



Global airline alliances: international regulatory issues

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Abstract

The air transport industry has remained one of the most regulated and restrictive industries in international trade. Domestic deregulation and liberalization have been progressing at an uneven pace across countries, and liberalization of the international markets has yet to overcome numerous obstacles. Air carriers, on the other hand, need to build up an extensive global network to realize economies of scope and density and to meet consumer demands. To accomplish this, they need to have foreign partners. However, ownership restrictions do not allow for cross-country mergers or takeovers. As a result, alliances have become, and will remain in the near future, the primary means for expanding and strengthening airline global service networks. Alliances have provided a way for carriers to mitigate the limitations of bilateral agreements, ownership restrictions, and licensing and control regulations. In effect, both airlines and governments consider international alliances to be the second best solution to achieve free trade in world aviation. This paper discusses regulatory issues related to international airline alliances. Section 1 provides an overview of the current regulations surrounding alliance frameworks, and Section 2 contains a synthesis of economic analysis of regulatory concerns for international airline alliances. Section 3 discusses international coordination in regulations of airline alliances, and Section 4 provides a summary and conclusion. © 2001 Elsevier Science Ltd. All rights reserved.

1. The current regulatory framework for airline alliances

Alliances can and do take many different shapes and forms. A fundamental concern about alliances is how alliances affect the vitality of competition in the affected markets, which depends both upon the terms of the alliance and the carriers involved. International airline alliance agreements must comply with the applicable regulations in the partner airlines' home countries. Because of entry restrictions in some international markets and the resulting small number of competitors in those markets, alliances are scrutinized for their potential impact on the degree of competition and cooperation between air carriers.

Code-sharing agreements between partners is a key feature of international airline alliances, whereby one airline's designator code is shown on flights operated by its partner airline. Alliances involving code-sharing are in many respects the most controversial. They have the

potential to be procompetitive — they can create new service, improve existing service, lower costs and increase efficiency, all to the benefit of the traveling public. Code sharing agreements also have the potential to be anticompetitive. They can result in market allocation, capacity limitations, higher fares, or foreclosure of rivals from markets, all to the injury of consumers. The ability to distinguish the latter from the former is crucial for aviation policy makers and antitrust enforcement authorities. The US Department of Transportation (DOT) has taken the position that code sharing agreements between US and foreign airlines require approval by DOT. Although DOT has the final authority to approve, or disapprove, a code-sharing agreement, the US Department of Justice (DOJ) reviews code-sharing proposals for potential antitrust violations.¹ Even though international airline alliances cannot, by law, lead to a merger, DOJ approaches code-sharing agreements and associated alliances from the same perspective as

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¹ DOJ took over responsibility for approving airline mergers and alliances from DOT in 1989.

a merger.² If it determines that a proposed alliance would cause anti-competitive effects, it may impose conditions on it or prohibit it altogether.

The DOJ has reviewed a number of major trans-Atlantic and/or transborder alliances, including BA/USAir, KLM/Northwest, Delta/Sabena/Swissair/Austrian, Lufthansa/UA, and American/Canadian Airlines International. The BA/USAir alliance involved code sharing on flights to London from various US gateways. The alliance was approved after USAir divested all its route authority to serve London to other US airlines, to avoid antitrust objections. The DOJ also approved the other three alliances.

Unique to the airline sector, the DOT has the right to challenge any approval by the DOJ, and it also has the power to grant antitrust immunity in international aviation agreements. KLM/Northwest was the first alliance granted antitrust immunity by DOT in November 1992, shortly after the Netherlands and the US signed an open-skies agreement in September 1992. Although each carrier's management remains separate, due to the national-ownership restriction, the carriers can coordinate closely. They are able to achieve a high level of integration without the fear of legal challenges from competitors. They can discuss market strategies and pricing, develop formulas to set fares in all markets, and quickly change fares in response to changing market conditions. In effect, the carriers would be able to operate as if they had achieved a cross-border merger.

The Lufthansa/UA alliance and the Delta/Sabena/Swissair/Austrian alliance received antitrust immunities from the US DOT in May and June 1996, respectively. Unlike the case for KLM/Northwest's immunity, under these immunities certain routes between the partner hubs were still subject to antitrust laws. For the Lufthansa/UA alliance, there was to be no coordination of pricing, inventory or yield management coordination, of pooling of revenues on the Chicago–Frankfurt route and the Washington–Frankfurt route, whereas for the Delta/Sabena/Swissair/Austrian alliance, restrictions were imposed on the Atlanta–Brussels route, Atlanta–Zurich route and Cincinnati–Zurich route. The US authorities appeared to have viewed these alliances as a stepping-stone to more liberal, and thus more pro-competitive, bilateral agreements. For both alliances, the carriers must submit their agreements for renewal in 5 years.³

While the US authorities have been consistently active in applying competition law to alliances between US and

EU airlines for some time, the European Commission (EC) had been relatively inactive in this aspect prior to the proposal of the BA/American alliance. British Airways and American Airlines first announced their proposed alliance in June 1996, which would give the pair 64% of all seats between London Heathrow and the US, and a monopoly on a number of vital routes. This set off alarms and prompted the EC to begin reviewing antitrust implications of proposed alliances, reviving its interests in airline alliances. Officials realized that they could not just restrict AA and BA without examining other alliances. The fear was that, far from benefiting consumers through efficiencies, such alliances would gain undue influence over the market.⁴ This is in contrast to a somewhat more favorable stance towards such alliances by the US DOT. As discussed above, DOT has blessed some of the alliances with antitrust immunity.

The EU also fears that the US has used alliances and antitrust immunity to sign open-skies agreements with its member states, which provides advantages to US airlines over EU airlines. The US bilateral open-skies agreements with the Netherlands, Austria, and Belgium were signed concurrently with the US' granting antitrust immunity to the KLM/Northwest and Delta/Sabena/Swissair/Austrian alliances. It is perceived that an open-skies agreement has become a pre-requisite for the US to grant antitrust immunity to proposed alliances between US airlines and foreign airlines. BA and American, with limited code-sharing operations, are seeking antitrust immunity, but their request will not be granted until US and UK can reach an open-skies pact.

The EU essentially has two options: prohibiting an alliance, or adopting a decision with remedies that create the conditions for approval. The Commission takes the position that, if possible, it refrains from prohibiting alliances but adopts the second, more positive approach. This requires that the carriers accept proper remedies, which may include that alliances give up slots in crowded airports, cut back service on routes they dominate, and change their reservation policies. For example, EU stated the following conditions for its approval of the BA/AA alliance in a press release.⁵ (1) Reduction in frequencies on three hub-to-hub routes (London–Dallas, London–Miami, and London–Chicago). BA/AA will be obliged to reduce their combined number of weekly frequencies, if so requested by a competitor during a period of 6 months following authorization of the alliance. (2) Slots and airport facilities other than on hub-to-hub routes. When a rival airline wishes to launch a new service or to expand an existing service and cannot obtain the necessary slots in accordance with the procedure laid down in the EC slot regulations, the alliance will

² The Department of Justice uses the principles contained in the 1992 Horizontal Merger Guidelines in analyzing such alliances.

³ See, respectively, DOT 106-96 and DOT 148-96. At about the same time, DOT approved antitrust immunity for American/Canadian Airlines International. For the latter case, DOT limited approval in the New York–Toronto market until February 1998, when bilateral restrictions would no longer impede full freedom of entry in the US–Toronto markets.

⁴ For example, see Business Week, 2 March 1998.

⁵ European Union Press Release, No. 66, 1998 (July, 8).

be obliged to make available the necessary slots in London. Slots are to be given up without compensation. Whenever necessary, the alliance should also give up airport facilities necessary for the effective use of the slots they have given up. (3) Other conditions relate to frequent flyer programmes, computerised reservation system displays, relations with travel agencies and corporate customers interlining.

2. Regulating international alliances: economic analysis

The interest in competition, and hence regulatory scrutiny and measures, stems from fundamental concerns about the welfare of domestic air carriers and passengers. Alliances provide opportunities for the partner airlines to reduce costs by integrating activities in various aspects and by linking existing networks. The partners may just reschedule their existing fleet to serve new markets, thereby avoiding investment in new aircraft and hubs. On the other hand, an alliance between two significant competitors on an international route may adversely affect the degree of competition in that particular market. The net benefit accruing to domestic passengers, or the net change in consumers' welfare, is one important factor in assessing alliances. A merger allows the domestic firm to earn more export revenue that will in turn contribute to total domestic welfare. This positive effect of a domestic merger should therefore be taken into account in anti-trust policy towards firms competing in international markets.

There have been strong controversies in the popular press and government policy-making circles with respect to the impact of alliances on the degree of competition. On the one hand, an alliance that introduces a new competitor into a market will likely increase the degree of competition in that market. On the other hand, an alliance between two competitors on a route will adversely affect the degree of competition on that route. At the theoretical level, therefore, there are both benefits and costs associated with alliances. Oum et al. (2000) classified alliances into "complementary" and "parallel" alliances. The complementary alliance refers to the case where two firms link up their existing networks so as to feed traffic to each other, while the parallel alliance refers to collaboration between two firms who, prior to their alliance, are competitors on some routes. It is found that a complementary alliance is likely to reduce fares whereas a parallel alliance is likely to increase airfares. Brueckner (1997) and Park (1997) examined theoretically the effects of alliances on traffic level and welfare using linear demand and linear marginal cost functions. In particular, Brueckner (1997) pointed out that an alliance would reduce competition in gateway (or interhub) markets that were previously served by the partner airlines. However, cooperative pricing under an alliance would increase

traffic in connecting markets since portions of a connecting trip are complements.

Theoretical analysis for real-world alliances, which generally are a mix of complementary and parallel alliances, is intractable however. What then is the empirical evidence? Oum et al. (2000) conducted an empirical study on the effects of four major alliances on fares, outputs and consumer welfare in North Atlantic markets, to shed light on whether the increase in post-alliance route concentration should be viewed as a cause for concern. The four alliances are BA/USAir, Delta/Sabena/Swissair, KLM/Northwest, and Lufthansa/UA. The four alliances as a whole, increased (equilibrium) passenger volume by some 36,000 passengers annually, while decreasing fares by an average of \$41 on routes served by the alliance carriers. Consumers were better off as a result. The study did show, however, that if an alliance is more of the parallel alliance type, it tends to reduce total output and consumer surplus.

Brueckner and Whalen (1998) examined whether alliance partners charge lower interline fares than non-allied carriers. They found that alliance partners charge interline fares that are 18–28% below those charged by non-allied carriers. The main source of this fare reduction is internalization of a negative externality that arises from uncoordinated choice of interline sub-fares in the absence of an alliance. They also found that an alliance between two previously competitive carriers would raise fares by 4–6% in their gateway markets, but this anti-competitive effect is statistically insignificant. USDOT (1994) measured the impact of code-sharing agreements of the BA/USAir and KLM/Northwest alliances on market share and welfare. They conducted a counterfactual scenario analysis based on a model estimated using the post-alliance period only and estimated that the two alliances increased consumer surplus by US\$10.3 million and US\$27.1 million, respectively, during the first quarter of 1994.

The main source for fare reduction in Oum et al. (2000) is the cost reduction following an alliance. Although mark-up rose for some alliances, the reduction in marginal cost outweighed the increase in mark-up, leading to lower fares. In some cases, alliances could make the markets more competitive by, for instance, strengthening the weak carriers who would otherwise fail. Oum et al. (1996) examined the effect of code-sharing agreements between small carriers ("non-leaders") on the market leader's price and output, using data from trans-Pacific markets. They found that code-sharing agreements increase the degree of competition. In particular, it reduced the market leader's (equilibrium) price by \$83 while increasing its annual output by 10,052 passengers per route.

In addition to an assessment on the net benefit accruing to passengers, regulatory agencies will also assess the net effect of alliances on national carriers. Alliances may alter the competitive balance and outcomes among

domestic carriers. USGAO (1995) concluded, mainly based on interviews with representatives from governments and airlines, that alliances between US and foreign airlines have generated large gains for the participating carriers in terms of passengers and revenues. An examination of stock price reactions to the BA/USAir alliance (see Oum et al. 2000) showed that the alliance tended to increase the (expected) profitability of allying carriers while decreasing the profitability of non-allied carriers. The study suggested that international alliances appeared to improve the partners' competitiveness and in turn threatens the rivals' competitive positions. From a national policy viewpoint, the net effect of alliances on all domestic carriers combined is likely to be of prime importance in weighing their desirability.

In sum, the above discussions indicate that international alliances can provide cost-effective ways for carriers to enter new markets, expand their operations and obtain additional traffic to flow over their existing networks. In addition, alliances, especially those of the complementary type, can benefit consumers by providing additional service options, increasing flight frequencies and enhancing competition in international markets. It appears that competition problems do not really arise for connecting passengers, because there is a strong competition between alliances such that passengers have a choice of more than one hub to connect through. Regulatory agencies should, however, be very careful in granting antitrust immunity to would-be parallel alliance partners.

3. International coordination of regulations

National competition policies play an important role in the international aviation market. For many countries, international operations represent a vital source of their total aviation revenues. Domestic mergers are often justified by the argument that they would help improve domestic firms' international competitiveness as international aviation is gradually being liberalized. The importance of this argument rests on the importance of economies of scale and oligopoly market structure (hence, imperfect competition). Clougherty (1996) analyzed empirically the influence of merger among domestic airlines on the international airline market. Using cases from North American airline mergers, he found that the increase of market concentration in the domestic market did contribute to an increase in domestic firms' market share in the international market.

When there is an asymmetry in merger/competition policy across countries, cautions should be taken in liberalizing air transport markets. Suppose that the foreign country does not have a strong competition policy (or does not enforce it rigorously) while the home country does. Then an unconditional liberalization by the home country may lead to a situation where domestic firms are

driven out of market. This is because the merged foreign firm is able to extend its reach to domestic market and realizes economies of scope and density, thereby driving its unit cost down. At the same time, the home firms may not be able to merge and have to be confined within the home market. As home firms exit from the market, merged foreign firms would become the dominant firms, putting an upward pressure on prices. As a result, unilateral liberalization may not even achieve its original intention of promoting competition in the home market, let alone it hurts home firms. Unilateral liberalization is not likely, therefore, to be pursued under asymmetric national competition policies. In effect, unilateral liberalization may even reduce world welfare, if the merged firms of the closed country drive out of market the open country's firms that happen to be more efficient when they are given equal scale and scope of operations. This could happen because of the access to a larger market by the former (but not the latter) and because of the existence of scale and network economies in the airline business. This will not happen, however, if both markets are open and both countries adopt the same set of competition policies.

Asymmetries in domestic regulatory policy would also make direct application of GATS concepts to air services problematic. Under the GATS negotiation framework, countries negotiate on whether to allow foreign services providers to enter domestic markets (referred to as "market access"). Once market access is allowed, they negotiate on whether foreign firms to be treated the same as indigenous firms (referred to as "national treatment"). Since domestic regulations remain largely as national affairs, the national treatment principle would effectively increase market access for airlines from nations with closed domestic markets without expanding access for airlines whose domestic markets have already been deregulated (Kasper and Hindley, 1999). As a case in point, national treatment would be sufficient to assure foreign airlines access to the internal markets of deregulated countries such as the US, Canada, European Union, and Australia. However, it would not help the US, Canadian, EU, and Australian carriers obtain access in foreign markets where, for instance, regulatory limits on entry apply to both own and foreign carriers. As our analysis shows, substantial economies of scope and density make effective access to other markets an essential competitive factor. With the existence of nations still practicing restrictive domestic regulatory systems, therefore, the application of market access and national treatment does not help resolve the problem of equal access to all markets. Another key GATS principle is the most favored nation (MFN) clause, meaning that the concession that one country yields to another country extends automatically to all other WTO members. In the case of air services, it is not clear that liberalization would be speeded up by the application of such unconditional MFN to traffic rights. In particular, the application may

permit “free riding” by countries that are unwilling to open their own markets. As a result, large blocs of more liberal nations including US, Canada and EU member states would have probably not been able to agree among themselves on substantially liberal terms were unconditional MFN in place. It appears that even the most liberal nations find it necessary to discriminate in granting traffic rights in order to offset severe restraints experienced by their own airlines in foreign markets.

The above discussions point to the need to coordinate/harmonize competition policies among trading partners in tandem with liberalization of trade in air services. Recent general examples include the promotion of transparency of restrictive business practices policies, extending national laws beyond national borders (i.e., “extraterritorial” application of competition policy), and the harmonization of national rules and procedures. The benefits and costs of a system of internationally coordinated competition have received increasing attention in academic literature over the past decade.⁶ Examination of such a system in the context of international aviation is lacking however. Below we discuss briefly the coordination issue for international airline alliances.

As indicated in Section 2, both the US and EU appear to have adopted the policy of specifying remedies that create the conditions for an approval of proposed alliances. For alliances in the North Atlantic market, these remedies must be available on both sides of the Atlantic. Regarding the question of slots, for instance, we cannot simply request slots in European airports without being sure that appropriate slots will be available in the US airports for US and EU airlines. Generally, international traffic involves (at least) two hub (or gateway) airports, one in each country. Each country, by its competition policy, may be able to regulate and monitor one hub. Naturally, at the national level each would focus on its own national interest rather than the interest of international aviation markets as a whole. Coordinating the regulation of both hubs would be better however, at the international level. This may require coordination between the regulatory agencies of the two countries involved, or creating a super-national regulatory body.

The need for such coordination arises from two other considerations. First, as mentioned earlier, there exist asymmetries in regulatory policy across countries. Even in countries where competition laws exist, there are variations in them. Second, aviation has traditionally been a regulated industry and, consequently, has been treated somewhat differently when competition policy is concerned. In the US, for instance, aviation has been given limited exemption from antitrust laws. The grant-

ing of such antitrust immunity to several strategic alliances is an example of this at the international level. The EU has given block or individual exemptions to tariff conference activities that would otherwise violate Articles 85 and 86 of the Rome Treaty. Exemptions also exist in Japan. To the extent where such exemptions do exist, inconsistencies in the rules applied may occur. In some cases, there may be problems associated with transparency and implementation of the rules between countries.

In a sense, EU-wide competition policy provides such a super-national mechanism that covers all industries. But it is concerned only with the potential effects of an alliance within the EU. Similarly, the current bilateral ASAs may be viewed as a form of internationally coordinated competition policy once entry matters have been determined (Findlay, Forsyth and Bora, 1996). However, the system has not resulted in free trade multilaterally, and, in fact, may have facilitated anti-competitive behavior by allowing the two countries’ flag carriers to dominate the bilateral markets.

As the world airline industry is undergoing changes through consolidation at both national and international levels, it is important that the restructuring be guided by an appropriate regulatory structure. The desirable international regulatory structures on strategic alliances should have some of the following features. First, national competition policies and enforcement practices for all industries are in place and are transparent. Further, they should converge to an adequate, common standard across countries. Second, as the pace of deregulation and liberalization continues in many countries, airline alliances and their competitive effects should be treated within the general framework of competition policy. Third, where relevant, international coordination of national regulatory agencies should be activated towards alliances-related matters such as slot control at each country’s hub airports, disclosure of the operating carriers of code-shared flights on CRS display, and antitrust immunity granted by each country. An interesting question here is whether a super-national competition policy and a super-national regulatory body may be more effective in dealing with some of these matters than mere international coordination. While recognizing the potential benefits, we note that there is no precedent in other industries for such super-national competition policies and associated regulatory bodies.⁷ As indicated by Warran and Findley (1998), “one of the strongest arguments against the development of a multilateral competition policy is the possibility that such an arrangement will be captured and used by various interests for

⁶ See Hoekman (1997), Hoekman and Mavroidis (1994), Lloyd and Sampson (1995), Low (1996), Messerlin (1996), OECD (1994, 1996, 1999), Industry Commission (1996), Scherer (1994), Warren and Findlay (1998), and Vautier and Lloyd (1997).

⁷ It is particularly surprising to observe that there are no super-national competition agencies in those industries that enjoy much more commercial freedom than aviation, such as telecommunications, automobile manufacturing, computer hardware, and computer software industries despite the fact that they are covered by GATT or GATS.

illiberal ends (Low, 1996).” We believe that there is a need for further study on this issue.

The current regulatory system, including bilateral ASAs, poses impediments to structural changes in international aviation. The immunized alliance is one limited way of dealing with the restrictions inherent in the bilateral system. The initiation of regional and more liberalized bilateral, or open-skies, agreements has removed some of the impediments. This suggests that the coordination/harmonization of competition policies among countries and the liberalization of international aviation reinforce each other and should therefore be pursued simultaneously.

4. Conclusion

Our assessment based on economic incentives is that, while continued pressure for liberalization is expected, it is likely that restrictions imposed by the bilateral system and national ownership laws will continue to affect the development of global airline networks. In the near term, alliances would remain as a dominant form of inter-airline relationship in international air transport. How to regulate alliances, therefore, becomes an important policy issue. Generally, international traffic involves (at least) two hub airports, one in each country. Controlling both hubs may require coordination of regulatory agencies of the two countries. The need for such coordination arises from the considerations that there exist asymmetries in regulatory policy across countries and that, where antitrust exemptions to aviation do exist, inconsistencies in the rules applied may occur across countries.

The desirable international regulatory structures on international alliances should include convergence of national competition policies and enforcement practices to achieve common standards and treatment of airline alliances within the general framework of competition policy. Furthermore, where relevant, international coordination of national regulatory agencies should be activated towards alliances-related matters. The establishment of such coordination regulatory structures and the liberalization of international aviation reinforce each other and should be pursued simultaneously.

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