2004, exited oct 2009)	82.4 %	81.2 %	82.2 %	81.5 %	79.5 %	70.0 %	72.2 %	70.6 %	69.6 %	73.3 %
Czech Airlines (joined march 2001)	65.8 %	64.5 %	66.1 %	69.7 %	70.1 %	75.7 %	74.4 %	72.5 %	69.2 %	73.3 %
Delta Air Lines	82.3 %	82.1 %	81.1 %	79.0 %	77.5 %	75.7 %	74.4 %	72.5 %	69.2 %	73.3 %
Kenya Airways (joined sept 2007)	70.8 %	75.6 %	83.4 %	83.8 %	71.4 %	71.1 %	68.5 %	70.6 %	68.8 %	72.7 %
KLM (joined sept 2004, merged with Air France 2005)	81.4 %	82.2 %	83.4 %	83.8 %	71.4 %	71.1 %	68.5 %	70.6 %	68.8 %	72.7 %
Korean Air	69.7 %	71.3 %	72.7 %	72.4 %	71.4 %	71.1 %	68.5 %	70.6 %	68.8 %	72.7 %
Northwest Airlines (joined sept 2004, merged with Delta 2009)	83.7 %	84.9 %	84.7 %	84.8 %	82.6 %					
TAROM (joined Jun 2010)										
Vietnam Airlines (joined Jun 2010)										
Number of member values	13	12	10	10	9	6	6	6	5	4
Average	74.9 %	76.2 %	76.2 %	76.1 %	66.2 %	71.7 %	71.3 %	70.7 %	69.7 %	73.0 %
Median	75.3 %	77.4 %	77.3 %	76.3 %	73.6 %	71.5 %	72.2 %	70.8 %	69.2 %	73.0 %
* Alitalia-Linee Aeree Italiane bankrupt 2008										

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 16 (Operating Revenue, Star Alliance)

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Star Alliance	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Adria Airways (joined oct 2004)	226 357	302 529	247 862	194 200	167 314					
Aegean (joined jun 2010)										
Air Canada	8 588 000	10 384 000	10 157 000	8 731 000	8 167 000	6 846 000	6 016 000	6 220 562	6 044 654	6 159 970
Air China (joined dec 2007)	7 523 000	6 555 523								
Air New Zealand (joined mar 1999)	3 518 321	2 883 525	3 308 690	2 302 025	2 533 369	2 196 045	2 097 600	2 048 375	3 389 000	1 742 686
ANA (joined oct 1999)	13 282 000	13 883 000	13 109 000	10 419 862	10 230 066	8 517 612	10 894 000	10 132 575	10 312 000	10 402 984
Ansett Australia (joined mar 1999, bankruptcy sept 2001)										
Asiana Airlines (joined mar 2003)	3 320 245	3 388 835	3 890 952	3 712 917	3 028 471	2 865 770	2 105 000			1 943 045
Austrian Airline Group (joined mar 2000)	2 311 000	3 573 340	3 377 393	3 188 494	2 907 602	2 757 127	2 287 000	2 264 719	1 167 247	1 848 645
Blue1 (joined oct 2004)	237 784	310 608	348 422	164 851	226 000					
British Midland International (joined jul 2000)	1 360 000	1 852 000	2 049 000	1 674 000	1 570 000	1 520 000	1 270 000	1 092 000	1 059 367	
Brussels Airlines (joined dec 2008)										
Continental Airlines (joined oct 2008)										
Croatia Airlines (joined nov 2004)	254 974	330 692	274 226	230 423	235 806					
EGYPTAIR (joined jul 2008)	1 797 000									
LOT Polish Airlines (joined oct 2003)	887 965	1 193 650	1 083 985	870 596	829 815	782 458				
Lufthansa	34 970 000	40 102 000	32 982 000	26 750 000	24 472 000	23 458 000	19 948 000	18 028 318	16 245 000	15 457 000
Mexicana (joined jul 2000, exited mar 2004)							1 300 000	1 400 000	1 404 000	
SAS	5 169 410	6 500 050	5 934 091	5 206 334	4 934 270	7 925 000	7 208 000	6 689 953	3 062 000	4 307 500
Shanghai Airlines (joined dec 2007, exited nov 2010)	2 100 000	1 920 000								
Singapore Airlines (joined apr 2000)	7 733 898	10 969 108	9 528 116	8 203 785	7 236 771	6 432 321	5 648 000	5 875 637	5 353 000	5 618 503
South African Airways Group (joined apr 2006)	2 200 076	3 182 109	3 188 763	3 125 990						
Spanair (joined may 2003)	1 530 000	1 530 515	1 594 745	1 449 677	1 192 339	1 023 298				
Swiss (joined april 2006)	3 956 023	4 827 458	4 036 014	3 243 666						
TAM (joined may 2010)										
TAP Portugal (joined mar 2005)	2 256 000	2 784 820	2 331 022	2 087 000	1 663 000					
Thai	4 686 103	6 097 913	5 591 518	4 535 542	4 035 001	3 795 211	3 179 000	2 988 753	2 902 182	2 969 673
Turkish Airlines (joined apr 2008)	4 490 374	4 659 297								
United (merged with Continental 2010)	16 935 000	20 194 000	20 143 000	19 840 000	17 879 000	16 391 000	13 724 000	14 286 000	16 138 000	19 352 000
US Airways (joined may 2004)	10 608 695	12 243 762	11 813 428	8 055 592	7 212 379					
Virgin (joined oct 1997, bankruptcy jun 2005)					3 121 337	2 752 649	2 109 000	2 500 000	2 578 000	3 000 000
Sum	140 945 225	159 505 734	134 782 237	113 485 964	101 161 540	87 262 491	77 825 000	73 536 890	69 654 450	73 001 936
Number of members	24	23	20	20	18	14	13	12	12	11
Average	5 872 718	6 935 032	6 739 112	5 674 298	5 620 086	6 233 035	5 986 538	6 128 074	5 804 538	6 636 540
Median	3 423 783	3 573 340	3 654 173	3 216 080	3 028 471	3 330 491	3 179 000	4 437 195	3 225 500	4 307 500

Exhibit 17 (RPK, Star Alliance)

Star Alliance	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Adria Airways (joined oct 2004)	872	1 003	863	773	1 019					
Aegean (joined jun 2010)										
Air Canada	70 988	74 496	74 400	72 485	75 256	65 980	59 018	69 019	66 778	44 806
Air China (joined dec 2007)	73 908	65 720								
Air New Zealand (joined mar 1999)	25 368	27 539	27 381	25 673	23 304	24 710	22 689	22 255	21 797	22 232
ANA (joined oct 1999)	52 465	57 166	59 135	58 028	57 645	54 991	52 077	54 220	53 367	55 042
Ansett Australia (joined mar 1999, bankruptcy sept 2001)										17 110
Asiana Airlines (joined mar 2003)	24 428	23 622	22 472	20 812	19 174	19 918	16 156			
Austrian Airline Group (joined mar 2000)	14 759	16 458	17 427	19 890	18 903	17 520	14 537	13 794	8 140	8 799
Blue1 (joined oct 2004)	1 281	1 333	1 413	1 398	947					
British Midland International (joined jul 2000)	8 535	10 206	9 506	9 776	9 325	6 544	6 514	5 523	4 320	
Brussels Airlines (joined dec 2009)										
Continental Airlines (joined oct 2009)	1 151	1 217	1 084	1 005	1 199					
Croatia Airlines (joined nov 2004)	16 326									
Egyptair (joined jul 2008)	6 101	6 711	7 288	6 720	6 284	5 861				
LOT Polish Airlines (joined oct 2003)	123 083	126 267	122 091	114 672	108 185	109 471	96 617	93 643	91 336	94 170
Lufthansa										
Mekong (joined jul 2000, exited mar 2004)	23 241	27 890	27 304	27 506	26 487	24 050	23 020	24 170	22 956	22 647
SAS	14 254	11 900								
Shanghai Airlines (joined dec 2007, exited nov 2010)	81 552	93 626	90 900	87 646	82 742	77 082	63 816	74 172	68 822	70 795
Singapore Airlines (joined apr 2000)	20 979	22 920	24 849	25 502						
South African Airways Group (joined apr 2006)	8 411	8 854	9 507	8 464	5 974	5 777				
Spanair (joined mar 2003)	27 510	28 140	25 106	22 076						
Swiss (joined apr 2006)										
TAM (joined mar 2010)										
TAP Portugal (joined mar 2005)	21 076	21 908	19 135	16 649	14 400					
Thai	52 449	56 092	61 370	55 899	49 931	50 719	44 773	48 337	44 142	42 236
Turkish Airlines (joined apr 2008)	38 977	32 596								
United (merger with Continental 2010)	184 486	176 706	191 932	188 684	183 903	184 320	167 136	176 048	187 639	204 187
US Airways (joined may 2004)	93 110	97 418	70 092	60 136	39 043	27 855	26 081	26 037	25 777	26 286
Varg (joined oct 1997, bankruptcy jun 2005)										
Sum	961 240	989 798	863 155	823 194	721 721	672 798	603 965	618 625	607 931	611 310
Number of members	24	23	20	20	18	14	13	12	12	11
Average	40 052	43 034	43 158	41 160	40 151	48 128	46 459	51 552	50 661	55 574
Median	23 830	27 539	24 978	23 789	20 739	26 283	26 081	37 187	34 960	42 236

Normal: Numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Rest: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 18 (ASK, Star Alliance)

Star Alliance	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Adria Airways (joined oct 2004)	1 450	1 585	1 342	1 216	1 605					
Aegean (joined jun 2010)										
Air Canada	86 505	90 479	91 534	89 474	94 658	84 971	79 630	91 649	91 315	61 260
Air China (joined dec 2007)	94 608	87 471								
Air New Zealand (joined mar 1999)	32 883	36 318	35 883	34 689	29 411	32 919	31 041	29 350	31 033	31 411
ANA (joined oct 1999)	81 057	86 820	88 177	85 159	85 838	82 748	81 287	80 249	81 964	86 293
Ansett Australia (joined mar 1999, bankruptcy sept 2001)										23 305
Asiana Airlines (joined mar 2003)	34 713	33 246	30 514	28 160	26 765	26 775	23 781			
Austrian Airlines (joined mar 2000)	20 044	22 129	23 208	26 814	30 887	24 279	20 387	19 561	12 186	13 140
Blue1 (joined oct 2004)	2 042	2 124	2 161	2 186	2 050					
British Midland International (joined jul 2000)	12 516	15 587	14 070	13 639	13 129	9 101	9 972	8 381	7 394	
Brussels Airlines (joined dec 2009)										
Continental Airlines (joined oct 2009)	1 887	1 879	1 675	1 658	2 030					
Croatia Airlines (joined nov 2004)	23 901									
Egyptair (joined jul 2008)	8 423	9 209	9 623	9 061	8 492	7 934				
LOT Polish Airlines (joined oct 2003)	158 180	160 869	152 731	145 931	144 182	139 696	124 166	121 459	127 107	124 198
Lufthansa							18 174	17 921	19 189	
Mexicana (joined jul 2000, exited mar 2004)	32 440	38 776	36 852	36 971	38 454	35 087	33 333	34 096	35 520	33 782
SAS	19 070	17 129								
Shanghai Airlines (joined dec 2007, exited nov 2010)	107 006	118 863	112 576	112 052	109 484	102 951	88 580	97 335	94 203	92 304
Singapore Airlines (joined apr 2000)	29 396	30 839	33 150	34 110						
South African Airways Group (joined apr 2006)	12 514	13 090	13 945	12 353						
Spanair (joined may 2003)	34 357	35 032	31 290	27 675	9 731	9 047				
Swiss (joined apr 2006)										
TAM (joined may 2010)	30 785	32 709	26 983	22 871	20 000					
TAP Portugal (joined mar 2005)	71 761	74 848	77 564	71 833	69 843	69 772	63 952	64 594	60 568	56 398
Thai	54 741	44 011								
Turkish Airlines (joined apr 2008)	197 126	218 029	231 917	229 775	225 791	232 613	217 798	239 369	265 167	282 260
United (merged with Continental 2010)	113 757	119 364	87 607	76 875	49 090					
US Airways (joined may 2004)										
Vnair (joined oct 1997, bankruptcy jun 2005)						38 154	36 605	37 954	37 989	36 176
Sum	1 261 962	1 290 206	1 102 802	1 062 502	961 440	896 047	828 716	841 948	863 635	840 527
Number of members	24	23	20	20	18	14	13	12	12	11
Average	52 582	56 096	55 140	53 125	53 413	64 003	63 747	70 162	71 970	76 412
Median	32 862	35 032	32 220	31 135	30 149	36 621	36 605	51 274	49 279	56 398

Normal: Numbers from WMI5
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 19 (PLF, Star Alliance)

Star Alliance	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Adria Airways (joined oct 2004)	60.2 %	63.3 %	64.4 %	63.5 %	63.5 %					
Aegean (joined jun 2010)										
Air Canada	82.1 %	82.3 %	81.3 %	81.0 %	79.5 %	77.6 %	74.1 %	75.3 %	73.1 %	73.1 %
Air China (joined dec 2007)	77.1 %	75.1 %	76.0 %	74.0 %	75.8 %	75.1 %	73.1 %	75.8 %	70.2 %	70.8 %
Air New Zealand (joined mar 1999)	77.1 %	75.8 %	76.0 %	74.0 %	75.8 %	75.1 %	73.1 %	75.8 %	70.2 %	70.8 %
ANA (joined oct 1999)	64.7 %	65.8 %	67.1 %	68.1 %	69.8 %	66.5 %	64.1 %	67.6 %	65.1 %	67.3 %
Amsett Australia (joined mar 1999, bankruptcy sept 2001)										
Asiana Airlines (joined mar 2003)	70.3 %	71.1 %	73.6 %	73.9 %	71.6 %	70.7 %	67.9 %			73.4 %
Austrian Airline Group (joined mar 2000)	73.6 %	74.4 %	75.1 %	74.5 %	73.8 %	72.2 %	71.3 %	70.5 %	66.8 %	67.0 %
Blue1 (joined oct 2004)	62.7 %	62.8 %	65.4 %	64.0 %	56.9 %					
British Midland International (joined jul 2000)	68.2 %	65.5 %	67.0 %	71.7 %	71.0 %	71.9 %	65.3 %	65.9 %	58.4 %	
Brussels Airlines (joined dec 2009)										
Continental Airlines (joined oct 2009)	61.0 %	64.7 %	64.7 %	60.6 %	59.1 %					
Croatia Airlines (joined nov 2004)	68.3 %									
Egyptair (joined jul 2008)	72.4 %	72.9 %	75.7 %	74.2 %	74.0 %	73.9 %				
LOT Polish Airlines (joined oct 2003)	77.8 %	78.8 %	79.9 %	78.6 %	75.0 %	78.4 %	77.8 %	77.1 %	71.9 %	75.8 %
Lufthansa										
Mexicana (joined jul 2000, exited mar 2004)	71.6 %	71.9 %	74.1 %	74.4 %	68.9 %	68.5 %	69.1 %	70.9 %	64.6 %	67.0 %
SAS	71.7 %	69.5 %								
Shanghai Airlines (joined dec 2007, exited nov 2010)	76.2 %	78.4 %	80.8 %	78.2 %	75.6 %	74.9 %	72.0 %	76.2 %	73.1 %	76.7 %
Singapore Airlines (joined apr 2000)	71.4 %	74.3 %	75.0 %	74.8 %						
South African Airways Group (joined apr 2006)	67.2 %	67.6 %	68.2 %	68.5 %	61.4 %	63.9 %				
Spanair (joined may 2003)	80.1 %	80.3 %	80.2 %	79.8 %						
Swiss (joined apr 2006)										
TAM (joined may 2010)										
TAP Portugal (joined mar 2005)	68.5 %	67.0 %	70.9 %	72.8 %	72.0 %					
Thai	73.1 %	74.9 %	79.1 %	77.0 %	71.5 %	72.7 %	70.0 %	74.8 %	72.9 %	74.9 %
Turkish Airlines (joined apr 2008)	71.2 %	74.1 %								
United (merged with Continental 2010)	81.9 %	81.1 %	82.8 %	82.1 %	81.4 %	79.2 %	76.7 %	73.5 %	70.8 %	72.3 %
US Airways (joined may 2004)	81.9 %	81.7 %	80.0 %	78.2 %	79.5 %					
Variig (joined oct 1997, bankruptcy jun 2005)						73.0 %	71.3 %	68.6 %	67.9 %	72.7 %
Number of members	24	23	20	20	18	14	13	12	12	11
Average	72.1 %	72.8 %	74.1 %	73.5 %	71.4 %	72.8 %	70.5 %	71.7 %	68.5 %	71.9 %
Median	71.7 %	74.1 %	75.1 %	74.2 %	71.8 %	72.9 %	71.3 %	72.2 %	68.1 %	72.7 %

Normal: numbers from WATS
 Grey: Numbers from Airline Business Magazine
 Red: Not Applicable
 Yellow: Numbers from Annual reports

Exhibit 20 (Exact Figures: Mean Operating Revenue Changes)

Year	Star Alliance	Oneworld	SkyTeam	IATA
00-01	-0,0506	-0,0910	-0,0525	-0,0572
01-02	0,0609	0,0663	0,0330	-0,0783
02-03	0,0351	0,0712	0,0645	0,0571
03-04	0,1038	0,1003	0,1185	0,2850
04-05	0,0457	0,1156	0,0850	-0,0779
05-06	0,0828	0,0779	0,0585	0,2394
06-07	0,1742	0,1376	0,1442	-0,0042
07-08	0,0985	0,0938	0,1503	0,1385
08-09	-0,1503	-0,2164	-0,1823	-0,1794

Exhibit 21 (Exact Figures: Mean RPK Changes)

Year	Star Alliance	Oneworld	SkyTeam	IATA
00-01	-0,0052	-0,0572	-0,0494	-0,0395
01-02	0,0189	0,0670	0,0037	-0,0151
02-03	-0,0555	-0,0171	-0,0323	-0,0056
03-04	0,1198	0,1053	0,0972	0,2152
04-05	0,0271	0,0916	0,0715	-0,1495
05-06	0,0392	0,0185	-0,0002	0,1212
06-07	0,0338	0,0195	0,0485	0,0583
07-08	-0,0232	0,0342	0,0158	-0,0339
08-09	-0,0776	-0,0407	-0,0397	-0,0063

Exhibit 22 (Exact Figures: Mean ASK Changes)

Year	Star Alliance	Oneworld	SkyTeam	IATA
00-01	0,0231	-0,0572	-0,0010	-0,0176
01-02	-0,0267	0,0670	-0,0272	-0,0458
02-03	-0,0482	-0,0171	-0,0382	-0,0024
03-04	0,0876	0,1053	0,0789	0,1860
04-05	0,0292	0,0916	0,0586	-0,1576
05-06	0,0050	0,0185	-0,0256	0,1224
06-07	0,0213	0,0195	0,0318	0,0316
07-08	-0,0040	0,0342	0,0164	-0,0179
08-09	-0,0709	-0,0407	-0,0361	-0,0094

Exhibit 23 (Exact Figures: Mean PLF)

Year	Star Alliance	Oneworld	SkyTeam	IATA
2000	0,7166	0,7129	0,7295	0,6940
2001	0,6983	0,6901	0,6970	0,6786
2002	0,7352	0,7213	0,7063	0,7004
2003	0,7202	0,7180	0,7080	0,6982
2004	0,7390	0,7371	0,7205	0,7154
2005	0,7459	0,7599	0,7293	0,7223
2006	0,7640	0,7717	0,7428	0,7216
2007	0,7736	0,7773	0,7520	0,7403
2008	0,7593	0,7790	0,7533	0,7282
2009	0,7534	0,7883	0,7490	0,7305

*Exhibit 24 (Industry (IATA) RPK, ASK and PLF)***Industry figures (All IATA Members in Total)**

	RPK	Change in %
2000	2 740 901	
2001	2 623 865	-4,27 %
2002	2 676 154	1,99 %
2003	2 617 760	-2,18 %
2004	2 987 324	14,12 %
2005	3 163 549	5,90 %
2006	3 351 962	5,96 %
2007	3 495 942	4,30 %
2008	3 578 294	2,36 %
2009	3 537 785	-1,13 %

	ASK	Change in %
2000	3 847 371	
2001	3 793 560	-1,40 %
2002	3 732 898	-1,60 %
2003	3 657 377	-2,02 %
2004	4 076 937	11,47 %
2005	4 214 488	3,37 %
2006	4 410 488	4,65 %
2007	4 539 306	2,92 %
2008	4 698 471	3,51 %
2009	4 655 587	-0,91 %

	PLF	Change in %
2000	71,2 %	
2001	69,2 %	-2,0 %
2002	71,7 %	2,5 %
2003	71,6 %	-0,1 %
2004	73,3 %	1,7 %
2005	75,1 %	1,8 %
2006	76,0 %	0,9 %
2007	77,0 %	1,0 %
2008	76,2 %	-0,8 %
2009	76,0 %	-0,2 %

*Exhibit 25 (Industry (IATA) Revenue and number of members)***Industry (All IATA Members in Total)**

Year	Revenue ('000 USD)	Members
2000	328 000 000	275
2001	307 000 000	273
2002	306 000 000	273
2003	322 000 000	270
2004	379 000 000	264
2005	413 000 000	261
2006	465 000 000	249
2007	510 000 000	236
2008	564 000 000	225
2009	482 000 000	232

Appendix

Appendix 1: Preliminary thesis report



GRA 19002

Preliminary Thesis Report

”Structural Changes in Strategic Alliances –
A Case Study of the Airline Industry”

BI Norwegian School of Management, Oslo

Date of submission:
17.01.2011

Students:
Christoffer Giske and Torbjørn Gloppen

Supervisor:
Gabriel R. G. Benito

Programme:
MSc Business and Economics

Table of Contents

ABSTRACT	111
RESEARCH BACKGROUND	112
THE AIRLINE INDUSTRY	113
HISTORY OF ALLIANCES IN THE INDUSTRY.....	114
A BRIEF COMPARISON OF THE THREE ALLIANCES	115
RESEARCH STATEMENT	116
RESEARCH QUESTION	116
RESEARCH OBJECTIVES	116
RELEVANCE OF THE TOPIC.....	118
THEORETICAL FRAMEWORK	118
METHODOLOGY	121
DIAGNOSIS OF THE PROBLEM SITUATION	121
CHOICE OF RESEARCH DESIGN	122
CHOICE OF DATA COLLECTION	123
SELECTION PROCEDURE AND FIELDWORK	124
ANALYSIS AND INTERPRETATION OF THE DATA	125
REPORTING	125
APPENDIX	127
REFERENCES	128

Abstract

In this preliminary thesis we will present how we are going to go about writing our master thesis. We start out by explaining the background for the research, give an overview of the development in the commercial airline industry and then give an introduction to strategic alliances in the same industry. The research question and objectives are then presented, together with an explanation of why this is relevant today. We then give an introduction to previous research on strategic alliances in general, where we among other things take a look at theoretical reasons for why firms create alliances. A more precise description of how we are going to structure the work and what we are going to do are then presented in the methodology part of the paper. In this section we also explain our choice of research design, and why this is so closely connected to the research question.

Research Background

The current globalization has impacted the strategic posture, organizational structure, processes and performance of firms (Venaik, Midgley and Devinney, 2005). The tremendous possibilities that the global market represents are tempting firms to expand, in order to grow faster than they perhaps would have been able to by only operating in their local market. There are several ways firms can invest and grow internationally. One possible method is to cooperate with other firms by creating an alliance. If the alliance is formed to solve a major strategic challenge, it is often referred to as a strategic alliance (Yoshino and Rangan, 1995: p. ix).

There are many definitions of an alliance and little consensus about which is the right one. Our working definition of an alliance is based on the book “*Foreign Operation Methods*” (Welsh, Benito and Petersen, 2007) which defines an alliance as “an arrangement where two or more companies engage in collaborative activity, while remaining as independent organizations and result in foreign market operations”. Since there are so many definitions of alliances, it might be difficult to separate what an alliance is and what it is not. We will discuss this later on in this paper.

Being involved in a strategic alliance might make firms, depending on the alliance structure, to some extent dependent on the performance of partner firms. Being involved in an alliance also means that firms might have to accept compromises that could be in conflict with their own interests (Kleymann and Seristö, 2004: p. ix). Thus it might seem risky to enter an alliance. However, a good alliance is likely to create synergies making participation mutually beneficial for the involved parties. The basic idea is simply to cooperate in order to increase the performance. An effective alliance might to some degree level off the effects of turbulent times as well. By spreading the risk out over the different members of the alliance, firms can employ strategies involving risks they could not handle on their own (Agusdinata and Klein, 2002). Since the structure of the alliances seems to be important, it would be interesting to study if structural changes in alliances could affect the performance of the alliance.

The commercial airline industry is a large and fascinating industry that has contributed to the globalization by connecting different parts of the world even tighter. It is also an industry where strategic alliances are extensively used by firms in order to grow. This could partly be explained by the existing regulations, which are limiting the firms to some extent from growing through mergers and acquisitions (Iatrou and Alamdari, 2005). This is one reason why we have chosen to use the commercial airline industry as an example when analyzing strategic alliances. Other factors for our decision are the high level of operations that are coordinated between the alliances, and the fact that the airline alliances are good examples of cooperation with an international scope. Due to the fact that the alliances we want to have a closer look at have existed for several years, there should be enough data out there for us to analyze how they have changed over time.

The Airline Industry

The commercial airline industry has recently been facing the worst cyclical downturn since the 1930s according to the International Air Traffic Association (IATA) annual report for 2010. The terrorist attacks in September 2001, the SARS disease, the financial crisis and the volcano ash crisis are some of the things that have taken its toll on the industry in general. However, there are still signs of optimism among the airlines. Technological innovations that save costs and further economic growth in emerging markets such as the domestic market in China (See appendix 1) are some of the things that give the industry new hopes and positive expectations for the future.

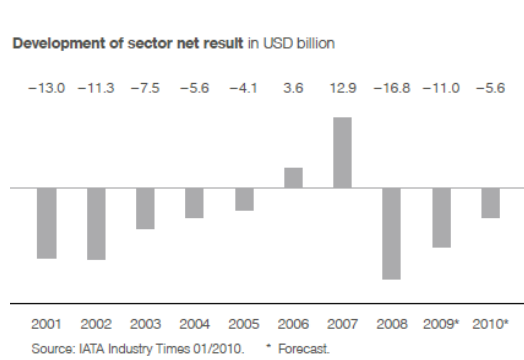


Figure 1

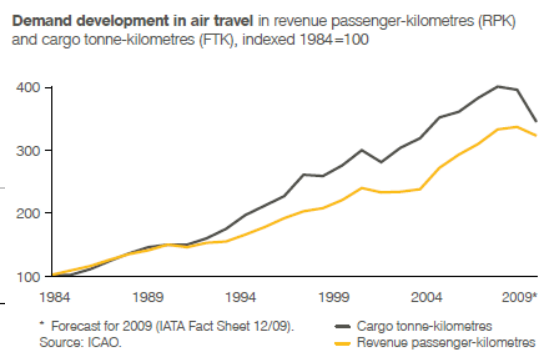


Figure 2

The net results published by the airline sector since 2001 have not been very good (See figure 1). The market managed to recover after the tragic events of September 2001, and combined with a general economic upturn this eventually led to positive net results in 2006 and 2007. However, the financial crisis changed this dramatically. “*The revenue fall of airlines after September 2001 was just nearly one quarter compared to what happened in 2009*” (IATA annual report, 2010). However, IATA also reported that the forecasted loss of 11 billion USD in 2009 turned out to be a loss of 9,9 billion USD. Better than expected, but still very dramatic numbers for the industry in general. In figure 2 we see that there has been significant growth in demand for air travel since 1984. What we also see is that the table confirms what we saw in figure 1, namely the huge negative impact of the financial crisis on the airline industry. The demand for business class seats did especially decrease dramatically (See appendix 2). Did the crisis force the alliances to restructure? Have significant changes been made in order for the alliances to better cope with times of decreasing demand? These are some of the questions that we hope to answer in our thesis.

History of Alliances in the Industry

Strategic alliances have been a part of the commercial airline industry for quite some time. The first alliances on a global scale began in the late 1980s. This was the first time trans-Atlantic alliances between large carriers had been established (Morrish and Hamilton, 2002). In the beginning the structure of the cooperation was fairly loose, with code sharing⁶ as the most common method to join forces. However, the deregulation of especially the US and EU markets led to a wave of cooperation between the airlines. The deregulation opened for operations in foreign markets that had previously been largely dominated by national carriers controlled by the local governments. However, the international markets are not completely liberalized. Due to the regulations that still exist today; the most common way to cooperate is to establish an alliance with other airline companies. In addition to the governmental regulations there are several other reasons why alliances are created as well. Button et al. (1998) have found four main advantages for creating an airline alliance:

⁶ Code sharing allows an airline to sell seats on a partner's flight under its own designator code (Morrish and Hamilton, 2002)

-
- Access to new markets by tapping into a partner's under-utilized route rights or slots
 - Traffic feed into established gateways to increase load factors and to improve yield
 - Defense of current markets through seat capacity management of the shared operations
 - Costs and economies of scale through resource pooling across operational areas or cost centers, such as sales and marketing, station and ground facilities and purchasing

Due to the aforementioned reasons, Star Alliance was officially established in 1997. Oneworld followed in 1999, and SkyTeam in year 2000. Today these are the three largest alliances in the industry, and the alliance members are cooperating more closely than ever before. The three alliances are also the ones that we will have a closer look at in our study. Below is a comparison we made of the three alliances, which will give a quick and easy overview.

A Brief Comparison of the Three Alliances

	Star Alliance	Oneworld	SkyTeam
Established	1997	1999	2000
Member Airlines	27	12	13
Aircraft	4 023	2 500	2 225 (+902)
Employees	402 208	311 830	316 445
Passengers per Year	603,8 million	335,7 million	384 million
Sales Revenue in US \$	150,7 billion	91,27 billion	Approx. 88,9 billion
Daily Departures	21 000	9 381	13 000
Number of Airports	1 160	901	898
Number of Lounges	Over 970	550	447
Countries Served	181	145	169

(Source: staralliance.com/oneworld.com/skyteam.com)

Research Statement

In our thesis we will explore the connection between the structural characteristics of strategic alliances and their realized performance. Can differences in performance be explained by varying approaches to the structuring of the alliances? Why do strategic alliances change structure over time? Do changes in alliance structure affect performance and if so, how? These were some of the questions we formulated as we conducted a preliminary search for literature on strategic alliances and the airline industry. Through our research we wish to contribute by answering some of these questions for ourselves.

Research Question

The foundation of any thesis is the research question. The research question is essentially the core that drives the research process forward and gives direction to the research. This acts as a statement of the problem the thesis will analyze. Based on a preliminary review of the literature and the questions stated above, we have formulated the following research question:

How does structure affect performance in strategic alliances?

Research Objectives

Answering the stated research question involves a process with many steps. In order to outline the process we intend to follow, we have identified some of these steps below. These steps can be referred to as research objectives.

- Analyze and develop a thorough understanding of the industry
- Examine the roles played by airline alliances and their primary reasons of existence
- Analyze the history of the three alliances in question with focus on their structural characteristics
- Analyze the performance of the three alliances over time

-
- Compare and interpret findings on alliance performance with changes or variations in alliance structure

The first objective of any case study is to develop an understanding of the industry and the concepts and issues related to it. This also includes developing an understanding of the framework of strategic alliances and their functions in the industry. We mean to accomplish this through a thorough review of literature and interviews with experts of the industry.

After we have established a deeper understanding of the industry and the framework, we will need to collect and analyze data on the three alliances and their structures. Based on a preliminary review of the literature as well as a run-through of some of the major changes in the three alliances, we have thus far identified five main structural characteristics that we intend to examine in our study. We will look at the alliances' ownership structure, scope of activities, processes of decision making, operational mandate, organizational structure and criteria for membership. It is important to emphasize that this list only serves as a preliminary indication of the factors that we mean to examine. Yin (2009) states that case studies are likely to adapt as the researcher gains a better understanding and insight into the issues at hand. The factors identified here may therefore change as we progress through our study. Factors which are alike between the three alliances and maintain constant throughout their history are unlikely to contribute to our study and will therefore be rejected. On the other hand, structural characteristics that vary between the alliances or change over time should be included in the study. The list of factors is therefore likely to change somewhat.

Following the analysis of the structural characteristics of the alliances, we will need to collect data and perform an analysis of their performance. The definition of performance varies greatly and is entirely dependent on the stated objective of the alliance. Defining appropriate indicators of performance is therefore one of the challenges of our study. Prior studies conducted on airlines have used performance indicators ranging from survival or duration to cost structures and member satisfaction. However, because all three alliances have a stated objective of improving sales volumes for member airlines we have identified the indicators of market share, number of passengers and passenger kilometers as our

preliminary list of performance indicators. The choice of these indicators is also supported by the literature as generally accepted proxies for performance in the industry (Kleymann and Seristö, 2004). In addition to being supported by literature, these indicators are measurable and the data itself should be accessible.

One of the final steps of our study is to compare and interpret the findings in performance with the changes or variations in alliance structure. This is essentially the analysis through which we hope to discover the answer to our research question and formulate hypotheses.

Relevance of the Topic

The topic of strategic alliances is a highly relevant topic in the field of strategic research. In today's globalized business culture alliances between firms with divergent goals is a relatively common occurrence. The dynamics of these alliances and their relationship to performance is a topic that has occupied researchers and managers for decades. We hope to make a contribution, however small, to this field of research by conducting our case study to reveal connections between performance and structure in these alliances. The airline industry is also a reasonably hot topic in today's economy as low-cost carriers are becoming established in the market and the industry is changing. This has become evident lately through a trend of consolidation including several large mergers and acquisitions such as United and Continental, Delta and Northwest and several others including the prospect of a buyout of SAS by Lufthansa. Strategic alliances may act as an alternative to this process of consolidation. We therefore feel that clarifying such perspectives as possible links between structure and performance in alliances could contribute to the industry and the field of research.

Theoretical Framework

We will now introduce an outline of what we think are the most important theoretical frameworks for our thesis. A highly relevant field of research for our thesis is the research on alliances in general. A lot of research has been conducted in the past on both strategic alliances in general, as well as more specifically on strategic alliances in the commercial airline industry. However, to our knowledge

there has not been conducted studies comparing the three largest airline alliances with focus on structural changes related to performance.

There are several interesting subjects that have been studied in the field of strategic alliances. Reasons why alliances are established, how performance of alliances is measured and management of alliances are some of the most discussed topics in this area of research. Contractor and Lorange (2002) have gathered a collection of research articles that discuss these subjects and more. We will now have a look at what they believe are the reasons why firms create alliances. According to Contractor and Lorange (1988) there are at least seven reasons:

- Risk reduction
- Economies of scale and/or rationalization
- Technology exchanges
- Co-opting or blocking competition
- Overcoming government-mandated trade or investment barriers
- Facilitating initial international expansion of inexperienced firms
- Vertical quasi-integration advantages of linking the complementary contributions of the partners in a “value chain”

If we link this general theory to airline alliances we see that it fits nicely with the reasons why Star Alliance, Oneworld and SkyTeam were created.

Since we have previously mentioned the disagreement around the definition of strategic alliances, we will here rather try to illustrate what it is not. “*Mergers, takeovers, and acquisitions in which one firm assumes control of a new entity are not alliances*” (Yoshino and Rangan, 1995: p 5). It is important to specify what a strategic alliance is and what it is not. That is because otherwise one might think that almost every form of cooperation between firms can be addressed as a strategic alliance. In figure 3 we can see an example of what sort of partnerships between firms are defined as belonging to the category of alliances. This can of course vary to some extent due to the several different definitions existing, but the main categories are illustrated below. Figure 4 shows a bit more complex version, but is basically the same model.

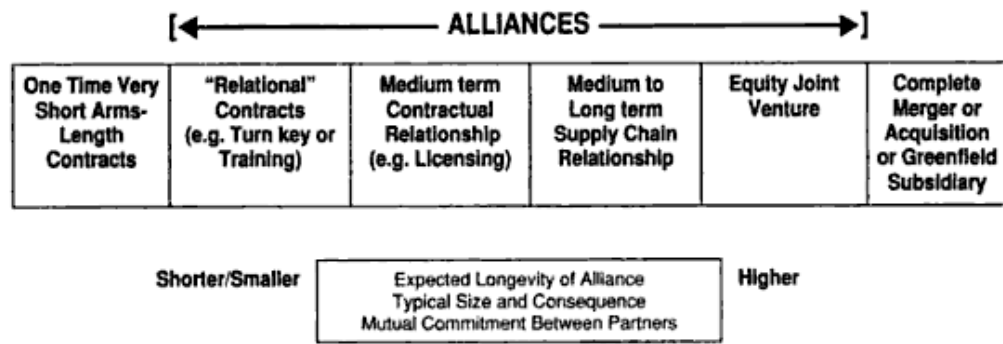


Figure 3 (source: Contractor and Lorange, 2002, p 5)

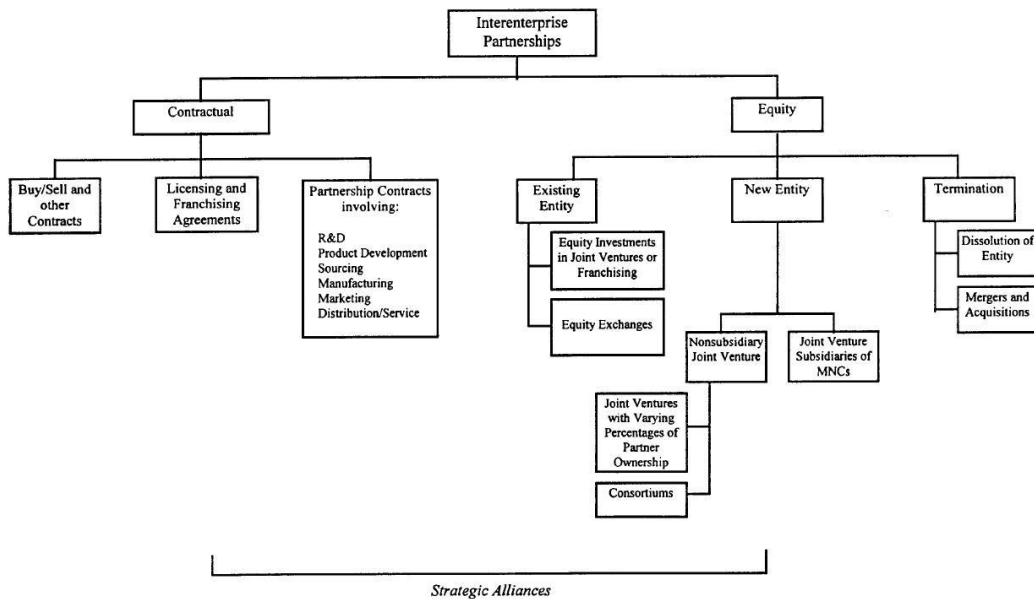


Figure 4 (source: Yoshino and Rangan, 1995, p 8)

The ownership structure of alliances is in itself very interesting. There are several pros and cons with both contractual partnerships and partnerships involving equity. Degree of control, resource commitment and dissemination risk are good examples of factors that need to be considered (Hill, Hwang and Kim, 1990). Hill, Hwang and Kim’s study of international entry modes can contribute to our understanding of why the structures of strategic alliances are taking different shapes. Some firms want to have a high degree of control. Others, due to risk, are more concerned about how much resources they would have to commit to the alliance. Choosing the alliance structure therefore tends to involve some sort of trade-off. For instance there is a trade-off between wanting to have a low commitment of resources and at the same time wanting to have a high degree of control.

The theoretical framework employed in our thesis will evolve as the thesis and issues become more distinct. The thesis itself will therefore include a more extensive summary of prior studies as well as theoretical principles related to strategic alliances.

Methodology

Research methodology should act as a framework which guides the research process and justifies the way that results are obtained throughout the study (Yin, 2009). In order to properly outline the methodology of our thesis and to ensure we have included all stages of the study, we have applied a research framework published by Churchill (1999). The framework identifies six different stages of undertaking a study which will be discussed in detail below.

Diagnosis of the problem situation

The problem situation of our study is focused on the relationship between the characteristics of strategic alliances and performance. More specifically, the problem we wish to answer is how performance can be enhanced or hindered by altering specific structural factors of the strategic alliance. Our study will be focused on the airline industry and the three largest alliances therein. In our thesis we will conduct a comparison of the structures of these three alliances, both by comparing them to each other, but also by comparing and contrasting the structure of each alliance as it changes over time. By conducting these comparisons and seeing these in combination with timelines of performance, we hope to identify possible linkages between the structural aspects of the three strategic alliances and their performance.

By identifying possible links between structural aspects of the three alliances and their performance over their decade of existence, we hope to uncover implications for strategic alliances not only within the airline industry, but also on a general basis. These implications will hopefully uncover how and to what degree the structural characteristics of strategic alliances influence their performance.

Choice of research design

The choice of research design should always be guided by the nature of the question one seeks to answer (Yin, 2009). Yin further states that questions related to *how* or *why* are best investigated by employing a qualitative methodological approach to the study. Seeing as how our research question is concerned with how structure affects performance in strategic alliances, this seems a valid reason to focus on taking a qualitative approach. A qualitative approach implies conducting an analysis of data which is primarily non-numerical (Saunders, Lewis and Thornhill, 2009). This seems to coincide well with the properties of the study we aim to conduct as data on the structural characteristics of alliances are primarily non-numerical.

Creswell (2009) discusses the utilization of a case study approach and states that the main purpose of a case study is to explore factors which may contribute knowledge. This seems well aligned with our stated objective of exploring the factors that influence alliance performance. The case study method also offers a good way of studying processes in the context where they occur (Saunders, Lewis and Thornhill, 2009). This is particularly relevant to us as we aim to adopt an inductive approach by analysing data from the industry and to use these insights to formulate hypotheses. Studying these processes in the context in which they occur seems vital to conducting a thorough and valid analysis. We have therefore chosen to employ the case study approach to our thesis. Choosing airline alliances as a basis for our case is reasoned for earlier. The airline industry essentially represents one of the industries in which we would argue that the structural characteristics of the alliances have the greatest affect on performance. The industry also includes certain characteristics that should contribute to making the implications of the study interesting. We therefore feel justified in deeming the airline alliances a solid case study for our purposes.

Yin (2009) distinguishes between single case and multiple case study strategies stating that a researcher should only employ a single case strategy in studies where the nature of the study strongly supports this. Yin argues that employing a multiple case strategy can act as a way to ensure and improve the degree of validity of the research. Studying multiple cases ensures that conclusions drawn

from analysing one case can be found in other cases as well and therefore promotes the ability to generalise findings. The underlying logic of employing multiple case studies is therefore that each of the selected cases should either predict similar results contributing to the validity or predict contrasting results stemming from anticipated reasons (Yin, 2009). We have therefore chosen to incorporate the three largest airline alliances as this should contribute to a better understanding of the phenomena we are researching as well as providing a background for deductions of validity and generalizability. The fact that all three alliances conduct their operations in the same industry and a similar environment leads us to believe that structural factors deemed to enhance performance in one alliance should also positively affect performance in the other alliances. We therefore predict similar results in all three cases which would provide us with a replication of results and an increased likelihood of findings that are generalizable within the industry.

Yin (2009) argues that case studies are, contrary to popular belief, one of the most difficult research strategies to undertake. This is largely due to the lack of standardized procedures as case studies vary greatly based on the case in question. Case studies often evolve as the research process proceeds and the researcher gains a better understanding of the subject at hand. Establishing routine procedures and guidelines is therefore very difficult. In order to compensate for the lack of standardized procedures for case studies, Yin argues that it is essential for researchers using this approach to exhibit a specific set of skills. Firstly, researchers should always approach the research with an open and inquiring mind and maintain the ability to perform an unbiased analysis of the data. Furthermore, conducting a good study is contingent on the researcher's ability to handle unanticipated results or changes in the direction of the research. Lastly, it is important that the researcher develops a thorough understanding of the issues being researched. These skills form a guiding framework for our thesis which we aim to follow throughout our study.

Choice of data collection

Saunders, Lewis and Thornhill (2009) state that data collection techniques employed in a case study vary greatly. The method of data collection appropriate

for use in a case study may vary from interviews to observations or documentary analysis. One could also use a combination of several different methods of data collection. The main data collection method we have chosen is documentary analysis. This is largely due to the natural restrictions of access that apply due to the fact that we have no previously established contacts in the alliance organizations. Basing the main part of the study on secondary data could act as a limitation as the data included will be limited by factors such as access to databases and search abilities. However, a preliminary search and review of the data available through academic journals, published books, annual reports, industry analysis etc. reveals that there is a vast amount of data available pertaining to our study. We therefore conclude that basing our study primarily on secondary data should not severely limit or bias our study.

Although we realize that realistically there are several limitations of access in front of us, we still wish to make an attempt to establish contacts both in the industry in general and to make contact with the airline alliances. We feel that performing semi-structured interviews with key contacts can be a valuable way to gain insight into the industry. Gathering primary data about the industry in general could supplement the secondary data on the industry and as such could give us a better understanding of the issues. Our stated aim of contacting the alliances directly and gathering data from them is based on the notion of data triangulation. Data triangulation can act as a way to ensure that data is interpreted correctly (Saunders, Lewis and Thornhill, 2009). The ability to ask direct questions related to data we find questionable or to clarify certain data through interviews seems like a potential tool to ensure the quality of the study.

Selection procedure and fieldwork

The access limitations mentioned above are likely to somewhat narrow our scope of selection with regard to interview objects. The evaluation and selection of potential persons to interview will therefore be an ongoing process. The fieldwork of our thesis will largely be composed of the search for literature and data relevant to our study as well as the interviews to establish a deeper understanding of the industry. These interviews will be designated as semi-structured interviews as we

see the potential for gathering additional information by asking relatively open questions. The semi-structured format should allow us to learn more about the industry because the answers given are not necessarily bound by the questions asked. In the event that we obtain access to the airline alliances themselves, these interviews will be somewhat more structured. The reasoning behind this is the form in which such interviews would be conducted due to the distance between the researchers and the likely interview objects as well as the need for more specific answers.

Analysis and interpretation of the data

Although there is a vast amount of data available on the focus of our study, the three major airline alliances, we have not been able to find studies conducting the same type of comparison and research we will undertake. Analysis and interpretation is therefore one of the most important stages of our thesis as it to a great extent represents the contribution that we hope to make through our thesis. Ensuring a solid and valid analysis and interpretation of the data is one of the most important aspects of the study. It is therefore important to choose good indicators and to establish a good picture of the industry and framework of the study in order to facilitate the formulation of hypotheses. The data collected in our study will be analysed and compared with previous studies in the field.

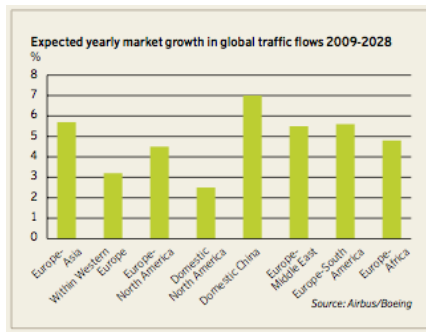
Reporting

The final thesis will act as the report of the findings of our study. In addition to a thorough analysis of the findings and proceedings of the study, our final report will include hypotheses and hopefully implications for further empirical studies. Though we realize that the study will primarily be relevant in the selected industry due to the context in which the study is conducted, we hope to draw conclusions and generate hypotheses that can be relevant for strategic alliances in other industries as well. The main aim of the study is therefore to contribute to the strategic field of research on strategic alliances. However, when writing our thesis we would also like to focus on making it understandable to the general public in order to reach a wider audience. We think the notion of strategic alliances; in the airline industry in particular, is a subject that is interesting not just to strategists

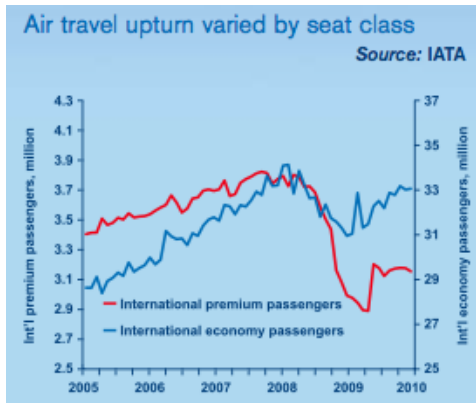
and academics, but also to the general public. We therefore hope to shed some light on the subject by making the report appeal to a wider audience.

Appendix

Appendix 1



Appendix 2



References

- Agusdinata, B., de Klein, W., 2002. *The dynamics of airline alliances*. Journal of Air Transport Management, (8), pp. 201 – 211
- Button, K., Haynes, K., Stough, R., 1998. *Flying into the Future: Air Transport Policy in the European Union*. Edward Elgar, Cheltenham, UK.
- Churchill, Gilbert Jr. 1999. *Marketing research – Methodological Foundation*. 7th Ed. USA: Harcourt College Publishers.
- Contractor, F.J., & Lorange, P. 2002. *Why Should Firms Cooperate?: The Strategy and Economics Basis for Cooperative Ventures*. In Contractor, F.J., & Lorange, P. (Eds.) *Cooperation Strategies in International Business: Joint Ventures and Technology Partnerships between Firms* (p. 3-30). Oxford: Elsevier Science.
- Contractor, F.J., & Lorange, P. 2002. *The Growth of Alliances in the Knowledge-based Economy*. In Contractor, F.J., & Lorange, P. (Eds.) *Cooperative Strategies and Alliances* (p. 3-23). Oxford: Elsevier Science.
- Creswell, J. W. 2009. *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*. 3rd Ed. Thousand Oaks, CA: SAGE Publications.
- Hill, C. W. L., R Hwang, and W. C. Kim. 1990. *An eclectic theory of the choice of international entry mode*. Strategic Management Journal 11:117-28.
- IATA Annual report 2010. Available at:
<http://www.iata.org/about/pages/index.aspx>
- Iatrou, K. Alamdari, F. 2005. *The empirical analysis of the impact of alliances on airline operations*. Journal of Air Transport Management. Vol. 11, pp. 127-134.

Kleymann, Birgit and Hannu Seristö. 2004. *Managing Strategic Airline Alliances*. England: Ashgate Publishing.

Morrish, S. C., Hamilton, R. T. 2002. *Airline alliances - who benefits?* Journal of Air Transport Management. Vol. 8, pp. 401-407.

Saunders, Mark N. K., Philip Lewis and Adrian Thornhill. 2009. *Research Methods for Business Students*. 5th Ed. England: Pearson Education.

Venaik, S., Midgley, D. F. and Devinney, T. M. 2005. *Dual paths to performance: the impact of global pressures on MNC subsidiary conduct and performance*. *Journal of International Business Studies*, 36 6: 655-675

Yin, Robert K. 2009. *Case Study Research: Design and Methods*. Los Angeles, CA: SAGE Publications.

Welch, Lawrence S., Gabriel R.G. Benito, and Bent Petersen. 2007. *Foreign Operation Methods: Theory, Analysis, Strategy*. Cheltenham: Edward Elgar.

Yoshino, Michael Y. and U.Srinivasa Rangan. 1995. *Strategic Alliances, An Entrepreneurial Approach to Globalization*. Boston: Harvard Business School Press

Online:

Star Alliance

www.staralliance.com (Accessed 10.01.11)

Oneworld

www.oneworld.com (Accessed 10.01.11)

SkyTeam

www.skyteam.com (Accessed 10.01.11)