THE AIRLINE BUSINESS: GLOBAL AIRLINE ALLIANCES

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ABSTRACT

This article investigates the differences between airline alliances and strategic alliances, forms of airline alliances, the environment in the airline industry, and global airline alliance groupings. It also examines the effects of alliances on airline partners, customers, the degree of competition, and the industry as a whole. Generally, current global airline alliances can be grouped into three phases, ranging from commercial alliance to strategic alliance. Horizontal alliances, vertical alliances, and external alliances are three general forms of airline alliances. Each signifies different characteristics of participating airlines. When airline competitors join their operations in order to strengthen their competitive positions, two main perspectives can be taken into account. They are based on transaction cost economics approach and classic industrial organization approach. Two sources of environmental uncertainties, which drive competitors into alliances with each other are demand uncertainty and competitive uncertainty. At present, Star Alliance, OneWorld, SkyTeam, Wings, and the Qualiflyer are the largest global airline alliance groups. Their financial and operating figures in terms of revenue, expense, operating income, net income, number of passengers, RPKs, FTKs, and number of aircraft are compared so as to show a whole picture of competitive global airline alliances. However, airline members in current alliances can be changed, and new global alliances may be formed in the future. Nine remarkable impacts of global airline alliances are examined-- economies of scale aspect, economies of scope aspect, nature of competition, freedom of the air, code sharing and Computer Reservation Systems (CRS), degree of competition and airfares, alliance strength, passenger services, and partners' traffic routing.

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1. Introduction

In the airline industry, competition exists when two or more commercial air carriers are authorized to perform the same service. One of the most important developments in the international airline industry in recent years has been the rapid expansion of global airline alliances among airline competitors. Large airlines are spreading their wings by including airlines of various sizes from all parts of the world into their alliances. These have involved cooperation between two or more airlines in a wide range of commercial and operational areas, for example, scheduling, purchasing, marketing, and frequent flyer programs.

2. Airline Alliances and Strategic Alliances

The airline industry is in the process of globalization. Commercial airlines around the world are entering into marketing alliances with each other to expand market coverage and to coordinate their capacity.

Airline alliances are strategic weapons to achieve common strategic objectives, allowing airlines to reduce costs and gain higher market share in different parts of the world by strengthening existing markets and accessing new ones (see Figure 1).

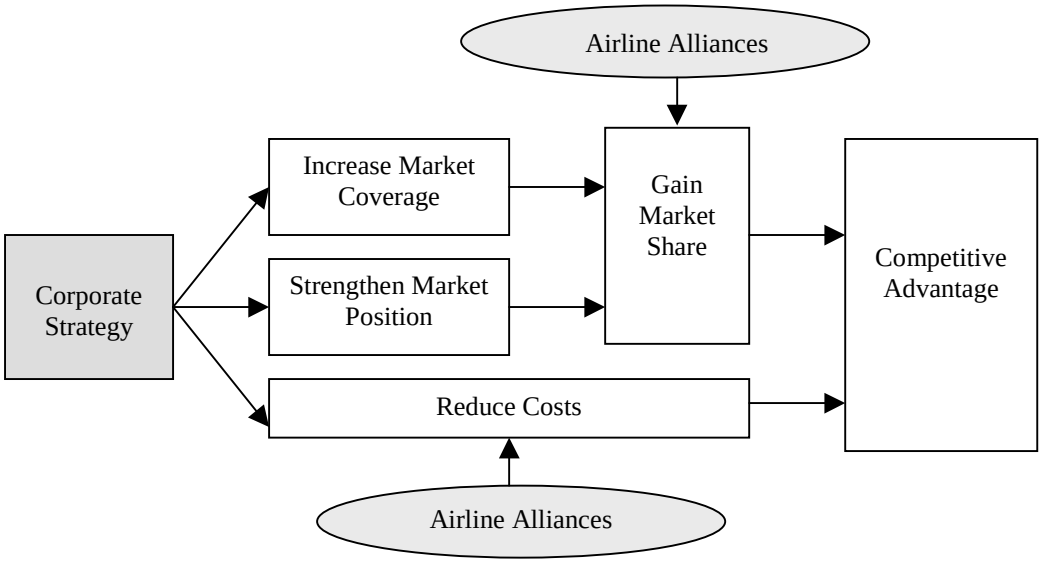

Figure 1 Airline alliances as strategic weapons

Source International Center for Air Transportation (ICAT), Massachusetts Institute of Technology (MIT), 1999

Airline alliances are also cooperative business activities, formed by at least two or more airlines for strategic purposes, that create an independent airline business entity and allocate financial risks, operational responsibilities, ownership, and rewards to each airline member, while allowing the partners to preserve their autonomy and separate identity. Several joint activities, for example, many joint frequent flyer programs, code sharing agreements, and even some block spacing agreements, are essentially marketing alliances. Several airlines involve no investments in equity while several are limited to marketing agreements and technical cooperation. They are not strategic alliances because each airline partner continues to operate and use its assets independently, as well as pursue its own objectives. It can be said that airline alliances are the response of airlines to globalization under the legal framework that prevents them from merging.

In the management literature, there is no generally accepted definition of a strategic alliance. However, based on strategic management literature and the airline business context, a strategic alliance is a long-term partnership of two or more airlines who co-mingle their assets in order to pursue a single or joint set of business objectives, collectively enhance competitive advantages, share risks and resources, improve product quality and customer services, and finally, improve profitability. Airlines may blend and share their assets in capital resources, traffic rights, terminal facilities, ground handling, catering, aircraft, staff, and fuel and maintenance bases. That is to say if two or more airline partners offer a uniform service standard and a common brand, this means they are co-mingling their assets and have moved into a strategic alliance.

The ultimate strategic alliance is a full merger of the airlines into one alliance brand. However, some activities such as share swaps are not necessarily a sign of a true strategic alliance if the airline partners still continue to pursue their own particular objectives. For instance, in 1989, Singapore Airlines, Delta, and Swissair swapped shares, making each a small shareholder in the other two. This was not a strategic alliance pursuing common objectives since they joined up for different reasons and pursued differing objectives. Consequently, it was not a truly strategic alliance but a purely commercial agreement with regard to interlining, pro-rate revenue agreements, frequent flyer programs, joint ground handling, and franchise agreements, for example.

Airline alliances can be relatively simple, ranging from linked frequent flyer programs to increasing integration and technology, and complex partnerships that closely resemble mergers. Figure 2 shows how inter-airline agreements and types of alliances fall along a spectrum, starting with a very simple and straightforward marketing alliance--little more than a joint frequent flyer program or an interline agreement so as to generate revenue and reduce costs. When the agreements involve greater integration of assets, they move from being purely commercial to being increasingly strategic in character. At the

end of the spectrum are joint ventures where airlines come together to create a truly strategic alliance.

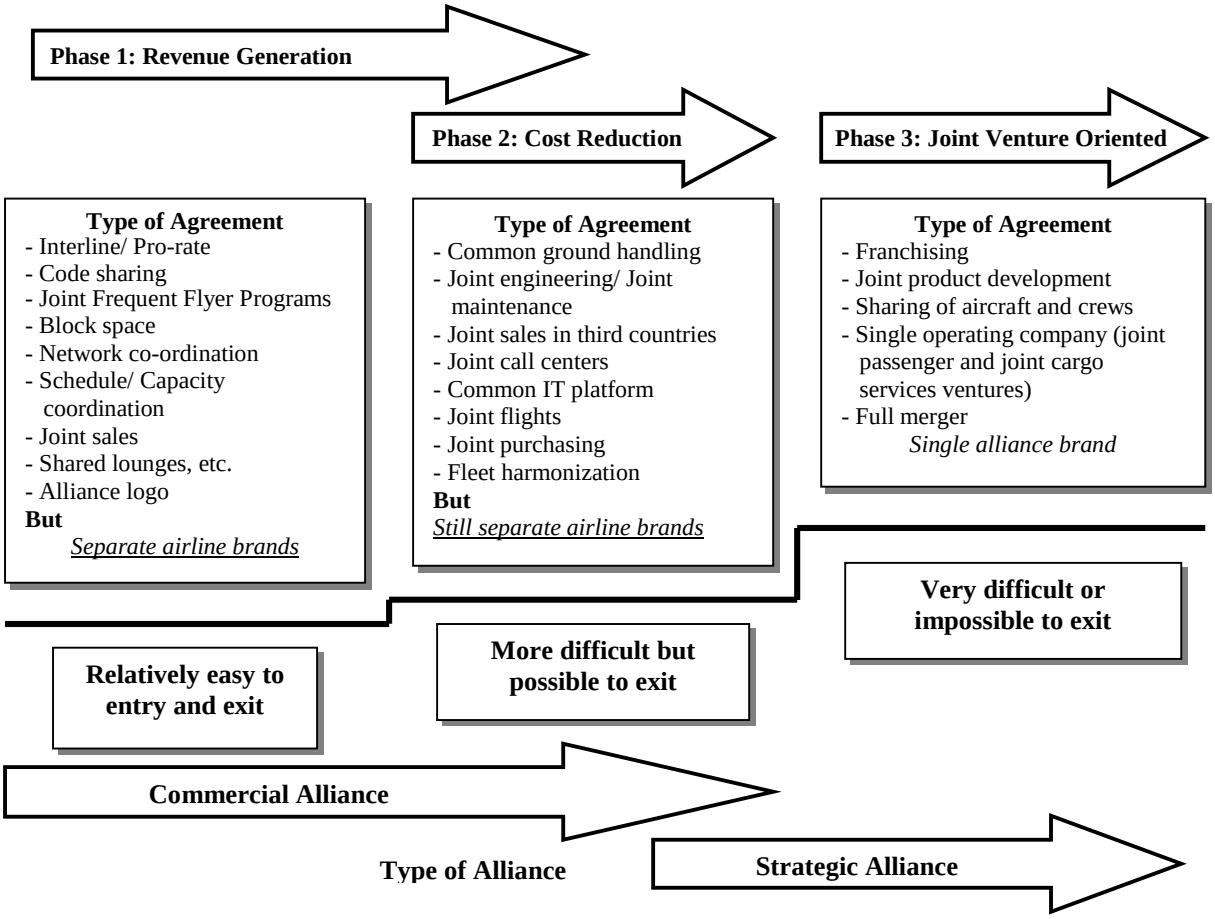

Figure 2 Categories and phases in airline alliances
Sources Adapted from Doganis, 2001: 66, 86

3. Forms of Airline Alliances

The forms of airline alliances and the characteristics of participating airlines are summarized in Table 1.

Table 1 Summary of forms of airline alliances and characteristics of participating Airlines

Forms of Airline Alliances	Characteristics of Participating Airlines
Horizontal Alliances	Horizontal alliances are cooperation between airlines providing the same products or service markets. In the airline context, therefore, horizontal alliances are alliances between airline competitors. They are long-term agreements involving an exchange or combination of some resources among airline competitors.
Vertical Alliances	Vertical alliances are established with airlines' suppliers, intermediaries, distributors or buyers. Most vertical alliances in the airline industry are co-operations that exist between airlines and car hire firms, hotels, travel agents, and other companies involved in travel and tourism.
External Alliances	External alliances are established between airlines and potential entrants or with the producers of substitutes or complements in other industries. In the past, most external alliances have been limited to joint ventures in marketing promotions; for example, frequent flyer bonuses, travel insurance, special offers on fares, package holidays, etc. Recently, some airlines have separated some of their specialized activities to external alliances. For example, under a joint venture agreement between AT&T and Delta Airlines, AT&T handles most of Delta's internal computing requirements.

4. Environmental Uncertainties in the Airline Industry

There are two main dominant perspectives when competitors within an industry join operations with other competitors so as to strengthen their competitive positions. The first perspective is based on transaction cost economics, which emphasizes the use of alliances as an efficient way to expand strategic capabilities. The second is based on classic industrial organization, and emphasizes the use of alliances as a means of reducing competition. In both cases, environmental uncertainties drive competitors into strategic alliances with each other. Two sources of environmental uncertainties are 1) demand uncertainty, which motivates a drive to greater efficiency and make competitors enter into alliances so as to gain access to capabilities required to cope with that uncertainty, and 2) competitive uncertainty, which motivates the market power motive, making airlines enter into alliances so as to reduce such uncertainty by reducing competition.

4.1 Demand Uncertainty

In the airline context, demand uncertainty occurs from unpredictable changes in airline customer choices. Airlines must be able to adapt quickly to changing demand conditions in order to survive in an uncertain environment. However, airline organizational inefficiency and ineffectiveness can make it difficult to internally develop or purchase the strategic capabilities required to deal with rapidly changing demand conditions. Therefore, airlines can gain access to the requisite strategic capabilities by entering into alliances with other airline firms that already possess those capabilities. Strategic alliances can help airlines to cope with unpredictable changes in customer purchasing choices. However, alliances can cause problems, as they can decrease airline organizational autonomy. Hence, although airlines have a clear incentive to enter into alliances, such problems make some airlines hesitate to do so.

4.2 Competitive Uncertainty

Competitive uncertainty in the airline industry occurs from competitive interdependence among airline companies. Competitive interdependence exists when the competitive actions of an airline have a direct effect on the market position of its competitors. Competitive interdependence produces competitive uncertainty because an airline never knows in advance whether its actions will provoke retaliation, or whether its competitors will initiate competitive actions that cause direct effects on its market share and require a response. Therefore, the incentive of airlines to cooperate with competitors to reduce competitive uncertainty is an important motive for entering into horizontal alliances.

5. Major Global Airline Alliances

The current five major global airline alliance groups and their Frequent Flyer Programs (FFPs) are summarized in Table 2.

Table 2 Five emerging global airline alliance groupings

Alliance Groups and Frequent Flyer Programs				
Star Alliance [1] (14)	**The Qualiflyer Group (10)**	**Oneworld (8)**	**SkyTeam (6)**	**Wings (3)**
United Airlines: Mileage Plus	AirEurope[1]: Qualifier	American Airlines: Aadvantage Program	Delta Airlines: SkyMiles Program	North West Airlines: WorldPerks
Lufthansa: Miles & More	Air Lib[2]: Qualiflyer	British Airways: Executive Club	Air France: Frequence Plus	KLM: Flying Dutchman
Lauda Air: Lufthansa Miles & More	Air Littoral: Qualiflyer	LanChile: LanPass	Korean Air: SkyPass	Continental: OnePass
Air Canada: Aeroplan	LOT Polish[3]: Voyager	Finnair: Finnair Plus	Aeromexico: Club Premier	
Air New Zealand: Air Points	PGA Portugália: Sky Club	Iberia: Iberia Plus	CSA Czech Airlines: OK Plus	
Tyrolean: Lufthansa Miles & More	SN Brussels Airlines[4]: Qualiflyer	Qantas: Qantas Frequent Flyer	Alitalia: Alitalia Club Mille Miglia	
Austrian Airlines: Lufthansa Miles & More	SWISS[5]: Qualiflyer	Cathay Pacific: Asia Miles		
Scandinavian Airlines System (SAS): EuroBonus	TAP Air Portugal: Qualiflyer	Aer Lingus: Air Lingus TAB		
Singapore Airlines: KrisFlyer	Turkish: Miles & Miles			
Thai Airways International: Royal Orchid Plus	Volare[1]: Qualiflyer			
VARIG Brazilian: Smiles				
All Nippon Airways (ANA): Mileage Club				
British Midland (BMI): Diamond Club				
Mexicana: Frecuenta				

[1] Air Europe and Volare Airlines are scheduled to leave Qualiflyer in 2002.
[2] AOM French Airlines became Air Liberté as of March 25, 2001 and renamed itself Air Lib.
[3] Asiana, LOT Polish, and Spanair will be three new Star Alliance members by mid 2003. LOT Polish is scheduled to leave Qualiflyer to join Star. Air China may join either the Star Alliance or OneWorld.
[4] Sabena became Delta Air Transport- DAT at the end of 2001 and renamed itself SN Brussels Airlines in February 2002.
[5] The Swissair and Crossair brands disappeared on March 31, 2002. They were replaced as of April 1, 2002 by SWISS, the new Swiss national airline and changed their flight code from SR to LX.

These five alliance groups account for approximately 64 percent of the world's total Revenue Passenger Kilometers (RPKs). Membership in current alliances tends to change, and new global alliances may be formed in the future.

5.1 Star Alliance

Star alliance is the largest and most geographically diverse alliance in the world. United and Lufthansa are the core and founding members of the group. The alliance comprises 14 airlines and will add another three new airline members in 2003 (Asiana, LOT Polish, and Spanair). The frequent flyer programs of the members have been linked, allowing passengers to accrue and redeem mileage across the network. Almost 60 million people worldwide currently participate in these loyalty programs. With 729 airports in 124 countries worldwide, Star claims that it provides customers a global reach that no other alliance can match. Star has around 26 percent of the world's scheduled airline market.

Table 3 Star alliance's financial and operating data (as of 2001)

Airlines	Revenue (000)	Expense (000)	Op.Income (000)	Net Income (000)	Passengers (000)	RPKs* (000,000)	FTKs** (000)	Fleet
1. Air Canada[1]	6,197,795	6,021,535	176,260	(54,747)	n.a.	57,374	n.a.	242
2. Air New Zealand	n.a.	n.a.	n.a.	n.a.	7,814	20,978	821,000	84
3. ANA	10,129,000	9,478,000	651,000	318,000	49,887	62,592	n.a.	140
4. Austrian Airlines	1,832,300	1,754,300	78,000	49,300	8,446	17,985	419,514	92
5. British Midland	1,101,408	n.a.	n.a.	1,222	7,098	3,837	9,270	43
6. Lauda Air	n.a.	n.a.	n.a.	n.a.	1,886	n.a.	n.a.	19
7. Lufthansa	13,356,240	12,441,513	914,727	605,424	41,300	88,606	7,666,000	243
8. Mexicana	n.a.	n.a.	n.a.	n.a.	8,964	13,825	66,266	60
9. SAS	5,054,000	4,729,000	325,000	295,000	23,395	22,923	680,531	155
10. Singapore Airlines	5,113,254	4,568,450	544,804	742,221	14,874	70,795	6,020,319	96
11. Thai Airways	2,869,686	n.a.	n.a.	113,656	18,038	42,395	1,714,488	80
12. Tyrolean	371,367	n.a.	19,961	n.a.	2,234	n.a.	n.a.	34
13. United	19,352,000	18,698,000	654,000	50,000	84,521	204,235	3,693,774	604
14. VARIG	2,634,000	2,517,036	116,964	(91,314)	10,897	26,599	1,238,232	93
Total	**$68,011,050**	**$60,207,864**	**$3,480,716**	**$2,028,762**	**279,354**	**632,144**	**22,329,394**	**1,985**

Source: Adapted from Air Transport World Report, July 2001: 60

[1]Canadian Airlines was absorbed into Air Canada. Canadian Airlines ceased to be a member of the Oneworld global alliance on June 1, 2000, and became a member of Star Alliance by virtue of its status as an Air Canada subsidiary.

5.2 Oneworld Alliance

The OneWorld alliance group has the potential to be a close rival to Star Alliance. It is the second largest and most geographically diverse. The Oneworld alliance comprises eight airlines- American Airlines, Aer Lingus, British Airways, Cathay Pacific, Finnair, Iberia, LanChile, and Qantas across the Oneworld network of 574 destinations, the alliance employs more than 278,850 people in over 130 countries. It provides over 340

* RPK (Revenue Passenger-Kilometers): One revenue passenger transported one kilometer in revenue service. Revenue Passenger-Kilometers are computed by summation of the products of the revenue aircraft kilometers flown on each inter-airport hop multiplied by the number of revenue passengers carried on that hop.

** FTK (Freight Ton-Kilometers): One ton (2,205 lb.) transported one kilometer; ton-kilometers are computed by multiplying the aircraft kilometers flown on each inter-airport hop by the number of tons carried on that hop.

Source: Air Transport World, July 1998: 71

lounges across the globe. The alliance has around 15 percent of the world's scheduled airline market.

Table 4 Oneworld's financial and operating data (as of 2001)

Airlines	Revenue (000)	Expense (000)	Op.Income (000)	Net Income (000)	Passengers (000)	RPKs (000,000)	FTKs (000)	Fleet
1. Aer Lingus	n.a.	n.a.	n.a.	n.a.	6,639	8,889	167,620	40
2. American Airlines	19,703,000	18,322,000	1,381,000	813,000	86,280	187,600	3,328,800	717
3. British Airways	13,230,428	12,688,548	541,880	213,900	38,231	118,890	4,563,970	288
4. Cathay Pacific	4,426,194	3,748,091	678,103	641,691	11,864	47,153	4,108,230	68
5. Finnair	1,106,547	999,346	107,201	77,941	7,438	n.a.	n.a.	58
6. Iberia	3,793,348	3,761,715	31,633	157,287	24,543	40,049	845,673	159
7. LanChile	1,425,154	1,341,765	83,389	48,368	3,106	8,882	1,214,716	44
8. Qantas	5,486,847	4,995,087	491,761	312,035	21,327	67,486	n.a.	107
Total	**$49,171,518**	**$45,856,552**	**$3,314,967**	**$2,264,240**	**199,458**	**478,949**	**14,229,009**	**1,481**

Source: Adapted from Air Transport World Report, July 2001: 60

5.3 SkyTeam Alliance

SkyTeam is a multi-lateral, global alliance among six airlines. SkyTeam is the newest alliance and is one of the world's top three global airline alliances. It is probably the one with the greatest potential for growth and integration over time. With Delta and Air France at the core, and support from Alitalia, CSA Czech Airlines, Korean, and Aeromexico, this alliance could become a powerful alliance, particularly across the North Atlantic, offering its 176.7 million annual passengers a worldwide system of 7,091 daily flights covering all major destinations. At present, it has only 11 percent of the world's scheduled airline market.

Table 5 SkyTeam's financial and operating data (as of 2001)

Airlines	Revenue (000)	Expense (000)	Op.Income (000)	Net Income (000)	Passengers (000)	RPKs (000,000)	FTKs (000)	Fleet
1. Aeromexico	n.a.	n.a.	n.a.	n.a.	9,750	14,392	110,895	70
2. Air France	10,790,000	10,483,000	307,000	369,933	39,204	91,801	4,979,630	231
3. Alitalia [1]	5,146,000	5,393,000	(247,000)	(241,000)	26,697	41,433	n.a.	146
4. CSA Czech [2]	424,830	n.a.	n.a.	13,994	2,462	3,623	32,238	30
5. Delta	16,741,000	15,104,000	1,637,000	828,000	105,723	173,486	2,673,260	605
6. Korean Air	3,089,271	n.a.	n.a.	(367,337)	22,053	40,532	6,573,000	111
Total	**$36,191,101**	**$30,980,000**	**$1,697,000**	**$603,590**	**205,889**	**365,267**	**14,369,023**	**1,193**

Source: Adapted from Air Transport World Report, July 2001: 63

[1] Alitalia joined SkyTeam in Fall 2001
[2] CSA Czech Airlines became a SkyTeam Alliance member airline on March 21, 2001

5.4 Wings Alliance

The oldest integrated alliance is the so-called Wings group comprised of KLM, Northwest, and Continental. It is worth noting that Wings is the weakest alliance in terms of scope. The two major airlines, Northwest and KLM, serve more than 750 cities in

nearly 120 countries on 6 continents. Alitalia left Wings and joined the SkyTeam Alliance at the end of Fall 2001.

Table 6 Wings' financial and operating data (as of 2001)

Airlines	Revenue (000)	Expense (000)	Op.Income (000)	Net Income (000)	Passengers (000)	RPKs (000,000)	FTKs (000)	Fleet
1. Continental	9,899,000	9,215,000	684,000	342,000	46,896	103,235	1,295,092	372
2. KLM	6,115,752	5,872,352	243,400	67,660	16,234	60,327	3,964,270	98
3. Northwest Airlines	11,415,000	10,846,000	569,000	256,000	58,722	127,317	3,651,460	429
Total	**$27,429,752**	**$25,933,352**	**$1,496,400**	**$665,660**	**121,852**	**290,879**	**8,910,822**	**899**

Source: Adapted from Air Transport World Report, July 2001: 63

5.5 The Qualiflyer Group

In 1998, Europe's airline alliance, the Qualiflyer Group, was formed. Qualiflyer Group partners serve more than 330 destinations worldwide. The Qualiflyer group has 10 members: SWISS, SN Brussels Airlines, TAP Air Portugal, Turkish Airlines, Air Lib, Air Littoral, AirEurope, LOT Polish Airlines, PGA-Portugalia Airlines, and Volare Airlines. With a fleet of 531 aircraft and a staff of over 45,000, in 2001, Group members transported more than 61 million passengers.

Table 7 The Qualiflyer Group's financial and operating data (as of 2001)

Airlines	Revenue (000)	Expense (000)	Op.Income (000)	Net Income (000)	Passengers (000)	RPKs (000,000)	FTKs (000)	Fleet
1. AirEurope	n.a.	n.a.	n.a.	n.a.	1,603	5,594	n.a.	9
2. Air Lib	n.a.	n.a.	n.a.	n.a.	7,263	15,677	204,574	77
3. Air Littoral	n.a.	n.a.	n.a.	n.a.	1,558	853	3,447	33
4. Crossair Group [1]	791,275	796,513	(5,238)	(15,655)	3,103	2,003	186,523	84
5. LOT Polish	904,646	n.a.	n.a.	12,034	2,791	n.a.	n.a.	42
6. PGA Portugália	n.a.	n.a.	n.a.	n.a.	981	824	1,212	12
7. SN Brussels	1,969,827	2,155,322	(185,495)	(278,714)	10,932	19,660	n.a.	78
8. Swissair Group[1]	10,076,424	9,702,027	374,397	(1,791,268)	14,238	34,246	1,935,610	75
9. TAP Air Portugal	972,953	1,025,712	(52,759)	(104,340)	5,291	10,414	223,715	33
10. Turkish	1,539,513	1,744,119	(215,778)	(111,525)	12,031	17,396	380,204	73
11. Volare	n.a.	n.a.	n.a.	n.a.	1,316	1,856	n.a.	15
Total	**$16,254,638**	**$15,423,693**	**($84,873)**	**($2,289,468)**	**61,107**	**108,523**	**2,935,285**	**531**

Source: Adapted from Air Transport World Report, July 2001: 63

[1] The Swissair and Crossair brands disappeared on March 31, 2002. They were replaced as of April 1, 2002 by SWISS, the new Swiss national airline. The new flight code is LX.

6. Some Remarkable Effects of Global Airline Alliances

Alliances, in particular global alliances, have wide impacts on various aspects of the airline business. Some of their remarkable effects are summarized and illustrated in Figure 3.

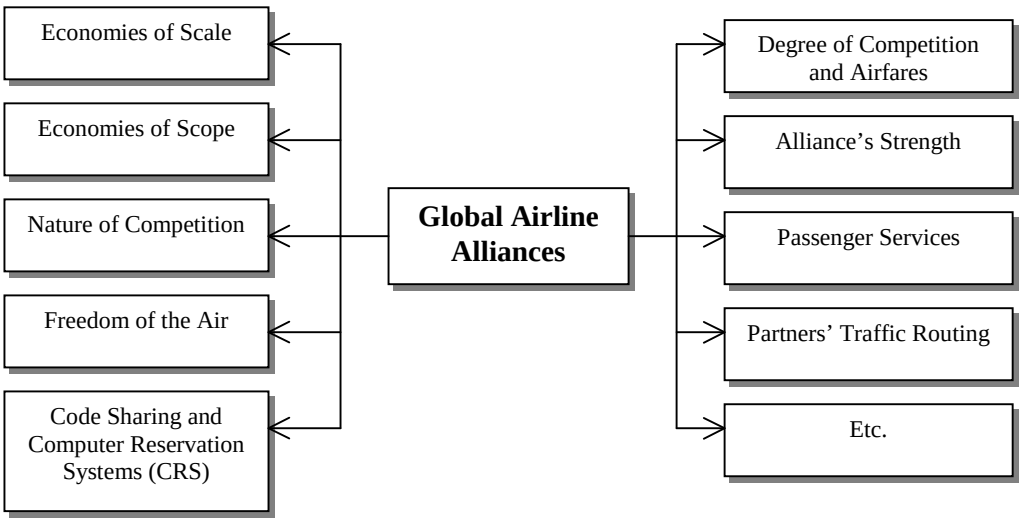

Figure 3 Effects of global airline alliances

6.1 Effects of Alliances on Economies of Scale

Generally, every airline alliance seeks the way to achieve a large volume of output in order to reduce the cost per unit of each seat departure as much as possible. In order to achieve economies of scale, airline alliances adopt the principle of specialization. Their workers are employed fulltime on particular operations according to their special skills and thus become proficient at the specific tasks assigned to them. In some cases, airlines exploit economies of scale by reducing costs through joint purchasing and joint marketing, etc.

Moreover, the alliances can also utilize the latest technology available, bringing about economies of scale. Bigger and stronger airline alliances can purchase larger supplies of both aircraft and spare parts, thus giving them better bargaining power to negotiate for lower purchasing prices. Smaller alliances, however, are often not able to utilize the most efficient and productive equipment because of the massive capital investment required. For example, the strategic partnership between Kenya Airways and KLM has enabled them to achieve substantial economies of scale through the sharing or pooling of resources in the areas of sales and marketing, station and ground handling facilities, flight equipment, maintenance, purchasing, and revenue management.

6.2 Effects of Alliances on Economies of Scope

Economies of scope of airline alliances exist when an increase in the production of one product or service leads to a reduction in the production costs of another. For instance, alliance groups may find it less costly to ally both their passenger and freight joint operations than to ally only a service. Code sharing allows alliances to operate like a hub-and-spoke network with a large presence at both ends of the market. This 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.

In addition, the airline alliances' economies of scope exist when the cost of supplying two products jointly is cheaper than producing them separately. These economies usually relate to the size of an alliance. For example, advertising costs are not aimed at particular airlines, but at the airline alliances' whole network, which can be termed an economy of scope. Large alliance networks also generate opportunities for economies of scope through frequent flyer schemes that generate customer loyalty and Computer Reservation Systems.

6.3 Effects of Alliances on the Nature of Competition

In the airline industry, Star, Oneworld, and SkyTeam are among the most dominant alliance groups. Groups of alliances can shift the nature of competition. For example, competition does not so much occur between United Airlines and American Airlines, but between Star and Oneworld.

The effect of airline alliances on competition also depends upon the nature of the allied networks. In particular, an alliance can significantly reduce competition on overlapping non-stop and connecting routes where the allied airlines used to be competitors. In addition, when the two networks do not overlap in the markets they serve, the alliance can have anti-competitive effects by reducing or eliminating competition on hub-to-hub routes between the networks. The former alliance between KLM and Alitalia led to a monopoly position on the two hub-to-hub routes, Amsterdam-Rome and Amsterdam-Milan. For airlines operating hub-and-spoke networks, alliances will increase market power and enhance demand for the network as a whole, particularly at hub airports.

The anti-competitive effects of airline alliances make new entrants unable to serve the routes covered by the alliances, get slots at saturated or congested airports at both ends of the routes, unfreeze the number of frequencies operated by allied airlines, and release monopoly positions on the hub-to-hub routes operated by the alliance airline members. In addition, it is very difficult for new entrants to participate in Frequent Flyer Programs

(FFPs), to refrain from tying travel agents by using loyalty schemes, and to allow any new entrant to be displayed in the first CRS screen.

In addition, from a commercial point of view, increasing network size through global alliances is an advantage, but this is not appropriate for competition law purposes in terms of substitution products and services for customers. Customers will have fewer alternatives in choosing the best airfares. The alliance of British Airways (BA) and American Airlines (AA) did not have an Open Skies Agreement between the UK and the US. Moreover, the US Department of Transportation refused to grant antitrust immunity to the BA/AA alliance. Thus, the status of the BA/AA alliance seems uncertain. Both decided to scale down their co-operation level and integrate in a new form in the Oneworld Alliance.

6.4 Effects of Alliances on Freedom of the Air

Code sharing, one form of airline alliance coordination, has significant implications for "Freedom of the Air." There has been some debate over whether or not code sharing should require specific authorization just as third, fourth and fifth freedom traffic rights because in fact airlines offer their services to the public as if they had the traffic rights to do so. Code sharing has made the US worry that it would allow foreign carriers with cabotage rights on internal United States domestic routes. Cabotage rights are generally reserved for national airlines and very seldom granted to foreign carriers. Therefore, code sharing in some alliance routes has become an international aeropolitical concern, as when the US has tried to restrict it to routes for which foreign carriers obtain the appropriate traffic rights, i.e. routes to/from gateway airports specified in the applicable bilateral agreement.

6.5 Effects of Alliances on Code Sharing and Computer Reservation Systems (CRS)

Airline alliances link the route networks of more than two partner airlines via a cooperative agreement. An airline alliance permits a partner to expand its network internationally without purchasing new aircraft and adding new service. This can be done through a code sharing agreement, allowing each of them to sell tickets on behalf of its own name to passengers who travel within both airlines' route networks.

Code sharing flights give allied carriers a higher priority in Computer Reservation Systems (CRS) than connections of non-allied competitors because code sharing flight numbers operated by the partner which owns the reservation network are displayed twice, once for each airline. Consequently, there is a better chance for airline partners to be selected by travel agents than those of other carriers on the same route.

However, some passengers may argue that code sharing is a deceptive scheme on the part of the airlines because it misleads passengers into believing that they are buying

one thing while getting another. According to IATA, 45 percent of passengers got angry and confused when they arrived at an aircraft and found a different airline from the one they expected to travel on. They may not have been aware that part of their trip would be with a partner airline. If they experience less satisfaction on the partner carrier, they tend to blame the airline whose tickets they purchased.

6.6 Effects of Alliances on the Degree of Competition and Airfares

Airline alliances reduce competition when two competitors join together and become one. As a result, a third competitor may withdraw from a market. For example, American Airlines cancelled its Miami-Frankfurt route when it could not maintain sufficient interline feed at Frankfurt after the Lufthansa-United Airlines alliance formation. As a result, airline alliances can control international traffic through various gateway airports. Thus, regulators fear a significant loss of competition in gateway-to-gateway market due to alliances. With less competition, there will be less frequent flights and significantly higher airfares, although economic theory predicts that airline cooperation should lead to lower fares for the interline passengers who must travel on two airlines to reach their destinations.

American Airlines (AA) and British Airways (BA) used to compete in the Chicago-London market before joining together. Since forming an alliance, they have acted like a single airline serving this market. The result is a loss of competition and a five percent increase in airfare in the Chicago-London market.

Indeed, the major goal of global airline alliances is to boost traffic in behind-the-gateway markets rather than in markets linking major hubs by lowering some airline ticket prices. For example, the Kansas City-Munich market, which has no single-airline service, would benefit if served by AA/BA partners. In addition, the US Department of Transportation (DOT) found that existing alliances charge approximately 18 percent lower fares than non-allied airlines in some behind-the-gateways markets.

Figure 4 illustrates how international alliances work in gateway-to-gateway and behind-the-gateways markets. Lufthansa and Thai Airways International’s routes emanate from Frankfurt and Bangkok hubs, which serve as gateways for international routes.

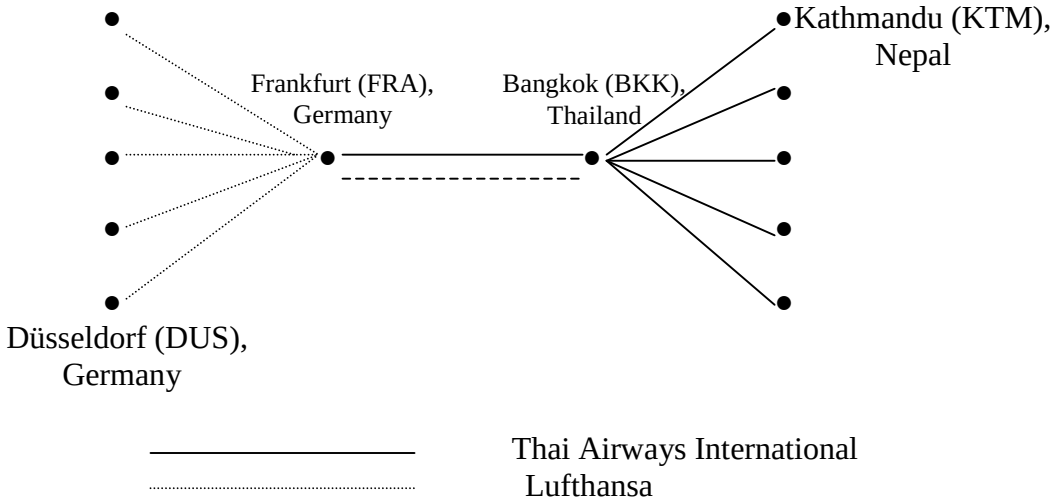

Figure 4 How international alliances work in gateway-to-gateway and behind-the-gateways markets

However, gateway-to-gateway markets like Frankfurt-Bangkok are not the main focus of international alliances. Instead, alliances are mainly intended to boost traffic in behind-the-gateway markets, for example, the Düsseldorf-Kathmandu market. Before joining Star Alliance, passengers could travel on Lufthansa from Düsseldorf to Bangkok via Frankfurt, and then switch to Thai Airways International to reach Kathmandu. With this alliance, Thai Airways International departures to Kathmandu are coordinated with Lufthansa arrivals in Bangkok, reducing stopover times.

According to economic theory, the fare on this route should be cheaper when both airlines are allied than when they operate separately. Lufthansa should cut the amount a passenger must pay for its part of the trip, knowing that a high Lufthansa charge hurts Thai Airways International by raising the overall fare and reducing traffic in the market. Since Thai Airways International, keeping Lufthansa's interests in mind, would also accept a lower payment for its part of the Düsseldorf-Kathmandu trip, the result is a lower overall fare and higher traffic in the market. This traffic gain more than compensates for the lower fare, so that both carriers earn higher profit. This is opposite to the gateway-to-gateway market where the fare rises. This shows that the alliance does not change passengers' needs to travel on both carriers, but it enhances cooperation between them.

In addition, because behind-the-gateway markets have a multitude of needs, consumer benefits in these markets may lead to overall consumer gains from an alliance without regulatory intervention. Nevertheless, regulators are considering ways to lessen the seriousness of the anticompetitive effect in gateway-to-gateway markets. For example, EU regulators will require the AA/BA alliance to forfeit a large number of reserved landing slots at London's Heathrow Airport, which should allow the entry of new competitors to balance the loss of competition from the result of the alliance formation. At the same time, US regulators are expected to impose similar conditions.

6.7 Effects of Alliances on Alliance Strength

When airlines enter into alliances, they can find opportunities to weaken a competitor's position by weakening its alliances. In one dominant incident, Air Canada, a Star Alliance member, supported by Lufthansa and United Airlines, was able to take over Canadian Airlines, and thus weaken the "Oneworld" alliance of which the latter was a member. However, the number of alliance members is not an indicator of the strength of alliance groups. An alliance group can consist of both strong and weak members. For example, a weak network in the airline industry is the "Qualiflyer" alliance, consisting of a number of secondary and small airlines. Qualiflyer alliance members are Air Europe, Air Lib, Air Littoral, LOT Polish, PGA Portugalia, SN Brussels Airlines, SWISS, TAP Air Portugal, Turkish, and Volare (see Table 2 and Table 7).

In terms of financial strength, the airline alliances help improve airline partners' financial performance through revenue enhancement and cost-saving. For instance, the strategic alliance with United Airlines has provided Thai Airways International access to many cities via the Los Angeles gateway, also giving travelers from the USA easier access to a larger number of destinations. The benefit of these alliances is economic because they allow Thai Airways International to serve many more destinations in the USA with only minimal investment costs and vice versa.

In addition, alliance partners can also build a strong relationship on cargo coordination. Alliance partners can agree to link up their cargo operations to form strong global networks. Star Alliance became the first global alliance to offer unified cargo transportation.

6.8 Effects of Alliances on Passenger Services

The alliances produce a large number of important consumer benefits in terms of improved quality of service, for example, through improved scheduling of connecting flights and fare reductions, particularly in behind-the-gateway markets. In coordination with alliance partners, airline members can familiarize their airline staff with the alliance objectives in order to work towards standardized passenger service procedures. In addition, airline alliances can affect the quality of inflight services since the pressure to offer seamless travel can lead airline partners to raise the standard of their inflight services. For instance, KLM-Northwest redefined their business class services and products up to identical quality levels after their alliance formation.

The alliance groups have also tried to enlarge the number of benefits to their customers via Frequent Flyer Programs (FFPs) in many ways, such as:

- A member of an airline FFP can accrue miles or points on all airline flights within the same alliance group. These can be redeemed for airline rewards.

- Generally, first and business class travelers as well as FFP members are welcomed in airport lounges of alliance groups at many airports around the globe. Also, aircraft of alliance groups are increasingly being parked at adjacent gates in order to speed up connection times.

- Regardless of fare or class of service, FFP members of some airlines can go to any check-in counter without facing long lines at the check-in counter.

- An FFP member would have a priority bag tag to ensure that his/her suitcase can be picked up from the baggage carousel usually within 15 minutes or less after arrival. Also, in most cases the passenger's baggage will be checked through to his or her final destination, no matter how many alliance carriers are involved in the journey.

- In some airlines, an FFP member is entitled to board at his or her convenience along with First and Business Class passengers (where available).

- Priority Reservation Waitlist and Airport Stand-By give FFP members the flexibility to change planes at the last minute even when they do not have a reservation. However, this benefit is normally not permitted on award tickets. In addition, this is provided where permitted by law.

- When FFP members need to change their schedules between destinations and fly on a non-restricted ticket, they can use the ticket endorsement waiver to transfer to a more convenient flight without having to return to the issuing desk.

- FFP members are entitled to an extra baggage allowance. For example, member passengers holding economy class tickets of some airline alliances are normally entitled to an additional 20 kilograms (44 pounds) of baggage, or one additional piece of luggage when the piece concept applies (The piece concept applies primarily on flights to and from North or South America, and means passengers can check three bags instead of the standard two).

- Airline alliance members have tried to further integrate their databases; thus FFP members can expect streamlined check-in procedures when switching airlines and even have special requests such as booking vegetarian meals, baby cots, and wheelchair, without having to inform each airline individually.

6.9 Effects of Alliances on Partners' Traffic Routing

Most passengers generally prefer to travel with airlines serving a large number of destinations. Airline alliances can increase airlines' traffic not only on gateway-to-gateway alliance routes, but also on gateway-to-gateway non-alliance routes. However, airline partners' traffic on gateway-to-gateway alliance routes tends to increase more than that on gateway-to-gateway non-alliance routes because airline partners are likely to feed domestic traffic onto their gateway-to-gateway alliance routes. As a result, airline partners can increase their load factors on gateway-to-gateway alliance routes and reduce operating costs and airfares on those routes. Therefore, more passengers prefer to fly with alliance airline partners.

In addition, one of the marketing objectives of alliances is to promote interline hubbing by facilitating cooperation between domestic and international services. Hub-and-spoke networks are normally based on the assumption that if airlines build a major hub, with large numbers of flights in and out of it, it will be very difficult for a newcomer to break in because the airlines already have first-mover advantage. However, the limitation of hub-and-spoke networks is that most passengers prefer to take direct flights rather than those requiring intermediate stops.

7. Summary

Global airline alliances are one of the major innovations in the airline industry after deregulation and have rapidly expanded in the last few years, ranging from commercial alliances to strategic alliances. More importantly, although the scope and nature of these alliances differ, there is a tendency towards deeper alliances, ranging from cooperation on numerous aspects of airline operations to virtual merging of the alliance members' activities. There are five dominant alliance groups, which account for approximately 64 percent of the world's total Revenue Passenger Kilometers (RPKs). They are in order from largest to smallest in terms of RPKs, Star Alliance, Oneworld, SkyTeam, Wings, and the Qualiflyer Group.

The alliances mean a win-win situation for airlines and their alliance partners, who are now able to market airline flights as their own, share facilities, provide mutual benefits, and seek to expand their services without increasing costs. Moreover, the alliances mean that some secondary airlines can be considered as world players with a world-class image to match. However, airline alliances are not a panacea. They have problems and benefits to competition. Airline alliances, therefore, raise fundamental questions about their effects on competition in airline services.

Although alliance benefits to airline members are apparent and broad in terms of cost reduction and synergy, marketing and revenue generation, and reduction in competition, global alliances have wide and varying impact on airline partners, customers, the industry, and the degree of competition. This paper summarizes some of the remarkable effects of global airline alliances on economies of scale, economies of scope, nature of competition, freedom of the air, code sharing and Computer Reservation Systems (CRS), the degree of competition and airfares, alliance strength, passenger services, and airline partners' traffic routing.

Although the airline alliances which have emerged in the past few years offer many benefits, they must be managed cautiously so as not to reduce competition and ultimately disadvantage passengers, as well as to enable global airline alliances to grow and prosper into the 21st century.

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