Deregulation and Globalisation: Process, Effects and Future Challenges to Air Transport Markets

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ABSTRACT

Through a sequence of examinations, the research identifies that there is a difference in the liberalisation process of different regions' air transport markets. This has impacted on the configuration of strategic airlines alliances. Deregulation and strategic alliances that have contributed to the air transport market globalisation to benefit air travellers' welfare, carriers and economic development of each country should be pursued simultaneously in reducing the current existing barriers to entry into the regulated air transport market. However, increased complexity in the international business environments stem from a number of sources that pose long term issues. This challenges both globalisation process and approaches. The future air transport market consolidation or fragmentation will therefore have implications for the airline operations, as well as, State of governance.

CHALLENGING ENVIRONMENT

As the cold war is still going on, the impact of Sep. 11th is difficult to discern at this stage. After Sep 11th, some economists indicated that the world had indeed changed, and in significant ways. The airline industry's case shows that it overall has sustained a massive impact from the September 11th Events. On that day, both American Airlines (AA) and United Airlines (UA) aircrafts were hijacked and used in the terrorist attacks. That caused a dramatic decrease in passenger numbers and flight frequency of airline services.

The immediate problems posed to the airline companies after the Sep 11th events in general, include the higher costs associated with new airline security directives, the companies' ability to raise additional financing, the cost of such financing and the price and availability of jet fuel. These problems were also followed by airlines cutting capacity, grounding aircraft and deferring certain aircraft deliveries to future years, sharply reducing capital spending, closing facilities, trimming food service and reducing workforce. The continuing Gulf and SARS crisis further deteriorated the situation. In an attempt to get SARS wary passengers back on the planes, airlines are continually cutting down airfares (Philling, 2001; O'Toole, 2001). The 'price war' hence causes the carriers to suffer. The characteristics of the airline industry show that any single factor such as terrorist attacks, war, financial crisis, economic recession, business competition and even SARS could have a huge impact on airline operations. The idea of airline mergers and acquisitions has been pursued since the 1990s, by carriers to reduce risk and increase competitiveness. Strategic airline alliances were rapidly developed and various types of formations appeared in competing air transport markets in the last decade. Incentives for airlines entering strategic alliances are also because of the commercial aspects of international air transport matters, in which they have been generally governed by bilateral air treaties between the countries involved in the airline industry. Further multinational enterprises have been very slow to develop in this sector because of legal restrictions on foreign equity ownership in national carriers and restrictions on the operation of foreign carriers on domestic routes (Staniland, 1997).

Facing these constrains, entering strategic alliances is the major means for international carriers to obtain access to new markets, to provide new services (Oum, Park and Zhang, 2000). Thus, it has been identified that the coordination of regulatory alliances and the liberalization of international aviation reinforce each other and should therefore be pursed simultaneously (Oum et al., 2000). The liberalisation debate remains open in the last two decades. Continuing globalisation may be the most effective way of raising the living conditions of the world, particularly those most economically disadvantaged areas of the world. However, it is important not to lose sight of the problems of globalisation, which may be the single most important challenge in the first half of this century (Enderwick, 2001). New geopolitical alliances, new tensions and many of the changes become more important issues in research (Enderwick, 2001). Thus, the process and effects of liberalisation and strategic alliances is necessarily revisited and hence further challenges can be addressed.

In order to accommodate the critical issues discussed above, this research examines how the *liberalisation in different regions has impacted on airlines forming strategic alliances? What are the effects on the air transport markets and the future challenges?*

PROCESS OF LIBERALISATION

In this section, the research explores the liberalisation process based on an examination of the published documents and research articles existing in the current literature from 1978 to 2003.

Following the Airline Deregulation Act of 1978 and the International Air Transport Competition Act of 1979, the US domestic air transport markets were deregulated after 1978 (IATCA, 1979). The deregulation enabled the launch of other policies to maximize consumer benefits through preservation and extension of competition between airlines in a fair market place (IATCA, 1979). A series of crucial bilateral negotiations were also conducted over the period 1977-1982, which led to a dramatic expansion in the number of airlines operating, the total scheduled capacity offered in those markets and the number of US gateway points with direct services to European or Asian destinations (DOT, 1997; PC, 1998). In March 1992, the US offered to negotiate trans-border "open skies" agreements with all European countries, which enabled US carriers to pursue the more liberal form of alliances in the world air transport markets. The first US "open skies" deal was signed in September 1992 between the US and the Netherlands. In 1993, the US Department of Transportation granted anti-trust immunity to the alliance between Northwest (NW) and KLM Royal Dutch Airlines (KLM), which allowed the airlines from both countries unrestricted entry and capacity rights between and beyond both countries (PC, 1998). KLM/NW as alliance partners signed a long-haul code sharing and comprehensive marketing agreement, on the North Atlantic, the US and Europe, Africa and the Middle East. The agreement enabled them to cooperate on ground handling, sales, catering information technology, cargo and maintenance, joint purchasing and FFPSs (Alliance Survey in Airline Business, 1999: Wang, 2002).

Under the 'open skies' regime, the US further extended invitations to a number of countries to enter into open aviation agreements, offering important traffic flow potential for its carriers and by January 1998, the United States had signed a total of 28 agreements with a range of countries in Europe, Central America and South America (PC, 1999). In the next steps, the US started to shift the focus of its international aviation policy to Asia. Whilst the US was fast moving toward air transport market globalisation, the European markets were also reforming from a very fragmented market into a single market. Bilateral agreements used to govern international aviation policies within the Union before the mid 1980s and the bilateral treaties caused the market to be tightly regulated behind high entry barriers, showing a very fragmented market. Consequently, European air traffic was not very efficient, costs and therefore prices were higher than necessary.

Deregulation, the term so called as three policy packages, was introduced in three phases to improve the market efficiency. The first package effect started from 1st January 1988 allowed the airlines to increase their capacity shares on the routes between two countries and access to the markets and the airlines to set the airfares. The second package approved in June 1990 removed airport deregulation in the position of the fourth freedom services and loosened the capacity of shared contracts. The third package came in June 1991 and went into effect on January 1st 1993. The three packages were completed in 1997. These provided protection against discrimination of the airlines by their nationality in the cases of getting licenses in different member states. After the EU aviation market was liberalized in April 1997, the EU carriers were allowed to enter into various alliances unless they resulted in a virtual monopoly (McNeil, 1993). Pricing, market entry requirements and capacity were also determined by the airlines instead of respective governments or other bodies. EU carriers are able to fly between member states without restriction, due to the liberalized bilateral agreements among the members (Park, 1997; Button, 1996). Any EU- registered carrier has the right to run domestic services within any of the EU's 15 member countries, as well as in Norway and Iceland. National ownership rules were replaced by the EU owner criteria. Airlines have freedoms to set fares, with safeguards against predatory principle through competition rules. The deregulating and liberalising aviation in ASEAN is slower in process, compared with the other two markets. However, privatization of Qantas and Australian Airline started in 1991 and in 1993 Australia witnessed a very large increase in domestic passenger numbers (Healey, 1994). British Airways was permitted to purchase 25% of Qantas in March 1993. By November 1995, the privatization process was completed. In November 1996, the Australian Airlines and New Zealand governments signed an agreement allowing designated carriers to fly within and between the two countries, allowing at least 50 per cent to be owned and controlled by nations of either country.

In South East Asia, Singapore and Brunei signed the first open-skies agreement in ASEAN in 1997. Malaysia, Indonesia and Thailand also formed the Northern Growth Triangle, followed by a few regional blocs formed in 1996. Qantas, the Australian international carrier allied with American Airlines and entered oneworld

groupings by 1998. During that period of time, the concern arisen was airlines in the AP region being slow in response to the liberalization of world airline markets (PC, 1998; Oum, 1998). This might be because the region was more diverse than Europe or North America, and that the airline industry in the Asia Pacific region was in a relatively early state of its development and experiencing very high levels of growth (CAPA, 1996). When the economic crises in South East Asia placed the carriers based in the region under financial stress, the process of globalization of the airline industry was expected to take a major step forward since alliances could help the Asian carriers in the short term, in some cases, with injections of capital, through sharing the use of resources, by consolidating traffic and improving utilization of aircraft and by strengthening market positions (Hooper and Findlay, 1998; Oum, 1998). The wave of alliance formation in Asia would help the region's airlines rationalize services, consolidate traffic and improve their finances. They also would play a role in deciding the competitive strength of the major global alliances at key Asian hubs (Hooper and Findlay, 1998; Oum, 1998).

The major liberalisation processes shows that the US domestic air transport market was deregulated after 1979. From 1988 to 1993, the EU countries were reformed through completion of the three packages. From 1995, North America and the EU made further progress in liberalization and by 1997 the US domestic market was fully liberalized, followed by the EU single market in the same year. However, most of the AP region retained its regulatory markets during this period of time. The liberalisation poses the question: how has it impacted on strategic alliances in the major air transport markets? This question is examined in the section below.

PROGRESS OF STRATEGIC AIRLINE ALLIANCES

The formation of strategic airline alliances within the current Air Services Agreements can be categorised mainly into three types: codeshare, joint activities and more liberal forms of service agreements such as the US 'open skies'. The current global groupings show that there are three major sectors in the global networks: Star Alliance, oneworld, and SkyTeam (refer to Table 1). The Star Alliance network appears to be the largest and most integrated airline network having 15 members in this group. Its network offered 680 destinations in 127 countries, with on average 10,791 flights every day. This network transported 314 million passengers in 2003 and the total group revenues were US$67.5 billion in 2002.

Table 1: Three larger global alliance groupings

STARALLIANCE	United Airlines, Lufthansa, Air Canada, Thai International, SAS, Varig, Air New Zealand, All Nippon, Singapore, Austrian, Asiana Airlines, Bmi British Midland Mexicana Airlines, Spanair, LOT Polish Airlines
ONEWORLD	American Airlines, British Airways, Qantas, Cathay Pacific, Canadian,Inter'l, Iberia, Finnair, Lanshile, Swiss International
SKEYTEAM	Delta Airlines, Air France, Aeromexico, Korean Air, Alitalia, CSA Czech Airlines

http://www.star-alliance.com, http://www.oneworld.com, http://www.skyteam.com, 2004

The oneworld alliance has become the second largest airline network in that Swiss International Air Lines very recently became the ninth member (www.oneworld.com 2004). This network serves more than 560 destinations in 136 countries, with more than 8,500 flights every day. In 2003, this alliance sector approached about 20 per cent of the entire world airline industry's output, transported 220 million passengers and earned revenues of US$50 billion.

SkyTeam based initially on the two partners of Air France and Delta and other members in 1999 has been further developed by two more members Alitalia and CSA Czech Airlines. Now it has become the third global alliance network, as its six members offer 500 destinations in 110 countries, with 7865 flights every day. This network transported 212 million passengers in 2003. These global airline networks cover a broad range of activities, including city-pairs or non-stop services through code-sharing and joint operations that include ground handling, flight schedules, creating connection services, use of ground facilities, coordination of baggage checks, honouring of tickets between airlines, joint advertising, share of CRS, reciprocal FFPs participation and recognition, purchasing of aircraft and fuel and interchanges of flight-crew personnel and aircraft (Oum, Park and Zhang 2000; Wang and Evans 2002b). These multilateral agreements through the global groupings allow members to achieve global market coverage and to extend the provided services in order to improve customer satisfaction.

The airline alliance research (Wang, 2002) shows the bilateral route services with the fastest growing number of agreements before 1995. The growth then slowed and the number of more multiple services agreements increased during 1996 and 1999. Code sharing developed rapidly after 1992 until 1999. Both joint activities and

marketing alliances were more developed after 1996. It was not until 1994 that the numbers of broader commercial alliances, i.e. 'open skies' started to increase but they grew rapidly after this.

This research adopts the airline alliance data collected by Wang (2002) and further analyses the impact associated with the air transport market liberalisation. Table 2 below describes the number of alliance under different formations from 1989 to 1999. The results show an annual minimum number of new service agreement as 1 and the maximum 21. These results were summarised from 286 cases and the variable means and standard deviations are also included.

Table 2 General alliances data descriptions

	VARIABLES	N	MIN.	MAX.	SUM	MEAN	STD. D.
Alliance data (27 carriers)	Route specific services	286	1	11	220	0.77	1.36
	Code share	286	0	11	363	1.27	1.73
	Joint activities	286	0	9	302	1.06	1.82
	Marketing	286	0	10	269	0.94	1.80
	'Open skies'	286	0	3	57	0.20	0.76
	Annual alliances	286	1	21	1,211	4.23	4.36

Table 3 shows that in total there were 1211 airline alliances formed between 1989 and 1999 in term of the 27 major airlines (the right column shows the designated code of the observed airlines). Among the total number of airline alliances, there were 363 'code sharing' agreements and 302 joint activities.

Table 3: Sum total of each form of agreements - 27 airlines (1989-99)

Designated code	Route Specific	Codeshare	Joint Activities	More liberal
BA	8	22	29	2
AA	9	33	15	4
UA	21	20	10	6
QF	20	23	20	0
AC	18	13	19	2
SK	4	15	22	1
AF	4	27	11	3
LH	3	15	20	1
JAL	12	17	18	0
SR	2	26	7	3
KL	11	13	9	4
CO	8	12	8	5
NW	20	8	2	6
NZ	9	13	14	1
DL	6	19	7	3
CX	5	5	20	0
MH	3	16	13	2
AZ	6	13	2	6
SQ	8	3	15	3
TG	1	4	20	0
NH	13	7	4	0
CA	9	6	7	0
KE	3	16	2	0
AL	15	3	0	1
CDN	0	6	1	2
AI	2	3	7	0
VS	0	5	0	1
TOTAL	**220**	**363**	**302**	**57**

Note: [a d]esignated code of the airlines data source: Wang 2002, Strategic alliances: concepts, models and empirical analysis

ANALYSIS OF THE IMPACT

In order to analyse the impact of the liberalisation process on formation of strategic airline alliances, the empirical analysis is conducted in that the process of regulation, before and after liberalisation are treated as dummy variables that are conjunctively analysed with the development of airline strategic alliances. Both numbers and different formations of alliances are recorded, respectively in the spreadsheets and both multiple regression analysis and analysis of variation are conducted. The theoretical examinations enable the research presuming that the market liberalisation can contribute to the development of airline strategic alliances, and both liberalisation and alliances

have further resulted in the airlines to be more competitive in the markets. In testing parameters of the development of strategic alliances and market competitiveness, the theoretical model is expressed as:

$$Y_i = f[AL_i, Z_i, Yr_t, Q_i, F_i]; \varepsilon_i \quad \text{.....(1)}$$

where the subscript *i* is a given carrier, Al_i is alliance variables, Z_i is a market-specific stage, *Yr is* year indices in that the subscript *t* is a year-specific variable, Q_i is total market outputs of passenger traffic and F_i is a vector of flight services, and ε_i a term of unobservable effects that may influence the development of airline alliances. In comparison of the market differences in entering airline alliance in respect to market liberalization process, the conceptual model is expressed as:

$$\Delta Al_k^i(\theta) \equiv AL_k^i(1) - Al_k^i(0) = \int_0^1 [dAL_k^i(\theta)/d\theta]d\theta \text{.....(2)}$$

Define θ as θ=1 for 'impact'; θ=0 for 'before liberalisation'. Treat θ as continuous in the range $0 \leq \theta \leq 1$, and assume that carrier i's alliances in market k, $Al_k^i(\theta)$ is conditioning and differentiable in θ in the entire range of liberalisation process. In estimating the effects of airline alliances on carriers' market competitiveness, the function for the increase in airline competitiveness with an increase in airline alliances becomes:

$$E_{ij} = f_E(k_i) + h_E(g_j) \text{.....(3)}$$

$$i = 1, 2, ..., 5 \quad j = 1, 2, ..., 6 \quad and\ i \neq j$$

Hence:

$$\Delta E_{ij} = \Delta f_E(k_i) + \Delta h_E(g_j) \text{.....(4)}$$

where E_{ij} is a carrier's market competitiveness as the function of an increase in types (*k)* of alliances and the function of market deregulation (g*)*, and the subscripts i and *j* is an alliance type-specific variable and a liberalisation stage-specific variable, respectively, their ranges are from 1 to 5.

In order to measure market competitiveness, it needs to calculate the changes of output in equilibrium due to the progress of liberalisation and strategic alliances, which means to compare the 'within' alliances equilibrium to 'without' alliances. To accomplish this simplifies model 1 and 2 as:

$$\Delta Q \equiv Q_1 - Q_0 = [\exp(A_1) - \exp(A_0)]\exp(\alpha_0 + A_c) f^{\alpha_1}$$

$$\Delta f \equiv f_1 - f_0 = [\exp(B_1) - \exp(B_0)]\exp(\beta_0 + B_c) Q^b \text{.....(5)}$$

where A_1 and B_1 are the terms where variables associated with alliances in the performance (Q passenger and f passenger flight services) equations are 1 respectively; A_0 B_0 are the terms where variables associated with alliances in the two equation are 0 respectively; In testing the above conceptual models, the hypotheses become:

H1: Deregulation can lead to a development of strategic alliances
H2: Strategic alliances with liberalisation progression can contribute to carriers' market competitiveness
H3: The increase in demand of travellers' welfare and decease in operating expenditure can result in both market consolidation and fragmentation

As described in the above theoretical models, the liberalization process is specified as five different stages, representing 1) regulated markets, 2) in the process of deregulation, 3) deregulated markets, 4) in the process of liberalisation; and 5) fully liberalised (1997- present). The statistical data information are from the US General Accounting Office (GAO) International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), airlines' Annual Report, Airline Business, and Strategic Alliances: Concepts, Models and Effect (Wang, 2002). The analysis and results are presented in the following sections. These sections firstly report the descriptive results, showing the numbers of different forms of strategic airline alliances of the major carriers, followed by the empirical results of the impact of the liberalisation on the formations, on the carriers' market competitiveness and the future issues.

Firstly, a significant difference is identified, in terms the annual number of Airline Services Agreements signed with different alliances by NA, EU and AP (F statistics: 5.05, p<.007). The results secondly show an increase of the types of alliances is significantly related to market-specific variables in that the market deregulation significantly influence the development of 'code sharing' (F statistic: 45, p<.01), 'marketing alliances' (F statistic: 31. p<.001), 'open skies' (F statistic: 31.5, p<. 001), and 'total alliances' (F statistic: 87.2, p<.001). Particularly, the second model tests showed that the parameters of alliance development are the market-specific variables, year variables and the passenger market, in that the adj. R^2: 0.62 demonstrate a better fit, compared with the first model. The test results corroborated the theoretical examinations and descriptive study to support Hypothesis 1 (refers to Table 4).

Table 4 Impact of liberalisation on development of number and scope of strategic airline alliances

(Coefficient)	With the progress of liberalization	
Variables	**Model 1**	**Model 2**
Total number of alliances	0.65***	1.1***
	(14.3)	(9.2)
Route specific (bilateral)	0.43***	0.56***
	(7.9)	(4.5)
Code share	0.59***	0.44***
	(12.4)	(3.3)
Joint activities	0.27***	0.69***
	(4.7)	(4.7)
Marketing	0.65***	0.79***
	(14.6)	(5.4)
Open skies	0.66***	0.76***
	(15.4)	(5.1)
Model summary	Adjusted ^{2}=0.45	Adjusted R^2=0.62

Model one tests liberalization as a parameter
Model two tests liberalisation, time series and market demand as parameters **p<0.01, ***p<0.001, ( )The numbers in parentheses are T value

Table 5 shows that the increase in number of carriers on the routes was significantly related to an increase in a level of cooperation through the alliances. The coefficients of number of carriers were positive. The quadratic data showed the increase in the number of carriers with alliance was not significant. The logarithmic tests showed a better model fit (F statistic: 308, R^2:.047, coefficient β=1.58, p<.000), compared with the linear statistical results (R^2=.033, F statistic: 308, coefficient β=.76, p<.001).

Table 5 Liberalisation and market competitiveness: increase in number of carriers on routes

		Dependent: airlines						
Levels of cooperation	**Mth.**	**Adj. R^2**	**d.f.**	**F**	**Sig.**	**β**	**$β_1$**	**$β_2$**
	LIN	.018	308	5.59	.019	2.39	.37	
	LOG	.035	308	11.06	.001	2.66	1.03	
	QUA	.074	307	12.34	.000	-.14	3.29	-.61

β= unstandardised, $β_1$= Standardised, $β_2$ = quadratic

Table 6 presents the results of five routes (a total number of 5021 routes observed). Route AMSTERDAM-NEW YORK had an annual average passenger number of 287,603 with bilateral services on this route but 310,662, if code share was performed and 363,467 with joint activities performed. Similarly, the number of passengers carried per flight with bilateral was 224, by code share 225, and by joint activities 255. On route AUCKLAND –MELBOURNE, the passengers carried per flight by bilateral was 160 on average, by code share were 235, and by marketing alliances 283, demonstrating the passengers carried increases with the alliances.

Table 6: Liberalisation and market competitiveness: increase in flight frequencies and passengers carried per flight

ROUTE	Alliances (k=1,…,5)	flights	Passenger carried per flight
AMSTERDAM-NEW YORK	1	1282	224
	2	1379	225
	3	1425	255
AUCKLAND–LOS ANGELES	1	650	234
	2	662	309
AUCKLAND –MELBOURNE	1	1063	160
	2	727	235
	3	700	283
BANKOK-FRANKFURT	1	952	263
	2	1105	277
BANKOK-KUALALUMPUR	1	758	239
	2	913	292
	3	792	252

Note: Flight = average number of flights on a route

Generally the average number of flights and the number of passenger carried per flight on the routes increased after airlines entered alliances, and the increase continued with the airlines' commitment to the cooperation, particularly that based on the regional traffic or alliances. As these increases are related, they further explain that carriers were able to implement a market concentration strategy by focusing on major routes or profitable routes, to increase frequency of direct flights or passenger load factors. This contributes to economies of scope, in that the number of routes or flights remains constant but the traffic increases. This showed that partners were able to implement the strategy through codeshare or joint activities. These gains in turn develop partners' competitiveness in competing markets.

Table 7 shows that there is a significant relationship between the levels of cooperation with services variables, except airfare, suggesting that an increase in levels of cooperation between partners contributes to an increase in network share, passenger market share, number of direct flights, and city-pairs and number of routes of the carriers. Although carriers on some routes are decreased (the negative coefficients), the quality of competition may be not necessarily decrease. The analysis supports Hypothesis 2.

Table 7 Liberalisation and airlines competitiveness: increase in route network scale and scope

	Variables	With the variables of levels of cooperation (commitment to alliances)				
		B	Std. Error	Beta	t	Sig.
Model R^{2} 0.33	(Constant)	1.573	.071		22.136	.000
	Number of routes	-.175	.025	-1.564	-7.137	.000
	Network share	.822	.140	1.319	5.878	.000
	Passenger market share	.202	.028	.499	7.283	.000
	Total flights	.19	.000	.279	5.103	.000
	City pairs	.065	.002	.195	2.791	.006

β= unstandardised, βeta= Standardised

FUTURE ISSUES

The Airbus forecasts that the worldwide demand for air travel will grow strongly due to the deep recession and strong recovery in 2001 and 2002, followed by the rapid world GDP and travel market growth (Airbus, 2002). Thus, the company believes that very large craft will play a significant role in accommodating traffic growth and also the lower cost of the larger plane will address the demand of leisure travellers. Hub congestion will be handled through fewer flights/larger airplanes driven by lower cost per seat-mile. From the Boeing's point of view, hub congestion will be handled through the addition of longer-range, point-to-point service, which is driven by passenger demand and in some cases, greater efficiency (Boeing 2004). The market places prefer the higher quality (fewer connections and better flight times) Early gateway markets peak and then fade as the route network grows by bypassing them (Swan, 2004).

Further analysis by focusing on the markets of to/from Australia by international carriers identifies an increase in number of carriers in 1998 and 199 but a decrease in 2000 and 20001 on the markets (refer to Table 8). In general there is no significant change in term of the number of carriers estimated. However, the number of passenger carried each month had a significant change (F statistic: 4.4, df = 6945, P<.01) and the total number was significantly going up from 1996 to 2001 (the inbound passengers: t=2.3, P<.001 and outbound passengers: t= 1.8, P<.05) but the service frequency shows an insignificant increase. Further analysis will be needed to support Hypothesis 3.

Table 8: The number changes: case summary of international carriers on routes from/to Australia (1996-2001)

Year	Cases summarised	Operators
1996	1456	42
1997	1403	72
1998	1356	85
1999	1510	78
2000	1265	45
2001	1133	51

The results indicate that the increased traffic had been accommodated mostly by the same number of carriers on the markets but the increased traffic volume suggests two applications. One is that using larger planes will contribute to an increase in operation efficiency through reducing operating costs for long haul markets such as

Air NZ, BA and QF, operating multiple connections through joint operations. On the other hand, the multiple services agreement developments will enable more point to point destination services, which will bypass the connecting airports and thus contribute to passenger service improvement.

CONCLUSIONS

This research evidences the merits of liberalisation and strategic alliances by showing the improved passenger flight services through increased direct flights, city-pairs, route networks, market share, and change of number of carriers on routes. Through removal of barriers to entry, airline alliances enable new services and a growing number of competitors on routes. Thus, market liberalization provides the conditions for the development of strategic airline alliances. Liberalisation and strategic alliances enable the airlines to be more competitive in competing markets.

The additional analysis by following the Boeing and Airbus surveys has raised a few issues, in that market consolidation needs further development of levels of cooperation through strategic alliances and thus more liberal market condition will be needed. The market fragmentation pressurises countries to be more open to the international market. Thus, there is a need to develop more flexible but committed service agreements, including domestic market service agreements between international carriers. To tackle the current problems and changes, some mega-merging cases in China and Taiwan aim to create a highly concentrated domestic market for better fitting the world's aviation competition. The Chinse economists argue that less competition may enhance the existing airlines' market power, hence make the airline a profitable business in the future (Shon, 2003). The recent new route allocation regulations in China have appeared in that small carriers are asked to withdraw from hub airports. As predicted, the markets will be dominated by the major airline groups and crossing-holding equity within these leading aviation groups, such as Air China, China Eastern Airline, China Southern Airline (Shon, 2003).

The analysis of US airline industry in respect to the changing environment suggests that smaller scales of operation seem to flourish. The international carries may experience higher levels of risk, suggesting that market concentration and gradual development of international markets can help with dealing an unstable and uncertain situation. Market liberalisation and strategic alliance in general have contributed to the issues of economy, safety and flexibility. However the changing environment raises new issues. Despite years of deregulation as well as assertion that globalisation will lead to a contraction of the state, what is happening today indicate that it is unlikely to be successful if business operations loose the sights of government and foreign policy. The increased complexity in the international business environments stem from a number of sources that pose long term issues, which further challenge the globalisation process and approaches

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