THE ECONOMICEFFECTS OF AIRLINE ALLIANCES AND MERGERS IN THE AIRLINE INDUSTRY

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Abstract:

The paper discusses the impacts of international consolidation in the airline industry, with a focus on alliances and mergers which are two typical forms of consolidation. It provides a comprehensive overview of airline alliances and mergers development within the framework of economic effects. The paper compares economic effects on airlines as well as benefits for consumers and analyses the differences between various mergers and alliances as well as the synergies generated thereof. In all respects this paper attempts to provide a suitable framework for future research of international consolidation in the airline industry, as a strategy for international network development.

Keywords: *International Consolidation, Airline Industry, Economic Effects, Airline Alliances, Airline Mergers.*

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1. Introduction

1.1. A brief history of Airline Alliance

The first formation of airline alliances was related to the expansion of the hub-and-spoke scheme and the airlines' need to develop domestic and international networks. After the US Airline Deregulation Act of 1978, US airlines changed network structures in order to take advantage of hub economies. Large US airlines formed regional alliances by establishing code shares with regional airlines, a cost-effective way to feed into profitable long-haul and medium-haul networks.

By 2001, there were five large strategic alliances in the North Atlantic area – SkyTeam, Oneworld, Star Alliance, Qualiflyer and Wings. Nevertheless, based on each alliance's frequency of flights to all the inhabited continents in the world, only Star Alliance and Oneworld could be considered as global-reaching alliances. Eventually the scenario of multi-airline alliance with global reach stabilized with three current Global Airline Alliances – SkyTeam, Oneworld, and Star Alliance. Each Global Airline Alliance was founded with one of the "Big Three" European airlines (Lufthansa, Air France and British Airways), a major US airline, and an Asian major airline. As of 2006 when the first African airline, South African Airways, joined Star Alliance as the 18th member, the alliance could be considered as truly global.

During the past decade, the picture of the

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airline industry with three global alliances has been continuously reinforced by the growth of Star Alliance, Oneworld and SkyTeam, and the absence of further consolidation between global alliances or the rise of new strategic multi-airline alliances. By 2012, the majority of large network legacy airlines had aligned into one of three global alliances. In 2011, they carried 68% of international scheduled Revenue Passenger Kilometres (RPKs), and provided 59.5 % of world capacity share, as shown in Figure 1 (Airline Business, 2012). In fact, by 2012 Star Alliance had presence in 181 countries, Oneworld in 145, and SkyTeam in 169 (Airline Business, 2012). There are about 40 unaligned airlines, most of which are small airlines and low cost carriers with the exception of Emirates and Air India.

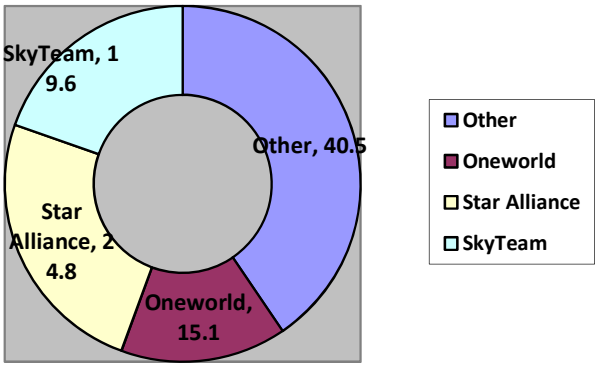

Figure 1: Alliances Market share (2011)

Source: Airline Business, September 2012, page 28

1.2. A brief history of Airline Merger

The most integrated form that two airlines can become is when they enter into a merger and act as one. More than 200 airlines have merged since the start of deregulation in 1978 in the U.S providing the involved airlines with larger gains in efficiency.[1] In recent years, the global airline industry has experienced an increase in many cases of merger. According to Airline Business Magazine (2013), in the US, the new American, Southwest Airlines, Delta Air Lines, and United Airlines and their regional affiliates carry up to 90% of US domestic traffic.[2] Also, Europe experiences a period of consolidation motivated by International Airlines Group (British Airways with Iberia), Air France-KLM and Lufthansa Group (who took over Swiss and Austrian Airlines).

Airline Mergers in US

The US air transport industry has been experiencing substantial merger activity since its initial time, particularly immediately after the deregulation in 1978. A flurry of mergers throughout the 1980s, when Delta Air Lines and Western Airlines merged, and American Airlines and Air California merged. In 1988, merger review authority was transferred from the Department of Transportation (DOT) to Department of Justice (DOJ). Since 1998, in spite of tumultuous financial periods, fewer mergers took place.

Figure 2 shows airline mergers, acquisitions and bankruptcies that took place in the first half of the 1980s decade in the US. Throughout this time a lot of "local service carriers" of the regulated era, such as Ozark, Republic, Southern, and PSA, were merged into larger airlines. The second trend of consolidation took place in the second half of 1980s decade driven by the "leveraged buyout" phenomena. From 2000 to 2007, there were three important proposals of merger and acquisition, of which two were approved without major congressional opposition, American's acquisition of TWA (2001) and America West's acquisition of US Airways (2005) (Fischer et al, 2008).

[1] http://www.uni-marburg.de/fb02/strategy/dateien/scenariosairline.pdf.

[2] Edward Russell, Mergers signal new dawn for US airline industry, Airline Business Airline Business Magazine, 15 Mar 2013, available at http://www.flightglobal.com/news/articles/analysis-mergers-signal-new-dawn-for-us-airline-industry-383473/.

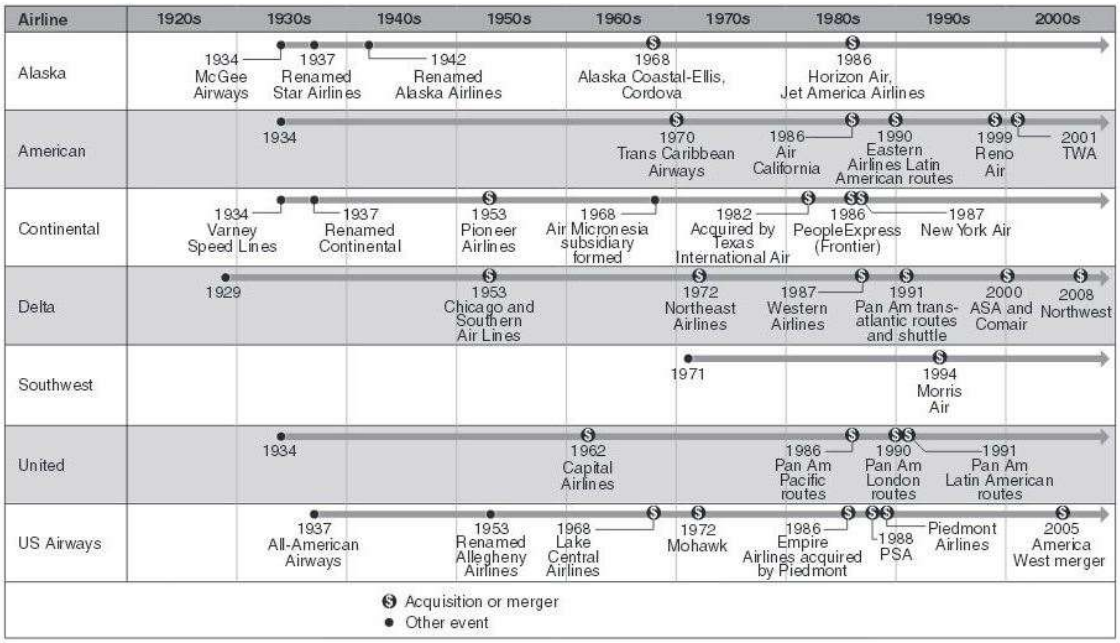

Figure 2: Highlights of Domestic Airline Mergers

Source: Cathay Financial and Airline Company documents (2012)

Recently, the US airline industry has been facing long-standing challenges such as limits to organic growth, fuel price instability and lower demand for air travel. Both low cost carriers and legacy airlines have reacted to the developments with reorganizations, new pricing strategies, bankruptcies, and spin-offs. There have been six major mergers in the U.S airline industry in recent years: US Airways and America West Airlines (2005), Delta Airlines and Northwest Airlines (2008), Republic Airlines and Midwest Airlines (2009), Republic Airlines and Frontier Airlines (2009), and United Airlines and Continental Airlines (2010). In 2011, Southwest Airlines and AirTran Airways merged in the first major transaction involving low cost carriers. In August 2013, the US Department of Justice (DOJ) and the District of Columbia filed a lawsuit challenging the merger of US Airways and American Airlines because the combination would lead to less service and higher prices for consumers. According to the DOJ, the merger which would create the largest airline in the world would "substantially lessen competition" for commercial air travel.[3]

European Market consolidation

Consolidation is in fact a trend in Europe and the merger between British Airways and Iberia in Europe could be an example. Actually, many European airlines have developed through acquisitions and mergers in the most recent decade. Other outstanding cases apart from British Airways are Air France-KLM and Lufthansa (Wulf and Maul, 2010). Nevertheless, this consolidation trend does not only happen through to full mergers. Many airlines often create strategic equity stakes which could be enlarged later, because

[3] http://edition.cnn.com/2013/08/13/us/airline-merger-antitrust-lawsuit/

the regulatory constraints in many countries usually prevent foreign majority ownership. For instance, in 1999 Singapore Airlines purchased 49% of Virgin Atlantic in order to get an indirect access to the traffic between London Heathrow and the US (Wulf and Maul, 2010). Because of better marketing advantages and the larger efficiency, which consolidation holds for airlines, further mergers is expected to occur in the coming decades in the global airline industry.

Since 2004, when the extensive improvement of EU merger guidelines was brought into effect, the EC investigated eleven cases of airline merger European airline industry. If the effect of a merger is limited to only one EU member state, the competition authorities in that country are in charge of merger control, for example the competition authority in Germany made decision on two significant mergers between Air Berlin/TUIfly and Air Berlin/LTU. Table 1 summarizes of the EC's decisions during 2004-2013 managing mergers in European airline industry.

Table 1: Overview of EC's airline merger decisions during 2004 -2013

Merger approved	Merger subject to conditions	Merger prohibited
KLM-Martinair (2008)	Air France-KLM (2004)	Ryanair-Aer Lingus (2007)
Lufthansa-bmi (2009)	Lufthansa-Swiss (2005)	
British Airways-Iberia (2010)	Lufthansa-Eurowings (2005)	
Olympic-Aegean (2013)	Lufthansa-SN Brussel (2008)	
	Iberia-Vueling-Clickair (2009)	
	Lufthansa-Austrian Airlines (2009)	

Source: Fichert (2013)

Airline Mergers in Australia

In 1992, the Australian Government's international airline, Qantas Airways Ltd., merged with the Government's domestic carrier, Australian Airlines, completing a $290 million merger.

In September 1996, Air New Zealand signed a conditional agreement to buy 50 percent of Ansett Holdings which owned 100 percent of domestic Ansett Australia and 49 percent of Ansett International. The purchase was completed in October 1996. In February 2000, Air New Zealand purchased the remaining 50 percent of Ansett Holdings Limited from News Corporation Limited, with a further deferred consideration equivalent to 10.5 percent of issued capital to be settled between two and four years.[4]

In 2013, the proposal by Virgin Australia to purchase 60 percent of Tiger Airways Australia was approved by the ACCC. ACCC admitted that allowing an airline to buy a major part of a rival is unusual to maintain market competition but it said that if the deal does not go ahead struggling Tiger is likely to leave Australia altogether.[5]

[4] See http://www.airnewzealand.co.nz/history

[5] See http://www.abc.net.au/news/2013-04-23/accc-clears-virgin-tiger-merger/4647198

2. ECONOMIC EFFECTS OF AIRLINE ALLIANCES

2.1. Economic effects of alliances for the airlines

Effects of Alliances on Economies of Scale

Economies of scale are the decrease in unit costs with respect to the increase in network size and the provision of services. They can also derive from learning, specialization and the distribution of fixed costs over a larger output (Iatrou & Oretti, 2007). In general, almost all airline alliances find ways to achieve a large amount of output to decrease the cost per unit of each seat departure. Sometimes, airlines make use of economies of scale by cutting costs through joint marketing or purchasing. There can be potential economies of scale with aircraft size, as the unit costs in fuel and crew increase to a lesser degree than the available seats/km if laboring under the ceteris paribus assumption when considering aircraft technology and pilots' seniority. Stage length also provides economies of scale as fixed costs in airport-based costs are the same for a longer covered distance. Fuel costs also reduce with longer stage lengths as there is lower fuel consumption at cruise altitude and the higher consumption in takeoff and descent are distributed over a longer period. Alliances with foreign airlines bring more international flights, enhancing economies of scale from a larger average stage length and, tentatively, the operation of a larger number of flights.

Effects of Alliances on Economies of Scope

Airline alliances could achieve economies of scope when an increase in the production of air service results in a decrease in the production costs of another. According to Kilpi and Vepsäläinen (2004), "Code sharing allows airline alliances to operate like a hub-and-spoke network with a large presence at both sides of the market. The yields economies of scope from lower entry costs into new markets and economies of scale from increased route density producing lower incremental costs of carrying additional passengers". Moreover, the airline alliances have economies of scope when the cost of providing two products together by two airlines is cheaper than producing them independently. Those economies often involve the size of the alliance. For instance, advertising costs are not targeted to an individual airline, but to the whole network of the alliance, which could be defined as an economy of scope. A large airline alliance network also creates chances for economies of scope by means of frequent flyer programs that build customer loyalty and Computer Reservation Systems.

Marketing advantages

Joining airline alliances offers extensive marketing advantages to the members. Most alliances integrate computer reservation programs and frequent flyer programs, and launch common advertising campaigns. From the travelers' view, the airlines are offering a better product of a seamless journey to all the destinations of the network (Schäfer, 2003). By becoming a member of the alliances, airlines could earn more loyalty from their customers. Higher switching costs give airline alliances chances to gain a premium on their flights and become more effective in their response than competitors. The sharing of total marketing costs for a large number of airlines in the alliance lowers the marketing average costs (Hanlon, 1999).

Airline alliance has advanced and distinct characteristics, that are exploited by joint marketing activities to manage the marketing co-operation of the whole alliance. Joint

marketing activities of an alliance control its member's joint Frequent Flyer Program registration and recognition, mutual recognition of alliance member's priority status, sharing of airport lounges, wide multilateral code-sharing, coordinated network schedule and fare setting. Nevertheless, the goal of the alliance marketing is to present a seamless travel experience to the customers across the alliance carriers (Oum et al, 2000).

Alliance members could build value to their partners in the alliance by introducing their networks of flight, destination, airport lounge, loyalty programs, joint airline operation, joint marketing strategy, and integrated information technology system to enhance airline services quality to their customers. Conversely, an airline can create value to the alliance by introducing its own flight network, destination, transit, knowledge about their market, airport lounge, loyalty program, and experience in dealing with customer complaints and giving consumers' experience. Thus, the benefit offered by an airline alliance to its members' passengers are mutual.

Market power and Competition

Alliances can be an effective means for airlines to gain market power and become more competitive in the market. Youssef and Hansen (1994) indicate that alliances may create virtual monopolies in markets between the hubs of alliance partners. Alliance helps its members to reduce the number of competitors in the long-haul market and give airlines the power to control yield and increase prices. This may be very effective for parallel alliances, such as the alliances between British Airways and American Airlines because the network size is not enlarged considerably and the competition on the route between London and Miami, Chicago and Dallas may be reduced. According to Martin Holtz et al., "the addition of two complementary non overlapping networks will not create market power."

The global airline alliances, Star Alliance, SkyTeam and Oneworld could shift the nature of competition, for instance, competition does not often happen between American Airlines and United Airlines but does happen between Star and Oneworld. The impact of alliances on competition in the airline industry also depends on the nature of the network resulting from the alliances. Particularly, an alliance could considerably reduce competition on overlapping non-stop and connecting routes where alliance members used to compete with each other.

2.2. Economic effects of alliances for the consumers

Alliances create more chances for airlines in generating economic benefits, some of which might be dependent on the closer integration attainable only with antitrust immunity. Those benefits could be considered from the demand-side, regarding the formation of new or developed air service through extended network or seamless service, or from the supply-side, basically the ability to supply similar services at lower cost taking advantages of traffic densities, improved utilization of capacity as well as reduce transaction costs (IATA Economics, 2011). A number of those economic benefits will be explained in more detail below.

Lower fares for passengers

A major benefit from airline alliances is gained by customers who fly beyond international hubs to and from small cities, on two alliance airlines during the journey. There are widespread recognition of the benefits to the interline component of an international

trip (Chanpayom, 2002).

If the carriers providing service for those customers are not aligned, the airfare setting process involves each co-operating airline independently setting airfares on the part of the route that they operate with their own aircraft. Airlines set airfares based on market conditions through their revenue management process. This complicated process was expressed in research to be represented as airlines both maximizing their mark-ups based on demand in their segments, while ignoring the negative effect on the others' segments. In research, this price effect is mentioned as 'horizontal double marginalization'. At the same time, it increases the airfare for passengers and reduces airlines' profits.

Passengers can combine fares in a journey more simply

Alliances' non-price benefits are important and undoubted. New trends in product differentiation place special importance on these elements of competition. The applications of technology in airfare distribution, including the internet, generally lead to transparent prices and give both consumers and travel agents low airfare search tools. This results to the commoditization of air transport that passengers may consider prices as a first priority in selecting services of an airline. Yet, the combination of airfare transparency and airlines' ability to set immediate price changes lead to very homogenized pricing. Consequently airlines begin to focus on their product differentiation, to compete on other elements that bring much value to their customers such as increasing frequency, frequent flyer programs, better flight timing in order to lower total connection time, airport lounges, and unbundling extra services.

Airlines can offer passengers a much wider range of schedules

Cooperation between members in the alliances improve flight schedules with more route frequencies, separating concurrent departures to offer customers better options, and coordinating departure and arrival to cut down on connecting times. A characteristic of competing airlines is to cluster services around times of peak demand. This characteristic of the marketplace was studied by Hotelling (1929) who observed that competing firms try to make their products similar in order to expand their market share. Competing airlines usually operate 'wingtip-to-wingtip' flights to fulfill their own traffic capacity, although it is not efficient for the whole market. Immunized alliances could co-organize flight times and schedules to achieve the right capacity at peak seasons, and increase daily departures more regularly, rather than flying concurrent competing departures. Departure and arrival times could be controlled by the allied airlines to improve connecting itineraries' elapsed time. Additionally, rising demand caused by the enlarged network might result in increased frequency on hub-to-hub routes and spoke-to-hub routes which provides the customers with more options.

3. ECONOMIC EFFECTS OF AIRLINE MERGERS

3.1. Economic effects of mergers for the airlines

Market power

Market power in the airline industry is defined as the ability of an airline to charge airfares profitably above the competitive level for a certain period of time. An airline merger often leads to the loss of a direct competitor in the airline market and is suspicious of extending the market power of merging parties

resulting in further decrease in output and increases in price, which impedes passengers (Hüschelrath and Müller, 2012). The main reasons of the airfare sizes increase after merging are explained by oligopoly theory. For example, in the case of Cournot model with homogeneous products, the percentage of post-merger airfare increase is a function of market concentration, shown by market shares or market demand elasticity (Werden and Froeb, 2008). Regarding differentiated products, Bertrand models often provide a better explanation to the nature of competitive interaction. In a simple differentiated Bertrand model, the rise in price post-merger depends on - the pre-merger price-cost margin - a measure of the degree of market power pre-merger - and the diversion ratio - a measure of how close two products are in the product space and therefore how intense competition is between these two products - (Hüschelrath and Müller, 2012).

Efficiencies

Gaining market power could be an important rationale for mergers; however, airline usually justifies its merger objective with the achievement of merger efficiencies. The achievement of efficiency is different regarding the time window that they are planned to materialize. Under the total welfare standard, all the mergers that result to a post-merger airfare increase would decrease total welfare by the size of deadweight loss. Nevertheless, once the achievement of merger-specific efficiencies allows the merged entity to reduce cost, the consequential increase of producers' surplus need to be traded off against the deadweight loss. If the efficiency is big enough, total welfare increases post-merger.

Amir et al. (2009) demonstrated in a Cournot model that "airlines have an incentive to overestimate the achieved efficiencies in the merger regarding both the antitrust authority and rivals."Thus, they concluded that antitrust authorities have to be strict when accepting cost-reducing arguments because there is likelihood that the estimated efficiencies are much smaller or even do not exist which could cause higher airfares in the post-merger cases.

Entry

Post-merger entry is a significant market power mitigating factor because it raises the entry barriers for the new entrants. Though market concentration is rather high, incumbents might not possible to exercise market power providing potential entrants can start producing substitutes easily. Froeb and Werden (1998) studied the impacts of entry-induce to antitrust policies. It was found that airlines only have a motivation to merge if they look forward to important efficiencies created by the merger or they acknowledge extensive entry barrier that allows them to charge high competitive airfares post-merger. They came to a conclusion that antitrust authority must be skeptical to prevent mergers' anti-competitive effect. Since they reduce the possibility of post-merger entry, the cost-saving's beneficial effect passed on to consumers is not strong enough to over-compensate the negative effect on consumer welfare. When studied the relationship between entry and merger efficiencies in a Cournot model, Spector found that profitable Cournot mergers that fail to generate synergies will reduce consumer welfare irrespective of entry conditions(Spector, 2003*)*. He came to a conclusion that such mergers must be blocked without consideration of the role of post-merger entry.

3.2. Economic effects of mergers for the consumers

The effects of competition and mergers on consumer welfare have been investigated by a number of scholars. Brueckner and Spiller (1991) differentiate between competition in three different hub-and-spoke route structures and investigate the implications for competition and mergers on traffic and fares. The authors found that competition is not necessarily beneficial as soon as both the effects on hub-to-hub and hub-to-spoke routes are taken into account (Bittlingmayer, 1990). As an increase in competition is likely to reduce traffic for the incumbent airlines on that route, cost complementarities and economies of traffic density are reduced possibly causing increases in marginal costs and therefore prices on complementary routes of the network. Whether the benefits of additional competition overtop these cost increases, depends on the demand and cost characteristics of the respective routes. Therefore, mergers cannot be considered as generally consumer welfare reducing, as the costs of a reduction in competition might be overtopped by additional efficiencies created by the larger network operated by the merged entity.

Although any investigation of the consumer welfare effects of a merger has to consider market price as a key variable, it is equally undisputed that additional service-related variables might also influence consumer welfare. Bailey and Liu (1995) studied the effects of airline consolidation on price andservice measured by scope of operations or network density. They assume that consumers prefer larger airline networks as they basically allow them to reach a higher number of destinations with a higher level of convenience in a shorter amount of time. In a two-stage model with open entry, they show that the service-enhancing effects of further consolidation may indeed outweigh the price-increasing effects of a reduction in the number of effective competitors. Richard (2003) concentrates on flight frequency as a service-related driver of consumer welfare in another research. Based on a model of firms' decisions which endogenizes flight frequency, the results of various simulation exercises suggest that although a merger typically causes decreases in passenger volume and consumer surplus, some markets show net welfare gains as soon as merger induced changes in flight frequency are included into the welfare assessment.

Hüschelrath and Müller (2013) study the consumer welfare effects of mergers in airline networks basing on the background of five large mergers in the US (American Airlines - Trans World Airlines (2001), America West - US Airways (2005), Delta Air Lines - Northwest Airlines (2009), United Airlines - Continental Airlines (2010) and Southwest Airlines and AirTran Airways (2011)). Their estimation on the route-carrier level shows that, across all route types, two years after its completion, the merger led to 6.4 percent higher prices than observed on the comparator routes over the same time frame. Their analysis also revealed that average prices of the merging parties and their competitors do not differ significantly from each other; this is found to be true for both price increases and price decreases post-merger. Regarding to the overall consumer welfare effects of the merger, their estimation results on the surface suggest that the merger might have been anticompetitive as it led to substantial price increases in two route categories and to price decreases in only one category. However, taking the number of passengers traveling in the

respective categories into account revealed that only about 10 percent of the overall number of passengers in the two year period following the merger travelled in markets which experienced a price increase post-merger. For the majority of passengers, the merger either led to substantial price reductions or had no significant effect on average prices (Hüschelrath and Müller, 2013).

4. MERGERS AND ALLIANCES: COMPLEMENTARY AND RIVAL FORMS OF COOPERATION

4.1. Differences between mergers and alliances

If airlines try to get economies of scale from integration, a merger will provide more rationalization than an alliance. The planned merger aims to take the rationalization process further, finish inefficient facility or reorganize the product line more consistently.

The main difference between mergers and alliances is that collaboration in an alliance will be limited in effectiveness and scope by two factors: (a) All decisions have to be made by consensus among the partners, and (b) alliances are transient in nature and must remain reversible (Chang and Hsu, 2005). Since they are placed under the concurrent authority of many partners, alliances may lead to nearly everlasting rounds of negotiations (Garette and Dussauge, 2000). Differences about decision to be made within the framework of newly merged firms could be decided by the acquiring firm's managerial board. Nevertheless, one of the parties in an alliance could not force other members to agree any specific solution without an agreement.

Airline alliances have another characteristic that is temporary in nature. It is possible to terminate an alliance without putting its partners at risk. One important justification for choosing alliances rather than other permanent forms of integration is that they could be undone very without difficulty.

One of the main difficulties for mergers is the post-merger period. Alliances try to avoid the organizational and cultural shock that often appear in the post-merger process. A large number of integration problems that unavoidably arise after a merger means that

Table 2: Advantages and disadvantages of mergers and alliances

Mergers		Alliances	
Advantages	**Disadvantages**	**Advantages**	**Disadvantages**
• Full integration of network • Control of partner • Concentration on profitable routes • Cost savings • Rapid decision making	• Difficulties in post-merger integration • Antitrust restrictions • Need capital for purchase • High risk	• Undone relatively easily • Easier to find a partner • Low risk	• Consensual decision-making process takes longer • Must remain reversible • Partners' goals may be different • Cannot force partners to accept any particular solution • Partners might be purchased by a rival

Source: Hanlon, 1999

the merged airlines should be well-prepared for distraction from performance and the triggering of unpredicted lay-offs because separate organizations join into one (Marks and Mirvis, 1998).

Another main inconvenience of merger is that it needs capital to invest and sometimes is a risky investment. When the partner airlines get into financial difficulties, it apparently reduces the market value of the stake and if the partners declare bankruptcy and ceases operation, the investment has to be given up for lost altogether. The differences between alliances and mergers could be found in table 2.

4.2. Synergies Generated Respectively by Mergers and Alliances

In this part the mergers and alliances will be compared by looking into their ability to generate synergies for airlines. The ability to realize synergies will be analyzed in detail of three areas of the airline industry:

- Market entry and network expansion
- Network integration
- Identity and integration

Market Entry & Network Expansion

In the airline industry an important advantage for the airlines over competitors is to be presented on many markets. Although having numerous destinations is highly demanded by customers, the airlines face difficulty to meet this requirement because of the national laws and the bilateral systems. The regulation and limitation for airline mergers on international level are stricter than for alliances.

Beside legal barriers, there are different uncertainties that airlines should take into account before joining a new market. Although an airline could succeed in its home market, it should not apply its current strategies to other cultures or geographical regions. In order to avoid the risk, airlines could cooperate with a successful experienced local firm. If the new market is very geographically far away and culturally different from the home market, an alliance would be the preferable since the inexperience of the buyers in case of a merger may result to high integration costs. In some cases, it is much better to give the management of the cooperation to the local partners within an alliance (Reuer, 2004).

A second situation could be that airlines already have experience in the new market. In these cases, the integration cost for mergers could become much lower. However, the existing experience proves that the airline was operating in such market, so the term market entry is not suitable in this situation. According to Doukas and Travos (1988), a merger only creates positive economies of scale if the buyer was not active before in its partner's market. Hence, it is uncertain that a merger with competitors could actually improve the buyer's competitive position in a different market as it expected.

Meanwhile, joining into an alliance, members could take full advantages from a global network so that they do not have to invest themselves (Iatrou & Alamdari, 2005). A positive effect for passengers occurs when alliance members combine their traffic and hence could continue to operate in unattractive routes which have low demand from passengers. Meanwhile in a merger case, airlines expect to cancel these routes from the flight plans. Another difference in this situation is that a merger would increase the airlines' network as well as the company size but in an alliance, although the network is extended the size of the company still stays the same. So the airline have to decide

whether it wants to increase company size or not. In the case that the airline has achieved the minimum efficient scale, a merger could cause profits to fall and prevent the company from the profit maximizing output (Besanko et al, 2007).

Network integration – Code Sharing, Optimization of Flight Plans & Antitrust Immunity

To enter a new market an airline not only has to attract more customers by persuading them of the good service quality but also offer them more flight route options. To offer reasonable connections it is essential to join with the partner's flight plans and network integration. In merger cases, all the advantages might be realized and will allow the airlines to avoid double routes and jointly set airfares for their code share routes (Iatrou & Oretti, 2007). Partners ought to merge an important amount of traffic routes in order to realize a maximum of cost reducing synergies. On the contrary, an alliance should be founded from members who have little overlap in their networks to improve revenue enhancing synergies. For the network integration process, alliance members need to use the code-sharing system. But that is not enough. Alliance members could integrate their networks to a certain extend with code-sharing, but they could not set a common airfare for the whole route. That means all the alliance partners have to set fare for a part of the route where they are operating separately and then add up to the total route fare. Consequently, double marginalization will occur and raise the price over competitors, causing the decline of passenger amount (Iatrou & Oretti, 2007). Alliances must seek for antitrust immunity with the relevant national authority in order to avoid this risk.

Further coordination of the common network could be realized by assigning a feeder role to small partners in the network. Such strategies often work best in the merger where the buyer is much bigger than the target airline. In this case, the buyer could allocate the firm to a feeder role. With the partner in the integration who has same size, almost all of the decisions must be made together. So it happens to be so complicated to persuade a partner to take the feeder role. The same situation also happens to alliance partners though they have different sizes because of their economic and legal independence. It will take a high level of integration between the alliance members for smaller partners to agree with an absolute feeder role (Vasigh et al., 2008).

Identity and Integration

Nowadays in the airline industry, an airline's identity is still very important for the airline itself. Particularly in alliances, airlines who are offering services with higher quality are always afraid that partners with lower service quality might damage their brand image. However, in theory this is not a big problem for merger partners since smaller targets often take on the buyer's brand or sometimes a new brand will be established in the case of mergers of equal firms. Nevertheless, many examples in the airline industry may prove a different fact and also mean that in a merger case, notwithstanding the size of merger partners, airline's brand is very important and must be preserved carefully (Gaughan, 2005). Keeping their own brands or identities could make the integration process of both alliance and merger forms more difficult.

In a merger case, problems may sometimes come from management. It is possible that the merger may not be the best choice for the company; however, the managers still push it forward. The hubris theory may help

to explain this irrational behavior, caused by overvaluing the target. An alliance provides the opportunity to dispose of most of the problems above because the integration process is completed with a softer approach than in a merger. With these smaller steps, partners avoid operative and cultural shocks and the continued independence of the alliance members reduces massive changes. A much bigger difficulty for the alliance partners is the integration of their information technology systems which may be very time intensive, creating high expenditures (Gaughan, 2005).

4. CONCLUSION

This paper provides an explanatory framework for identifying the market results of international consolidation of the airline industry. The intention has been to provide a comprehensive view of airline alliances and mergers on development historyand economic effects. Furthermore, the author has analyzed the differences between mergers and alliances as well as the synergies generated respectively by mergers and alliances. Implications have been provided for airlines to take full advantages and limit the dark sides when they decide to participate in international consolidation. In conclusion this paperhas providedsuggested framework for future studies of international consolidation in the airline industry, as a strategy for international network development.❑

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