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# THREE THEORETICAL PERSPECTIVES ON AIRLINE INDUSTRY EVOLUTION

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## Abstract:

To explore the motivation of airline alliances, Doganis (2001) conclude that to circumvent nationality rules in bilateral air agreement is the most critical factor pushing airlines into developing alliance strategies. In addition, Bronder and Pritzl (1992) developed a conceptual framework of strategic alliances. An interesting question to ask is without airline ownership rules and strict regulation in international market, whether carriers will prefer mergers rather than alliances. The deregulation of the domestic airline industry in U.S. provides an excellent opportunity to observe firm strategic behaviors from strict economic regulation to fairly unimpeded competition. For analysis purpose, I divide the airline market into domestic market and international market; first, I analyze the international market by applying institutional framework; second I observe the strategic behaviors before the regulation and after the deregulation in the U.S. domestic market; finally I provide some predictions of the international market competition by applying transaction cost economic framework.

**Keyword**: Airline Industry, Strategic Alliances, Competition under regulation

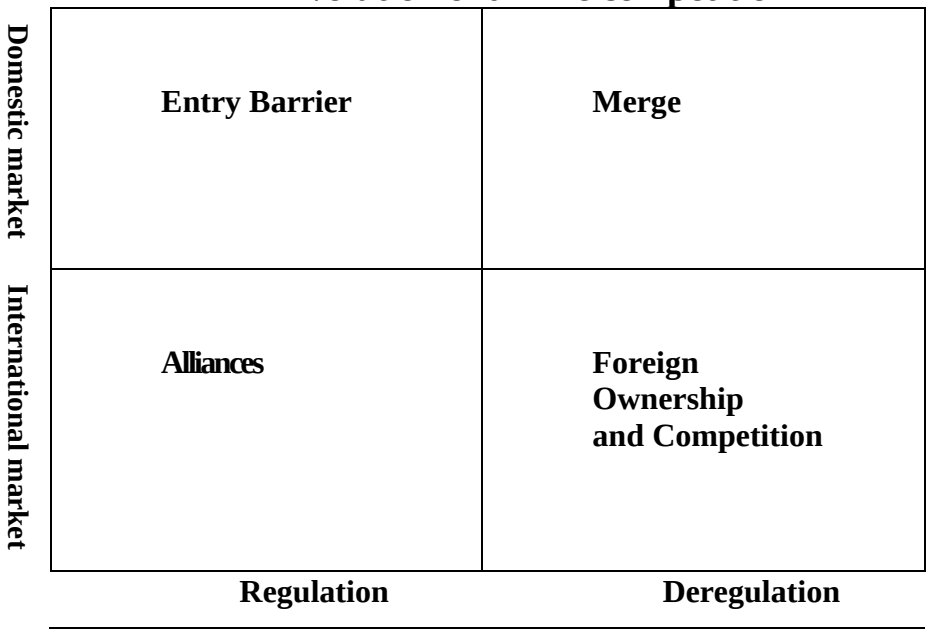
## INTRODUCTION

To explore the motivation of airline alliances, Doganis (2001) conclude that to circumvent nationality rules in bilateral air agreement is the most critical factor pushing airlines into developing alliance strategies. In addition, Bronder and Pritzl (1992) developed a conceptual framework of strategic alliances. An interesting question to ask is without airline ownership rules and strict regulation in international market, whether carriers will prefer mergers rather than alliances.

The deregulation of the domestic airline industry in U.S. provides an excellent opportunity to observe firm strategic behaviors from strict economic regulation to fairly unimpeded competition. For analysis purpose, I divide the airline market into domestic market and

international market; first, I analyze the international market by applying institutional framework; second I observe the strategic behaviors before the regulation and after the deregulation in the U.S. domestic market; finally I provide some predictions of the international market competition by applying transaction cost economic framework. The framework is listed in Figure 1.

**FIGURE 1:**
**Evolution of airline competition**




## REGULATION AND ALLIANCE: AN INSTITUTIONAL APPROACH

Bruck, Macharis, and Verbeke (2011) described the institution in different ways. For example, North (1990) defines institutions as the rules of the game. Hodgson (2006) defines institutions in more specific terms as "durable systems of established and embedded social rules that structure social interactions" (Hodgson, 2006). In the context of airline alliances, most important institution regulation is the Air Services Agreements and National laws. An airline cannot buy an airline in another country, though it may benefit for both countries. In fact, European Community and most Asian countries are not yet ready to allow U.S. airlines to fly domestic and international routes within and between their countries. As a result, U.S. negotiators are understandably hesitant to drop barriers to foreign airlines in the U.S. without gaining access to foreign markets. (Borenstein, 1992). As with foreign ownership, foreign competition is probably a good idea, but under current institutional setting, alliances could successfully circumvent nationality rules in bilateral air agreement.

## THE DEVELOPMENT OF AIRLINE ALLIANCES

According to Professor Oum (1997), the first international alliance was formed in 1986 between Air Florida and British Island Airways. Air Florida fed US originating traffic to British Island's code-share flights on the London-Amsterdam route. At that time, the US DOT did not require any formal approval for international code-sharing alliances. However, in March 1988. US DOT clarified its position on international alliances, stating that an alliance would not be approved unless it was covered in a bilateral agreement or otherwise brought benefits to the US. and unless

the foreign country also allowed US carriers' code-sharing rights in its own markets. For example, Northwest and KLM were granted antitrust immunity by the US DOT in November 1992, shortly after the US and Netherlands signed an Open Skies agreement in September 1992. Another example is the granting of antitrust immunity to Lufthansa and United in May 1996, in exchange for the Open Skies agreement between the US and Germany in February 1996. The most significant alliances in terms of network expansion are clearly those with a global scope. The current status of members in these global networks is summarized in Table 1. Alliances however, are an artificial solution to an artificial problem which is why they are unstable and why many have been abandoned. Table 2 shows the results of the Boston Consulting Group' s 1995 and 1998 studies concerning the durability of airline alliances. A key finding is that the success rate for all categories of alliances has improved substantially in the 1995-98 period over the earlier three-year period. (Chang & Hsu, 2005)

But which facts drive the attempts for alliances? According to Professor Doganis (1998), four factors determine the airlines into transnational alliances. Firstly, to gain the marketing benefits of large size and network spread; Secondly, to reduce costs; thirdly, to reduce competition on duopolistic routes; and lastly, but most importantly, to circumvent nationality rules in bilateral air agreement.

**TABLE 1.**
**Major airline alliance group**

| Oneworld | SkyTeam | Star Alliance |
|---|---|---|
| Aer Lingus | Aeromexico | Air Canada, |
| American Airlines | Air France | Air New Zealand |
| British Airways | Alitalia | ANA |
| Cathay Pacific | CSA Czech Airlines | Asiana Airlines |
| Finnair | Continental Airlines | Austrian |
| Iberia | Delta Air Lines | Bmi |
| Lan Chile | KLM | LOT Polish Airlines |
| Swiss | Korean Air | Lufthansa |
| Qantas | Northwest Alines | SAS |
| | | Singapore Airlines |
| | | Spanair |
| | | Thai Airways International |
| | | United |
| | | US Airways |
| | | VARIG |

**TABLE 2.**
**Survival percentage of alliances**

| | 1992-95 (%) | 1995-98 (%) |
|---|---|---|
| Overall alliances | 38 | 68 |
| Equity alliances | 73 | 81 |
| Non-equity alliances | 26 | 62 |
| Domestic alliances | 65 | 93 |
| Alliances within a continent | 59 | 68 |
| Intercontinental alliances | 33 | 58 |

Source: Oum and Zhang (2001), Key aspect of global strategic alliances and the impacts on the future of the Canadian airline industry, *Journal of air transport management*, No.7, p288.

**Alliance objective**

According to Bissesseur (1996), the objective of airline alliances can be analyzed from two perspectives: supply (production) and demand (marketing). On the supply side, the objectives are to decrease production costs and to increase efficiency. The strategy is to combine certain of the partners' operations in order to decrease unit production costs and to increase the utilization of resources, including facility sharing, labour sharing, capacity rationalization and joint purchasing **(**Table 3**).** Demand side objectives consist mainly of accessing new markets, benefiting from traffic feed and increasing market power. Airline alliances enable airlines to satisfy their need to grow. The strategy includes code-sharing, block-sharing, franchising, schedule and fare co-ordination, FFP co-ordination and international hub.

**TABLE 3**
**The objective of airline alliance**

| Supply side | Demand side |
|---|---|
| Increase utilization | New market |
| Facility sharing | Traffic feed |
| Labor sharing | Market power |
| Capacity rationalization | Code sharing Block sharing |
| Joint purchasing | Franchising |
| Cross utilization fleets | Fare co-ordination |
| Joint ground handling | FFP co-ordination |
| Joint engineering and service | International Hub |

On the other hand, strategies for cost reduction include joint marketing, labour sharing, cross utilization of fleets and shared facilities. The way to achieve labour sharing includes joint sales, joint ground handling, joint engineering and joint services.

**Factors affecting alliances**

From an economic perspective, limitations to alliances can result from several sources: regulatory constraints imposed by overseeing agencies, trends in the demand level, supply-side factors, such as scale, and market organization determinants such as the nature of competition

**TABLE 4**
**Factors and Influence**

| Factors | Influences |
|---|---|
| Regulatory effects | • State or market regulation<br>• International treaties<br>• Antitrust legislation<br>• Non-uniform environment regulations<br>• Non-uniform airport charges |
| Technology | • Aircraft type<br>• ATC<br>• CRS<br>• Baggage handling |
| Demand factors | • Longitudinal trends<br>• Geographical distribution<br>• Preferences (price, travel time and frequency elasticities)<br>• Competing modes (e.g. rail) |
| Supply-side factors | • Horizontal integration between airlines<br>• Economic complementary in production: network integration<br>• Common (shared) factors of production<br>• Demand complementarity<br>• Global network economics<br>• Product (scope) economies |
| Market-organisation factors | • Effective market entry barriers<br>• Effect of hub-and-spoke networks<br>• Market entry by new start-ups<br>• Anti-trust immunity<br>• Extent of network economies<br>• Market equilibrium and stability |

Source: compiled from Berechmank, Joseph and Jaap de Wit, 1999. In Gaudry, Marc and Mayes, Robert, 1999. *Taking stock of air liberalisation*. Kluwer Academic Publishers. p.256-279.

## DEREGULATION AND MERGER: A RESOURSE-BASED VIEW

Modern resource-based thinking builds upon both a descriptive and a normative component ( Rugman & Verbeke, 2002). From a descriptive perspective, the focus is on the distinctive resources profile of each firm and the processes, both at the firm and industry level, that lead to specific new resource combinations and induce or reinforce heterogeneity among firms. As regards prescription, the value of resource-based field to practitioners results from its emphasis on the purposive creation, through firm-level investments in resources and capabilities, of "isolating mechanisms" (Rumelt, 1984). These constitute the analogue of entry barriers at the industry level.

In operational level, a set of resources, not equally available to all firms, and their combination into competences and capabilities, are a precondition for sustained superior returns. From a dynamic perspective, new resource combinations, can substantially contribute to sustainable superior returns. In the airline industry setting, the hub-and-spoke networks are well recognized as the key resource. First, hubs could contribute to cost savings. Second, they are

valued for the market power effect. The hub-and-spoke networks have evolved to the point that one airline will generally fly to another airline's hub only from its own hub. United, for instance, offers nonstop service to Atlanta-Delta's major hub-only from Denver, Chicago-O'Hare, and Washington-Dulles, three of United's four largest hubs.

Morrison and Winston (1989) compare the costs of market power and the benefits of improved efficiency for six merges among jet carriers that took place between 1985 and 1988. The Northwest and Republic, which shared hub at Minneapolis, merged in October 1986; The TWA and Ozark, which shared hub at St. Louis, merged in October 1986; Besides, these included Delta-Western, American-Air California, US Air-Piedmont, and US Air-Pacific Southwest Airlines. They conclude that six mergers in total had a positive effect on consumers.

As the much-publicized horizontal airline mergers in the mid-1980s, less-publicized vertical network mergers and joint marketing agreements were forming between major airlines and commuter carriers. In the late 1980s, the beginning code sharing agreements were replaced by vertical integration. Such mergers permit greater coordination of flight schedules, baggage handling, marketing, and frequent flyer programs, which may increase the consumer's value of the joint product and may lower actual production costs. In addition, they can raise the costs of entry for a new airline at airports where the major and the commuter airline connect.

The main difference with an alliance is that collaboration will be limited in scope and effectiveness as a result of two factors: All decisions must be made by consensus among partner firms. Alliances are transient in nature and must remain reversible. Because they are placed under the simultaneous authority of several partner firms, alliances tend to lead to virtually unending rounds of negotiations (Ciarette. & Dussauge, 2000). For mergers, one of the major pitfalls is the post-merger integration process. Alliances make it possible to avoid the cultural and organizational shocks. Combining two into one is an extremely difficult task (Marks. & Mirvis, 1998). The other major disadvantage of mergers is that it requires capital to invest. If the partner airline gets into financial difficulties, this will obviously reduce the market value of the stake. The general differences between merge and alliances are summarized in Table 5.

**TABLE 5**
**Differences between merge and alliances**

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

**Merge or alliance: TCE perspective**

Williamson (1996) suggests that a set of discrete governance mechanisms are required to complete transactions. Each governance mechanism has its own capabilities and limitations such that different types of transactions are handled by specific governance mechanisms at low cost. The polar types of governance mechanisms are markets and hierarchies. But hybrid governance mechanisms are common, such as relationships, alliances and network. Coase (1937) developed the insight that markets and firms were alternative ways of completing transactions. The firm or merged firm could arise if could complete transaction at lower cost than in the market. Williamson generalized these observations by suggesting that markets and hierarchies were alternative governance mechanisms that had a contingent cost advantage in completing transactions depending on the nature of those transactions (Characterized by the critical dimensions of asset specificity, frequency, and uncertainty). This leads to the discriminating alignment hypothesis that transaction will be allocated to particular governance mechanisms in order to minimize the cost of completing those transactions. Williamson's work proved to be particularly useful for challenging anti-trust laws by showing that vertical integration in the airline industry was economically rational rather than simply an attempt to create monopoly power.

## FUTURE DEREGULATION IN INTERNATION MARKETS

When regulation of the international market is relaxed, a new period of instability and change may occur as cross-border mergers begin to replace the traditional alliance agreements. Old partners may be abandoned and new partnerships created. Furthermore, the gradual privatization of state-owned airlines will also bring these airlines into play. The better ones will also become acquisition targets and alliance partners. As mentioned before, alliances and merges both have their risks and side-effects. Many of the speakers at the Phoenix Symposium in May 1999 argued that alliances were better than mergers or takeovers, because of the difficulties of

integration, illustrated by past history; on an international scale those difficulties would be exacerbated by cultural differences.

For an airline, the most important thing is clarifying the corporate mission, in order to achieve its long-term objective, either to be a global network carrier or a niche player. A global airline would aim to provide a world-wide network of routes and destinations. It can link its own wide route network with alliance partners through their hubs, or acquiring carriers for their regional networks, as was the case with British Airway and Singapore Airlines. Ally or merge? The right option is to analyze the institutional environment and firm level core competency resources.

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