

STRATEGIC ALLIANCES IN THE GLOBAL AIRLINE INDUSTRY

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Abstract

Strategic alliances are common to any industry. Their presence is felt quite significantly in the airline industry. Starting in the US in 1978 deregulation of airline industry has since brought about sea changes in functioning of the industry. This paper attempts to understand the developments and strategic alliances that have occurred in the airline industry since deregulation. These strategic alliances exist in various forms and differ widely in scope and no consensus on classification was found. The advantages and disadvantages of strategic alliances with respect to the airline industry have been discussed. It is felt that the industry is getting increasingly concentrated. However, no conclusive remarks can be made about consumer welfare.

“Airline Business Alliance Survey of 2000 reports that there are 579 alliance agreements in place, up from 280 agreements (more than double) in 1994 when the survey was first conducted. Five major alliances (Star, Oneworld, Qualiflyer, Sky Team, and Wings) account for some 60 percent of all air travel.” (Mason, 2002)

The lines above make the issue important enough to understand the phenomenon that is guiding the industry. Almost a decade back Oum, Taylor and Zhang (1993) argued that the airline industry will be marked by strategic alliances and these alliances will be global in nature. The guiding factors will be several that include formation of blocs, resource scarcity, limits on foreign ownership and limitations imposed by bilateral agreements. They further forwarded the argument that to be a part of an alliance will become a necessity for an airline to survive in the future.

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As we look today around us, there are alliances of various types all over. An effort is being made to understand the literature on alliances in the global air transport industry.

The air passenger transport industry has been one of the major drivers behind rapid globalization of the world businesses and the consequent shortening of the distances on the planet. The face of the industry as we see today has a history of its own. Starting in 1909 on a relatively insignificant note with the invention of an airplane, it has come a long way in less than 100 years. The technological developments made till the end of the Second World War made it possible for airplanes to become capable of flying passengers and goods across continents in a short span of time. However, the most noted use(s) of the aircraft may best be termed undesirable and unfortunate, still there is no doubt that the airplanes took the world by storm since Second World War. With the Chicago convention of 1944, a structure to govern international air travel started taking place. Today 1.83 billion passengers fly nearly 3.3 trillion RPKs. The aviation industry employs 1.77 million people directly and 17,650 aircraft (including freighters; Airbus puts the passenger plane number at 10,349 at the end of the year 1999) are in service (data as of 2001).

DEREGULATION: THE FREEDOM TO THE INDUSTRY

Starting off in the US in 1978, the deregulation of the air passenger transport industry brought sea changes in the industry. European countries emulated the steps within next 10 years. With deregulation setting in, there was freedom to choose routes to operate on, set the prices as demanded/ told by the market with no government intervention on the prices. In other words, deregulation was aimed at bringing in total welfare of the consumers using air-transport. Initially, the freedom led to increased competition in the market place following new entry in the business leading to lowering of prices in the markets that put further pressures on the bottom lines of the

airlines companies' balance sheets. Subsequently, the focus shifted on economising the operations so as to reduce the costs and arrest the price increases so as to boost the margins and keep the airlines in business. Still some majors (like Pan Am in the US) of the pre-deregulation era found it difficult to survive and went out of business selling off their rights for domestic and international routes to different buyers.

The cost cutting efforts led to rationalization of route structures. The efforts to gain efficiency led to formation of hub and spoke networks wherein the "traffic feed" was brought in to a central place (the hub) from other areas in the vicinity of the hub (the spokes). The flights from the hub took off for their destinations with the passengers sorted and boarded on a flight leaving for their destination. This did result in some discomfort to some passengers as they might have to change the aircraft at the hub, still there were benefits like that of single ticketing and lower fares to most of the passengers. This tilted the balance in favour of hub-and-spokes networks' approval by public at large. This hub and spoke network led to maximum utilization of the resources and elimination of duplication of efforts was greatly saved that resulted in substantial savings to the incumbent airlines. This hub and spoke network is prevalent today all over the world. Globally, New York, London, Amsterdam, Dubai, Singapore and Tokyo are the best examples of the hub wherein passengers flow in from all corners of the region and again take off for their respective destinations. Over period of time these hubs have developed into fortress hubs i.e., a particular carrier or family of carriers dominates the hubs. For example, airports at Charlotte, Denver and Washington Dulles are dominated by US Airways/ United Airlines to the monopoly levels (above 70 percent as per US standards) (Cooper, 2001).

Owing to the continuous drive towards achieving better margins through cost cutting there has been a gradual and steady decline in the real value of airline yields all over US and the Europe (Doganis, 2001, p.9); i.e. the average revenue per passenger-km (RPK) has declined. In a study on the after effects of deregulation in the US, Thirer (1998) noted that air travel has increased steadily since deregulation and the fares in

1997 were 40% lower than the 1978 levels (1982 constant dollar yield). The consumer benefits at the 1993-dollar prices were estimated to be \$19.4 billion (Crandall and Ellig (1997) as quoted in Thirer (1998)). Also the number of passengers flying has increased by almost 140% from approximately 250 million in 1978 to nearly 600 million in 1997.

Also the creation of fortress hubs that integrated domestic and international routes resulted in enhanced international competitiveness of the US carriers, as they were now able to leverage huge feeds available for their international operations. This achievement of critical mass by the US airlines in their domestic market forced them to look for opportunities outside the US market. The need to find foothold in other markets in the regime of (mostly) restrictive bilateral agreements gave rise to another thoughtful idea of “Open Markets” policy by the US in 1978. Pustay (1992) has also noted that the move towards “Open Markets” initiated by the US was also responsible for changing the structure of the international air travel industry. The open market policy was aimed at providing maximum consumer benefits of competition in the market place. Not only there was freer market access for both foreign and US carriers, but multiple designations of airlines from both sides were also made available. Still, there were some nationality requirements of the ownership of the designated airlines. The capacities were set to ‘unlimited’, and double disapproval of tariffs (i.e. filed tariffs chargeable unless both governments disapprove) was enforced. In 1978, US efforts towards “open market” were initially seconded by the Netherlands. Then due to market dynamics, Germany and Belgium also signed “open market” agreements with the US (Doganis, 2001, p. 23-25). Europe also gradually moved away from traditional bilateral air service agreements (ASAs) that were restrictive in nature as they allowed limited number of routes to be operated on with very few fifth freedom rights. Single designation and capacities were also agreed upon in advance and double approval for tariffs was required. (Though some of these features were revised in the Bermuda agreement, still there were large restrictions on the operating airlines. Notably, most of the world’s ASAs are still of traditional types as noted by Doganis,

2001, p.21). In 1984, UK and Netherlands signed an “open market” agreement that resulted in effective deregulation of air services between the two countries. Later somewhat similar agreements that ensured freedom of air services were signed with Germany, Luxembourg, France, Belgium, Switzerland and Ireland. Some important restrictions placed were of nationality of the airline ownership and limitation of the fifth freedom rights that, however, were less restricting on the US airlines. Also, while there were limitations on the number of gateways available to the foreign airlines in the US, the US airlines had the freedom to fly from any point in the US to the foreign country.

Similar moves towards deregulation of air services took place in other parts as well. Japan Airlines’ virtual monopoly on international routes was broken with the international operations allowance to All Nippon Airways in 1986. Similarly, new airlines like EVA Air in Taiwan, Asiana in Korea, Ryanair in Ireland and Lauda Air in Austria were allowed to operate international flights.

In some cases these “Open Market” agreements were renegotiated to “Open Skies” agreement. These new agreements inaugurated the first phase of international deregulation. US-Netherlands was the first pair of countries to sign the Open Skies agreement. Later Germany, Belgium, Switzerland, Singapore, Korea and Japan joined the league. It is important to note that these agreements had some variations as per demands of the negotiating countries. The “Open Skies” agreement marked an end to the disparities that existed in the earlier Open Market agreements. Now the airlines from both the signatory countries had the freedom to fly to any desired point in the other country. Also granted were unlimited fifth freedom rights and multiple designations of airlines with no restrictions on frequency or capacity. The fares were to be in line with the market conditions and there was full freedom for making commercial agreements. (Doganis, 2001, pp.: 30-32).

These activities were not limited to US alone. Other countries like New Zealand were quite active in entering into similar agreements with other countries. It signed Open

Skies pact with the US, Singapore, Brunei, Malaysia, the UAE and Chile. It also signed for a single aviation pact with Australia, which in turn signed its first Open Skies agreement with the UAE. The notable feature of the pact was that Australia was willing to give Seventh Freedom Rights for a stand-alone air services between the bilateral partner and a third country on a case-by-case basis. However, domestic cabotage was not possible.

With changes in the US and the formation of single European aviation market since 1993, there is a shift in favour of market-based approaches in the air travel industry (Brueckner and Whalen, 1998; Yergin, Vietor and Evans, 2000). Pustay (1992) also puts forth the conclusion that these efforts made other countries emulate the US policies as these measures resulted in tightening of control of the US airlines on their domestic feed to the international flights. This undoubtedly increased the international competitiveness of the US airlines.

ALLIANCES: HOW, WHEN AND WHAT

It has been pointed out earlier that US airlines found the US market place too crowded to fight the competition. Doganis (1994) observed that in 1989 the six largest US carriers generated 84% of US domestic passenger kilometres, as per year 2000 data, the top 6 airlines in US in terms of RPKs, have a share of over 72% of the total US RPKs. Europeans took a cue from the US experience and found that the size was necessary not to get the economies of scale, but to attain economies of scope with deeper and wider reach in the market. To achieve the desired economies of scope, alliances were a handy solution as the cross-border alliances or mergers had the potential for generating traffic feed between an airline and its partner.

European airlines threatened by the US moves to garner large shares of the transatlantic air passenger market decided to enter into marketing alliances. However, these marriages of convenience proved to be short-lived and less beneficial to the partners. The alliances between United Airlines and British Airways and that between Air France and Lufthansa were such examples (Doganis, 1994).

In order to achieve desired economies of scale, European carriers came up with a three-pronged approach (Doganis, 1994 and 2001). The first step of this approach was to make sure that the airlines had a dominant position in its home market. This was done through purchasing the smaller airlines in the market (e.g., KLM buying into shares of Netherlines and a charter carrier, Transavia) or by increasing the shares through launch of new airlines that cater to a different market segment. As in the case of British Airways which merged its wholly owned subsidiaries, British Regional Airlines and Brymon Airways in March 2002 to British Airways Citi Express. Its 2001 acquisition of British Regional airlines group further strengthened its position in the UK domestic market.

The *second* step was to gain foothold in other major European markets. The major constituents of the European market are the UK, Germany and France. SAS did this by purchasing shares of British Midland's parent company in 1988. British Airways acquired majority stakes in Deutsche BA in Germany. It also bought equity in Air Russia. As discussed above, recently the launch of British Airways Citi Express also made it garner a larger share in the European pie. It has now increased its share in the European air passenger market.

The *third* strategic option was to establish a global presence through marketing alliances with other non-European airlines or making share purchases in them. The point was to enter the markets that were under-represented by the incumbent airline. Obviously, the market choice for the European carriers was the American market and the Asia-Pacific market as they are the largest markets outside the European Common market for air passenger traffic. With this aim British Airways purchased stakes

within 2 months in Qantas in 1992 and in US Air in 1993. These purchases made some room for British Airways in the Pacific and the US market.

de Wit (1996) makes similar observation when he identifies that European airlines are restructuring their networks to increase their competitiveness. The airlines in Europe are entering into alliances of all sorts by way of equity purchase, code share agreements, block-space arrangements, wet leases, franchising agreements and joint ventures. Transnational alliances as in case of SAS and Swissair, BA-Deutsche BA, TAT and Maersk Air, KLM and Air UK were also observed. These alliances were expected to lead to network economies and the reinforcement of home base, thereby ensuring increased feed and formation of fortress 'Euro' hubs, similar to those in US. Sabena, SAS, KLM and Lufthansa have reportedly developed such hubs at their respective home bases.

KLM, Lufthansa, Swissair (now Swiss) and SAS, all followed similar three pronged strategies during late 1980s and the 1990s. BA, however, was the first to develop a clear plan of taking 3 steps to gain the market. It continuously increased its stake in various airlines. BA bought 40% share in Brymon Airways in 1987 and subsequently purchased it outright in 1993. Its moves of taking over of British Celadonian in late 1987; 1992 acquisition of principal European and domestic scheduled routes of Dan-Air which eventually helped it to strengthen its hold on Gatwick Airport; 1993 franchisee arrangements with Maersk Air and City Flyer Express further solidified its position in the market. The only other significant UK airline was British Midland. When low cost carriers like EasyJet and Ryanair started out in 1995, BA set up Go, a low cost no frills airline, in 1998.

In the second part of the strategy, BA and a consortium of German banks, acquired 49% stakes in Delta Air (a domestic German airline) in 1992. In 1997, it acquired the remaining 51% stake as well. In 1993, it bought 49.9 % of TAT, France's largest independent domestic airline.

As the industry gains maturity over years, airlines all over have been constantly revising their strategies for growth and encountering competition. This has been driven by one particular need, survival. Ironically, prosperity in this glamorous industry is secondary. These strategies cover cost cutting measures, better management and most importantly, strategic alliances with other airlines. These alliances are guided by the bilateral air services agreement system. In many cases code-sharing agreements have been made to maintain or expand coverage. This international code sharing has become a part of bilateral negotiations.

Such code-share alliances have served many purposes for the airlines operating in the domain. They do not need to own and operate aircraft in a particular region to earn revenues. Also, this has shielded the airlines from unprofitable operations that would have resulted from their operations if undertaken all alone. Alliances also create marketing advantage for the partners.

Alliance is a catchall expression that airlines have adopted for various strategies they have adopted to expand their services (Yergin et al., 2000). These range from cooperation on activities like ticketing and baggage handling or reciprocal participation in frequent-flyer programmes to integration that includes code-sharing, revenue sharing for the use of network (*pro-rate agreement*), joint ground service, joint telephone call centres, joint marketing, sharing aircraft and now, even aircraft purchases. The customers have also shown preference for airlines with larger networks to minimize their own cost of travel, get better services and to take advantage of better frequent flyer programmes. In addition the alliances offer better access and passage at congested airports, which is an attraction to both consumers and airlines alike. The benefits of economies of scale are self-evident that flow in as a result of such activity. The overall aim of the alliances is to create a win-win situation for all the alliance partners. In other words, their ultimate aim is to enhance partner airlines' competitive positions and to achieve higher profits for all the partners in the alliance.

The first international alliance took place between Air Florida and British Island in 1986. This was of code sharing nature. Since then there has been a frenzy of alliances in the industry.

The Rationale For Entering Into Alliances

It has been pointed out above that the enhanced US competitiveness due to deregulation made it necessary for the other big players in the market to look for alternatives, which could shield them from the onslaught of US airlines at their home turfs/ dominant markets.

There may be several reasons as pointed out in the strategic management literature. Oum, Park and Zhang(2000, p. 4-5) have observed that there is no universally accepted definition of strategic alliance. For the airline industry they define the term as "...a long term partnership of two or more firms who attempt to enhance competitive advantages collectively vis-à-vis their competitors by sharing scarce resources including brand assets and market access capability, enhancing service quality, and thereby, improving profitability." They have then extended it to practical application as, "In practical terms, a strategic alliance is one involving strategic commitment by top management to link up a substantial part of their respective route networks as well as collaborating on some key areas of airline business."

Several authors have pointed out various reasons for formation of strategic alliances in the airline industry. Burton and Hanlon (1994) opine that alliances are central to formulation of business strategy. Further, they argue that in airline industry there are no *a priori* reasons for consolidation through alliances. The airlines enter into alliances to gain economies of scale and more importantly, that of scope.

Youssef (1992, as quoted in Youssef and Hansen, 1994) has put forth two theories that try to explain the reason for alliances to take place. The first theory is related to attaining the technical efficiencies of lower production costs/ better service characteristics available to larger airlines in comparison to smaller airlines. The alliances allow the partners to consolidate facilities like maintenance bases. Also, each airline then has increased geographical reach and the network increases. This increase in network coverage has the benefit of improved quality and quantity of service (with assumptions about passenger acceptability) that are fallout of either better schedule coordination or perception by the passengers. Secondly, with increase in network there will be enhanced benefits of frequent flyer programs that may be offered to the passengers. Thus, there will be more attractions for passengers to fly a particular airline and the airlines are immensely benefited as they have increased coverage without increasing their individual route systems. This may then lead to lower unit production costs and economies of network density result.

The second explanation for the formation of strategic alliances is their possible use to limit competition in the markets. As there exist several restrictions on market and route entry, capacity and pricing in domestic and international aviation markets, strategic alliances enable formation of virtual monopolies in markets between the hubs of alliance partners. This can limit the competition through monopolization in the hubs. In addition, there will be disincentive for any other airline to expand through internal expansion.

Clearly, the biggest motivation for airlines to enter into alliances is to expand market feed. Some airlines that are dominant in their home markets have entered into an alliance with an international airline to provide feed to their airlines. The agreement between Jet Airways (an airline operating in the Indian domestic market) and KLM is one such example. Then, there are other reasons like the governments seeking better management practices in the airlines by improving performance and economic returns.

The two authors then summarize the requirements for partners for entering into alliances into 3 categories with their example of SAS and Swissair alliance:

Convergence: Similar images of carriers in quality of service, safety and technical competence.

Competitiveness: the incumbents need to be competitive in their own markets that can then yield to increased competitiveness for all in the joint schemes.

Complementarity in terms of routes served so that there are more routes than before that could be served. This will provide the necessary scope economies.

Oum et al. (2000) have drawn similies between alliances in other industries and airline industry. They put forth the main reasons for entering into strategic alliances as the desire to attain economies of specialization and scale achieved by specialization of knowledge in a particular field/ arena; cross country specialization (as in the theory of competitive advantage of nations); gain the benefits of owing the ‘new to world’ products and cash on its novelty (as the case of alliance between IBM and Microsoft to simultaneously develop the hard and soft components of a PC) or to gain the top end of the market.

Besides the alliances come in handy to overcome restrictive entry policies as enforced by some countries. Airline industry is clearly an example of such restricted policies. It is highly paradoxical that though this has perhaps the greatest role in quick spread of globalization, there are several restrictions around the world that have held it back from becoming fully global by itself. Similar views are expressed by Staniland (1998) quoting KLM chairman who himself had expressed alliances as being a reasoned response to the antiquated regulatory system and facilitators for providing indirect access to restricted markets.

Further, they cite the risk sharing advantages of the alliances and the advantages accruing due to convergence of technology and products across the industries. Lastly, when the resources of one player are scarce, pooling of resources may provide the necessary global scales in branding as well. Such common branding then contributes to increased mind space and increased market share. (Alpert and Kamins (1995) argue that consumers have a favourable perception and attitude towards pioneer brands.)

Then, Oum et al. (2001), focus on the airline industry and identify the following as the most common and most important reasons to form strategic alliances:

(a) Reach of Seamless Service Networks: A connection of networks gives the consumers a large choice of destinations to choose from and plan better, connections are eased out and there are increased benefits of Frequent Flyer Programs (they have a broader range of benefits to offer) and lesser possibilities of lost baggage. Also, the alliances' network comes in handy when operations are to be made in highly competitive, unprofitable and price sensitive market conditions (e.g. pooling in of resources by two airlines to coordinate to overcome otherwise unprofitable routes). By connecting the networks, partners are able to expand their routes beyond their country territories.

Also, there are several restrictions on foreign ownership and fifth, seventh and eighth freedom rights are generally not available. Even if some carriers manage to get the requisite legal permissions, the costs associated -of time, risk and capital- act as virtual barriers (potential facilitators) to direct entry by foreign airlines in other markets (for forming strategic alliances).

(b) Enhanced Traffic Feed: With linkage of the airline networks the carriers can increase their load factors with the increased feed. Also, flight frequency can be increased without increasing the size of the fleet.

(c) Cost Reduction: The partners in the alliance can have the benefits of attaining the economies of scale (through joint operations of air and ground services) and scope

(through increased reach and efficient connections) and increased traffic density (through network expansion and additional traffic feed).

- (d) Service Quality Improvement: Ease of online connections, frequency and schedule convenience has been marked as the dimensions of an airline's service quality. By entering into alliances, the schedules can be better-coordinated and waiting time for passengers reduced. Further, the increase in itinerary choices is another benefit that an alliance can offer to passengers.
- (e) Marketing Advantages: The frequent flyer programs are pooled in an alliance and the passengers thus have a wider choice as well as more chances to accrue points to use later. Then there are many display benefits of Computerized Reservation System for airlines entering into strategic alliances. The visibility on the CRS is increased manifold as all the partners in the alliance show the flight to the same destination as their own. Consequently, the chances that a traveller will fly a particular airline are increased manifold. (Also observed in Burton and Hanlon, 1994.)

Increased market share and cooperative pricing that is possible is another reason that airlines enter into strategic alliances. There have been concerns raised over time about the anti-competitive effects of the alliances, there have been exemptions like KLM-Northwest alliance, which received anti-trust immunity. This is reportedly one of the reasons that Netherlands became the first country to sign an Open Skies pact with the US.

As Doganis (1994) has also observed that the larger airlines offer the FFP members more opportunities to collect and use points. They may also act as a potential entry barrier for small start-ups. In addition, they provide access to information on passenger characteristics and needs and also direct marketing access to large number of frequent travellers. The data as provided in the same paper suggests that there is

high non-redemption rate that offsets the potential huge costs that the airlines may have to incur in flying passengers for “free”.

Another reason to enter into alliance has been put forward by de Wit (1996), where he finds alliances a convenient way to form a multiple hub structure. This multiple hub structure will give the alliance an edge over any other airline that wishes to operate in Europe. A pan European alliance or an alliance dominant in Europe will be an attractive partner that will be sought to become one of the members of a global alliance. This is also one of the identified pre-requisites of a potential partner willing to join a global network (Oum, Taylor and Zhang, 1993).

CLASSIFYING ALLIANCES

There is no consensus on classification of alliances in airline industry. There exist several ways in which alliances are classified. One preferred way is to categorize them into 3 categories depending on the **extent of co-ordination**:

- (1) Simple route by route alliance (interline),
- (2) Broad commercial alliance,
- (3) Equity alliance.

(A) Interline Alliance: The Interline Alliance is simplest of them all. It involves low level of co-ordination on few routes. Potential areas of co-ordination include ground handling, joint use of ground facilities, code sharing and joint operations, block space sale, and co-ordination of flight schedules for directly related flights.

(B) Broad Commercial Alliance: The Broad Commercial Airline Alliance extends the areas of co-ordination to joint development of systems and joint marketing

activities. It is wider for it may comprise of code sharing and sharing frequent flyer programmes. This may also include transfer of traffic at hub airport to other airline. An example is the One World Alliance that was founded on February 1, 1999. The founder members of the Alliance are American Airlines, British Airways, Cathay Pacific and Qantas. Later, in September 1999, Finnair and Iberia joined in the alliance. This expanded further with the inclusion of Aer Lingus (June 2000) and LAN Chile (June 2000). This alliance has assets of nearly 2000 aircraft with more than 300 still on order. It is spread in more than 130 countries across more than 550 destinations, employs nearly 260,000 people. This is an example of how the alliances can be useful to customers for they can offer the benefits that are way beyond the reach of individual airlines.

(C) Equity Alliance: In Equity Alliance, as the name suggests, there may be equity swap among the partners. Thus, the partners generally co-operate in all areas of joint activities. It may involve code sharing on a large number of routes so that all the partners gain the leverage from the strategic alliance they have entered into. The alliance between American Airlines and Canadian Airlines International of 1994 is an example of this kind of alliance. AA invested US\$190 million in equity and voting shares of CAI. This is most durable type of alliance, but the proportion of such type has declined and the carriers mostly enter into commercial alliance.

It should be borne in mind that alliances are just another milestone in this very bumpy ride of the aviation industry. They are in no way the end of the journey because international air transport is a dynamic industry. Changes may occur in any area of alliance. There are cases where the alliances continue for years and on the other end, alliances break away in a few weeks' time.

Another view of the airline alliances is to see them in the light of alliances between airlines. The inter-airline alliance arrangements are complex. They can be broadly divided into two categories (Doganis, 2001):

- (i) Strategic Alliances
- (ii) Commercial (Marketing) Alliances

Strategic Alliances: When the partners co-mingle their assets in order to pursue a single or joint set of business objectives. These co-mingled assets may be terminal facilities, maintenance bases, aircraft, staff, traffic rights or capital resources. This is extended to two or more airlines offering a common brand and a uniform service standard. The franchisee partner may be much smaller than the other, however the fact, that they share a common objective of leveraging the alliance to increase their profits, makes the alliance strategic.

Marketing (Commercial) Alliances: They are different from strategic alliances as the partners stay independent of each other and each partner pursues his own objectives. Thus, many code-sharing agreements, joint frequent flyer programmes and some block space arrangements are essentially marketing alliances.

Literature suggests another classification of alliances on the basis of **GEOGRAPHIC SCOPE**. This again can be done in two ways:

- (i) **Regional Alliances:** These alliances are on a wider scale. They can further be of two kinds.

The *first* is a commercial agreement covering many routes, though usually from a particular geographical region or a country. Such agreements, generally, involve, code-shared flights, joint marketing and sales, some capacity coordination, use of each other's business lounges and so on. (Example, 1999 alliance of Malaysian Airlines and Thai Airways covering code sharing on several routes within their countries. Similar alliance existed between SIA, Air New Zealand and Ansett. This alliance covered routes between South East Asia and Australasia as well as some routes within

Australia. Also, the alliances between Swissair and Austrian or Lufthansa and SAS would also fall under the category of regional alliances.)

The *second* kind of regional alliance is a franchise agreement between a larger carrier and a smaller regional or feeder operator carrier. The regional operator adopts the livery, brand and service standards of the franchiser and normally only carries the regional operator's flight code. (In 1999, British Airways had nine franchise partners, seven of them being in UK and one each in Denmark and South Africa. Together they added 74 destinations to BA's network.

- (ii) **Global Alliances:** These have global scope and are the most significant strategic alliances in terms of network expansion. The prime purpose here is to achieve all the marketing benefits of scope and cost economies from any synergies through linking two or more large airlines operating in geographically distinct (ideally continents) markets. Global alliances normally involve code sharing on a large number of routes. They may, however, extend to include schedule co-ordination, joint sales offices, ground handling, combined frequent flyer programmes, joint maintenance activities as well as some equity stake transfer. The individual members may have a large number of route specific and a small number of regional alliances.

Burton and Hanlon (1994) provide yet another categorization. They argue that alliances can be categorized on the basis of extent of cooperation, motive and scope of co-operation.

When the alliances are graded along extent of cooperation, the resulting strategic alliance is horizontal (pooling for cooperative scheduling and joint marketing), vertical (customer services like car rentals, travel agents) or external ('diversification' alliance, e.g. alliance between AT&T and Delta to handle computing requirements not related to reservations).

The motives behind forming the alliance may be technical or market related. Alliances that allow the airlines to leverage their maintenance facilities for mutual use fall in such category. In 1968, KLM, SAS, Swissair and the former UTA got together to form KSSU. This was found with the objective of economizing on aircraft maintenance. This is also handy in shifting the base from a high cost base to a low cost base. Besides, code share agreements, frequent flyer programs and block-space arrangements are all covered under the marketing motives. Another important area where both motives are evident together is the development of sophisticated computer reservation systems. These systems are very important as marketing tool and are very costly to build. The pooling in of resources by various airlines is definitely of help.

The third area is on the lines of scope of cooperation and largely relates to inter-firm governance. There are instances when there is informal understanding amongst the boards and there is no managerial control exchange. In other instances, there is change and the directors of both the partners are represented on the board of the allying airlines. There is the extra element of managerial control exchange brought in it, and obviously, the stakes are higher. Thus, huge investments of BA in purchasing equity in other airlines shows a more definitive commitment towards better performance and a serious interest in long-term collaboration.

The alliances can also be viewed along a spectrum (Doganis, 2001). The spectrum starts from a very straightforward marketing alliance (as in interlining agreement or a joint frequent flyer program; example is Jet Airways (India) and KLM alliance). These agreements move towards strategic alliances as the overlap in the use of assets and integration of businesses increases. Mergers occupy the other end of the spectrum, which is called as the ultimate strategic alliance. However, it is important to note that share purchases or mutual swaps do not necessarily indicate a strategic alliance if the partners continue to pursue their own objectives. Such arrangement can best be called commercial agreement that is concerned with joint operations with the

underlying purpose being cost reduction and market increase, rather achieve a common goal with common philosophy of business.

Here it is useful to note once again that though the aviation industry is a great enabler in the process of globalization, it itself has been subject to severe restrictions all over the globe and cannot yet be said to be a global industry (Yergin et al., 2000; Staniland, 1998). Nonetheless, the airlines all over find it increasingly necessary to become a part of a major alliance at the global level. Some of the benefits of a global alliance have already been highlighted earlier. The impact of global alliances can be gauged from the fact that there are 4 major global alliance networks viz.; Star Alliance, One World Alliance, Sky Team Alliance and the Wings alliance, which is smallest of the 4. These four alliances accounted for about 57 percent of the world's passenger km in 1998 (Doganis, 2001, p. 71) and carried over 70 percent of the scheduled international traffic in 1999 (Yergin et al., 2000 p. 47).

Name of Alliance	No. Of Partners	Countries served	Revenue (Approx.)	Fleet size	Passengers served
Star	15	124	USD 67.5 billion	2,058	292 million
One World	8	135	USD 51 billion	1,983	230 million
Sky Team	6	114	USD 50 billion	1,224	228 million
Wings	3	100	USD 25 billion	899	114 million

These figures are for the latest financial year available with the sources.

Sources: Company literature, Air Transport World – World Airlines Report, 2002.

ALLIANCES BRING...

There are several opinions on what the alliances in the airline industry result/ have resulted in. there are some opinions that throw some caution on the alliances. The

approach here is to identify both the advantages and disadvantages rather make a judgement on their nature.

THE ADVANTAGES

Yergin et al. (2000) have found that global alliance formation is most apparent change to the public eye in the last 5-7 years. The initiative to rationalize their operations, build more effective marketing coverage and offer more seamless, hassle-free transportation than competitors in the face of tight regulatory environment overlooking the industry.

The airlines benefit from the economies of scale and scope (Burton and Hanlon, 1994; Doganis, 1994, 2001; Oum et al., 2000). Most of the benefits that arise out of airline alliances have also been the reasons for entering into alliances. Still to recapitulate, airline alliances bring in the benefits of shared costs thus leading to lower costs per unit for the allying partners. Then there are economies of scope that arise out of increased reach and enhanced feed brought in by network partners. The marketing alliances that allow use of brand name, livery, uniform, brand image (Burton and Hanlon, 1994), blocked space arrangements that guarantee availability of seats and revenues and the benefits of code sharing all on a global scale are easiest promised only by strategic alliances. It would be very difficult for an airline to build a global network on its own because of the prevailing regulations and restrictions in the globalization of the greatest enabler of globalization.

In a report released by the US Department of Transportation in October 2000, the alliances between Northwest-KLM, United-Lufthansa, and between Delta, Austrian, Sabena, Swissair were studied to get empirical evidence on the benefits that were made available to consumers in the transatlantic market. It was found that these

alliances coupled with the Open Skies initiative resulted in decline in average fares in the period 1996-99. It was concluded that airlines can offer improved, more marketable services and that they are the principal driving force behind transatlantic price reductions and traffic gains. The traffic gains were not simply diversion from others, but largely due to addition of new traffic. Also, it was evident that geographic expansion taking place resulted in growth of traffic and as the improved services were provided to more passengers in more markets, the competitive overlap too increased with expansion. The alliances between the carriers under observation also revealed that there was development of new European hubs consequent to increase in traffic levels in beyond Europe markets. There were significant increases in the traffic levels and price decreases between smaller cities of Europe and not so well developed hubs (like Portland, Oregon) of USA. For instance, the fare levels for smaller European destinations declined by 33 percent in the period 1995-1999, while the traffic increased by huge 138 percent in the same period.

The report finally concluded that international airline alliances have improved services in historically underserved regions of the world, and as a result, have stimulated additional demand for air transportation in those markets.

Gudmundsson (1999) has pointed out the benefits of alliances to be code-sharing, amalgamation of frequent flyer programs, increased traffic feed (economies of scope and density come into play to the benefit of the airlines), schedule coordination leading to enhanced 'perceived' seamlessness, elimination of duplication of certain tasks (such as offices), easier access to congested airport gates, technical cooperation, access to established system of travel agents' and finally, the halo effect that stems from the tendency of travel agents to book a well known domestic brand.

While studying the international alliance between SAS and the erstwhile Swissair, Youssef and Hansen (1994) concluded that the alliance increased both the quantity and quality of the partners' connecting services. Also the cost savings resulting in from the alliance were expected to lower fares in the market to the extent competition

existed in a particular. Thus the fare reductions were at best expected to be in line with market conditions rather across the board reduction that will benefit the passengers at large.

The international marketing alliances that take place between the airlines offered two additional advantages. One, they enabled the airlines to expand their existing markets through extra traffic generated by the feed to and from the airline partner; and two, new markets were developed that were previously inaccessible to them (Doganis, 2001). Lufthansa had claimed in 1997 that its marketing alliances with United, SAS, Thai, South African and VARIG were producing benefits of DM 250-270 million a year. Clearly after the much broader and larger Star Alliance was formed the potential will have gone even higher. The international airline alliances have also proved beneficial to the underserved regions like Africa wherein the alliance partners could increase services due to better market penetration. This is evident from data that yields to Africa, Middle East and Far East have decreased by 32, 29 and 35 percent respectively over a period spanning from 1992 to 1999 (USDOT, 2000). This has stimulated additional demand for air transportation in such markets.

The alliances and the cooperation results in lower fares in interline markets. The competition loss in the inter-hub market tends to effect a raise in fares in that particular market. Also, the rise in traffic in the interline market offsets the increase in fares in the inter-hub market (Brueckner, 2001). From 1997 data, the fare charged by alliance partners for a representative trip in a behind the gateway market is 18 percent lower than fare charged by 2 non-allied carriers. It also reveals that there are lower fares in the behind the gateway markets and higher fares in the gateway to gateway markets. Also, the benefits arising out of a multitude of behind the gateway market might actually offset the harms caused by the increase in gateway-to-gateway markets. The total outcome is therefore, expected to be positive (Brueckner and Whalen, 2001).

A study on the business travel decision-making revealed that corporates were increasingly looking forward to global alliances to sign contracts that will allow access to lower/ cheaper rates of travel to companies for their employees. As many as 47 percent companies studied felt that alliance groups resulted in cheaper travel and 75 percent of the travel managers believed that their companies would sign a global deal with an alliance group in next 5 years. In that study, the major benefits were seen as the more attractive FFPs, seamless travel experience and service enhancements that result from the alliance (Mason, 2002).

The reduction in IATA's authority on deciding fares over a period of time, fares are now mostly set through a process of strategic interaction. This process results in elimination of "double marginalization". Consequently, fares are lowered (Brueckner, 2001). An important observation is that the anti-trust immunity has to be maintained. There are views in the literature that domestic airline alliances, like that of Delta and United Airlines in the US, induce international benefits for the airlines. The cost and benefits of the alliance in the domestic market are almost the same (Clougherty, 2000). It is the gain through improved performance in the international market that is the guiding factor. Going back to the Delta and United Airlines' alliance, the Delta lacks extensive international routes that United has. The new international routes gained through the alliance will ably support the extensive domestic coverage of Delta.

Clougherty (2000) argues that when international markets are characterized by Cournot competition, domestic airline concentration improves international performance of a national airline industry. This is achieved on the supply-side through improved scale economies and reduced competition in the domestic market. These economies of scale come through; (a) extensive and enhanced use of hub and spoke network, and; (b) lower competition that helps the airlines reap density economies in that market segment. As a natural consequence, better domestic coverage means that there are more passengers available to the network (alliance) to feed international flights.

On the demand-side, there is product differentiation resulting from enhanced Frequent Flyer Programmes, marketing, visibility and other service amenities. Thus, while the number of competitors in the international market remains constant, the allying airlines increase efficiency.

Clougherty (2000) finds that the US domestic airline industry stands to gain approximately \$350 million in additional producer surplus due to alliances in domestic market. Additionally, 4 million passengers may be fed in to the international flights of various US operators. Also, home nation international consumers likely face more competitive international markets with lower fares.

Thus providing for the equivalence between the gains and the costs of the domestic alliance, the international gains resulting from these alliances as discussed above, likely, improves national welfare.

Oum et al. (2000) found that strategic alliances have significant effects on productivity, pricing and profitability of alliance partners. They also found that formation of alliances had a positive effect on the value of partner firms. In their study of 58 international alliances over 1989-98 period, they found that share value of firms participating in the alliance has increased and such increase was similar irrespective of the size of the firm. In addition, the alliances with a broad scope of strategic cooperation create more value than alliances with a narrow scope of tactical cooperation. Furthermore, when a strategic alliance with a broad scope of cooperation is combined with equity investment, the value creation effect of the alliance is further strengthened.

There are concerns that infrastructure constraints by way of availability of slots at the airports located at the major cities/ hubs. In such cases, alliances between airlines can provide much needed slots for landing or take off. The alliances have the potential to provide the allying partner easier access to certain desired slots (held by other partner) that are otherwise unavailable or are too costly to be bought. This was an important issue in BA/ AA/ Iberia alliance as identified by Gudmundsson (1999) and also Flôres Jr. (1996). Further, alliances are a way out to bypass the costly airport charges that

need to be paid for every landing and take-off. The alliance partner's flights could be used to ferry in the passengers at a higher load factor (i.e. the number of flights remaining the same, more passengers are carried to and from the airport), thus reducing the costs for the airlines.

There is a caution however, to the alliances. It should not be taken for granted that all alliances will be beneficial. Vander Kraats (2000) observes that extent of benefits of the alliance depends on geographic scope of agreement, degree of operational and marketing integration between partners and revenue sharing agreement. He further suggests that true economic advantage can be gained only through making a single entity unifying all business aspects. This suggests increased concentration and the consumer welfare is likely to be jeopardized.

THE DISADVANTAGES

Borenstein (1992) found that with deregulation setting in the US domestic airline industry there was fall in prices in long distance routes while the short distance routes had little or negative change as prices increased in some markets. He also understood that TACOs (Travel Agent Commission Override) play an important role in increasing the feed to the carrier and also results in increased market power of the airline. Also, the horizontal mergers between direct competitors (a result of some strategic alliances, also discussed by Burton and Hanlon, 1994) were found to have negative effect on the welfare of the passengers in the short-run. Whatever production efficiency the mergers may have permitted was reflected not in the prices but in the increased market power. The long run effects could not be estimated because of possible extinction without such mergers of some of the firms in the study. It has also been reported that as the alliances increase there is increased concentration in the industry (Borenstein, 1992; Brueckner and Whalen, 2000; Cooper, 2001).

Furthermore, the code sharing holds the potential to be a mask for anti-competitive arrangements between competitors to allocate markets, limit capacity, raise fares or push the rivals out of the markets (Vander Kraats, 2000).

There are instances when previously there were 2 carriers operating on a route. However, after the alliance was formed there was just one player on the route. E.g., Swissair purchased 49.5% of Sabena and services between Switzerland and Belgium were rationalized. Effectively, routes where there was duopoly earlier, now were monopolies. Competition was eliminated, capacity growth could be constrained and fares could be kept high. In their study, Brueckner and Whalen (2000) have also concluded that absence of an anticompetitive alliance effect must be viewed as a tentative conclusion. They could not establish if an alliance between two previously competitive carriers would result in an increase of fares.

In an analysis of a strategic global alliance (between the Northwest Airlines and the Continental) by the US General Accounting Office (as quoted in Hemphill, 2000) it was found that there was acute potential for reduction in competition in one-stop market because many such routes were served by alliances joining the same alliance. Transport Research Board (TRB) of the National Research Council of the US in its report issued in 1999 recommended a number of suggestions to safeguard and further competition in the US airline industry. This report showed concerns that code sharing and other collaborative arrangements among large US airlines would result in considerable consolidation among current and potential rivals. Additionally, global alliances between airlines of the US and that of other countries could, reportedly, be harmful in the long run by reducing competition in primary international routes and making it harder for non-aligned carriers to compete domestically as well as internationally.

Oum et al. (1993) argued that there would be global networks that would provide service to most of the large and medium sized cities around the world, particularly in North America, Europe and Asia. They also expected that there would be consolidation as witnessed in US, US-Canada and Europe and that major chunk of the

world air passenger market will lie with 5-6 alliances. Today, with 4 major global alliance groupings (Star, Wings, One World, KLM/ NW) ruling over 70 percent of international air travel (Yergin et al., 2000), the authors' prognosis has come true.

Doganis (1994) also studied the liberalization of the European airlines also concluded that there will be concentration in the industry and it will become increasingly oligopolistic in character following mergers and alliances that themselves will be the results of deregulation of the European market. Burton and Hanlon (1994) also found that there would be an increased market power that will be available to larger players (who are members of large alliances). The anticompetitive effects of market power were likely to be most marked for short haul markets. Also, there was a potential threat that the old- horizontal pooling arrangements will return. The competition was likely to reduce if there was no new entry in the markets.

In their study of SAS and Swissair alliance, Youssef and Hansen (1994) put that alliances had the potential to stop competition that could otherwise have occurred from airlines that sought to increase their market share through internal expansion. All this was in addition to direct reduction of competition through monopolization effect that alliances brought along. The alliance in question resulted in an increased concentration in the markets where they had competed earlier and the fares in non-stop markets between alliance partner hubs have increased more than in other non-stop markets in the same region. This, too, was mediated by concentration. Though the cost savings from the alliance were expected to bring down the fares, the increased market power was expected to nullify the effect. As noted earlier, while commenting on market power and mergers, Kim and Singal (1993) pointed that loss of one competitor increases fares by approximately 10% on average. Also it was hypothesized that with increase in market concentration the potential to exercise market power is greater. It was also found that on routes where the merging firms had neither common hubs nor overlapping service there was exercise of increased power. In cases, where merger involved a financially distressed airline, there was steep increase in fare levels. The consumer was thus worse off. Stavins (2000) while

testing for price discrimination in competitive markets found that though there was a decrease in price discrimination with market concentration and the discounts were lesser on routes with higher market concentration.

Gudmundsson (1999) also noted that there was enhanced market presence through code sharing. This was a strategic advantage derived from the alliance and had a potentially negative impact on consumer interests.

Brueckner and Whalen (1998) also found that alliances increased fares in gateway-to-gateway markets and that they were beneficial only in behind the gateway markets. The negative effects in such markets could be offset only by intervention by regulatory authorities. In addition the domestic alliances had the potential of exercising greater anti-competitive effects than the international alliances and it needs to be checked.

Brueckner and Spiller (2000), however, could not gather enough evidence of an anti-competitive effect in gateway-to-gateway markets. Though they found that there would be an increase of 5 percent in case of an alliance, this was found statistically insignificant.

Flôres Jr. (1998) has pointed out that alliances were essentially a tool used by main players in the industry to enlarge their market share. The innate desire was to gain total market control within the prevailing regulatory framework. In other words, their main utility was to gain or protect market share rather use them for cost saving or efficiency improvement purposes. Flôres finds it difficult to define the global pressures on the airline alliances except for negative characterization in the sense that they are all kinds of agreements that are less than a standard, autonomous joint venture. He also opined that the alliances are transitional in nature and as such, are doomed. There will be bigger carriers emerging from each group of alliances. This further strengthens the opinion that there will be increasing concentration in the airline industry that will further increase the market power of the players in the industry which can then be exploited against consumer benefits.

Various reports have indicated that the mergers (another form of strategic alliances, broadly speaking) in the airline industry, especially in the US have resulted in formation of a cartel. A handful of major firms are dominating the market and they rarely compete with each other. The formation of fortress hubs is being used as effective entry barrier and the advantages of hub and spoke networks are not passed on to the consumers (Cooper, 2001).

Further, the US Department of Transportation has identified 15 airports where market share of dominant firm exceeded the monopoly limits of 70%. The industry was found to be in the moderately concentrated market with a Herfindahl- Hirschman Index (HHI) of 1400. (HHI 1000-1800 => moderately concentrated; 1800+ => Highly concentrated). With another two mergers allowed - United/US & American/TWA and Delta/NW or Delta/Continental - HHI levels shall cross 2200 mark!

Cooper (2001) also contemplates that in reality, market power is abused and the theoretical benefits of the alliances are actually never passed on to the consumers. Also, there should be actual competition on the routes rather have potential competition as the beneficial effects of potential competition are much smaller compared to those of actual competition. Hub concentration measures of 1995 (GAO study) resulted in 22.1% increase in the prices. Morrison and Winston (1995) have found that hubbing; frequent flyer and CRS manipulation activities together could affect the prices to the extent of 22.7%. These together with fare restrictions could result in 46% effect on the prices. In a DOT (US) study, low cost carrier entry or exit at all hubs could affect the prices by 35%. This is even more significant at the concentrated hubs, where it touches the level of 40%. Bryer (1990) also upholds Cooper's view that it is difficult to estimate the number of potential competitors and thus the downward effect on prices cannot be ascertained. Further, he concludes that there is a need for a strong antitrust policy to maintain competitive market structures which otherwise stand under threat.

News reports on mergers in airline industry have vociferously demanded that regulatory authorities should intervene and stop the drive towards monopolization and predatory pricing. (Barry, 2001; Lochhead, 1998)

THE ISSUE OF SURVIVAL OF ALLIANCES

There have been several news items speaking of strategic alliances as short-term marriages that hardly stand pressures of time. In a BCG report of 1995, it was pointed out that Intercontinental alliances had a higher failure rate. About 67% of the alliances formed in 1991/1992 fell by 1995. These failures had been in all the categories, whether Non-Equity (Agreements or JVs) or Equity Alliances. Flôres (1998) has also argued that the alliances are heading towards doom and that in the future there will be no alliance but a few major airlines that will rule over the market. This makes it all the more necessary to look at the longevity of the alliances.

There were various factors pointed out from the case study of alliances in the air passenger transport industry. Avmark Aviation Economist (1993) documented reasons for failure as:

- Too broad setting of objectives/ Incongruent objectives – It is realized later on that very few practically possible opportunities exist.
- Asymmetry of partners, in the size, for example.
- Asymmetry of benefits versus expectations
- Differing product/ service standards (this was also pointed out in Mason, 2002, as this has potential of creating dissatisfaction among the consumers travelling on different partners)
- Lack of Exclusivity
- Lack of management structures to make the alliances successful.

It also outlined design parameters and key issues for creating a successful alliance. The key design parameters include:

- ❖ Symmetry of partners by way of relative power, control over assets
- ❖ Familiarity with partner as to have no hidden agenda, cultural and management style mix
- ❖ Term/ horizon for the alliance
- ❖ Equitable terms of sharing.

BCG outlined a model (Avmark Aviation Economist, 1993, p 22) which reveals that alliances are an iterative process and they move on from setting of Objectives (with mutual understanding) - to Design - to Implementation (laying down appropriate structures and systems) - to Reassessment and Redesign of Relationship which then in turn leads to resetting or relooking at the objectives of the alliance.

Doganis (2001) has suggested a 3-phase model for alliance building. The first phase concentrates chiefly on revenue gains. These alliances have to be of commercial nature. In other words, there is easy entry into and exit from the alliance. Phase two involves continuing and reinforcing cooperation extended in Phase one, thus bringing in operational gains to the alliance partners. This phase is likely to involve separate agreements in one or more specific areas where joint operations can reduce costs, as in ground handling or maintenance. These two phases, however, do not necessarily cement the alliance. Cementing of the alliance takes place in the third phase when partners commingle their assets and start using them jointly. There is joint product development and creation of joint companies to manage different aspects of operations. The partners are expected to move from having separate brand identities to emphasising and even adopting a single alliance brand. The exit from the alliance is very difficult.

It is notable that though there are large global alliances in the world skies, most of the alliances have not moved beyond the first phase. The revenue focus of the partners

makes the alliance highly vulnerable to sudden exit of the alliance partners. Delta walking out of the Atlantic Excellence alliance in June 1999 is an example of this.

It is also necessary to understand that this approach of cementing the partnership has to follow all the phases. KLM and Alitalia alliance is a case in point. The partners were too eager to move to phase 3 without understanding the necessities of going through phase 2. The alliance collapsed in May 2000.

The Key Success Factors in making the alliances can therefore be:

- ✓ Set up concrete, realistic and specific goals.
- ✓ Due diligence to be carried out by both partners.
- ✓ A clear horizon and understanding of future direction of the alliance is necessary.
- ✓ Cost/ benefit analysis has to be carried out and there should be a move to create a sense of mutual dependence.
- ✓ Appropriate resources to be allocated to the alliance.
- ✓ Communication amongst the partners should continue and success measured from time to time.
- ✓ Lastly, the alliances should be done away with when the partners feel that the issues to them are no longer valid.

SUMMARY

There is no doubt that air passenger transport has grown globally since deregulation. With deregulation there was a move towards economising operations and attaining economies of scale. The air transportation evolved from point-to-point, to, hub and spokes, to, network formation amongst various hub and spokes networks. These networks essentially involved strategic alliances of various forms. This led to increase in passenger welfare in the form of lower fares and various programmes to enhance perceived customer value. This, in turn, gave rise to strategic alliances of various kinds and scope amongst the industry incumbents. There can be several parameters on which the alliances could be classified and literature shows that there is no consensus on the parameters.

Further while discussing the advantages and disadvantages of strategic alliances it is observed that though the alliances were initially for the purpose of airline welfare through cost reductions, the industry is gradually concentrating into a few hands. It was observed that the phenomenon is evident at some US airports (reported by Cooper, 2001). Globally, with 4 major alliances holding more than half the market, it clearly is getting concentrated.

The fallout of this is clear. Firstly, smaller airlines (like that of Air India, Indian Airlines) are likely to grow only as traffic feeders to bigger alliance partners due to operating economies. Secondly, as it emerges, there is concentration happening in the industry. This concentration may lead to cartel formation among airlines and the benefits to consumer may actually get reduced and the basic premise of airline deregulation stands negated.

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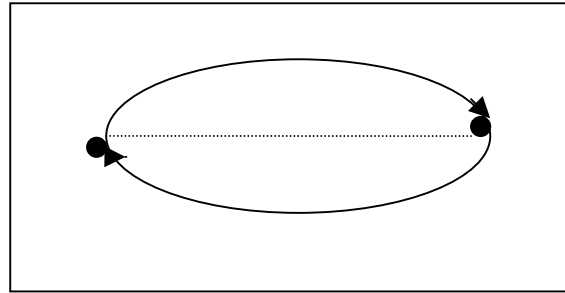
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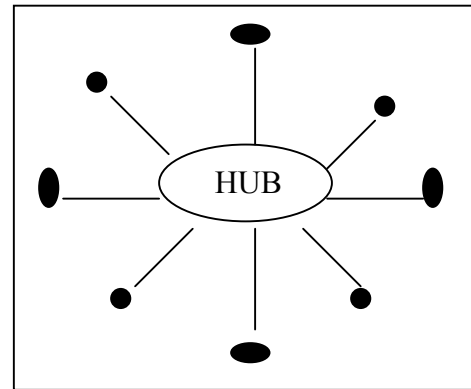
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Schematic Representation of Changes in the Airlines Industry

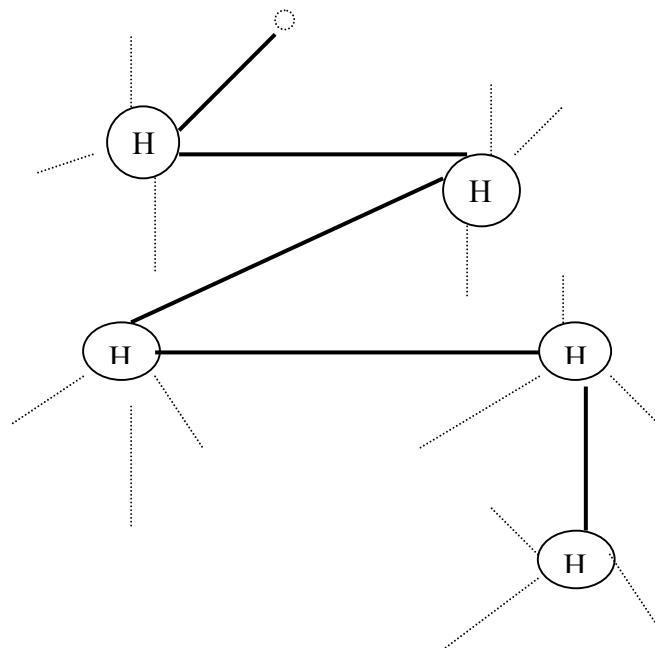
1940 - 1970s
Point-to-Point
City Pair Service



1980s
Hub and Spoke
Networks



1990s
NETWORKS
International Alliances
In Global Market



Source: Yergin et al. (2000), p.37.

Schematic Representation of an alliance classification method

Type of Agreement

Type of Alliance

- INTERLINE/PRO-RATE
- MUTUAL GROUND HANDLING
- FREQUENT FLYER PROGRAMMES
- CODE SHARE
- BLOCK SPACE
- COMMON SALES/TICKETING OUTLETS
- SCHEDULE/CAPACITY CO-ORDINATION
- JOINT ENGINEERING
- JOINT FLIGHTS

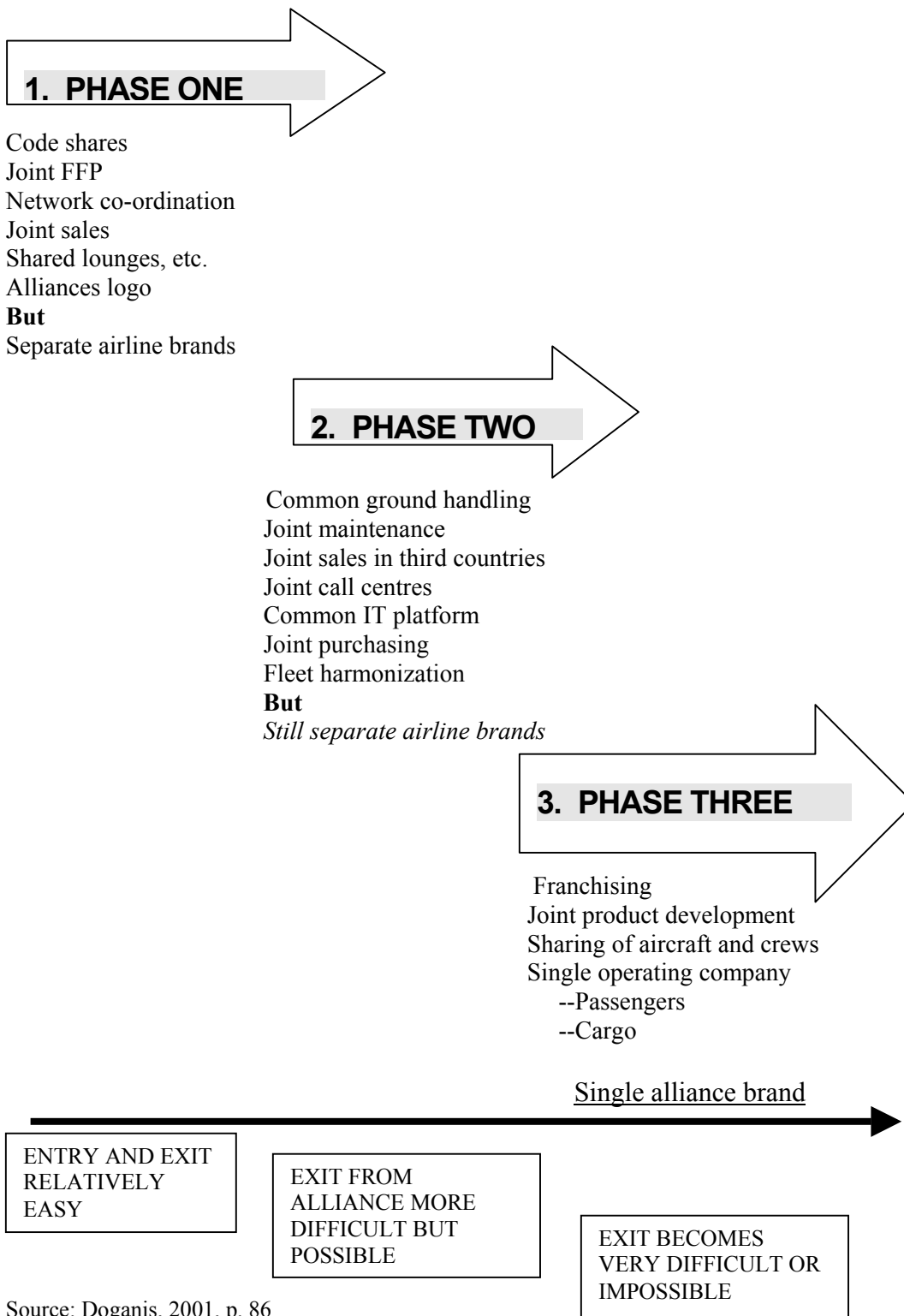
COMMERCIAL ALLIANCE

STRATEGIC ALLIANCE

-
- FRANCHISING
 - COMMON BRANDING
 - JOINT CARGO AND PASSENGER SERVICES VENTURES
 - FULL MERGER
-

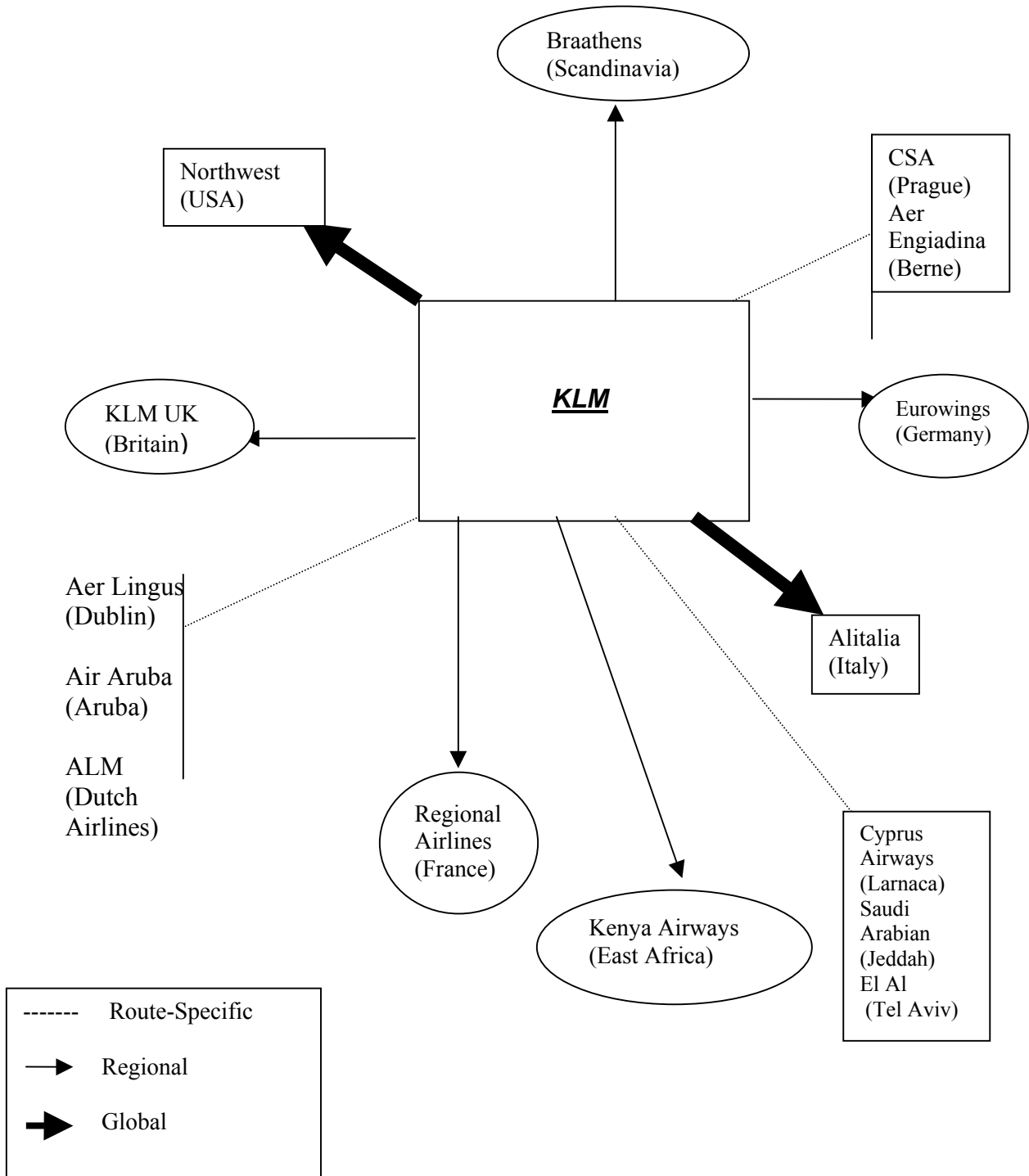
Source: Doganis, 2001, p. 66

The phases of Strategic Alliance



Source: Doganis, 2001, p. 86

KLM's alliances as an example of alliance networks and scopes



Source: Doganis, 2001, p. 68.

Glossary of terms

A. Freedoms of Air:

1. First Freedom: The right to fly over another country without landing.
2. Second Freedom: The right to make a landing for technical reasons in another country without picking up or setting down revenue traffic.
3. Third Freedom: The right to carry revenue traffic from your own country (X) to the treaty partner's country (Y).
4. Fourth Freedom: The right to carry revenue traffic from other country (Y) back to your own country (X).
5. Fifth Freedom: The right of an airline from country X to carry revenue traffic between other countries such as W and Z on services starting or ending in its home country X. (Use of this freedom, however, requires agreement of countries W and Z).
6. Sixth Freedom: The use by an airline of country X of two sets of 3rd and 4th freedom rights to carry traffic between two other countries but using its base at X as transit point.
7. Seventh Freedom: The right of an airline to carry revenue traffic between points in two countries on services that lie entirely outside its own home country.
8. Eighth Freedom (Cabotage rights): The right of an airline to pick up and set down revenue traffic between two domestic points in another country on a servicing originating in its own home country.

The first 5 freedoms are negotiated in the bilateral air services agreements. The latter 3 are called the supplementary rights. The 6th freedom rights are generally referred to

implicitly in memoranda of understanding attached to the agreement. The 7th and 8th freedoms are granted only in very rare cases.

Definitions of some of the terms used

- TACOs** Travel Agent commission overrides involve paying higher commission if the agent reaches a certain level of bookings. Overrides vary from carrier to carrier and from market to market.
- Code Sharing** When two or more airlines use their own flight codes or a common code on a flight operated by one of them.
- RPKs** Revenue Passenger Kilometres is the product of number of fare paying passengers on each flight-by-flight stage distance. They are a measure of an airline's passenger traffic.
- Slot** Slot at an airport is the right to operate one take-off or landing at that airport within a fixed time period.
- HHI** US Department of justice explains that Herfindahl-Hirschman Index is a commonly accepted measure of market concentration. It is calculated by squaring the marketing share of each firm competing in the market and then summing the resulting numbers.