Empirical Studies on Strategic Alliances in the Airline Industry

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Executive Summery

Objectives and Structural of the Dissertation

The existence of the commercial airline industry gives purpose to the existence of airports, air traffic control and navigation systems, and commercial aircraft industries. The airline industry plays a key role in the world's economy, industry, tourism, and related activities, facilitating trade between cities and countries as well as stimulating the transfer of people, goods, and ideas across different geographical regions. Recently, the airline industry has faced more competition and the recent recession has led to widespread severe losses across the entire industry. This has forced many airlines to undertake major restructuring to improve productivity and reduce costs. An alliance is one network expansion strategy when an internal route development or an acquisition is not a viable option. Quite often this is the case even if internal expansion is possible, while alliances may be preferable as they provide quicker and more secure access to new markets. Furthermore, alliances allow airlines to increase revenues, reduce costs and increase customer benefits. In recent years, there has clearly been a significant surge in alliance formation among leading airlines around the world.

Nowadays, airline alliances dominate the air transport industry with the largest carriers belonging to one of the alliances. Alliances-participating airlines account for flying over 80% of the total passengers in the industry. As a result, "airlines that do not enter into alliances will find themselves at a competitive disadvantage unable to generate traffic from their alliance competitors", Dresner and Windle (1996). "A failure to join a global alliance would leave individual carriers isolated and at a competitive disadvantage", Button et al. (1998).

Several research projects have studied the effects of alliances on different aspects such as cost reduction, market entry, market share and profitability. Porter and Fuller (1986) argued that alliances enabled firms to achieve increased economies of scale through joint operations so that firms could increase profitability. However, to date, there are few studies that examine airline strategic alliances from the customer perspective.

This research was carried out within the context of the changing air transport strategies. In other points of view, the research on airline alliances development is still somewhat limited in scope. It is not clear to what extent airlines adopted alliances into their strategic method, and not clear on how changing managerial strategic of airlines will effected the airline performance and/or passenger behavior.

The objective of this study was to assess and describe the extent to which airlines have reconfigured their alliances strategy, as well as to explain how these strategy changes affected the airlines' performance and how passengers can deal with the changing context of airline marketing strategic behavior. For this reason, the research was structured into three parts with each individual research question being evaluated by its own methodological and theoretical elaborations. The first part is based on the overview of airline alliances and past researches. The second part is based on the effects of airline alliances towards airlines' management, or the supply side. The last part is based on effects of airline alliances on passengers, or the demand side.

First part: Overview of Airline Alliances— chapter 2

An airline alliance is any collaborative arrangement between two or more carriers involving joint operations with the intention of improving competitiveness and/or enhancing overall performance. The concept of airline alliances is not new. Alliances were first seen around 1980s in the US domestic market; however, the significant growth was witnessed during the 1980s and 1990s as a response to the pressures of globalization. Alliances began on a global scale in 1989, but nowadays, there are three Global airline alliances: Oneworld, Skyteam, and Star Alliance.

Park (1997) distinguished two major types of alliances as being either vertical or horizontal. The vertical alliance features non-overlapping routes, whereas the horizontal alliance's routes can be overlapped. Button (1998) also differentiated alliances as marketing or strategic. A strategic alliance is one in which the partners co-mingle their assets in order to pursue a single or joint set of business objectives; may include terminal facilities, maintenance bases, aircrafts, staff, traffic rights or capital resources. Conversely, many code-share agreements, joint frequent flyer programs, and even some block space agreements are essentially marketing alliances. They are not strategic because partners continue to operate and use their assets independently, each pursuing its own objectives.

Second part: The Effects of Airline Alliances towards Airlines' Management—Chapter 3

The effects of airline alliances on airline management can be measured by finding the effects of on airlines' productivity and profitability. Since airlines have to find strategies to improve their business with global expansion constrained by restrictive air services agreements which alliance has brought benefits to airlines on cost saving, new markets access, increases in load factors, yield improvement, and shared operations. Oum et al. (2004) had examined the effect of horizontal alliances on firm performance in terms of productivity and profitability, in which the study revealed that horizontal alliances have a significant contribution to productivity gains and have no significant or positive impact on profitability

Panel data were gathered from 20 airlines in terms of passenger-kilometers as published in the ICAO journal Annual Report including *Traffic, Fleet and personal and Financial Data* during the period of 1990-2004 for this research. Revenue was divided into 5 categories: schedule passenger service, schedule freight service, mail, non-schedule service and incidental service. Similarly, cost was also divided into 5 categories: labor expense, fuel, flight, ground property, and other materials.

A dependent variable was productivity index, in accordance with Oum et al. (2004) model, measured by the ratio of a firm's output to its input (Farrell, 1957). Firms use multiple inputs to

produce multiple outputs, so comparisons of productivity over time are based on index-number procedures. Profitability index variable was measured by dividing total revenues (TR) by total input cost (TIC). An independent variable is number of alliances, tallied by the number of existing cooperative agreements of airlines in a given year. Control variable was set to include potential impact of partner location on firm performance, firm size, average route distance and takeoff, business composition

The panel regression model was employed to test out two hypotheses. This study revealed that, in terms of productivity, with the control of partner airline location, distance, and composition of business, airline alliances had a positive significance to firm productivity. It also revealed that route distance did not have any relationship with airline productivity, while proportion of other associate business showed positive effect to productivity. Regarding the profitability, airline alliances had a positive effect to airlines' profitability. Unlike the productivity, profitability could be positively significant from the route distance. This implied that the longer route could result in less cost to the airlines.

Third part: Effects of Airline Alliances on Passengers—Chapter 4 and 5

The consumer benefits are state by alliances themselves—Star Alliance, OneWorld and Sky Team—on their website, press release and trade publications. The profits will include greater network access, seamless travel, priority status, lounge access and frequent flyer program.

In a past research, Goh and Uncle (2003), studied about perception of Australian business travelers based on benefits of airlines alliances. The results came out that the majority was sure of the benefits although with some misconceptions. However, there were no major differences between competing alliances and alliances benefits were not seen as important.

In this study, cross sectional surveys of Thai travelers at Bangkok international airport were used. The survey took 18 working days, 8 weekends and 2 national holidays, to obtain both

business and leisure travelers. Several benefits of global alliances in firm perspectives such as market access, cost reduction, airline productivity & profitability were recognized by travelers. Meanwhile, travelers also enjoyed benefits of global alliances in greater network access, direct flight and enhanced FFP benefits, more miles accruals and redemption. Most of leisure travelers were still unclear about alliances benefits, which suggested that each alliance should do more marketing such as advertising about the benefits to provide travelers with better understanding on alliances and what they will gain from it. Given that passengers have better standing, they will start to choose their flight by considering about alliances rather than just ticket fares. On the other hand, travelers rated fare and service from airlines very high. This finding will lead to the next chapter which was set to find out about service quality expectation and satisfaction on code sharing flight. It is suggested that delivering superior service quality is a prerequisite for success and survival in today's competitive business environment. Thus, this research focused on the gaps between customer's expectation and perception on airline service quality to further determine the effects of alliance.

Post-flight mail surveys comprising of six flights per day on Narita-Bangkok route, concentrating on passengers taking code share flights regardless of airlines, were used. As it turned out, only 315 data sets could be used. Using the "SERVQUAL" tool developed by Gilbert and Wong (2003) by seeing from both sides by the Likert scale 7-points and the Factor Analysis to group all the questions, the gaps between expectations and perceptions were found.

The results suggested that safety was the top priority. Individual attention to passengers was the most dissatisfactory, and availability of alliances network was the most satisfactory. The results also suggested that passengers' expectations and perceptions of code share services were different mainly because of their past experiences. In addition, the results showed that, for airline managerial side, the partner member had to provide at least up to the standard for all airlines to prevent their customers from dissatisfaction.

To investigate on structural relationships, SEM was applied to gauge the effect of airline service quality on passengers' behavioral intentions. The result showed that efficient personal services, frequent flyer program—mileage—had positively effect to customer satisfaction. Unfortunately, code sharing benefit had less effect on their satisfaction. At the same time, passengers' satisfaction carried a very strong positive effect on 'purchase intention' and 'fare'. On the other hand, 'purchase intention' had not affected by of 'fare'.

Part 4: Conclusion and Suggestion—Chapter 6

From all the studies, alliances are a strategy for airlines to survive and prosper in today's competitiveness. Alliances allow airlines to gain in productivity and profitability through cost reduction schemes, such as lounge sharing, airport facility sharing, and by introducing economy of scale in purchases. Code sharing and block spacing within an alliance also lead to an increase in flight load factor, allowing the use of more economical larger-size aircrafts. Alliances also increase customer benefits in many ways such as larger networking, enhanced frequent flyer program, upgrade, and premium services. This, in turns, attracts and retains customer base as well as increase customer loyalty.

Nevertheless, both airlines and alliances need to better promote such customer benefits beyond the present status. Having obtained customer loyalty, a higher price could be charged which incurs higher profit. At the same time, airlines should concern on their own development strategy, cost control, communization and customer mix, and relationship management with partner airlines.

One disadvantage from alliances is that it reduces the market competition. This, however, may not be entirely true since airlines from the same alliances still fly and compete on the same routes without any code sharing.

Limitation and Future Research

This study has a very limited regulation policy issue. A further study can be done on airline regulation such as open skies or even alliances joining and anti-competition market to see what alliances will face. This will gives policy makers an understanding of airline market and preparation.

The supply side research suffered from limitations of data availability. The results might not be a good representation of the entire airline industry because of the small sample size. Due to the fact that productivity and profitability could be affected by various factors, this study could not conclude whether the benefits of an alliance were actually derived from cost reduction or increase in revenue. In the future, it is necessary to find the exact factor which is the main source of productivity gains from alliance, and to see whether there is more on revenue gain or cost reductions. Besides, there is also a need for expanding regression time frame to observe more clearly on when airline start to gain productivity and profitability after joining alliance group.

For the demand side, global alliances benefits were only listed in airline materials and travelers are not necessarily aware of them. Sometimes it aims only to high priority passengers. Future research is to encompass more survey handouts to travelers at other provinces, or even to rearrange sampling for equal percentage of nationality in different countries. It will also be better to do in different periods of time to receive more opportunities to apply the survey procedure on various airline firms in different alliances. Given that the above suggestions were achieved, comparisons among each alliance would be plausible with ability to observe satisfaction of various passengers in a wider angle. Finally, consideration is made on doing a better empirical study whether the global alliances benefits play important roles in determining airline choice by travelers such as to perform calculation on air travelers' demand.