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Liberalising Airline Competition in India: Relevant Lessons from the Australian Experience

by

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TITLE: Liberalising airline competition in India - relevant lessons from the Australian experience.

ABSTRACT: As the commercial airline industry developed during the 1940's and 1950's, there was universal acceptance of the need to control entry, to regulate fares and to encourage airlines to cross-subsidise unprofitable services. By 1978, however, practitioners and academics in the USA mounted a forceful case that the nation's consumers would be better off in a deregulated environment and many other countries have followed suit since then. India is one of a number of Asian countries that have become recent converts to liberalism, but in formulating policies there are problems in translating the experiences of the USA. India's airline market is relatively undeveloped and air transport plays a vital role in supporting national objectives. This paper examines the parallels between Australia and India because, like India, Australia deregulated when it had two national carriers. Australia's domestic airline market is concentrated on a small number of routes and the remainder of the network lacks the density of traffic to promote competition, but airline services are regarded as a vital part of the infrastructure to support the tourism sector. The paper evaluates the experiences in Australia in terms of their relevance to India as it continues to develop its policies and as the carriers seek to develop viable strategies.*

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Introduction

During the early 1930's, both India's and Australia's airline industries gained impetus from the Empire Mail Scheme and through their links with Imperial Airways as it vied with other colonial powers and the United States to dominate the network of developing international airline services. World War II interrupted the activities of the commercial airlines, but by war's end they were carrying out extensive business with the military and were gaining access to transport aircraft. Air India and Qantas both emerged during the 1940's as stronger airlines, but they soon faced the threat of fierce competition as numerous ex-war pilots commenced small airlines. This resulted in a crisis of financial instability that threatened the orderly development of this strategically important form of transport, particularly at a time when its appeal to passengers was growing.

The problem was not unique to India and Australia and it is difficult to find an exception to the rule that governments imposed strict regulations on their airline industries. India brought the airlines under direct control by nationalising the industry and forming two airlines, one for domestic operations and one for international operations. Nationalisation of the airline industry was not sanctioned under Australia's Constitution and the Government entered into a compromise arrangement; a government airline was maintained in strictly controlled competition with a private sector airline in the domestic market. The sole international carrier, Qantas, was completely owned by the Australian Government. In the United States, the Government granted "grandfather" rights to 16 airlines and then prevented other would-be competitors from entering the industry. The US Government also wished to avoid destructive competition and it controlled fares and entry to routes to ensure its industry developed in an orderly way.

These regulatory arrangements for domestic markets changed little in the next 30 to 40 years, but history is beginning to repeat itself as all countries grapple with the problems of how to introduce a more liberal regime of competition into the airline industry. Just as market pressures produced similar responses during the period dating from the late 1930's to the early 1950's, there is an impression of inevitability about the reform process now. The United States, with the richest domestic airline market in the world, took the lead when it deregulated in 1978. Since then, its industry has gone through several phases of adjustment, and some argue that it has not fully adjusted. Not all of the outcomes have been welcomed but deregulation clearly has had benefits in terms of increased productivity, lower fares and an expanded market. Along the way, many airlines have failed, and the industry continues to be a high risk business with low returns.

In the intervening period since 1978, many other countries have embraced more liberal policies. Australia deregulated its industry in 1990 and subsequently merged its two national carriers before privatising the airline, and this step made it impossible to deny private sector airlines to compete in international markets. In this respect, Australia's experience is being reflected throughout the Asian region where rapid economic growth and tourism are combining to produce the highest traffic growth rates in the world. The expectation is that this growth will continue for at least the next ten years and some countries such as China and India will sustain the momentum

for much longer. The result is that, outside the USA, the largest domestic markets will be in Asian countries.

Table 1: Growth Prospects - Domestic Airline Markets

Region	1994		2014	
	Millions RPK's	Share	Millions RPK's	Share
USA	597,313	65.3%	1,356,797	58.7%
Far East	63,407	6.9%	289,234	12.5%
Japan	53,086	5.8%	157,679	6.8%
Australasia	24,170	2.6%	77,824	3.4%
France	19,876	2.2%	46,680	2.0%
UK	6,201	0.7%	15,918	0.7%
Other Europe	30,840	3.4%	73,016	3.2%
Former USSR	56,126	6.1%	142,608	6.2%
Other	63,209	6.9%	153,077	6.6%
Total	914,228		2,312,833	

Source: McDonnell Douglas (1995) *World Economic and Traffic Outlook 1994-95*.

There are three important implications. One is that this growth has placed pressures on the national carriers to perform and resource constraints have made it difficult to respond. The tourism sector has been an ardent advocate of change, arguing that important economic benefits cannot be realised with an unreliable and under-resourced airline system (Louden 1993). Across the region there has been an increasing reliance on the private sector, but in aviation, a business that requires technical, financial, marketing and administrative sophistication, the speed with which more liberal policies are being pursued brings with it a set of fresh challenges. In some countries, the transition has been traumatic as it has been impossible to match the growth in the market with experienced pilots, engineers, managers, air traffic controllers and regulators, not to mention airport infrastructure. These problems had severe consequences in China and India during the early 1990's.

A second implication is that the private sector has been eager to take advantage of the commercial opportunities and it has not been slow to produce new airlines (Nuutinen 1991, Bailey 1993). With few exceptions, Governments have welcomed the new carriers, but adjusting to a new competitive regime is a difficult process to manage. In the United States and Australia, for example, there was a considerable amount of research and debate leading up the decision to deregulate, and even then it has been the relentless pressure of the market that has dictated the need to make further and further adjustments. In the Asian context, the growth has been so rapid that prior evaluation of changes in policy has not been possible. The first tentative step towards a more liberal policy is to allow the private sector airlines some scope to operate, albeit with tight regulations over fares and about the needs to service "social routes" (Hooper et al 1996). Air transport continues to play a pivotal role in the economic and social development of many countries in the region, and the new airlines are expected to cross-subsidise these operations on the same basis as the national carrier.

In the United States, many of the new carriers that emerged immediately after deregulation possessed a competitive advantage; they used older aircraft, paid their

staff less money, achieved higher labour productivity and kept overheads to a minimum. This allowed them to take a price leadership position to gain market share. In the Asian context, the new carriers often use new aircraft and they pay their pilots more than the national carrier with whom they compete. Their fleets are small and they often have poor aircraft utilisation because of restrictions at airports. With regulated fares and the obligation to operate some unprofitable services, there are inevitable financial pressures. Many believe that access to international routes as the way out (Hooper 1996).

India is one of a number of Asian countries that have become recent converts to liberalism. In formulating policies it is tempting to draw lessons from the experiences of the USA, but India's airline market is relatively undeveloped and air transport plays a vital role in supporting national objectives. This paper examines the parallels between Australia and India because, like India, Australia deregulated when it had two national carriers. Australia's domestic airline market is concentrated on a small number of routes and the remainder of the network lacks the density of traffic to promote competition, but airline services are regarded as a vital part of the infrastructure to support the tourism sector. The paper explores the experiences of the most developed market in the world, the United States, and of a smaller, but also well developed market, Australia, and draws lessons relevant to India as its policies continue to evolve and as its carriers seek to develop viable strategies.

The Deregulation Movement

The United States

The Origins of the Regulatory System

The origins of a "viable" commercial airline industry in the USA can be traced to 1925 when the US Post Office began to support operators through its generous contracts to carry mail. The industry continued to develop in an orderly manner until responsibility for administering the subsidies passed to the Interstate Commerce Commission. That organisation placed pressure on the operators to accept lower rates, so much so that the industry lapsed into financial instability. The Government of the day accepted that competition had got out of hand and, especially as the airlines were beginning to carry passengers on a regular basis, it passed the *Civil Aeronautics Board Act (1938)* with the aim of stabilising the industry.

The CAB was authorised to award individual routes to carriers, to specify what fares could be charged, and to ensure safe airline operations. It was to allow competition only to the extent it was necessary and its first act was to issue "grandfather rights" to the 16 airlines that were operating in 1938. For the next forty years it turned down every one of the more than 100 applications to provide new services and the number of airlines had reduced to 11 (Pickrell 1991).

At an early stage, the CAB took the view that services to small communities should be supported by the Government through a system of direct subsidies. Although it attempted to promote efficiency, the scheme evolved into a cost-plus mechanism and the burden on the Government was increasing continually. In the early 1960's, the CAB was encouraging the "local" airlines to acquire more modern aircraft, but this added to their demands for financial support. In 1966, an attempt was made to give

the local service operators access to medium haul trunk routes to cross-subsidise the services to small communities. At the same time, these carriers were allowed to purchase jets and they were permitted to merge. However, this failed as well because the profits of the local service carriers dipped sharply. Part of the reason was that the local carriers now came into competition with the trunk operators.

By the commencement of the 1970's, the US airline industry consisted of the trunk carriers and the subsidised local service carriers, but another class of airline existed below them. The CAB allowed for non-scheduled operations called "air taxi services" that flew over relatively short distances on an on-demand basis. In the post World War II period, this sector grew rapidly, only to become financially unstable. By 1951, fewer than 50 of these commuters had survived. The CAB defined what constituted a "non-scheduled" service in an attempt to prevent these small carriers encroaching on the domain of the trunk and local carriers. Specifically, services were regarded as being non-scheduled if the customer would not be able to assume services would be provided on a regular basis, the CAB ruling that the limit was ten round trips between any two points in a month. This gave rise to considerable debate about whether the "commuter" operators, as they became known, needed to be certified by the CAB, but the outcome was that the they were left alone provided they did not engage in unfair methods of competition.

The Deregulation Movement

The 1970's heralded in a period of growth and dynamism that was to result in major changes to the way the industry would operate. The market was growing rapidly and improvements in aircraft technology were allowing costs to be reduced and services to be improved. Under these pressures, the CAB introduced a formula for setting fares, incorporating a flag-fall element and a rate per kilometre. By the middle of the decade, restrictions on charter operators were relaxed and the scheduled carriers were confronted with the emergence of low-cost, charter operators flying on a regular basis with no-frills service.

This prompted a significant response. American Airlines applied to the CAB in 1977 to allow it to introduce deep discounts and it subsequently introduced its "Super Saver" deals of up to 45% off the normal coach (economy) fare. The impact on the market was dramatic with traffic growing by as much as 60%. This provided evidence that the market was being constrained by the fares policies of the CAB. Moreover, there were two States, California and Texas, that were large enough to have airline operations entirely within their own jurisdictions, and both had pursued relatively liberal approaches to entry. The intrastate airlines showed that small airlines could survive and their costs were significantly lower than the carriers regulated by the CAB.

By 1978, the tide of opinion had turned firmly against regulation. There had been a considerable amount of work by academics to investigate whether there were genuine economies of scale, whether airline competition was likely to be destructive and what benefits would flow from deregulation. One important issue was that the majority of routes was served by a single airline and it was likely this would continue in a deregulated environment. However, there was a persuasive argument that, provided a market is contestable, the threat of potential competition would be a sufficient force to

check the abuse of monopoly power. This proved to be very persuasive at the time and the combined weight of arguments from all sources resulted in Congress passing the *Airline Deregulation Act in October (1978).* With immediate effect, the airlines had freedom to set their own fares and less restrictive control over their networks (Button 1989).

One of the residual concerns was that the major airlines would withdraw their services to small communities, and a feature of deregulation was that subsidies could be provided to commuter airlines. "Essential air services" were to be subsidised by the CAB on the basis that carriers applied to the CAB to provide services to communities that enjoyed services prior to deregulation and where the 1978 traffic levels were not more than 40 arriving and 40 departing passengers. The bidding was competitive and the contract would be for a period not exceeding two years. However, many operators preferred to remain unencumbered by the commitments required under the subsidy scheme and the experience was that the smaller communities were generally better off after deregulation. The trade-off was that larger jet aircraft were swapped for smaller, turboprop aircraft running, mostly, with improved frequency (Meyer & Oster 1984).

The Experiment With Competition

There have been several distinct phases in the process of adjustment to deregulation. At first, there was considerable activity by new entrant airlines. There were several that attempted to compete on service standards to capture high yield traffic, but most adopted a strategy winning market share based on lower fares. The incumbent airlines had the disadvantage that their employees had extracted generous conditions and incomes over a long period of time. Faced with powerful unions, these airlines were unable to match the new start-up airlines that were able to recruit on different terms. In addition to having lower labour costs, many of the new entrants were able to acquire used aircraft at favourable prices. Airlines such as People Express were setting the benchmark for low fares and generating significant increases in travel.

During the second phase, the incumbents were able to decrease their labour costs to some extent. Also, these airlines pulled out of shorter routes where the traffic density was low, allowing the regional carriers to expand. This had an added advantage for those major carriers that had developed a dominant position with the feeder carriers; the economics of operating a scheduled airline service are such that a small number of passengers delivered to the carrier from its allied feeders could mean the difference between a healthy profit and a loss.

During the third phase, the larger carriers went from strength to strength. The most notable feature was the adoption of hub-and-spoke networks. This strategy yielded some economies in operations as aircraft and ground equipment could be used more productively, but there were substantial marketing benefits. The hub-and-spoke strategy allows the airline to increase the number of origin-destination combinations in an exponential relationship so that the number of "products" available to consumers is much larger than it is under other network strategies. When the airline also has a frequent flyer scheme, the attraction to the traveller of choosing an airline with the largest number of connections is very high. In addition, frequency can be improved, but the traveller can suffer through poor connections at the hub. The larger

carriers had the advantage of on-line connections without the need for the traveller to make difficult transfers.

Through their code-sharing agreements with their partner airlines, the larger carriers further exploited this advantage, particularly since their computer reservations systems had in-built biases towards themselves and for code share partners. The major carriers used their computerised information systems (CRS and yield management) as competitive weapons against their weaker rivals and they developed “fortress hubs” at which it was difficult for another airline to attack them. There is some debate about higher fares resulted at these dominated hubs.

The entire industry suffered huge losses and there were many failures. Of the 11 incumbent airlines in 1978, Braniff ceased in 1989 after several years of trouble in 1989, Eastern was declared bankrupt in the same year, and Continental was kept operating under Chapter 11 provisions that provide a bankrupt enterprise protection from its creditors so that it can trade out of trouble. Western was acquired by Delta in 1986 and National was taken over by Pan Am in 1980, the national icon that has since gone. USAir is the single remaining local service carrier. The only airline to have made a profit throughout the entire period is Southwest Airlines, and few of the new entrants survived for more than a few years.

The outcome is an industry more than ever dominated by a small number of airlines and there are some who would argue that the industry requires re-regulation to curb the power of these carriers. However, productivity has increased for all airlines, and while fares have increased on shorter routes they have fallen significantly on longer routes.

The process of adjustment has been made more difficult because of the fluctuating fortunes of the travel industry resulting from variations in economic conditions. Also, there have been major advances in the uses of information technology, particularly in the form of computerised reservations systems and yield/revenue management systems. These have required adjustment to the way the airlines compete. However, there have been institutional rigidities that have prevented any rapid change in the relations between the airlines and organised labour.

Another factor in the adjustment process has been the integration of domestic and international airline operations. Excepting Southwest Airlines, all of the major US carriers are committed to international and domestic operations and they derive significant strength from this. Pan Am, without significant access to the domestic USA market, was severely weakened after deregulation and adoption of a more liberal international policy. However, the international environment is more complex than the domestic, particularly since the airlines are not free to adopt the networks that would be the most efficient to serve their chosen markets. Access rights must be negotiated through bilateral agreements, or marketing alliances must be struck with other airlines already serving those markets. Some analysts have described these alliances as part of a strategy to develop global airlines (Oum & Taylor 1995), but recent events such as the strained relations between Northwest and KLM and between British Airways and US Air and its more recent attempts to link with American Airlines illustrate the dynamic nature of these relationships.

Australia

The Origins of the Regulatory System

The technology of aviation promised much for an isolated country like Australia with its own internal transport challenges. Not surprisingly, Australian aviators were amongst the leading pioneers during the 1920's and 1930's when aviation technology had yet to prove its safety and reliability. Apart from requiring passengers with a spirit of adventure, high costs constrained the airline market to the wealthy few. In fact, the early airlines looked to government for assistance and, as in the United States, it was provided in the form of subsidies for carrying mail.

Qantas, established by two ex-war pilots in 1921, is the only Australian airline to have survived this era. Having been awarded a contract to carry mail, it developed services in the remote areas of Queensland and the Northern Territory. It was advantageously placed when the route from Southampton to Sydney, the longest in the world at that time, was being planned. Qantas and Imperial joined forces in a joint venture Qantas Empire Airways to serve the Singapore to Sydney leg.

By the early 1940's, the commercial airlines had a regional focus and the only airline with ambitions of putting the pieces together in a national network was Australian National Airways (ANA). It was backed by British ship owners and the Labor Government of the day feared this vital, emerging industry would be monopolised by foreign interests that had, in the Government's eyes, been well versed in monopoly practices in the maritime sector.

The policy response was to nationalise the industry, but the Government found it lacked the Constitutional power to do this. The Chifley Government then established the Australian National Airlines Commission in 1945 and it commenced operations in the domestic aviation market in 1946 as Trans-Australia Airlines (TAA). All Government business went to the new airline and there was a clear message that, if a monopoly were to develop, it would be in the public sector. TAA proved to be an innovative airline with a committed staff and it soon established a powerful presence in the market place. When the pro-business Menzies Government came into office in 1949, it also held the view that a natural monopoly was inevitable in a free market. TAA's popularity was such that it was not an option to close it down and to allow a private sector monopoly to emerge. The compromise was that the Government allowed a limited form of competition between TAA and the largest of the private operators, ANA. To implement this policy, the Government entered into an agreement in 1952 with ANA. The Government's stated aim was to ensure that the industry developed in an orderly fashion and that limited competition would provide consumers with a choice while avoiding destructive or wasteful practices.

This first attempt to introduce a two airline policy failed within two years. One of the reasons was that TAA was more effective than ANA in its marketing and in its choice of aircraft. A more fundamental problem was that several smaller airlines were still operating, mostly on a regional basis. One of these, Ansett Airlines, was run by an aggressive entrepreneur who basically provided a no-frills service with low fares alongside his main rivals. ANA tried several times to buy Ansett, but ultimately it was Ansett that swallowed ANA. The Government signed a new agreement with Ansett and that airline quickly acquired any remaining regional airlines that might pose a threat to it.

The Government's powers to prevent new airlines competing on trunk routes were limited under the Constitution and an important plank in the policy was the Government's commitment to deny any would-be airlines the right to import aircraft, relying on its *Customs (Prohibited Imports) Regulations*. Under the two-airline policy, fares and capacity were controlled, and the practice was to adopt the same type of aircraft. The Government was the arbiter on how much capacity should be introduced and there was a requirement that the capacity would be shared equally between the two carriers. The policy even went so far as to require the airlines to consult with each other on important commercial matters. Also, the Government extended its guarantees for financing aircraft purchases to Ansett. Other provisions related to the withdrawal of services on rural routes required evidence of the lack of profitability or of consultations that would lead to replacement services by another operator.

In 1981, the Government reaffirmed its commitment to the two airline policy in enacting legislation that would remain in effect until 1990. However, there were some changes that appeared to of minor significance at the time but which ultimately proved to be the first steps towards deregulation. First, scope was created for regional airlines expand their operations and to import jet aircraft. Second, there was a commitment to convene a public inquiry into the merits of deregulation no later than 1985. Third, air fares were now to be determined by an independent body, the Independent Air Fares Committee, using a cost-based formula approach.

The Deregulation Movement

Deregulation of the airline industry in the United States raised expectations that air fares in Australia would fall in a more competitive environment, especially on the longer sectors. Also, it appeared that the airlines had paid insufficient attention to the more price-sensitive sectors of the market. The tourism industry was a vocal opponent of the two airline policy claiming that agents had been denied opportunities to develop attractive travel packages. Others noted that, though the population of the USA was 15 times that of Australia's, the number of passenger kilometres in the USA were 38 times more than in Australia. Following deregulation in the USA, the number of people travelling by air increased sharply as discounts became freely available. A similar expectation was held for Australia.

A major influence on public opinion, however, was the expansion of East West Airlines (EWA), a former regional carrier. EWA took full advantage of the change in policy that allowed it to import jet aircraft and to expand its regional services. It provided a service directly into a resort area in Southern Queensland but then opened a new route that ultimately whetted the public's taste for more competition. EWA had a regional route from Sydney to Albury, the latter being on the New South Wales border with Victoria. The new route connected Melbourne with Albury. Taking each route independently, they fell within the definition of regional operations. However, the Sydney-Melbourne airline market is by far the largest in Australia and EWA began to exploit the connecting traffic, using low fares as the inducement. This attracted widespread publicity and aroused further expectations about the benefits of a more liberal airline policy.

When the promised public review of the two airline policy was conducted, the overwhelming number of submissions called for deregulation in one form or another. Even the Federal Government's own economic ministries advocated a more competitive market. The main supporters of the two airline policy were the two airlines deriving benefit from it, the Department of Transport and Communications that administered it, and the union movement fearing job losses and changes in work conditions. The review committee (May et al 1985) presented several options to the Government without supporting any particular one, but the pressure on the Government was so great that it announced it would serve notice to the airlines that it would terminate the two airline policy effective October 1990. This delay was the result of a requirement under the *Airlines Agreement Act (1981)* to give three years' notice of change.

In simple terms, deregulation in Australia meant that the airlines were free to act like any other business with the proviso that safety regulations had to be observed. New operators were able to commence operations once they had been certified and the airlines were free to set their own fares, choose whatever aircraft capacity they wanted, and to withdraw from unprofitable routes. In common with other businesses, they also needed to comply with general regulations on competition and on pricing practices under the jurisdiction of the Trade Practices Commission and the Prices Surveillance Authority (now combined as the Australian Competition and Consumer Commission).

The Experiment With Competition

Several events occurred prior to October 1990 that would constrain the opportunities for new entrants. First, the owners of Ansett Airlines, TNT and New Limited, acquired EWA. Second, they secured long-term leases over their own terminals at Australia's major airports with the result that any new carriers would have, at best, limited airport facilities. Third, they prepared for deregulation by upgrading and expanding their fleets and by improving their productivity. The Australian Airlines Commission dropped its established trading name and adopted the title “Australian Airlines” as part of a marketing campaign to shift its image in the eyes of consumers. Also, when the pilot's embarked upon industrial action to secure higher salaries, the airlines took a tough stand and precipitated a lengthy strike and interruption to airline services in 1989. Another development was that, as of July 1 1988, Qantas was permitted to carry the passengers of other international airlines on the domestic sectors of its services. However, the Minister for Transport and Communications rejected the argument that the Closer Economic Relations trade agreement with New Zealand would be extended to include aviation. By October 1990, Ansett and Australian were well prepared for any new rival.

Several prospective entrants vied to become the first start-up airline. Compass won the race and started in December 1990 with plans to capture a significant share of the market. However, its chief executive, Bryan Gray, argued that the incumbent airlines should not respond to Compass because his airline would succeed entirely on new traffic. Gray also claimed his airline would be able to produce seat kilometres at a significantly lower cost because it had low overheads and the most efficient aircraft operating in Australia at that time. When Compass under-cut its rivals' fares, they responded immediately and the public enjoyed a protracted price war lasting twelve

months. To be fair, airline deregulation commenced during a severe recession and the market had not recovered fully from the effects of the pilots' dispute. All businesses around Australia were cutting their prices and an advantage of airline deregulation was that the airlines were free to respond to the conditions.

Compass faced liquidity problems from an early stage and appears to have been under-capitalised. It suffered some set-backs as a result of factors beyond its own control (eg late delivery of aircraft, access to terminals), but it also performed poorly because of its strategy (Nyathi et al 1993). In the final event, Compass was brought under the control of a provisional liquidator just one year after starting. Subsequently, Southern Cross Airlines introduced services operating under the Compass logo, but it too failed after a short time.

Since deregulation, the demand for airline travel has increased sharply, especially for some destinations, and this was despite a sharp economic recession (Bureau of Transport and Communications Economics 1991). The proportion of passengers travelling on some form of a discount moved from 40% to around 45% by mid-1991, with the average discount appearing to increase, and the overall fare level was reduced in the initial stages. The competition was evident mostly on those routes where traffic levels were already high. Air fares fell most on the long routes while there were some increases on the shorter routes under 500 kilometres, mirroring the experiences in the USA. Just in the first year of deregulation, average air fares fell by 35.2% on routes of more than 2,000 kilometres (Australian Competition and Consumer Commission 1996).

When the public review of airline regulation was being conducted in 1985, it was made clear that the Government would not consider privatisation of Australian Airlines. By 1991, the Government had changed its mind, and both Qantas and Australian Airlines were being prepared for sale. However, it realised that the sale would be easier and would yield more if the two carriers were merged. In September 1991, Qantas acquired Australian Airlines from the Government for a cost of $400 million (Australian) and stated that it would create seamless domestic and international airline services. In February 1992, the Government made another policy announcement saying that Qantas would be permitted to sell any spare capacity on its international services to the domestic market.

These steps, though, could not be taken without making further guarantees about competition. At first, the Government indicated it was in favour of opening the Australian airline market to New Zealand carriers, but then it backed away from this position. In the end, the Government could not deny Ansett, or any other Australian operator, the opportunity to fly on international routes and this led to the establishment of the International Air Services Commission to allocate capacity fairly among the airlines (Findlay & Round 1994).

Since then, Qantas has been sold, with 25% being held by British Airways. Qantas also owns 20% of Air New Zealand. Meanwhile, Ansett's parents both have wanted to dispose of their shares in the airline and, finally, it has been agreed that Air New Zealand will purchase TNT's 50% share in two stages. This development has required extensive negotiations to satisfy the regulatory authorities of both countries that competition would remain effective. The cross-ownership relations between Qantas and Air New Zealand were one consideration, but Ansett New Zealand was the only

serious competitor to Air New Zealand in the New Zealand domestic market. One of the outcomes has been that it has been decided that there will be a single aviation market including Australia and New Zealand.

Within a decade, the Government was forced to abandon its long-standing policy on the regulation of domestic aviation, it merged and privatised its airlines, it permitted other Australian carriers to fly international routes, and it has entered into a regional aviation agreement. Competition and the dynamism of the market provided fewer and fewer alternatives as time progressed.

India

The Origins of the Regulatory System

When the Tata company formed a special aviation department in October of 1932, it provided one of the foundation stones of the modern Indian airline industry. Tata offered a scheduled airline service to connect with Imperial Airways flights at Karachi. As with Qantas, the new Indian airline benefited from the Empire Mail Scheme and it built up an impressive fleet. World War II interrupted the development of Tata's airline, but gradually it built its fleet up again as it was able to acquire aircraft like the DC-3 from the military. In 1946, the airline was floated as a public company and renamed "Air India" and investments were made in modern aircraft.

In common with the USA and Australia, India experienced a boom in commercial aviation after the war as pilots took advantage of surplus aircraft to commence their own businesses. It has been reported that over 100 airlines sprang up in this period and vied with Air India for market share (Brimson 1985). Under these conditions, the industry was unstable and the Government felt compelled to intervene. In 1947, 49% of the shares of Air India were acquired by the Government of India and it was intended that this carrier would serve international routes.

The remainder of the industry was in a financially precarious state and the decision ultimately was made to nationalise the industry. The Government took the nine strongest airlines and merged them to form the Indian Airlines Corporation. Indian Airlines was to operate domestic services and Air-India International, as it was now known, was to operate as the national flag carrier. The latter was now fully owned by the Government. The industry was to be regulated by the Director General of Civil Aviation under the *Air Corporation Act (1953)*.

The major subsequent change of policy was introduced in January 1981. The Government, under pressure to promote economic development at the regional level through tourism and other industrial development, decided to start a third level, feeder airline, Vayudoot.

The Deregulation Movement

However, by the middle of the 1980's, the performance of the national airlines and of the Government's policies were coming under criticism from a number of directions. International tourism was growing relatively slowly and two inhibiting factors were the performances of Air India and Indian Airlines. The former was constrained by its small ageing fleet and by the need to serve Government demands and the excellent

reputation is had earned over the years was being eroded through a lack of reliability and generally poor service. This, together with protectionist policies, were acting as constraints on the growth of international tourism. The problems at Indian Airlines were similar and the airline had a reputation for lateness, for cancelled flights and poor customer service and the Government was under pressure to inject capital into the airline. Vayudoot had not solved the problems of providing access to tourist destinations to the extent that had been hoped.

The first tentative steps towards a more liberal policy were taken by the Government of India in 1986 when the Minister of Tourism and Civil Aviation announced that private sector airlines would be granted licences to operate as "air taxis". The expressed aim was to boost capacity on the main tourist routes. To be considered eligible, the operators were to use "expatriate funds" to acquire their aircraft and these had to have at least 15 seats and no more than 50 seats. Also, the air taxis were not permitted to plan any departures within 2 hours of an Indian Airlines or a Vayudoot flight. Fifteen licences were issued within a short time (Mhatre 1994).

Despite this, criticism continued to grow. Indian Airlines was carrying 9.9 million domestic passengers in 1987/88, but independent assessments estimated that the market could grow to 25 million by 1995 if capacity restrictions were overcome and if services improved in a more competitive market (Louden 1993). At the same time, against the background of a poorly performing economy, the International Monetary Fund and the World Bank were urging India to allow the private sector greater scope to compete in areas previously reserved for state enterprises. The Government responded in 1989 by announcing an "open skies" policy under which it would begin a process that ultimately would allow the air taxi operators to offer scheduled services in competition with the national carriers. At the same time there was a clear signal that "unofficial" scheduled operations would be permitted in the meantime. In addition, the Government stated its intention to privatise Air India and Indian Airlines by first placing them under the Companies Act with subsequent sale in part or in whole.

To qualify for a licence as an air taxi operator, the Director General of Civil Aviation required the private sector airlines to operate an equal number of flights on routes of less than and greater than 700 kilometres and fares were to be regulated. In 1990, however, the restrictions on the taxi operators were relaxed with the exception of the control on purchasing aircraft with expatriate funds and again the stated intention was to boost capacity on tourist routes. Eleven applications were submitted to the Director General of Civil Aviation and, in 1990, five airlines were given approval to commence. Interestingly, one of the air taxi's, India International Airways, was granted approval to fly to Kathmandu from Delhi and Varanasi from April 1991. Air Asiatic, based in Madras, imported a Boeing 737 to fly between Madras and Bombay, but it discontinued operations after only five months, during which time it made 363 flights and carried 23,437 passengers. The other new entrants mostly operated smaller turbo-prop aircraft.

These new entrants fared poorly, but the commencement of East West Airlines in February 1992 heralded in a different era. Backed by one of India's largest travel groups, this Bombay-based operator soon made a major impact on the market with its seven B737-200's and three F27's. Its entry was assisted by a strike at Indian Airlines and it carried more than one million passengers in 1992-93. One of the significant

policy developments was that the air taxi's were permitted to obtain up to 40% of their equity finance from foreigners. Jet Airways, also backed up by a travel group, took up this option in 1993 with 20% funding from Kuwait Airways and 20% from Gulf Air. In the same period, the other significant airlines to introduce jet aircraft were Damania Airways and ModiLuft.

These operators all expanded rapidly, but in addition to taking traffic away from Indian Airlines and Vayudoot, they all recruited pilots and engineers from the national carriers. Plagued by industrial disputes and shortages of key operational staff, Indian Airlines increasingly was being weakened. Vayudoot was losing large amounts of money and was folded into Indian Airlines. The Minister of Civil Aviation responded by placing restrictions on the recruitment of pilots and engineers into the new carriers. Also, the Minister banned publication of timetables and the requirement that the private sector airlines fly an equal number of routes above and below 700 kilometres was enforced. Officially, the justification for halting the progress of the air taxis was air traffic congestion at Bombay and Delhi airports.

The situation improved in 1994 when the Government repealed the *Air Corporation Act (1953)* and issued new guidelines for granting scheduled airline status for private sector airlines. Each case was to be examined on its merits, but the operators were required to have a minimum fleet of 3 aircraft and to show evidence of an appropriate maintenance organisation and training facilities. Also, the government has stipulated that the new carriers were to provide services on a minimum number of lower yield routes. The new carriers had to prove their financial fitness and the carriers had to bear some of the responsibility for the social and other low density routes.

The regulations divided the network into three categories. Category I included the main trunk routes, Category II covered the "social" routes, and Category III included all remaining routes. Each scheduled carrier flying Category I routes was required to deploy an additional minimum of 10% of that capacity (in terms of available seat kilometres) on Category II routes and 10% of the capacity on these routes has to be operated within those regions that had some of the least economic fares. In addition, the carriers had to provide a further 50% of their capacity on Category III routes.

With the enactment of the *Air Corporations (Transfer of Undertakings and Repeal) Act (1994)*, Air India and Indian Airlines became limited liability companies incorporated under the *Companies Act (1953)*. In the words of the Director General of Civil Aviation, the industry has been "demonopolised".

The Experiment With Competition

There has been no shortage of new entrants, but it must be said that the airline industry in India is particularly risky from a financial point of view. As is the case in other countries, the airline industry is very competitive and there is little margin for a loss in yield and load factor. However, there are additional factors that are making it difficult for all of the airlines to remain financially viable, including Indian Airlines. First, a 117% surcharge was placed on the price of fuel during the Gulf War, increasing the price from 60-70 cents US to around $1.60 per litre (Prasad 1996). Although the airlines have been granted a dispensation to import their own supplies, customs duty and handling charges bring the costs up to a similar level. Added to this, airport charges are high and the airlines are required to collect a 15% tax levied on the

passenger fare, the Inland Air Travel Tax. Several airlines have had difficulty in paying the tax revenue to the customs authorities and at least two, ModiLuft and East West, have had their operations suspended as a result.

Also, all of the airlines have been operating with leased aircraft given the uncertain progress of the reform process, and the falling value of the Indian Rupee has left them exposed to currency cost increases. The private sector airlines initially recruited pilots and engineers from Indian Airlines at as much as five times their previous salaries (Ballantyne 1996). This practice has been banned by the Government and now all of the airlines are faced with the challenge of training more technical staff. The private sector airlines so far have not banded together to pool resources on maintenance, training or even for ground handling and security. One of ModiLuft's senior executives claimed that the break-even load factor was 67% and a fall of 5% in the load factor would result in a fall in profits of between 45 and 84%, depending upon the starting point (Dasgupta 1995).

Indian Airlines has led the way in increasing the general level of fares by 40% between 1993 and 1995 (Ballantyne 1996). However, the Government has refused to accede to the latest request for a 10-12% increase in domestic fares based on higher costs of purchasing fuel. Given the costs of operation in the Indian context, it is notable that it has been claimed that fares are half the level of comparable air services in Europe (Dasgupta 1995). Indian Airlines claims it is required to keep its fares 17% below its average on some of the secondary routes while its private sector rivals are not so constrained. Discounting so far has been limited, but in 1994 Indian Airlines introduced discounts of up to 10% for point-to-point fares and some airlines have offered a free return trip on selected flights.

The Government's policy initiatives have undoubtedly increased the amount of aircraft capacity on offer and one analyst has been led to comment that there has been *Öuncontrolled expansion, transforming a monopoly market into a chaotic free-for-all almost overnight. There are now seven scheduled private airlines, 18 non-scheduled operators and 27 others waiting in the wings proposing to enter the fray* (Ballantyne 1996). It is has been estimated that all airline combined now offer 50,000 seats each day while demand exists for 36,300. Despite this claim, the Government has stood firm on its opposition to the proposed entry by an airline owned by Tata Industries with 40% equity from Singapore Airlines on the grounds that the market could not withstand the scale of operation envisaged. There can be no argument that consumers are the ones gaining the benefit from a wider choice of airlines offering greater reliability and frequency, increased capacity, and improved in-flight service and passenger reservation and handling.

Infrastructure constraints have been a feature of deregulated markets and this is no less true in India. The new entrants have lacked terminal facilities, each has invested in its own security systems and ground handling. Apron congestion at Bombay, New Delhi, Calcutta and Madras has posed a major problem. The Government now requires the airlines to park their aircraft overnight at the nearest designated airport rather than at their operational base and this is claimed to be a constraint on the adoption of hub-and-spoke network strategies (Vakil 1996). In 1996 the Government has taken steps to address these problems by adopting a "Tourist Action Plan" according to which it will upgrade existing airport facilities and build new airports (Mayes 1996).

Successful new entrants in developed markets must possess some strategic advantage, and most opt to pursue lower costs so that can sustain low fares. The new Indian carriers did, at first, lease older versions of the Boeing 737, but many have been introducing the B737-300, -400 and now the -500 series. When these ownership costs are coupled with relatively poor utilisation resulting from operating constraints, the new entrants have not derived any significant advantage from this quarter. Training costs were minimised at the start by poaching crews and engineers, but now the new carriers have to bear the full burden of staff development. Salaries paid by the new carriers were considerably higher, totally opposite to the case for new entrants in the United States and other places.

With regulated fares it is predictable that the new airlines would attempt to distinguish themselves from the incumbent, Indian Airlines, through superior service. Their higher pay and better conditions for staff and their modern aircraft have helped them develop a reputation for punctuality and reliability and they have set new standards for in-flight service. However, these are not sustainable advantages and Indian Airlines has improved its performance. Moreover, Indian Airlines has a much larger fleet and a more extensive network, and its introduction of a frequent flyer plan in 1993 will continue to be a marketing strength. The new airlines have been forced to commence with relatively small fleets and then have been expected to spread their capacity across different classes of routes. These constraints have meant that the option pursued by many other start-up airlines of building up frequency on a route before opening competition on other fronts has not been available. As a consequence, many of the airlines continue to operate with very low frequency and a large network.

Probably the single most important requirement that most new entrants face is access to capital, particularly to sustain early losses while establishing a place in the market. ModiLuft, Sahara India, and NEPC are all backed by large industrial groups Jet Airways is owned by a sizeable travel group, as was East West. Jet Airways is 20% owned by Gulf Air and Kuwait Airlines, but cooperation between these carriers does not extend beyond some schedule coordination, although Jet now has signed a memorandum of understanding to establish feeder airlines. NEPC took over Damania, renamed it NEPC Skyline and intends using NEPC as the feeder airline. Also, NEPC has taken over the management of UP Air, a regional carrier in Uttar Pradesh. ModiLuft's relationship with Lufthansa has been severed and it is looking for fresh alliances.

Indian Airlines has improved its services but has come under continuing criticism for its financial losses. There are several extenuating circumstances that must be taken into account. First, when one of its A320 aircraft crashed in 1990, the rest of the airline's A320 fleet was grounded for ten months pending the outcome of an investigation. Shortages of pilots and engineers have been so severe that aircraft have had to remain idle while the private sector airlines have been seeking increased capacity. Indian Airlines continues to bear the main burden of providing services on the social routes while it has had to cope with industrial disputes as its numerous entrenched unions seek to improve their position. Salary increases have been approved and the airline has a strategy to deal with its shortages of pilots.

A major plank in this strategy is the commencement in March of 1996 of its own low-cost operation, Allied Services. The aim is to keep overheads to the minimum and to use the older B737 aircraft from the Indian Airlines fleet. The new airline has allowed

Indian Airlines to recruit some of its former pilots who had gone over to the new carriers without having to deal with seniority issues within Indian Airlines. Those B737's not required by Allied will be sold off so that Indian Airlines can operate a more uniform fleet and it can provide career advancement opportunities for its pilots by re-training them to fly its A300 and A320 aircraft.

At the same time, the talk of merging and privatising Air India and Indian Airlines has continued. The current position of the Government is that both airlines will be kept separate, although there have been some attempts to rationalise operations and to carry out joint marketing initiatives. In particular, Indian Airlines has introduced 17 new international services, a move which has released the capacity pressures on Air India so it can concentrate on winning back market share on the long haul routes while improving the average yield for Indian Airlines. Code sharing has been introduced and the national carriers are integrating their reservations systems.

Despite all of the activity, overall traffic has grown slowly. Indian Airlines carried 3 million fewer domestic passengers in 1995-96 than it did in 1987-88. The private sector airlines, including scheduled and air taxi operators, carried 3.98 million passengers in 1994-95 (later figures are not available), a 37% market share. The total traffic, therefore, grew by only 10% in 8 years. Over the period 1980 to 1986 (calendar years), there had been an increase of 89% in passengers carried. In other situations where the airline market has been liberalised, the market has expanded quickly. It needs to be asked why the market could grow as much as it did when Indian Airlines had no private sector rivals in the period up to 1986 and then so slowly when economic conditions were supportive and when the airline industry as a whole was upgrading its product.

Table 2: Indian Airlines Traffic Task 1987-88 to 1995-96

Year	Passengers	Task Performed Passenger Kilometres ('000)	Capacity Used Available Seat Kilometres ('000)	Load Factor %
1987-88	9,934,958	8,251,515	10,412,679	79.2%
1988-89	9,541,788	8,243,895	10,103,330	81.6%
1989-90	9,390,656	8,271,810	10,650,345	77.7%
1990-91	7,471,120	6,860,737	8,588,895	79.9%
1991-92	8,311,844	7,498,354	10,107,965	74.2%
1992-93	7,268,443	6,623,188	8,889,576	74.5%
1993-94	7,229,810	6,475,119	9,447,538	68.5%
1994-95	6,897,700	6,150,039	8,590,065	71.6%
1995-96	6,927,021	6,272,294	8,278,561	75.8%

Source: Director-General of Civil Aviation, India, various annual reports.

What Can Be Learned From the Experiences Elsewhere?

Economics of Airline Competition and Regulation

There are significant differences between one country and another in so far as commercial aviation is concerned. At one extreme there is the well-developed lucrative market in the United States and at the other extreme there are domestic markets only beginning now to realise their potential. Governments in developed economies tend to place an emphasis on providing benefits to consumers whereas, in developing countries suffering from inadequate surface transport links, a key objective for aviation is to assist in national development and to promote social interaction. Notwithstanding these differences there are some lessons that have been learned about airline competition and regulation.

Perhaps the most fundamental of these concerns the nature of economies of scale. Many countries regulated their industries believing that, if the market were left to its own devices, a monopoly would emerge. The evidence is that small airlines can survive in competition with large ones; that there are no significant economies of firm size beyond a fleet of 4 to 5 aircraft. This does not mean that there are no economies of scale in airline operations. Indeed, larger aircraft tend to produce seat kilometres at a lower cost than smaller aircraft. The trade-off is that, for a given size of market, frequency must suffer if the size of the aircraft is increased. After price, and putting the issue of safety to one side, the most valued aspect of airline service is frequency.

In the Indian context, the new entrants have been restricted to operating relatively small jet aircraft while having their fares regulated. This being the case, it should be expected that these airlines would want to build up their frequency on the densest routes. However, a third plank of the Government's policy comes into play by constraining the way the airlines, including Indian Airlines, can deploy their fleets. There are two ways this imposes higher overall costs on users. The first is that the airlines have to choose between having mixed fleets of aircraft, using smaller turboprop aircraft for the lower density routes and their jets for the trunk routes. Though larger aircraft yield economies of operation, this is only of value if the seats can be sold. If aircraft in a mixed fleet are matched more closely to demand

conditions, some savings can be generated. However, even large airlines avoid having mixed fleets knowing that this increases the costs of training and maintaining flight crews, engineers and spares. It also can affect reliability as it reduces the airline's flexibility in scheduling. Given the small scale of the new entrants, this is a significant burden and it is not surprising to see the emerging trend for the trunk operators to associate with feeder airlines and for Indian Airlines to form its own feeder airline.

The second way costs are increased is that the new airlines are commencing with a larger network and with lower frequencies than would be likely under completely free conditions. This means that the airlines are not able to exploit what is known as "economies of traffic density". There are some fixed costs associated with the opening of a new route including maintenance and administrative arrangements, passenger and traffic handling, marketing and the inevitable losses that occur as a presence is established in the market. As the traffic becomes more dense, these fixed costs are spread more thinly and so it is in the interests of airlines to develop their networks in such a way as to maximise traffic density. Evidence from North America indicates that, for scheduled jet airline services, these economies of density continue to be achieved up to 40 million route ton kilometres (Gillen et al 1990).

The constraints on aircraft choice and allocation to routes deny the airlines the opportunity to exploit these economies of density and constraints on airport infrastructure, as has been noted above, prevent the airlines from developing hub-and-spoke network strategies. These are known to yield significant savings to airlines and to give them a greater ability to cover a larger network of connecting points than is possible under other network strategies. All of these factors are resulting in lower aircraft and labour productivity than is achievable in other airline markets.

The Managing Director for Sales and Marketing for Indian Airlines was quoted recently as saying that only 20 of the 70 domestic routes served by Indian Airlines were profitable and that the core of the business was built on the "golden quadrangle" linking Bombay, New Delhi, Madras and Calcutta (Mayes 1996). Furthermore, the cost to Indian Airlines of just operating according to the same guidelines as the private sector airlines would have saved it 1.58 billion Rupees (approximately $48 million US) in 1985. This provides some indication of the burden all of the operators are bearing to cross-subsidise the uneconomic routes.

When the United States deregulated its market, it recognised the problem of serving small communities and it committed itself to pay subsidies according to strict rules of eligibility. The commuter airlines were well suited to the task since the problem arose on short haul routes and the view was taken that when traffic reached 40 passengers a day in each direction, the community could support its own services. The problems of larger airlines vacating unprofitable routes did not raise major problems with this safety net in operation. Undoubtedly there is scope for promoting smaller airlines to deal with the low density routes in India but there are some significant routes that are not of a short haul nature (eg Andaman Islands). India has to find solutions to these problems, but a concern all economists have with cross-subsidies is that the association between the costs of providing a service and the benefits to the community becomes obscured and often this results in inefficiency. The comments made above about the fundamentals of airline economics suggest the need for an evaluation of the current policy and of alternative strategies to achieve the Government's objectives.

The Australian Experience

When the Government of India made its first steps in 1986 to liberalise competition in its domestic airline industry, the number of passengers carried in a year was 9.2 million. In the same year in the United States, a market of a different scale and nature, the airlines carried 390 million passengers. Australia's market size was 11 million passengers in the twelve months prior to deregulation in December 1990. Since this traffic was being shared between two airlines in an approximately equal way, it can be seen that Australia entered into deregulation with two airlines each smaller than Indian Airlines.

The network for Indian Airlines includes close to 60 airports whereas the Australian operators confined their services mainly to 18 airports. While the average density of a route is much lower in India, averages can be misleading. Over half of the Australian passengers boarded or alighted at either Sydney or Melbourne and 82% of the traffic is shared between the nine major ports of Sydney, Melbourne, Brisbane, Adelaide, Perth, Canberra, Coolangatta, Cairns and Townsville. India has its "golden quadrangle", Bombay, Delhi, Calcutta and Madras. Both India and Australia have a small number of routes that could sustain competition and they have other routes where the traffic density is low. The two Australian domestic carriers achieved close to 40 million revenue tonne kilometres per airport served while Indian Airlines averaged closer to 10 million revenue tonne kilometres, well below the level necessary to exhaust economies of traffic density.

In summary, the Australian market is of a size that is relevant to the Indian market, but the two major carriers in Australia have not had to spread themselves as thinly as has Indian Airlines and, now, the new private sector airlines. Even so, Australia has only a small number of routes that would be considered dense by North American standards. It is notable, though, that the effect of a new entrant into the industry in Australia was to precipitate a price war that resulted in an increase of 4 million passengers in a single year even though the nation was in the middle of a recession. The total number of domestic passengers increased from 11 million in the twelve months prior to deregulation in December 1990 to almost 25 million five years later and Australia seems to have succeeded in expanding the domestic market under deregulation more so than India.

The new entrant in Australia, Compass Airlines, operated 5 Airbus A300-600R aircraft in a single-class configuration and it flew only the dense routes. This aircraft, on paper, gave the new carrier a cost advantage and, with its low overheads, Compass was relying on being able to sustain low fares. However, the two established carriers responded immediately with low fares of their own and the ensuing price war gained maximum publicity and resulted in many Australians flying for the first time in their lives. Though Compass did not survive for long, its impact has been long-lasting. The airlines have succeeded in penetrating new markets and they are using their discounts to continue developing price-sensitive segments of the market. Unrestricted fares have tended to rise in the post-deregulation era, but the widespread availability of discount fares has forced the average price down. The result is that Australians enjoy some of the lowest domestic air fares anywhere in the world (Bureau of Industry Economics 1994).

The key lessons that have been learned from deregulation in Australia are that:

- the regulated airlines had considerable scope to cut costs
- the boom in travel to tourist resorts in the midst of a recession indicated that the regulated airlines had failed to develop significant markets for low cost travel
- the market could be very competitive even with a small number of rivals
- actual competition is more effective than potential competition (three is better than two) and failure of one airline during a recession does not prove there is only room for two
- the deregulated market is risky and volatile and airlines need "deep pockets" to survive

What also became clear in Australia was that the Government's policy quickly became overtaken by events in a dynamic market. A firm position was adopted during the review of aviation policy in 1985 that the national airlines would not be merged and nor would they be privatised. Even when the decision to privatise was taken, the Government initially believed it could retain 51% of the ownership, but the financial sector would not accept this and the Government found it had to fully divest itself of ownership of the airlines. Also, the Government came to recognise that it made no sense to sell two assets separately, that they would be stronger when combined. Having made these decisions it was just a short step to allow other Australian carriers to operate on international routes. Continuing financial pressures on the owners of Ansett Airlines and the failure of the new entrants left the Government few choices when the only serious bidder for a half share of Ansett was Air New Zealand. The end result is that the Government has had to do an about-face on issues of merger, privatisation and a common airline market with New Zealand all in the space of five years.

Concluding Comments

India and Australia both commenced the uncertain process of reforming their commercial aviation sectors from around the middle of the 1980's, and both started from a position where they had two national carriers, one operating international routes and the other operating domestic routes. The markets were of a comparable size, although Indian Airlines had to spread its resources more thinly over a wider network. India has had many new entrants whereas Australia has had only two, and both of these failed after a short while. Australia's market has grown substantially while India's has achieved only a modest increase. Australians now enjoy access to a wide range of discount fares while discounting in the Indian market has been relatively subdued. All in all, India has been more cautious in its approach to liberalisation and has shown its concern to protect Indian Airlines rather than to address the wider economic benefits of a more competitive industry.

There is a sense that the airline industry in India is at the cross-roads. The first effective new entrants have gone out of business or have been absorbed, and there are signs of financial stress among the remaining carriers. Indian Airlines lacks the pilots to operate its full fleet and it continues to make losses. Its expanded international operations will provide it with higher yield traffic, and devolving its regional operations to its off-shoot, Allied Express, will help to improve the situation. The Government of India, as did Australia's, prefers to keep its airlines separate and is not

eager to sell off national assets. However, competition is a powerful force and the strong airlines around the world mostly have integrated domestic and international operations. The need to have a subsidy mechanism to encourage airline services in a country where surface transport links are inadequate is understandable, but there comes a point where the costs of supporting these services is out of proportion with the benefits. The challenge is to find a better way to proceed.

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