# REPORT OF THE COMMITTEE ON A ROAD MAP FOR THE CIVIL AVIATION SECTOR

**Ministry of Civil Aviation**
**Government of India**

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CONTENTS

## LIST OF ACRONYMS

| | |
|---|---|
| AA | Alliance Air |
| AAI | Airports Authority of India |
| AERA | Aviation Economic Regulatory Authority |
| AI | Air India |
| ATAG | Air Transport Action Group |
| ATC | Air Traffic Control |
| ATCOs | Air Traffic Controllers |
| ATF | Aviation Turbine Fuel |
| ATMS | Air Traffic Management Services |
| BCAS | Bureau of Civil Aviation Security |
| BOT | Build Operate Transfer Concession Model |
| CAGR | Compounded Annual Growth Rate |
| CANSO | Civil Aviation Navigation Service Organisation |
| CAP | Civil Aviation Policy |
| CCI | Competition Commission of India |
| CFI | Consolidated Fund of India |
| cif | Cost Insurance Freight |
| CII | Confederation of Indian Industry |
| DGCA | Directorate General of Civil Aviation |
| EAS | Essential Air Services |
| EASF | Essential Air Services Fund |
| E.C. | European Commission |
| E.U. | European Union |
| FAA | Federal Aviation Administration |
| FTT | Foreign Travel tax |
| FDI | Foreign Direct Investment |
| FI | Financial Institution |
| FICCI | Federation of Indian Chambers of Commerce and Industry |
| FII | Foreign Institutional Investor |
| FIPB | Foreign Investment Promotion Board |
| FY | Fiscal Year |
| FYP | Five Year Plan |
| GDP | Gross Domestic Product |
| GoI | Government of India |
| IA | Indian Airlines |
| IATA | International Air Transport Association |
| IATT | Inland Air Travel Tax |
| ICAO | International Civil Aviation Organisation |
| IMD | Indian Meteorological Department |
| KL | Kilolitre |
| MoCA | Ministry of Civil Aviation |
| MoD | Ministry of Defence |
| MoF | Ministry of Finance |
| MoHA | Ministry of Home Affairs |
| MT | Million tonnes |
| NATCA | National Air Traffic Controllers Association |
| NRI/PIO | Non Resident Indian/Person of Indian Origin |

| | |
|---|---|
| NPRM | Notice Prior to Rule Making |
| OCB | Overseas Corporate Body |
| OECD | Organisation of Economic Cooperation and Development |
| PHHL | Pawan Hans Helicopters Limited |
| PSF | Passenger Service Fee |
| PSK | Passenger Seat Kilometre |
| PSU | Public Sector Undertaking |
| QoS | Quality of Service |
| RASS | Remote Areas Subsidy Scheme |
| RBI | Reserve Bank of India |
| RPI-X | Retail Price Index Minus X |
| RPK | Route Passenger Kilometers |
| ToR | Terms of Reference |
| U.K. | United Kingdom |
| U.S. | United States of America |
| WTTC | World Travel & Tourism Council |

# CHAPTER 1. INTRODUCTION

The linkage between civil aviation sector and economic activity and its catalytic impact on general development are now well recognised. In a 1998 study, the Air Transport Action Group (ATAG)[1] had estimated that the total direct economic impact of aviation on gross world output would increase from US$1.36 trillion (trn) in 1998 to $1.7 trn by 2010; 28 million (mn) jobs – including direct, indirect and induced employment – are affected by the civil aviation sector. The International Civil Aviation Organization (ICAO) estimated[2] that $100 spent on air transport produce benefits worth $325 for the economy; a hundred additional jobs in air transport results in 610 new economy-wide jobs. The ICAO study attributes over 4.5% of global GDP to the air transport component of civil aviation. A DRI•WEFA study[3] of the impact of civil aviation on the U.S. economy in 2002, using a variety of economic multipliers encompassing the direct, indirect and induced effects on related industries for which civil aviation provides an enabling function, estimated a 9% share of civil aviation in GDP, amounting to about $900 billion (bn) and 11 mn jobs.

The aviation sector in India[4] is rapidly gaining importance, although its many impacts have not been rigorously quantified. It is estimated that foreign exchange transactions of $22.5 bn are directly facilitated by civil aviation and another $96 bn indirectly through civil aviation services.[5] 95% of tourist arrivals are by air. Airports facilitate growth of high-value and perishable trade; 40% of exports and imports in India by value are carried by air. The sector might one day also serve to routinely provide connectivity to remote areas otherwise inaccessible by other modes of transport.

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[1] ATAG, "The Economic Benefit of Air Transport", 1998.
[2] ICAO brochure, "Economic Contribution of Civil Aviation: Ripples of Prosperity", 2000.
[3] DRI•WEFA, Inc., "National Economic Impact of Civil Aviation", July 2002.
[4] The aviation sector in India can be broadly classified into three distinct functional segments: (i) operations, including the activities of Indian Airlines (IA) and its wholly owned subsidiary Alliance Air (AA), Air India (AI), Pawan Hans Helicopter and other private operators; (ii) infrastructure, under the purview of the Airports Authority of India (AAI); and (iii) regulation and development, the responsibility of the Directorate General of Civil Aviation (DGCA) and the Bureau of Civil Aviation Security (BCAS).
[5] Unless otherwise referenced, the numbers in this chapter are culled from the 2002-03 Annual Report of the Ministry of Civil Aviation, the Tenth Five Year Plan document and presentations made to the Committee by Ministries like Tourism, organisations like AAI and DGCA, air transport operators and various industry associations like CII and FICCI.

The Airports Authority of India (AAI) manages 122 airports, of which 94 are civil airports (including 11 international airports[6]) and 28 are civil enclaves at defence airfields.[7] These airports handled over 4.4 crore (cr.) passengers in 2002-03 (1.5 cr. international and 2.9 cr. domestic). Domestic passenger traffic had increased 8% in 2002 to 1.3 cr., despite adverse operating conditions, viz., low load factors, high fuel and insurance costs, etc. International passenger traffic carried by Air India (AI) and Indian Airlines (IA) also increased 8% to 0.4 cr. in this period. Indian airports handled close to a million tons (MTs) of cargo (0.65 MT of international and 0.33 MT of domestic) in 2003, a 15% increase over the previous year. Traffic and cargo growth over 2002-03 to 2006-07 is forecast to be between 5-7.5% per annum for domestic and international traffic.

The partial deregulation of selected segments initiated in the nineties and the consequent competition has transformed domestic airline operations. Choice and flight quality of service, especially on trunk routes, has increased dramatically. Flexible tariff structures are making flying increasingly more affordable. Customer interface and the quality of ancillary services are better. Innovative airline operations models are being introduced. Cargo is governed by an open skies policy. Responses of the government to economic exigencies have also paid dividends; its decision to announce open skies for winter schedules has led to increased tourist arrivals, even in a volatile international environment, and there is now a clamour for extending this policy for three more years.

Despite these advances, India has lost out in aviation; it has missed the travel boom of the nineties, ceded its natural geographic and economic advantages as a cargo and courier hub to other countries and air travel still remains confined to a tiny section of the domestic population. The share of India in total world aviation traffic continues to remain minuscule. India accounted for a mere 24 lakh tourist arrivals in 2002, compared to 71.5 cr. worldwide and 13 cr. in Asia Pacific (a 0.38% share). Worldwide, tourism accounts for 10.2% of GDP, while in India, it is just 4.8%. OAG, a respected industry information service estimates that while air seat capacity has increased 485% in China over 1989-2000, in India, this has increased by a mere 40%.

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[6] These are at Delhi, Mumbai, Kolkata, Chennai, Thiruvananthapuram, Bangalore, Hyderabad, Ahmedabad, Goa, Amritsar and Guwahati.

[7] Of the total 400 airfields / airstrips in the country.

Total world scheduled passenger traffic was 161.5 cr. and cargo traffic by scheduled airlines alone was 30 MT. The 25 largest airports in the world[8] handled some 102 cr. passengers and 1.1 cr. commercial air transport movements in 2002. Mumbai and Delhi airports are ranked the 80th and 109th busiest airports, respectively, in the world, in terms of passenger movement.

An efficient aviation sector is essential to support tourism, an industry with immense employment opportunity. Here, it is noteworthy that investment in tourism industry would generate the largest number of jobs as compared to investment in other sectors. Thus, an investment of Rs.10 lakh creates –

13 jobs in manufacturing

45 jobs in agriculture, and

89 jobs in tourism.

Furthermore, tertiary benefits of tourism are significant as the trickle-down benefits of the travel & tourism industry on the economy go far beyond what is apparent. The Satellite Accounting figures of World Travel & Tourism Council (WTTC) suggest that the $11.33 bn travel & tourism industry in India supported $23.8 bn in related economic activities.

Barring a few airports, available infrastructure is under-utilised. The four gateway airports account for 42% of revenue. There are a large number of airports where full infrastructure is available, but only operate one to two flights a day; about 50% of AAI airports are not being utilised by airlines. Although little quantitative data is available on Indian airports' performance parameters, casual empiricism suggests that quality of service is severely lacking. International airports, the gateways forming tourists' first impressions of India, are sub-standard. Passenger amenities, conveyor belt facilities, etc. are, for the most part, an embarrassment. Grossly inadequate cargo-handling procedures at airports result in delays of a couple of days in transit from one terminal to another. Only ten airports made a profit in 2001, despite airport landing

[8] 14 in North America, 6 in Europe and 5 in Asia.

charges having been increased threefold over the last 15 years. Airport charges[9] in India are 78% higher than the international average!

Clearly, the aviation sector in India is in crisis. Our airlines are bleeding, with the public sector domestic carrier having made a loss of about Rs. 350 cr. and the private airlines too are reported to have incurred heavy losses in 2002-03. The average age of IA's and AI's fleet is about 17 years, as compared to an age of 6-7 years internationally. Furthermore, AI employs 16,000-18,000 staff and IA has a staff strength of 20,000, much higher in terms of passenger route kilometres compared to international benchmarks. India has been losing (or, in occasional years, barely managing to retain by dint of bilateral rights) market shares in terms of passengers, aircraft and cargo volumes. The combined capacity of IA and AI actually contracted at a 1.8% CAGR over 1997-2002, thereby restraining them from maximising the network utilisation that is critical to airline profitability. Expectedly, India currently uses barely 40% of its international bilaterals. Costs of travel to and from India remain high, which, combined with the inconvenience of procedures here, has effectively shackled growth of air travel.

The public sector ownership of AI and IA, entailing multiple layers of extra-commercial accountability and cumbersome procurement processes, further hobbles these enterprises and stifles both the commercial orientation and the agility required for expanding in a competitive market. Labour policy inflexibility prevents effective cost management. IA's share of the domestic market (in terms of route passenger kilometres (RPK)) has declined from 100% in 1993-94 to 45% currently. Globally, as a rule of thumb, carriers invest in capacity when load factors touch 70% of capacity. In India, loads consistently cross this hurdle throughout the year. During the peak travel months of October to March, international passenger loads far exceed this level, as a large number of travellers who have been off-loaded from flights from India during peak season will testify. On the other hand, the constraints cited above contribute to keeping *domestic* travel depressed; seats routinely go abegging on most routes, in turn adversely affecting the financial viability of domestic carriers. There is persistent worry over the ageing fleets of the public sector carriers and the management of air traffic control systems.

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[9] Comprising of landing charges, route navigation facility charges (RNFC) and terminal navigation

It is true that the proximate cause of the airlines' distress is tied to the difficult times through which the civil aviation industry, worldwide, is passing.[10] But the malaise is deeper in India. Over the years, the civil aviation sector has been used often to dispense political patronage and the consequent meddling has adversely affected the sector's viability. The difficult environment for civil aviation has exacerbated distortions, inefficiencies and constraints for which government policies are also responsible.

Current restrictions on the provision of ancillary services at airports (like fuelling) give advantage to public sector undertakings, hinder competition and serve to keep costs high. Private airlines are not allowed to establish hangars for major maintenance overhauls at airports and consequently have to outsource maintenance activity to high cost locations abroad[11]. Vacillation over the privatisation of our carriers has seriously hindered their growth and modernisation.

Discussion on privatisation of AI and IA is often centred on the need for having government-owned national carriers. In this regard, the Committee has noted that our own history half a century back, where a privately owned Air India had pride of place in the global aviation community, is often forgotten. It might not be appropriate therefore to discuss this issue as a matter of national prestige. Any airline of India – public or private – enjoying a good reputation as an efficient carrier should be as much a source of national pride. It is also noteworthy that in a dynamic and competitive industry like air transport, it is quite likely that the incumbent national flag carrier will cede the role to other airlines that emerge as stronger operators. The most prominent example is the U.S., where American Airlines and United Airlines have donned this mantle from erstwhile airlines like Pan Am and TWA.

Given our size and strategic needs, a vibrant civil aviation sector is essential to our economy as well as security. Substantial data has been cited to indicate the importance of civil aviation as an important segment of country's infrastructure. A strong airlines system backed with a well-planned network of airports would be valuable in any national emergency. It would not be appropriate, therefore, to view

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landing charges (TNLC).

[10] The global airline industry is expected to post a $6.5 bn loss in 2003.

[11] CII presentation to the Committee.

civil aviation in India as a service for the elite and the rich. This approach, which needs to be adopted in our view for future planning, would require a thorough review of the manner in which the burden of taxes and fees levied in the sector as well as the steps that are needed to encourage and support the growth of civil aviation in India.

An onerous fiscal burden, arising from a view that looks upon the aviation sector as elitist and hence, a milch cow rather than an engine of growth, is taking a toll on air carriers. Excise duty on ATF is 16% and sales taxes on ATF for Indian carriers are on average 25%, resulting in a total mark-up of 45% on basic ATF prices. Allowing PSU oil companies to levy high and arbitrary charges, by dint of their monopoly for supplying ATF, only adds to the burden. As a consequence, it is cheaper for domestic travellers to fly to South East Asian tourist destinations rather than ones within the country. (See Table 1.1)

**Table 1.1: Airfare from Delhi to Selected Domestic & International Destinations**

| Delhi to | Round Trip Airfare |
|---|---|
| Goa | Rs.20,470 |
| Cochin | Rs.30,700 |
| Colombo (DGCA Fare- Round Trip Excursion) | Rs.17,355 |
| Bangkok (DGCA Fare- Round Trip Excursion) via Chennai | Rs.25,170 |
| Bangkok (DGCA Fare- Round Trip Excursion) Direct Code Share Flight | Rs.17,980 |

Note: Includes Passenger Service Fee and Insurance Fee, as applicable.
Source: Indian Airlines

Financing has become a constraint as well. Airlines are a highly capital intensive and risky business. Over the next 7-8 years, AI and IA will require a capital infusion of Rs. 16,000 cr. and Rs. 10,000 cr., respectively, including an equity infusion of Rs. 500 cr. and Rs. 400 cr.[12] Financing requirements of this magnitude require access to investors with appropriate risk appetites, i.e., foreign capital and it is precisely in this area that restrictions on foreign investment, especially equity, remain the most onerous. The equity limit for foreign individuals and companies in international services, for instance, is 26% and in domestic passenger transport, 40%.[13]

[12] Estimate of the external consultants to AI and IA.
[13] The Tenth Five Year Plan, 2002-2007, "Presentation to the National Development Council", Planning Commission, New Delhi, December 2002, Chapter 8.3, pg. 984.

Complete prohibition of equity participation of foreign airlines in passenger air transport is, frankly, not to put too fine a point on it, irrational. There are other entry barriers relating to licensing requirements, which artificially serve to limit competition.

In many countries with similar problems, deregulation and liberalisation of aviation in the past decade has enabled them to harness the positive effects of competition. Recognising the need for expeditious redress of the above deficiencies, this Committee was constituted by the Government of India (*vide* order F.No.Av.13011/02/2003-DT dated 21.7.2003) to chart a road map for rapidly rationalising and reforming the aviation sector in India. The Terms of Reference (ToR) are detailed in Appendix 1.

During the course of its deliberations, the Committee held extensive consultations with many stakeholder organisations, a list of which is given in Appendix 2. All these organisations have uniformly underscored the imperative to lower aviation costs and make air travel more affordable so as to facilitate economy-wide development in general and growth of travel & tourism industry in particular. The Committee realised during these consultations that, while it is important to draw on international experience of deregulation, with its range of alternatives and diversity of institutional practices, there is a need to evolve structures that suit India's specific needs and realities. The Committee found it useful to view the aviation sector as comprised of two distinct and separate types of services. The first, the core of the sector, is to be operated as a business and run on commercial principles. The second set, in consonance with social and distributive objectives, including connectivity, should be supported through direct and transparent subsidies from the government.

The Committee felt that, given the breadth of issues involved in deregulating the sector and the complexity of implementation of the resulting recommendations, it would be difficult to do justice to the issues in one Report. Hoary as the cliché may sound, the Committee reiterates that the devil will lie in the details. It was therefore decided that the ToR would be addressed in two parts: Part I to concentrate on issues that will impinge on the *structure* of liberalisation, and which will consequently have a bearing on the Civil Aviation Policy (CAP); and Part II will focus on implementation

issues, especially relating to coordination with other government departments, namely, the Ministries of Finance, Defence, Home Affairs, etc.

Although the Report is structured (for simplicity) in individual modules dealing with options for reducing systemic costs, air transport services, airports, air traffic control and the institutional framework, it is important to emphasise that the individual aviation segments have to be viewed as an organic whole for achieving system-wide efficiencies. The Committee is convinced that if India wants the civil aviation and the tourism sectors to become the key engines of growth, every aspect pertaining to the aviation sector needs to be examined and expeditiously actioned upon. The most important of these relate to the state of our airports, airline profitability, the high costs of fuel (including the fiscal effects on these costs), capacity augmentation and the costs of security. In the radically changed, competitive (and increasingly private sector dominated) environment that the Committee foresees as emerging, it is imperative that the existing institutional framework be substantially modified and some new institutions developed, with each of these organisations having clearly defined, commercially-oriented and sharply focussed limited roles. The Committee is of the firm view that we should have an efficient and vibrant civil aviation sector comprising airlines, airports, air traffic control and cargo services that match up to world class standards and are internationally competitive. Towards this end, the Committee's recommendations pertaining to various segments and institutional structures, taken together, provide a comprehensive approach that balances the need for safety, viability and affordability. The integrated approach is founded on four fundamental pillars. First, the Committee seeks to establish a level playing field for all operators and reduce the debilitating burden of an extortionate fiscal regime. Secondly, the Committee seeks to increase private participation and competition wherever possible by reducing entry barriers. Thirdly, the Committee advocates adherence to stringent safety standards and, in the areas not amenable to competition, the use of contestability, with a sound regulatory oversight to prevent abuse of market power. Fourthly, recognising that affordability and accessibility are often conflicting with connectivity and need to be balanced with viable commercial operations, the Committee suggests institutional mechanisms that transparently and explicitly provide support for socially desirable but uneconomical services.

The structure of this Report is as follows. Chapter 2 explores options for reducing the high systemic costs so as to make air transport more affordable and enhance air connectivity. Chapter 3 outlines the rationale for deepening and widening the ongoing process of liberalisation and privatisation of air transport services in India and delineates various policy measures necessary to accelerate these efforts. Chapter 4 examines methods of increasing efficiencies of existing airports in India, including accelerating the process of inducting private participation that is already under way. Chapter 5 outlines the strategy for efficient provision of air traffic control services in India, including associated issues such as financing and regulation. Chapter 6 outlines an integrated institutional framework that will be best suited to provide a seamless interface between the disparate activities and segments of the sector, as well as provide effective oversight in the emerging liberalised environment. Chapter 7 summarises the key recommendations. The Committee's acknowledgements are contained in Chapter 8.

## CHAPTER 2. IMMEDIATE CONCERNS AND REMEDIES

The civil aviation sector in India is facing a crisis, as explained in the previous chapter. The Committee is of the firm view that extricating the sector from the current malaise requires a series of policy and structural changes, encompassing all major operational segments and the associated regulatory institutions. Towards this end, the Committee deliberated at length on each of the major operational segments, and drawing upon international experience and sound economic concepts, has outlined a set of recommendations in subsequent chapters. The Committee, however, recognises that implementation of broad policy and deep structural changes is bound to take some time, whereas certain measures can be implemented relatively quickly.

In this context, many persons and institutions forcefully argued before the Committee that, at present, the civil aviation sector is viewed as a cash cow for garnering revenues by the central and state governments and government-owned oil companies. Inevitably, this has raised costs of air transport. Managing the sector in this manner is untenable and incongruent with the government's avowed objectives of making air transport more affordable, enhancing regional air connectivity and providing a boost to tourism. The Committee, based on its discussions with various key stakeholders, has identified the scope for lowering systemic costs for the sector as a whole, through intervention in the following five areas:

(a) Fiscal regime;
(b) Airport charges;
(c) Sourcing of ATF;
(d) Level playing field issues; and
(e) Interface with other Ministries.

### 2.1 Fiscal Regime

From presentations made to the Committee,[14] it is amply clear that the present fiscal regime is rendering air transport unviable even in areas where it has comparative advantage over other modes of transport. Presently the aviation sector is

[14] Presentations to the Committee by Jet Airways, Air Sahara and the Ministry of Tourism, Government of India.

subjected to a plethora of taxes, duties and fees, viz., excise duty and sales tax on ATF, Inland Air Travel Tax (IATT), Foreign Travel Tax (FTT) and Passenger Service Fee (PSF). Surprisingly, most of these charges are either set at very high levels or inequitable across comparable services.

**Excise Duty and Sales Tax on Aviation Turbine Fuel:** In other countries, while fuel cost is usually 10-15% of airline operating cost, in India it accounts for about 30% of the operating cost of domestic airlines. The average price of ATF for domestic airlines is Rs.19,811 per Kilolitre (KL), as against the international average of Rs.10,192 per KL. Even within India, domestic operators pay 51% more for ATF than international operators (see Table 2.1 below). This is mainly due to the incidence of high excise duty (16%) and high sales tax (average 25%; in some states as high as 39% (Kerala)) on ATF for domestic air carriers. In effect, on basic ATF price, domestic airlines are required to pay 45% towards excise duty and sales tax.

**Table 2.1: Price of ATF for Different Operators**

**Rs. Per KL**

| Type of Operator | Mumbai | Delhi | Kolkata | Chennai | Average |
|---|---|---|---|---|---|
| International Operators | 12,831 | 13,160 | 14,194 | 12,455 | 13,160 |
| AI/IA (International) | 16,027 | 15,792 | 17,766 | 16,074 | 16,415 |
| Domestic Operators* | 18,659 | 18,283 | 22,090 | 20,210 | 19,811 |

* Includes domestic operations of IA

Source: Jet Airways presentation to the Committee

Clearly, high excise duty and exorbitant sales tax are adversely affecting the viability of domestic airlines and affordability of air transport. In view of this, the Committee recommends that excise duty and sales tax on ATF should be substantially lowered. One way of achieving this could be to categorise ATF as "declared goods" under the Central Sales Tax Act so that sales tax on ATF does not exceed 4%. In case of smaller aircraft that are essentially deployed to enhance regional connectivity, governments should do away with the existing discriminations based on the type of aircraft and, accordingly, bring parity in the taxes on ATF for jets and turboprop aircraft.

**Customs Duty and Sales Tax on AVGAS:** At present, AVGAS – which is fuel for trainer aircraft at Flying Clubs – is subjected to a 20% customs duty and, on average, a 25% sales tax. Given that international prices are very high and, in any

case, the revenue yield is negligible, the Committee recommends that the import duty and sales tax on AVGAS may be abolished to give a fillip to aviation training and encourage flying clubs.

### 2.2 Other Taxes and Fees

In addition to taxes on fuel, the air transport sector is subjected to IATT, FTT and PSF. The IATT – which is 15% of airfare – was introduced as a "Fuel Surcharge" at the time of the first Gulf War, and has stayed on without any rationale. Furthermore, since IATT is charged on the ticket price, whenever ticket prices are raised to meet the increase in ATF/insurance, IATT also rises automatically. Moreover, airlines are required to pay full IATT on the ticket price, even in the case of discounted (apex) fares and non-paying travellers such as airlines' staff and security Sky Marshals. According to an estimate,[15] through IATT and PSF,[16] the government is expected to collect Rs.1,000-1,100 cr. in 2003-04, and this constitutes about 15% of the total revenues of the domestic airlines (Rs.6,500-7,000 cr.). Given the government's aim to make air travel more affordable, the Committee recommends that aviation-related taxes and fees such as IATT, FTT and PSF may be replaced with a single, lower *ad valorem* sector-specific cess, say at 5% of actual airfare, and the proceeds thereof should be ring-fenced into the proposed non-lapsable Essential Air Services Fund (EASF, detailed in Chapter 3), to subsidise uneconomical but essential air services including commercially unviable airports.

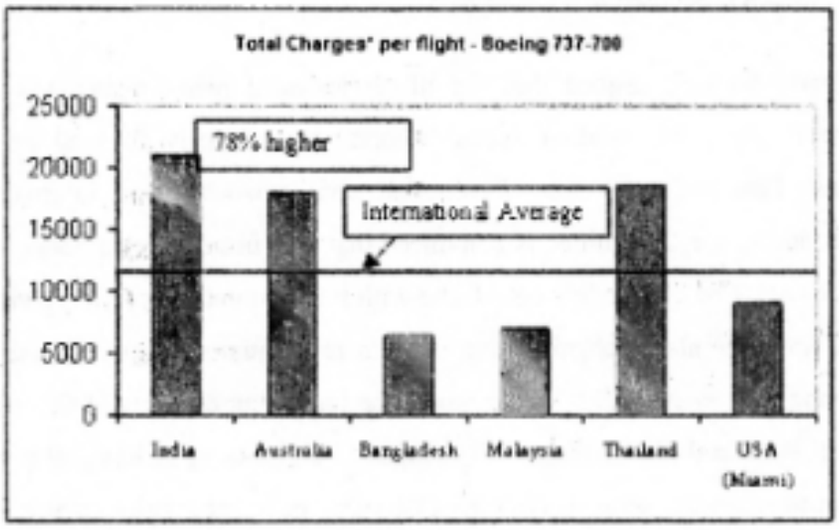
### 2.3 Airport Charges

At present, airport charges in India are 78% higher than the international average and exorbitant in comparison to countries such as Bangladesh and Malaysia.[17] (See Chart 2.1 below). Within India, at the 12 airports designated as international airports, charges are 16-90% higher compared to other domestic airports, contributing an additional cost of Rs.69 cr. per annum for all domestic operators. The Committee recommends that airport charges should be substantially

[15] Air Sahara presentation to the Committee.
[16] PSF is charged at the rate of Rs.200 per passenger.
[17] Jet Airways presentation to the Committee.

brought down to levels comparable with neighbouring South East Asian and Gulf countries.

**Chart 2.1: Comparison of Airport Charges**




* Total charges include Landing Charges, Route Navigation Facility Charges and Terminal Navigation Landing Charges

Source: Jet Airways presentation to the Committee.

## 2.4 Sourcing of ATF

Currently, the government-owned oil companies enjoy exclusive privilege over supply (domestic and imported) of ATF and control fuel hydrants and associated infrastructure located at the airports. All the three government-owned oil companies continue to charge the same price.[13] Furthermore, an examination of the fuel price at various points in the supply chain suggests that these companies may be overcharging at the expense of air carriers. The Committee is of the firm view that the monopoly of government-owned companies in the supply of ATF is grossly incongruent with the ongoing process of liberalisation in the oil sector. Accordingly, the Committee recommends that airlines should be allowed to source ATF from the supplier of their choice. In order to facilitate this process, the Committee further suggests that the Airports Authority of India (AAI) should offer to buy out the fuel supply hydrants and associated infrastructure of the government-owned oil companies and provide all oil companies equitable access to such facilities. Alternatively, the government-

owned oil companies should be required to provide private oil companies access to these facilities based on a "common user/carrier" principle. In either case, given that abuse of monopoly power cannot be ruled out, fuel supply infrastructure at airports should come under the purview of the proposed Aviation Economic Regulatory Authority (AERA) (detailed in Chapter 6).

It may be well argued that the aforementioned recommendations of the Committee to turn the aviation sector around are primarily focused on fiscal concessions. This is largely true. Given that civil aviation is an internationally contestable space, the Committee is convinced that it is imperative to adopt a fiscal regime that cannot be completely out of line with international practices. Having said that, the Committee also recognises that there is substantial scope within the sector for improving efficiency. In fact, the thrust of the remaining chapters of this report is on devising structural and institutional changes encompassing airlines, airports, air traffic control services, with a view to catalysing efficiency gains, using a two-pronged strategy of competition where feasible and economic regulation in the residual areas of natural monopoly.

## 2.5 Level Playing Field Issues

As of now, Indian Airlines has some comparative advantages over its private sector counterparts. Among domestic operators, only IA is allowed to operate international services and provide third-party ground handling services. In addition, government and PSU employees are permitted air travel only by IA. The Committee does not see any justification for these arrangements. The restrictions on travel of government and PSU employees on private airlines should be removed. Furthermore, since the sector has spare capacity in the domestic segment and under-capacity in the international segment, and a substantive portion of the bilaterals are not being utilised, it makes eminent sense to allow the domestic private carriers to operate international services.

In this context, the Indian Airlines has submitted that allowing private domestic air carriers to provide international services would severely dent their viability, which is already under pressure due to various commercially unviable obligations imposed

[18] Air Sahara presentation to the Committee.

on them on social considerations. On the other hand, various industry representatives including those from travel and tourism sectors have strongly argued in favour of enhancing the capacity on international segment, by allowing the private domestic air carriers to offer international services. While the Committee is sympathetic to the plight of IA, it regards continuation of the current protectionist arrangement as akin to opaque cross-subsidisation and inefficient and hence, needs to be eschewed. Thus, while recommending elsewhere that IA should be compensated for its losses on account of commercially unviable obligations imposed on them and to establish a transparent mechanism to provide subsidy to support to operations on unviable routes, the Committee recommends that the private domestic air carriers should be allowed to offer international services in an equitable manner.

In addition, considering the need to foster fair competition and ensure a level playing field, the Committee recommends that the domestic private airlines should be allowed to provide third-party ground handling services.

**Greenfield Airports:** Recently, the government has decided to review the provision in the National Policy on Airports, 2002, that "no greenfield airport will normally be allowed within an aerial distance of 150 kilometres of an existing airport." The Committee endorses this amendment. Given the location-specific nature of air travel, driven by a variety of considerations ranging from commercial to cultural, and the significant sunk costs involved in erecting airport infrastructure, airports enjoy a natural monopoly. An effective way to contain such monopoly power, as observed in several large cities across the world, is to allow the emergence of new airports in the vicinity of existing ones. The Committee, however, cautions that the investment decisions regarding greenfield airports should be based on purely commercial considerations. Accordingly, central and state governments may refrain from extending concessions in general and subsidies in particular to greenfield airports, which might impinge on the viability of existing airports.

### 2.6 Interface with other Ministries

Efficient provision of air travel services requires effective co-ordination between several organisations including Ministries. The Committee is particularly heartened that various Ministries that interface with civil aviation are keen to

cooperate to streamline operating procedures and facilitate efficient flight operations. In this context, the Committee notes that a high level inquiry committee chaired by Shri R.C. Jain conducted a detailed study of the management of airports in India and submitted a wide array of valuable recommendations, particularly focusing on the need as well as scope for streamlining the activities of various organisations engaged in the functioning of airports and for improving coordination between these organisations. The Committee also sees immense potential for improving operational efficiency of our airports through effective inter-agency co-ordination and, accordingly, proposes to address this issue in greater detail in Part II. Here, the Committee sought to highlight certain issues that require urgent intervention by the Ministries of Home Affairs and Defence.

**Ministry of Home Affairs:** Any international traveller to and from India can vouch for the inordinate delays at immigration counters. These delays are attributable to a lack of space and inadequate computerisation. In light of this, the Committee suggests that at international airports, operators must ensure availability of more space so as to enable the Ministry of Home Affairs (MoHA) to locate additional counters and deploy more immigration officers.

Government has started issuing machine-readable passports only recently. Even now, only 50% of the new passports are so readable. One reason mentioned for this is that the passports issued by Embassies abroad are not machine-readable because they do not have the necessary equipment. Even if all the new passports were machine-readable, it would still take nearly ten years before all the old passports are replaced by new ones; the validity period of a passport being 10 years. If the immigration process at airports is to be computerised, there has to be a vigorous campaign for replacing all the existing old passports with the machine-readable passports. Simultaneously, all immigration counters at all the international airports should have equipment compatible with the new process. Software packages for advance screening of passengers have been developed in Australia and some other countries, which are now being widely used. There is, therefore, no need for reinventing the wheel. What is required is a determination to take up this programme in mission mode within a fixed time-frame. Furthermore, the present practice of deploying the mix of local police and IB Staff at the immigration counters needs to be

reviewed. There is a need for a dedicated and specially trained staff directly under the control of the Ministry of Home Affairs for manning the immigration counters.

Furthermore, the paperwork involved in immigration should be reduced in line with international practice – i.e., all outgoing passengers as well as incoming nationals (Indian citizens) should not have to fill in an elaborate form, and incoming foreigners should also be required to fill in only simple forms that are amenable to easy and fast processing.

At present, all the costs pertaining to the provision of security at airports is being borne by the aviation sector. Recently, due to the rise in threat perception of terrorism, security costs have escalated significantly. For example, inducting the CISF in place of the state police has resulted in security cost increasing from Rs.85 cr. to Rs.350 cr. Here, it is noteworthy that following the Chicago Convention, the government has the sovereign responsibility for security cover, for instance against terrorist attacks. In light of this, aviation and airport security should be taken over and funded by MoHA.

**Ministry of Defence:** At present, large parts of Indian air space are reserved for defence use, thereby restricting the choice of optimal routes for commercial aircraft. This results in congestion of air-traffic on narrow corridors with planes having to fly at lower altitudes and so consume more fuel. In many airports, there are restrictions on the timing of civil aviation movements. Furthermore, defence services do not pay landing charges. In order to optimise the use of air space, the Committee recommends that the government may consider the model followed in the U.S. and many other countries, wherein the air space is permanently made available for civil aviation and segments of air space are re-vested and made available to defence on request. Defence services should also be required to pay user charges as mutually agreed upon for facilities such as runways. To facilitate effective co-ordination of air space and cost sharing, civil and defence ATCs may be co-located where feasible (as is the case in Brazil).

## CHAPTER 3. AIR TRANSPORT SERVICES

This chapter outlines the rationale for deepening and widening the ongoing process of liberalisation and privatisation of air transport services in India, and delineates various policy measures that are necessary to accelerate these efforts.

### 3.1 International Trends

During the last two-and-a-half decades, worldwide, the air transport industry witnessed three major transformations. First, the industry substantially moved away from government control and ownership towards deregulation and private ownership. The origins of this trend are generally attributed to the deregulation of the U.S. airline industry in the late 1970s, which led to lower fares and higher productivity.[19] Spurred by these benefits, several countries have pursued the path of liberalisation and privatisation.[20] This transformation also subsumed another trend of privatisation of national "flag carriers" – that is, airlines designated by a country's government to operate international air services to and from that country – as evidenced in Australia (Qantas Airways), U.K. (British Airways), Germany (Lufthansa), Japan (Japan Airlines), and Hong Kong (Cathay Pacific).[21] The second transformation pertains to liberalisation of international air transport services. At the bilateral level, within the traditional approach of limiting the points served, capacity, number of airlines and pricing, many countries have begun to incorporate greater flexibility or features of

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[19] According to an estimate, between 1976 and 1990, in the U.S. airline industry, average yields per passenger mile – the average of the fares that passengers actually paid – declined 30% in real inflation-adjusted terms, and the savings to travellers have been in the range of $5 billion to $10 billion per year. Compelled by the price competition unleashed by deregulation, carriers have put more seats on their planes – the average went up from 136.9 in 1977 to 153.1 in 1988 - and succeeded in filling a greater percentage of those seats – from an average of 52.6% in the ten years before 1978 to 61.0% in the twelve years after. The dramatic move to hub-and-spoke operations (in which an airline routes its flights through one or several "hub" cities) has increased efficiency in a number of ways including better adaptation of equipment to markets and offer of a wider variety of destinations.

[20] As on date, air transport industry is fully privatised in North America and the government-owned airlines constitute less than 10% of the industry in South America. Furthermore, airlines are privately owned in countries as dissimilar as Australia, Japan, Hong Kong, China, Germany, Philippines, Republic of Korea and the U.K., and partial privatisation is planned or in progress in Bangladesh, India, Malaysia, Papua New Guinea and Thailand.

[21] In several other countries, governments have substantially reduced their stake in the national carriers, viz., Argentina (Aerolineas Argentinas), Chile (LanChile), Brazil (Varig), and Netherlands (KLM).

liberalisation.[22] In addition, various groups of countries have either entered into or are in the process of forging full-market-access arrangements covering their member countries. These arrangements are arrived at either on a regional basis – as in the case of the E.U. and the Andean Pact countries of South America[23] – or on a plurilateral[24] basis. The third transformation is the emergence of co-operative alliances between airlines, encompassing a wide range of operational and commercial matters such as code-sharing and loyalty programmes.

While pursuit of economic efficiency is the prime mover underpinning all the aforementioned transformations, the process of privatisation is also motivated by a variety of other objectives: (a) relieving the fiscal burden on account of loss-making government enterprises; (b) using privatisation proceeds to reduce public debt; (c) attracting local and foreign capital; and (d) transforming the erstwhile government enterprises into more attractive alliance partners.

### 3.2 Emerging Indian Scenario

Clearly, deregulation and privatisation is the way forward in air transport services. India too, taking due cognisance of this trend, has liberalised its air transport services for private participation in domestic scheduled and non-scheduled passenger services and in cargo services. In India, the Air Corporation Act, 1953 was repealed in 1994, leading to the opening up of scheduled domestic air transport services in India to competition and private participation[25] (see Box 3.1 below for the key features of the current policy). Thanks to this liberalisation, between 1994-95 and 2001-02, the domestic air transport industry has registered impressive growth on several parameters including the number of aircraft-kms flown (by 155%) and

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[22] For instance, Australia, Brunei Darussalam, New Zealand and Singapore actively pursue liberalised market access in their aviation agreements with other countries, whereas India has opened its markets to cargo operations.

[23] Since 1995, eight more arrangements have emerged with a worldwide dispersion (four in Africa, two in the Americas, one each in Asia Pacific and the Middle East), and several potential arrangements are reported to be in the pipeline.

[24] In contrast to bilateral agreements involving two countries, plurilateral agreements involve several countries, but not as many as in multilateral agreements. In 1999, a plurilateral open skies agreement was signed between Brunei Darussalam, Chile, New Zealand, Singapore and the U.S.

[25] Non-scheduled (air taxi) services were opened to private participation much earlier in 1986, and the corresponding guidelines have been subsequently modified several times, incorporating greater flexibility to the private operators.

passenger-kms flown (by 76%).[26] In 2000-01, private operators carried 48.2% of the passengers and made available 43.7% of the seat-kms.[27]

**Box 3.1: Key Features of the Current Policy Pertaining to Domestic Air Transport**

- Private sector is allowed to operate scheduled and non-scheduled services.
- Operator should be a citizen of India or a company or a body corporate which is registered in India and whose (i) principal place of business is in India; (ii) Chairman and at least two-thirds of its Directors are Indian citizens; and (iii) substantial ownership and effective control are vested in Indian nationals.
- The scheduled operators are required to follow route dispersal guidelines – an administrative mechanism that was aimed at extending air transport services to regions/routes that is not necessarily commercially viable.
- Operators are required to have a stipulated level of fleet size and subscribed equity capital. For example, scheduled operators should have five aircraft (by outright purchase or through lease) and a minimum subscribed equity capital of Rs.10 cr. (Rs.30 cr. if operators have an aircraft of maximum take off mass exceeding 40,000 kg).
- Foreign Equity participation up to 40% and investment by Non-Resident Indians (NRIs)/ Overseas Corporate Bodies (OCBs) up to 100% is allowed. The representation of the foreign investing institution/entity on the Board of Directors of the Company shall not exceed one-third of the total.
- Foreign airlines are not permitted to pick up equity. Foreign Financial Institutions and other entities who seek to hold equity in the domestic air transport sector, shall not have foreign airlines as their shareholders.
- While fares are left to be determined by market forces, operators are given choice regarding aircraft type and size.
- Open skies policy for cargo services.
- As regards safety and security arrangements, the operators must ensure compliance with the relevant regulatory requirements stipulated respectively by the Directorate General of Civil Aviation (DGCA) and the Bureau of Civil Aviation Security (BCAS).

## 3.3 Way Forward

Although progress thus far has been impressive, the existing policy leaves substantial room for improvement in three directions, as detailed in subsequent sections:

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[26] More importantly,. during 1994-95 to 2001-02, the sector registered substantially higher Compounded Annual Growth Rate (CAGR) in several key parameters, as compared to the CAGR during the decade ending with 1994-95; the CAGR of aircraft-km flown increased from 1% to 14.3%, whereas the CAGR of passenger-km flown increased from 0.7% to 8.4%.

[27] Jet airways, the major private air carrier, has grown from 4 aircraft , 24 daily flights, and 12 destinations in 1993-94, to 41 aircraft, 250 daily flights and 41 destinations in February 2003, and achieved an estimate market share of over 46% in 2002-03.

(a) deepening reform in the domestic air transport segment, through abolition of route dispersal guidelines, removal of entry barriers and liberalisation of investment norms for foreign equity investors and foreign airlines, and encouragement of regional air services, helicopter operations and general aviation;

(b) extending the liberalisation process to the international air transport segment; and

(c) privatisation of Indian Airlines and Air India.

### 3.3.1 Route Dispersal Guidelines and Essential Air Services

Like in many other countries, in India too, there are some routes which are viewed as deserving air services on the basis of social, strategic or geographical equity considerations, even though they might not be commercially viable. In order to ensure availability of air services on such routes, existing policy requires all scheduled operators (both public and private) to follow route dispersal guidelines. According to these guidelines, routes are divided into three categories, and each operator is required to offer at least 10% of its deployed capacity in Category I routes[28] for "uneconomical" Category II routes connecting stations in the North-Eastern region, J&K, Andaman & Nicobar and Lakshadweep. Furthermore, each operator should deploy 1% of the capacity exclusively within Category II stations and 50% of the capacity provided on Category I routes on Category III routes (that is, routes not included in Categories I & II). Airlines are expected to cross-subsidise their losses on commercially unviable routes under Categories II & III routes by profits they make on other routes.

The current arrangement for ensuring essential air services suffers from several limitations. To begin with, airlines often incur losses on Category II routes as they are required to charge subsidised fares on these routes.[29] Furthermore, shorter routes among Categories II & III are commercially unattractive in view of the competition from alternative modes of transport such as rail and road. In any case, major airlines with their fleet comprising larger aircraft (geared towards capturing a share of the profitable long-haul trunk and regional routes with dense traffic) find it

[28] Category I comprises of routes directly connecting following city pairs: Mumbai-Bangalore, Mumbai-Calcutta, Mumbai-Delhi, Mumbai-Hyderabad, Mumbai-Madras, Mumbai-Trivandrum, Calcutta-Delhi, Calcutta-Bangalore, Calcutta-Chennai, Delhi-Bangalore, Delhi-Hyderabad, and Delhi-Chennai.

sub-optimal to serve shorter routes. Normally, routes that are not found to be commercially viable by major airlines can still be serviced by niche airlines with appropriate aircraft. The experience of Vayudoot not only underscored demand for air transport in small cities, but also that it can be successfully provided with the help of small modern economical aircraft.[30] Recently, Air Deccan – a private "no-frills" airline – launched its service connecting Bangalore, Hubli and Mangalore. The route dispersal guidelines may be inadvertently hindering the emergence of specialised airlines with appropriate aircraft to cater to the regional and short-haul feeder routes. This is because given that the larger airlines are bound by the route dispersal guidelines to operate a specified percentage of their deployed capacity on Category II & III routes (regardless of the viability of such operations) they can (potentially) undercut the specialised airlines on those routes.

In view of the above, the key to achieving the goal of expanding the reach of air services in the country appears to be in abolishing the route dispersal guidelines. Such a step would enable major airlines to focus their efforts on the routes of their choice and, more importantly, create room for the emergence of specialised airlines to service the remaining short-haul, regional and feeder routes. As regards maintaining essential air services on routes that are strategically important but are commercially unviable, the government should provide explicit subsidy support, preferably through direct budgetary transfers or the imposition of a sector-specific cess or a combination of both. In addition, such support should be allocated through a transparent process of minimum subsidy bidding.[31] Here, it is noteworthy that competitive tendering of subsidy for maintaining essential air services is a well-established practice in several countries, as it allows such routes to survive but on the basis of fair competition and at the lowest cost possible to the tax payer. For instance, the Remote Areas Subsidy Scheme (RASS) in Australia and the Essential Air Services (EAS) Programme in the

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[29] "The Future of Civil Aviation in India: Structure, Policy, Regulation and Infrastructure", National Council of Applied Economic Research, New Delhi, 2001.

[30] It is another story that political intervention led Vayudoot to expand its services to unviable routes and, as a consequence, to eventual demise.

[31] In this context, it is noteworthy that the Tenth Plan document also suggests that a more appropriate way of servicing unviable routes would be through minimum subsidy bidding and that the subsidy required for this may be funded by a setting up a fund through contributions made by operations in trunk routes and supplemented through other means.

U.S. are broadly based on minimum subsidy bidding.[32] (see Table 3.1 below for a summary of key parameters of RASS and EAS).

**Table 3.1: Comparison of Air Services Subsidy Programmes in Australia and the U.S.**

| Key Parameter | Australia | U.S. |
|---|---|---|
| 1) Name of the scheme | Remote Area Service Subsidy Scheme (RASS) | Essential Air Services (EAS) Programme |
| 2) In operation since | Original scheme since1957 (christened as RASS in 1982-83) | 1978 |
| 3) Scope | Eight air operators providing regular weekly air services to approximately 250 remote communities | 27 carriers; 114 communities (July 2002) |
| 4) Source of funds | Budgetary allocation and User Fees | Budgetary allocation and User Fees |
| 5) Proposals initiated by | Communities | Air Carriers |
| 6) Selection process | Minimum Subsidy Bidding | Minimum Subsidy Bidding |
| 7) Duration of award | Fixed term; usually less than 4 years | Reviewed every 2 years |

Sources: 1) Working Paper 54, Bureau of Transport and Regional Economics, Australia (Web site: http://www.bte.gov.au/docs/wp_54/ch3.html)
2) U.S. General Accounting Office, Washington DC, 20548 (Ref.: GAO-02-997R Essential Air Service)

Drawing upon international experience, the Committee suggests the following combination of principles and steps, to meet the objective of preserving essential but uneconomical air services.

- First, the scope of Essential Air Service (EAS) objective (including the pace at which it is pursued) must be congruent with the available quantum of finances. In the absence of a firm link between the objective and resource availability, the essential service goals cannot be sustained and, worse, the entire initiative may lose credibility. In other words, if adequate funds are not available, the scope of the EAS may have to be less aggressive, i.e., target routes may need to be prioritised.
- Secondly, while arriving at a quantum of resources available for meeting the EAS objective, all avenues of raising resources through direct user charges must be exhausted. This is necessary to wean the targeted segments away from the umbrella of subsidy support and, more importantly, to mitigate the risk of subsidy being perceived as a perennial entitlement.
- Thirdly, the promise of support should be for a reasonable length of time, and backed by a credible stream of resources, so that the service providers can make their investment decisions with a greater degree of confidence. Towards this end, the government may consider the creation of a non-lapsable Essential Air Services Fund (EASF), outside the Consolidated Fund of India, and the Fund's management may be vested with an independent board.

[32] In the E.U. too, similar approaches are used to preserve services on essential, but uneconomical routes.

- Fourthly, the government may consider replacing aviation-related taxes and fees such as IATT, FTT and PSF with a single, lower *ad valorem* sector-specific cess, say at 5% of airfare, and the proceeds thereof may be credited to EASF.
- Fifthly, the proceeds from the proposed privatisation of Airports may be ploughed back into the sector, i.e., into the EASF, towards meeting the net cost of EAS.
- Sixthly, to the extent that the central and state governments consider EAS as an area of priority in general, they should augment the resources through the general exchequer (as is indeed the case for other laudable objectives pursued by the governments). In a similar vein, the state governments may contribute to the lowering of the net cost of EAS through fiscal concessions, as for example, by exempting the EAS operations from high incidence of sales tax on ATF.
- Seventhly, the funds from the EASF may be used to "purchase" essential air services through a transparent process of minimum subsidy bidding.

The Committee recognises that the scope of EASF would include uneconomical airports and Air Traffic Control (ATC) services (as detailed in Chapters 4 and 5). Accordingly, the Committee suggests that all such services should be supported through the proposed EASF – subject, of course, to a clear demarcation of resources for different streams of support.

### 3.3.2 Entry Barriers

At present, domestic air transport operators in different segments are subjected to a varying degree of requirements with regard to minimum fleet size and subscribed equity capital. For instance, scheduled operators are required to have a minimum fleet size of five aircraft (by outright purchase or lease) and a minimum subscribed equity capital of Rs.10 cr. (Rs.30 cr. if operators have an aircraft of maximum take off mass exceeding 40,000 kg). Normally, such stipulations are justified on account of either safety considerations or to safeguard the interests of the other stakeholders interacting with the operating entity; the capital adequacy requirement imposed on banks is a case in point. In the absence of a similar or any other justification for imposing minimum size and capital requirements for airlines, the Committee firmly believes that these issues should be left open for resolution by equity investors (based on commercial considerations) and debt financiers (through the usual due diligence exercises). In view of this, the Committee recommends that requirements regarding fleet size and equity capital be removed, so as to encourage

entry (and competition) and allow operators and financiers to make decisions based on commercial considerations. In order to ensure that airlines operate on a level playing field in fair competition with each other, it is imperative that all airlines should be required to maintain accounts pertaining to their air transport services separately in a transparent manner. To facilitate this process, the Committee recommends that all scheduled airlines operators should be registered under the Companies Act. In fact, this should be made as a condition of license.

### 3.3.3 Investment Norms for Foreign Equity and Foreign Airlines

At present, in the domestic air transport services, equity participation by foreign individuals/companies is capped by a ceiling of 40%, and foreign airlines are not allowed to hold equity investments either directly or indirectly. The current policy further stipulates that ownership and effective control of the airline should be vested with Indian nationals and that the airline's Chairman and two-thirds of its Directors should be citizens of India.

Admittedly, controls on foreign participation and ownership have been widely prevalent in the aviation industry, and the origin of this regime is generally attributed to the Chicago Convention that created a legal system in which the citizenship of airlines was a critical component. Often, these controls are justified on the basis of strategic and safety considerations. Even today, many countries – including some with a highly mature airline industry such as the U.S. – continue to take a particularly aggressive stance with regard to national ownership and control requirements.[33] It is, however, noteworthy that several other countries, driven by public benefit considerations, are taking an increasingly liberal stance with regard to foreign participation. For instance, an airline that has been granted an Operating License by any E.U. country is allowed to exercise traffic rights on virtually any route within the E.U. and can set its own fares freely.[34] Australia, on the extreme end of the

[33] For instance, in the U.S., non-U.S. citizens may hold only up to 24.99% of the voting interest in a U.S. airline and they cannot expect to be the chairman of the board or the president of a U.S. airline. Even in cases where the United State has an open skies agreement with the homeland country of the investor, equity holding by the non-U.S. citizen investor is capped by a ceiling of 49%.

[34] In 1993, the E.U. replaced national ownership and control restrictions with the concept of a "Community air carrier," under which E.U. airlines must be majority owned and effectively controlled by E.U. countries and/or nationals of E.U. countries. Any airline meeting these (and specified financial and safety) requirements must be licensed by the E.U. country in which it has its registered office and principal place of business. (Source: "European Experience of Air Transport Liberalisation",

liberalisation of domestic air services, allows foreign persons (including foreign airlines) to hold 100% equity in an Australian domestic airline, unless this is judged contrary to the national interest.[35] Given the highly capital intensive nature of the airlines business, liberal norms for foreign investment is a critical pre-requisite for enhancing India's airlines' access to international capital flows. Equally importantly, the size and spread of operations of foreign investors across the globe, endow them with a higher risk appetite to undertake large, long-term investments, which are a hallmark of airline fleet expansion requirements. This equity infusion can be obtained either through strategic investors (i.e., foreign direct investment (FDI)) or through foreign institutional investors (FIIs). Investment by a foreign strategic investor (i.e., FDI), being primarily driven by the investor's interest in a long-term stake in the host economy, has the additional advantage of providing a stable source of capital. Furthermore, FDI is likely to facilitate access to advanced technologies and cutting-edge business practices as well as a superior understanding of sector operations, especially in the international segments.

The Committee is aware of views that foreign equity investment (including investment by foreign airlines) should be restricted due to national security concerns given the strategic nature of air services. We would like to disabuse this notion. The ground reality regarding the more liberal foreign ownership norms in another strategic sector in India, telecom (up to 49% FDI by foreign telecom companies), buttresses our view that liberal norms for foreign equity investment should be established in the case of air transport services as well.

Furthermore, the Committee noted that even countries with stringent requirements of ownership and control of domestic airlines by their citizens, do take a liberal view regarding participation of foreign airlines, subject, of course, to the overall limits on foreign equity investment and anti-trust provisions. In other words, policies of many countries seem to acknowledge the likely gains from equity

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Information Paper, *Worldwide Air Transport Conference: Challenges and Opportunities of Liberalization*, Montreal, 24 to 29 March 2003)

[35] "Airline Mergers and Alliances", Directorate for Financial, Fiscal, and Enterprise Affairs, Committee on Competition Law and Policy, OECD, February 2000.

participation by foreign airlines, viz., efficiency improvements and economies of scope.[36]

In light of international experience and the advantages associated with foreign equity participation, the Committee suggests that foreign equity investment norms pertaining to both domestic and international[37] scheduled air transport services should be liberalised, to allow up to 49% foreign investment. As regards investment by foreign airlines, investment up to 49% may be allowed with the approval of Foreign Investment Promotion Board (FIPB). In all other air services, i.e., non-scheduled services such as chartered aircraft and helicopter operations, foreign investment (including investment by foreign airlines) should be allowed up to 100%.

### 3.3.4 Liberalisation of the International Air Transport Segment

As highlighted in the earlier section on international trends, the international air transport segment is inexorably moving towards liberalisation, particularly at the regional and sub-regional levels. Even within the bilaterals, which continue to be a dominant form of regulating international air transport,[38] many of the recent agreements and amendments are reported to contain some features of liberalisation. Many countries have unilaterally opted for liberal air transport policies, often based on a broader perspective of national interest including economic development and trade benefits.[39] For instance, India has liberalised its air cargo services segment through a unilateral open skies policy.[40] In light of this, the Committee recommends

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[36] The airline industry reaps economies of scope when the cost of supplying two products jointly is cheaper than producing them separately. These economies usually relate to the size of an airline's flight network. For example, advertising costs are not aimed at a particular route, but at the airline's whole network. Large networks also give opportunities for economies of scope in areas such as frequent flyer schemes to generate customer loyalty and computer reservation systems. In a similar vein, global alliances between two airlines, in particular those whose networks are complementary, enhance efficiencies by allowing rationalisation of the network structure and greater exploitation of the cost-side economies of scope.

[37] It is noteworthy that the scope for liberalising India's international air transport segment with regard to certain key aspects such as foreign ownership is likely to be limited by the bilateral agreements it has with other countries. For instance, most countries – as for example, Australia, U.S. and E.U. Countries – continue to impose significant restrictions on foreign ownership and control, cabotage and the right of establishment.

[38] During January 1995 to December 2001, over 600 bilaterals were reportedly concluded or amended.

[39] "Liberalization of Market Access", (Presented by the Secretariat), *Worldwide Air Transport Conference: Challenges and Opportunities of Liberalization*, Montreal, 24 to 29 March 2003.

[40] According to this policy, any operator, including foreign operator, can operate any number of flights by any type of aircraft to any airport having customs and immigration facilities without any bilateral agreement. The operators are free to charge rates according to the demand and supply situation.

that India should pursue a path comprising of the following phases, for the liberalisation of its international air transport segment.

**In the first phase,** private airlines based in India should be allowed to provide international air transport services to and from India. As explained in Chapter 2, the sector has got spare capacity in the domestic segment and under-capacity in the international segment (particularly during the peak season), and we are presently using barely 40% of our bilateral rights. In view of this, it makes eminent sense to allow domestic private carriers to operate international services.

**In the next phase,** India should actively pursue the objective of complete liberalisation of the international air transport segment through (a) seeking more liberal arrangements under the bilaterals; and (b) enhancing full-access to wider market segments by joining a regional or a plurilateral group of countries with a similar agenda of liberalisation.

### 3.3.5 Liberalisation of Chartered Services

The Committee takes note that chartered services are emerging as an important segment of air travel, offering fares that are substantially lower than IATA fares. According to the Bombay Chamber of Commerce and Industry, the charter fare on certain segments is Rs.25,000 lower per seat as compared to the IATA fare, indicating that liberalisation of chartered services could offer substantial benefits to travellers. Furthermore, it is reported that a sizeable portion of resident Indians are currently availing chartered services by making internet bookings ex-UK, thereby depriving the Indian economy of taxes on charter earnings and the retail travel trade of a significant opportunity to increase their turnover and profit margins by offering comprehensive travel packages. With a view to benefiting consumers, enhancing tax revenues and giving a fillip to the retail travel trade, the Committee recommends further liberalisation of air chartered services. Specifically, the Committee recommends relaxation of restrictions pertaining to frequency and foreign ownership norms for chartered operators. In addition, the Committee suggests that tourist charters should be

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("Liberalizing Air Cargo and Tourist Charter Operations", (Presented by India), *Worldwide Air Transport Conference: Challenges and Opportunities of Liberalization*, Montreal, 24 to 29 March 2003)

allowed to take Indian Passport holders on board and also to carry a mix of foreign and Indian passengers on domestic tourist circuits.

### 3.3.6 Privatisation of Indian Airlines and Air India

It is the feeling of the Committee that the management and personnel of both AI and IA have performed well in difficult situations and at difficult times. In recent years, they have been able to improve their performance in a more competitive environment. The Committee is confident that, freed from the shackles that are associated with governmental ownership, they have the inherent strength to withstand competition and perform as world class airlines.

The profitability of both Indian Airlines (IA) and Air India (AI) has been under pressure. The external consultants to these airlines recommended early implementation of a strategy comprising of the following measures for turning these airlines around.

(a) Capacity addition mainly through the acquisition of new aircraft. It is estimated that in order to be able to fund the envisaged expansion plans IA would require Rs.18,000 cr. of investment over the next 6 years and AI would require Rs.16,000 cr. of investment by FY 10;

(b) Product improvement through a combination of service enhancement and rationalisation of network and schedules;

(c) Operations improvement by enhancing employee productivity and reducing procurement and channel costs; and

(d) Financial restructuring by way of unlocking value from non-core assets, improving working capital scenario and optimal capital planning.

A closer examination of the factors underpinning these recommendations reveals that both IA and AI suffer from similar limitations – inadequate capacity addition, slow decision-making, low operational efficiency and low labour productivity – which are largely attributable to their government ownership. In case of IA, government ownership imposes an estimated additional burden of Rs.55 cr. per annum on account of serving commercially unviable domestic routes.[41] In view of this, unless IA and AI are freed from government ownership (and control), the efficiency gains anticipated in the turnaround measures are unlikely to materialise.

Such under-performance is likely to further accelerate the current vicious cycle of poor financial performance leading to derailment of plans for capacity addition. All this, in turn, adversely affects the growth and profitability prospects of these airlines. Already, IA shares more than 50% of the market and AI is also likely to follow suit in case entry into international air transport segment is liberalised (along the lines suggested in Section 3.3.4 above). Thus, continuing government ownership of these airlines is likely to dim their prospects of turnaround. In the mean time, it is essential that AI and IA should be not constrained in their operations and in facing competition on account of lack of capacity. Hence, the capacity acquisition plans of AI and IA should be processed in an expeditious manner.

Among the approaches that seem plausible,[42] given the need to rapidly improve efficiency, augment investment and limit government interference in operations, the Committee is clearly in favour of early privatisation and transfer of management control to (strategic) private investors. Viewed from this perspective, the government's decision[43] to reduce its share (to 49% in IA and 40% in AI) through sale of equity to a strategic partner (26% in IA and 40% in AI), employees and other investors seems, in principle, to be a step in the right direction.[44] However, given the tepid response of the investors to the earlier privatisation efforts (both Air India and Indian Airlines) and the continued poor financial performance of these enterprises, in order to be able to attract strategic private investors, the government

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[41] Presentation to the Committee by the external consultants (M/s A T Kearney) to IA and AI. Earlier, the Kelkar Committee also highlighted that IA's operations on uneconomic but socially vital routes as a key reason for its accumulated losses.

[42] There are two broad categories of models for encouraging private participation in airlines. First category comprises of non-divestiture options such as management contracts and joint ventures, whereas the second category includes several partial or complete divestiture options such as auction, negotiated direct placement, management-employee buyouts, initial public offering, and capitalisation (privatisation proceeds are ploughed back into the company). Even within divestiture options, several variants are possible. To begin with, certain activities of the airline which are regarded as non-core – as for example, ground handling, maintenance and air cargo operations – may be carved out and privatised separately. Alternatively, government may resort to partial privatisation, with a view to inject capital without losing total control. Malyasian airlines, Singapore airlines, and Philippine Airlines have been partially privatised using this approach. Finally, total privatisation options include either outright sale to one or more major investors (as in the case of Korean airlines) or through share issue (as in the sale of British Airways) or a combination of both.

[43] Ministry of Disinvestment (web site: http://www.divest.nic.in/psu-returned.htm)

[44] There has been strong precedence of airlines being privatised in phases. For example, Qantas Airways was divested in two phases – first, 25% of the airline was sold to British Airways in 1993 and later in 1995 remaining 75% was sold through a public floatation. Other airlines which have been privatised in tranches include Air Canada (flotation of 43% and 57% in two tranches), Kenya Airways (26% sale to KLM Airways, followed by 51% flotation), and KLM (flotation of 61% and 26% in two tranches).

may need to consider enhancing the attractiveness of the privatisation offer. This could be done *inter alia* through a combination of the following measures:

(a) Some financial restructuring. For example, IA should be compensated for losses attributable to policy decisions such as provision of uneconomical services in pursuit of the government's social and developmental objectives and the grounding of Airbus A320s in early 1990s; the quantum of such compensation is estimated at Rs.400 cr.[45] In a similar vein, IA should be compensated for the financial burden on account of the Vayudoot merger. According to the Committee of Experts on Indian Airlines (Kelkar Committee), 1996, the merger of Vayudoot with IA in May 1993, added a burden of about Rs.20 cr. per annum as operating expenses and IA was also required to take care of Vayudoot's outstanding liabilities to the tune of Rs.185 cr.

(b) Retaining profit-making activities such as ground-handling and engineering services as part of the privatisation offer;

(c) Alleviating IA's social obligations through a credible mechanism of directly and transparently subsidising essential but uneconomical air services; and

(d) Liberalising foreign investment norms as outlined earlier.

In this context, the government could consider private placement of shares with domestic financial institutions (FIs) and banks. Given that domestic FIs and banks have access to ample liquidity, shares of IA and AI could be sold to these entities after independent valuation. Selected foreign institutional investors (FIIs) may also be invited to be part of this consortium. Although this approach does result in reducing the government's share in ownership, the Committee recognises that there are potential problems involving passive institutional ownership, apart from the lack of precedent for this method. Under this option, given that the Reserve Bank of India (RBI) regulations prescribe ceilings on investment in shares by banks, most of the investment will, perforce, have to be by domestic FIs and FIIs. However, even if the government is a minority shareholder, management control, by default, may remain with the government – thereby diluting the primary motive for the exercise as argued above. An effective way out of this predicament would be to allow the institutional investors freedom to appoint a management team of their choice. The institutional investors should subsequently be allowed to exit at their volition.

[45] Presentation to the Committee by the external consultants to IA and AI.

### 3.3.7 Privatisation of Pawan Hans Helicopters Limited

Pawan Hans Helicopters Limited (PHHL) was incorporated in 1985 as a Government Company under the Companies Act, 1956. Out of the present equity capital of Rs.113.76 cr., Rs.89.26 cr. is held by GoI and Rs.24.50 cr. by Oil & Natural Gas Corporation Limited. According to revised estimates, the company made a profit of Rs.35 cr. in 2002-03.[46] The Committee is of the view that PHHL, which caters mainly to the needs of the oil sector and charter services, has no justification to be in the public sector. In line with the perspective that the government should focus only on policy-making functions and distance itself from the role of an operator, the Committee recommends that the Government should disinvest in PHHL by inducting a strategic partner and, thereafter, go in for an Initial Public Offer.

### 3.3.8 Regional Air Services

In order to improve air connectivity, operations to remote areas need to be encouraged. Since the traffic on routes in these areas might not be adequate for air transport operations to be economically viable, certain incentives will need to be given for such operations.

The Committee deliberated a good deal on the desirability and feasibility of giving specific incentives to low-cost, no-frills scheduled airlines. It was recognised that a general incentive for low-cost operators (similar to incentives for small scale industries) might be counter-productive in the long run. Instead, it was felt that incentives should be targeted towards small aircraft, which are more likely to be deployed on regional routes. Accordingly, the Committee recommends that the use of aircraft (including amphibious aircraft) having a maximum certified capacity of less than 80 seats and helicopters may be encouraged through reduced charges for route navigation service and landing.

In addition, state governments seeking to encourage air transport operations in remote areas should consider reducing the sales tax on ATF and AVGAS to the level of Central Sales Tax, for all operators who provide air transport services on specified un-served / under-served regional routes.

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[46] Source: www.pawanhans.com/profile.htm

### 3.3.9 Helicopter Operations

Helicopter operations have the potential to improve connectivity in the country, particularly in areas where fixed wing operations are not feasible due to difficult terrain or the absence of an airfield. Regulation of helicopter operations is presently based on rules that are laid down for fixed wing operations. This inhibits full utilisation of their capability and adds to costs. Hence, it is necessary that dedicated operating procedures be developed by the DGCA for helicopter operations so that they are not unduly stifled by the regulations designed for fixed wing operations, which are of an entirely different nature. The current practice of combined provision of infrastructure services for helicopter and fixed wing operations places the former at a disadvantage. In order to overcome this limitation, separate operational areas including helipads should be developed at major airports. This would also facilitate faster movement of fixed wing aircraft as they would not be delayed by the slow movement of helicopters. In addition, the incentives recommended for general aviation (see next section) should also be extended to helicopter operations as well.

To encourage business and tourist traffic and tackle natural calamities, the Government should consider licensing of heliports by the private sector, subject to prescribed safety guidelines, which could also be applicable to state governments for constructing their own helipads.

### 3.3.10 General Aviation

General aviation is an important element of the aviation sector, as it provides basic trained manpower for scheduled airlines and connectivity to small towns not normally served by scheduled airlines, and helps to promote tourism. General aviation also includes non-scheduled flying and training activities by operators / schools authorised by the DGCA. General aviation operators usually cater to small airports and remote areas, which are not normally equipped with high technology and capital intensive navigation and other airport facilities. In order to encourage general aviation, the Committee recommends the following incentives: reduced navigation and landing charges, rationalisation of sales tax on ATF and AVGAS to bring it at par with Central Sales Tax, waiver of the proposed sector-specific cess for subsidising

essential air services, lower hangar charges at airports, etc. In any case, the total amount of such concessions to general aviation would constitute a very small portion of total revenue collection from the sector. Moreover, the aforementioned concessions would result in increased operations of small aircraft and helicopters including special flights for agricultural operations and industry and thereby help compensate for the loss of revenue and may even result in additional revenue and increased employment.

### 3.3.11 Aviation related manufacture

Despite significant growth in the overall industrial production scenario and development of technology, manufacture of aircraft and civil aviation products like components and spares for local use as well as exports, has been relatively quite low. Consequently, most products and spares have to be imported. There is excessive emphasis on the area of aviation operations thus neglecting the manufacture of aviation products. There has been significant growth in petro-chemical and automobiles sectors due to opening up of the economy resulting in increased indigenous consumption of these products, quality standards and exports. Most of these have been driven by economies of scale. There has been some work in the country on development of Light Combat Aircraft (LCA) and Advanced Light Helicopter (ALH). Capacity also exists for attempting manufacture of smaller civilian aircraft. It is high time we made serious study of the possibilities of encouraging manufacture of aircraft and products for the aviation industry. This could be facilitated and encouraged by giving incentives for local design and development of small aircraft and products that go into aviation industry. Specific fiscal incentives to the manufacturers of such products would enable them to make India a competitive force in aviation-related manufacturing industry.

The above approach would succeed only if the growth of the civil aviation sector in India is actively encouraged. This is one more reason for giving greater importance to the expansion of general aviation in the country.

### 3.3.12 Safety and Economic Regulation

A growth strategy for the airline industry should necessarily encompass safety and economic regulation.

As regards safety regulation, the Chicago Convention (1944) enjoins countries to follow highest practicable degree of uniformity in regulations, standards, procedures, and organisation in relation to (a) aircraft maintenance and operations; (b) personnel licensing; and (c) airways and auxiliary services – as laid down by the International Civil Aviation Organisation (ICAO). In line with this, the DGCA regulates the airlines industry in India through a Safety Oversight System, covering many aspects including personnel licensing, flight operations and airworthiness of the aircraft. According to a Safety Oversight Audit of DGCA conducted by the ICAO in 1999 and a follow-up audit in 2001, the system established by the DGCA for certification and surveillance of the aircraft operations and air transport activities was satisfactory and enabled the country to fully comply with its obligations. While the ICAO's audit report indeed is a strong endorsement that India does have satisfactory safety regulation, a study finalised in 2001 reported a prevailing perception in the industry that (the current system's) "extreme stringency as well as inability to account for ground level realities has stifled the industry."[47] The study further highlighted that, according to a cross-section of professionals associated with the industry, the DGCA hardly consults the operators and is not sensitive to the economic/commercial impact of its directives on operators. In order to alleviate this perception, the Committee suggests that the safety regulation regime should be reformed to incorporate a mandatory consultative process such as, for example, the Notice Prior to Rule Making (NPRM) procedure followed by the Federal Aviation Authority (FAA).[48]

As regards economic regulation, very few countries, if any, resort to heavy-handed practices such as controlling of fares and allocation of routes. In many countries, air transport operators, particularly in the domestic segment, are allowed freedom in setting their fares and choosing the routes that they would like to service.

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[47] "The Future of Civil Aviation in India: Structure, Policy, Regulation and Infrastructure", National Council of Applied Economic Research, New Delhi, 2001.

[48] Under NPRM, FAA issues notice to all operators, giving full details of regulations contemplated and requests their feedback with regard to the economic/commercial impact of the proposed arrangements.

Many governments, at the same time, are acutely conscious that incumbent airlines can – either alone or through alliances – potentially engage in anti-competitive practices at several levels, viz., hub & city-pair route (dominant operator can resort to predatory pricing and, in case of hubs, to extortionary pricing of allied services) and network (loyalty programmes for customers and travel agents and discriminatory access to reservation systems). Acquisition of dominant control over slots in capacity constrained airports is yet another source of monopoly power for the airlines (see Box 3.2 below). Given these avenues for anti-competitive practices, airlines are normally regulated under the anti-trust laws of the respective countries. Furthermore, given the dynamic and complex nature of the industry, competition authorities are typically given significant discretion in imposing conditions on what would otherwise be anti-competitive mergers and alliances and also over the remedies that can be requested as a result of an infringement of competition law.[49] In view of this, in India too, competition laws (and the Competition Commission of India) should be relied upon to regulate restrictive trade practices by airlines.

[49] For instance, as part of the pre-conditions for British Airways (BA)/American Airlines (AA) alliance, the European Commission (E.C.) required the merging airlines to give up a large number of slots to competitors wishing to provide U.S.-London services, but could not obtain slots through normal allocation mechanism.

**Box 3.2 : Slots**

As airports become congested, it is crucial for airlines to be assured of access to such airports by way of the right to take off and land at a particular time of day. Such rights, commonly referred to as slots, are normally provided on a first-come-first-served basis and subsequently "grand fathered". The allocation of slots is complex matter because of the need to ensure compatibility between slots at either end of each particular route (and in cases involving multiple sectors, at each point on the route). Allocation of slots pertaining to international routes is effected through twice yearly slot allocation conferences that take place between members of the International Air Transport Association (IATA), in accordance with procedures developed by IATA. Airlines routinely exchange slots on a reciprocal basis and a seldom-publicised "fact" is that airlines may ask for, and receive, some financial consideration while exchanging valuable slots with less attractive slots.

There is economic evidence that capacity constraint on slots and gates translate directly into market power. For instance, in the U.S., of the 43 airports which are classified by the Federal Aviation Authority (FAA) as "large hubs", the fares are generally much higher at the ten airports which suffer from capacity constraints. Across countries, a variety of policies have been tried to prevent airlines from acquiring and strengthening a dominant position in slots, with mixed results. Under the slot trading system introduced in the U.S., the dominant incumbent airlines have succeeded in increasing their proportion of the total slots, despite explicit provisions to ensure that slots become available to new entrants. Yet another mechanism is "use it or lose it", which requires an airline to use a slot at least 80% of the time or face having the slot revoked by FAA. A far more drastic mechanism proposed by the Port Authority of New York and New Jersey envisaged a modest withdrawal of air carrier slots, not to exceed 3% on an annual basis, for reallocation to new entrants and small incumbents by lottery.

In summary, it appears that regardless of the approach adopted for allocation of slots, there is strong possibility for anti-competitive behaviour, since a dominant operator would be willing to pay more than a competitor for acquiring valuable slots. In due recognition of this reality, many countries rely primarily on competition law to prevent airlines from attaining a dominant position in slots.

Source: Airline Mergers and Alliances, Directorate for Financial, Fiscal, and Enterprise Affairs, Committee on Competition Law and Policy, OECD, Feb 2000.

## CHAPTER 4. AIRPORTS

Airports play a critical role in promoting trade, tourism and economic development of a country. Airport operators are responsible for providing and maintaining airport infrastructure, providing essential services, and allocating space and resources among airlines. Operators' recover the bulk of their revenues from airport charges levied on airlines and also from commercial use of airport facilities. Usually, the revenue obtained from commercial activities is significantly higher when an airport is privately owned in comparison to when it is under government ownership.[50]

India has over 400 airports out of which the Airports Authority of India (AAI) manages 94 airports and 28 civil enclaves in military stations. The AAI was constituted in 1995, to bring about integrated development, expansion and modernisation of operational, terminal and cargo facilities at the airports in the country. The AAI is also responsible for managing the entire Indian airspace and provides air traffic services over this airspace and adjoining oceanic areas.[51]

Although it might appear that India has considerable airport capacity, only 62 airports are in use with the rest remaining inactive. Additionally, over 40% of the passenger traffic is concentrated in the two main international airports at Delhi and Mumbai, and as a result, the limited terminal capacity at these airports has led to increased congestion, bunching of flights and delays in passenger clearances. This situation is exacerbated by outdated infrastructure, inadequate ground handling systems and night landing facilities, and poor passenger amenities. The poor utilisation of existing capacity has impeded development and growth of the sector, and today only 10 airports are profitable.[52]

While there have been a few positive developments through government efforts in recent years, viz. an increase in the number of international airports and development of proposals for new greenfield airports in Bangalore and Hyderabad, there is still plenty to be done. The privatisation proposal of the two major airports,

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[50] O. Betancor and R. Rendeiro, "Regulating Privatized Infrastructures and Airport Services", Spain.
[51] The focus of AAI in recent years has been to increase the number of international airports, upgrading air traffic control systems at major airports and instituting training programmes to improve employee response and upgrade professional skills. (AAI web site)

namely Delhi and Mumbai has only recently been cleared after several delays. There is an urgent need to encourage better utilisation of existing capacity through incentives, add capacity at certain airports to ease congestion, and improve overall viability; something that a combination of fiscal burden and cumbersome government regulations have hindered. Hence, the need for privatisation.

### 4.1 Private Participation: International Developments

Traditionally, all over the world, the airport sector has been under government control. The move towards airport privatisation is a relatively recent phenomenon, and was driven by two key factors. First, due to continuous increases in passenger traffic across the world, there was an urgent need to expand existing capacity and invest in additional facilities. Governments were unable to undertake the necessary investment as continued public financing of airport infrastructure was becoming increasingly difficult, given the competing needs for tax revenues. Secondly, the declining level of operational efficiency and the apparent inability of government operators to run airports in a cost-effective manner, made a strong case for involving the private sector.

The British Government decided to privatise the British Airports Authority (BAA) in 1987 by opting for full flotation. While this is a rare and unusual case of complete privatisation,[53] several governments across the world introduced private participation in the sector, and by 1995, some form or the other of private participation was under consideration in over fifty-four countries.[54]

Privatisation of airports has been making rapid progress in Europe and Latin America, with countries such as the U.S., and those in the Middle East and Africa preferring a slower pace. Most countries in Europe have opted for ownership divestiture (mostly partial) of airport infrastructure, whereas developing countries have typically opted for concession contracts, long-term leases or management contracts. The nature of privatisation depends to a large degree on government policy,

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[52] Presentation of the Airports Authority of India to the Committee, 2002-03.

[53] Outside the U.K., the most far-reaching privatisation program has been in Australia, where long-term leases (50 years with an option to extend for another 49 years) were offered for sale for 18 of the 22 airports operated by the erstwhile Australian Federal Airports Corporation.

[54] "Privatising Airports – Options and Case Studies", Public Policy for the Private Sector, World Bank, 1996.

the existing financial condition of the airports and the state of the capital markets. It is apparent that there is no standard international best practice that is applied when considering airport privatisation. As described in Table 4.1 below, airport privatisation largely falls in three categories depending on the degree of private sector involvement. The following sections discuss various models, outlining relevant case studies and present the benefits and drawbacks of each model.

**Table 4.1: Options for Private Sector Participation at Airports**

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Allocation of responsibilities** | | | |
| Ownership | State | State | Private Sector/ Mixed |
| Investment | State | Private Sector/Mixed | Private Sector |
| Management & Operation | Private Sector | Private Sector | Private Sector |
| **Common strategies for private participation** | Service concessions<br>Contracting-out<br>Management contracts<br>Multiple concessions | Build-operate-transfer (BOT) schemes<br>Long-term leases<br>Master concessions | Wraparound additions<br>Trade sales<br>BOT schemes<br>Strategic buyouts<br>Capital markets |
| **Recent cases and examples** | Aeroports Du Cameroon, Cameroon<br>Santiago, Chile<br>Kai Tak Airport, Hong Kong | Athens International Airport, Greece<br>El Dorado Airport, Bogota, Columbia<br>Stewart Airport, NY Argentina | British Airports Authority, U.K.<br>Belfast International Airport, Scotland<br>Australia |

Source: Privatising Airports – Options and Case Studies, Public Policy for the Private Sector, World Bank, 1996.

### 4.1.1 Management Contracts

In the case of a management contract,[55] the public sector operator continues to own the airport infrastructure and is still responsible for operation of core activities such as managing runways and air traffic control facilities. The private sector operator manages airport assets such as passenger terminals and other activities for a fee, which is typically linked to revenues from these activities.[56] This model of private participation allows the private operator to introduce best practices across

[55] Also referred to as Service Concession and Contracting Out.

[56] An example of a management contract is evident in Cameroon, where the Government of Cameroon created an independent company, Aeroports Du Cameroon, to operate 7 out of the 14 airports in the country for a fifteen year period. The company comprises a joint venture between Aeroports de Paris (34%), Cameroon Government (24%), with the remaining shares being held by airline carriers and financial institutions. Other examples of management contracts can be seen in Albania, in the case of Tarana Airport, in Hong Kong for Kai Tak airport, and in Chile for the management of a terminal in the international airport in Santiago.

airport activities thereby increasing revenues and enhancing profitability of airport operations. The drawback with this model is that the public sector operator still has the responsibility of raising financing for investment in the airport infrastructure.

Management contracts have been used extensively in developed economies as a mechanism for increasing the efficiency and cost-effectiveness of airports and airport services. In developing economies too, where capital markets are often not developed enough to undertake full privatisation, management contracts often serve as an intermediate mechanism to improve performance and profitability through private sector management.

### 4.1.2 Concession Contracts and Variants

Concession contracts are an innovative arrangement for airports that allow for the benefits of private sector involvement without releasing ownership of a public asset. Larger economic benefits generally can be obtained through such long-term contracts, in comparison to short-term management contracts, and as a result concession agreements are becoming increasingly common, especially in less developed countries.[57]

In the concession model (also known as a BOT scheme), control of all or some of the core assets of the airport is transferred to a private investor who is responsible for financing investment and managing the operations of the airport for the term of the concession, typically 15-20 years. The private operator usually pays concession fees to the government through the concession period and in return the private operator gets all the revenues from airport operations and bears the commercial risk for the period of the concession contract, after which it reverts to the government. The concession contract may be regulated in regard to prices being charged and the quality of the services. A prominent example of a BOT scheme is the case of the El Dorado Airport at Bogota in Colombia (see Box 4.1 below).[58]

[57] The majority of airport privatisation projects have been carried out through concession contracts.
[58] Examples of BOT concessions include a 30-year concession awarded to the Hochtief consortium to build and operate the new Athens (Spata) airport and a similar 25-year concession currently tendered by the Cyprus government to build and operate new passenger terminals at Larnaca and Paphos airports.

**Box 4.1: BOT Scheme: El Dorado Airport, Bogota, Colombia**

After deregulation of the Colombian air transport market in 1990, passenger traffic had increased substantially (especially international air traffic), and as a result the single runway at El Dorado reached its technical capacity in 1993.

The Government of Colombia, recognising the urgent need for additional capacity decided to build a second runway through a BOT scheme. The BOT scheme was considered for construction and maintenance of the new runway and maintenance of the old runway. The concession was awarded in 1995 for US$ 100 million to a consortium comprising Ogden, Dragados and Conconcreto. The concessionaire was expected to recover the investment through landing fee revenues during the 20-year concession period. As a rare case, the government assumed commercial risk through a guaranteed level of minimum revenues which is not typically the case in BOT schemes.

Using the private sector to address the capacity constraint has allowed Aerocivil, the corporatised civil aviation authority to focus its investment on increasing the level of airside operations and deal with safety issues and regulation.

Source: "Developing Best Practices for Promoting Private Sector Investment in Infrastructure: Airports and Air Traffic Control", Asian Development Bank, 2000.

Long-term leases are variations of concession contracts, which typically involve transferring the management and development of the airport to a private operator for a fixed period while the government retains ownership of the airport. Long-term leases tend to be longer than typical concession contracts and are usually awarded for over 30 years, and can extend up to 50 or even 99 years. On the expiry of the lease, the management and operation of the airport is returned to the government, unless there is an option to extend the lease.[59] The U.S. has opted for the long-term lease route in privatising Stewart Airport in New York. In 1998, New York State opted to lease Stewart Airport for 99 years to a U.K. firm, National Express Group, plc. over four other finalists, having offered $35 million in cash up-front, plus a percentage of airport revenues.

There is some downside to concession contracts/leases. First, the process of conducting economic and technical studies and choosing a concessionaire can be a complex and time-consuming process. Secondly, the concessionaire's costs could be inflated due to uncertainty of how compensation clauses at the end of the concession will actually play out. Additionally, the lack of ownership rights could make it

difficult and costly for private investors to raise the required capital and may restrict the private operator's ability to operate independently.

### 4.1.3 Strategic Sale or Partnership

In the strategic sale / partnership model, a private company or consortium acquires a stake in an airport or a state owned airport operator. This option entails the partial transfer of ownership to a strategic investor in the private sector. The government has the option of determining what proportion of private ownership is required and the advantage is that the transfer of ownership can occur in stages. Strategic partnerships also allow the government to get access to private capital and thereby help to relieve financial constraints. The government benefits from private sector decision making and involvement in management, which can have a direct impact on operational efficiency.

A similar model, also known as partial divestiture occurs when the shares of a public owned airport or airport operator are sold to private investors, usually through a flotation. An instance of a strategic sale is the case of Vienna Airport in Austria,[59] which was originally owned by the government, and is today partially privately owned by Amsterdam Schiphol Airport, which has a share in the 48% stake that was divested to the private sector.

This model has mainly been used in developed countries, where capital markets are mature and there is a high degree of interest from qualified private investors. In developing countries, a partial divestiture may not interest foreign investors, unless management is also transferred.

### 4.1.4 Full Privatisation (Complete Sale)

Full privatisation involves the sale of airport infrastructure from a public operator to a private entity/investor through a flotation or a trade sale. The privatised entity is then wholly responsible for all airport operations and financing of any new activities or investments. The British government kicked off the airport privatisation

[59] In the case of privatisation in Australia, airports were awarded through a fifty-year lease that has an in-built option to renew for another 49 years.
[60] Betancor, *op. cit.*

trend by announcing the public sale of the British Airports Authority (BAA), a government agency that owned and managed seven of the country's largest airports, including London Heathrow, the world's busiest international airport. A phenomenal 1.4 billion shares of stock were sold to 2.2 million citizens in the initial public offering, and the newly privatised BAA (BAA plc.) remained as manager of the airports. A single golden share was retained by the government and 25% of the equity was reserved for employees. The Airports Act also provided for the regulation of BAA plc. in order to avoid any misuse of monopoly power.

A little over fifteen years later, Britain's privatisation program has been a success by every measure. As a private company, BAA has increased the number of flights and passengers (its airports account for 71% of all passenger traffic in Britain), earned higher profits, increased capital investments, and managed at the same time to lower per passenger charges in real terms. Heathrow, for example, dropped from being the 18th highest charger of airline fees in 1990 to 26th in 2000.

### 4.2 Private Participation in Indian Airports

As described in the introduction, India's airports urgently need to improve and, in varying degrees, undertake investments for capacity addition. In view of the international experience outlined earlier, the Committee is in favour of encouraging private participation in the airports and, where feasible, introducing elements of competition.

Since air travel is predominantly location-specific and is driven by a variety of considerations ranging from the commercial to the cultural, and the huge investments involved, airports exhibit a strong characteristic of natural monopoly. Despite this, there is scope for introducing competition in a variety of ways. First, airport operators in developed markets can face competition from nearby airports, such as in the case of London or New York, where more than one airport services a geographic area and airlines and consumers have a choice between airports. Secondly, there is often scope in large hub airports for creating competition within an airport, given the numerous services provided by airports. For example, terminals could be given out to different operators who would compete directly with each other, and therefore price

services competitively.[61] However, in India, given the traffic levels at most of the destinations and the limited number of terminals even at major airports, there appears to be little scope for introducing competition any time soon through these methods.

Given the limitations in India's airport infrastructure, a more suitable method would be to introduce "competition for the market" in airport services, where an existing airport is given on a concession, through a competitive bidding process. However, this essentially represents a case of a public monopoly being turned over to the private sector, and regulation is important to ensure that the private sector does not gouge airlines and passengers (detailed in Section 4.3.1 on Economic Regulation). Within such concessions, one could introduce additional safeguards such as requiring the airport operator to allow – either through concession or mandated free entry – multiple third-party operators for certain commercial services such as ground handling, cleaning and land-side services such as banks, foreign exchange counters and restaurants.

Against the above backdrop, the Committee suggests a strategy for improving the quality and affordability of airport services in India, in three broad areas, viz., privatisation of existing airports, greenfield airports and uneconomical airports, as detailed in subsequent sections.

### 4.2.1 Privatisation of Existing Airports

The Cabinet has recently taken a decision on the long-standing issue of privatisation of the New Delhi and Mumbai airports, and approved the proposal to set up joint ventures for these airports where AAI will have 26% equity, and the private partners will own the rest (74%).[62] In other words, the government has chosen to encourage private participation through a concession contract route, which has been used extensively elsewhere.

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[61] Price competition in this situation is likely to be most effective when there is unused capacity. When capacity levels are constrained, inter-terminal competition is likely to be less effective in affecting prices, but may ensure that capacity is used effectively.

[62] The recent Cabinet decision has approved the privatisation of the airports through the joint venture route, where 74% will be held by the private sector. More importantly, the government has not restricted the level of foreign investment, allowing upto 74% foreign equity participation via the direct approval route. While initially the plan is to privatise Mumbai and Delhi airports only, the model of privatisation adopted at these airports will provide the basis for privatisation of other airports as well.

This move towards privatisation comes as a much-needed impetus to the reform and restructuring of the sector and is to be applauded. Private sector management is needed for effective and nimble decision making and larger financing that the government may not be able to provide. However, there are several factors that could impact on the privatisation of these airports and therefore need to be addressed on a priority basis.

- First, the Committee has noted (earlier in Chapter 2) that airport charges in India should be substantially brought down to levels comparable to neighbouring South East Asian countries. Such a benchmarking exercise should be completed prior to the bidding process, as it would affect the valuation of the concession.
- Secondly, one of the key features of the current privatisation model envisions the transfer of existing employees of AAI to the new privatised joint venture for a period of three years so that there is no retrenchment. The government should reconsider this decision and as an alternative can choose to compensate these employees from the general exchequer through voluntary retirement schemes (as it indeed has for some PSU employees).
- Thirdly, at present, the AAI bears significant costs in providing adequate security for each of these airports, whereas the Committee suggested that these costs should be borne by Ministry of Home Affairs. This should be clearly settled prior to the bidding process.
- Fourthly, there needs to be effective co-ordination and streamlining of security, immigration, and passenger management services (i.e., check-in, boarding, etc.) to ensure that the efficiency gains from private service provision are not outweighed by delays in other government-run services.
- Fifthly, there is the important issue of existing tenants who have occupied airport space in the past, who may have to be relocated or compensated.
- Lastly, it is important to ensure that the qualification criteria are not too stringent, so as to limit competition in the bidding process. While it might be desirable to attract private entities that have a strong track record in airport management, these criteria may be limited to ensuring that one member of the bidding consortium has prior experience in managing airports.

These issues if not handled effectively before the start of the bidding process could derail the privatisation initiative on two counts. First, highly qualified international bidders might choose not to participate in the bidding process, and secondly even if the airport attracts qualified bidders, their ability to improve the efficiency level of airport operations will be hampered.

Successful privatisation of these two airports, which account for over 40% of total traffic will also serve the interest of promoting general aviation in the country and will have spill-over effects into other airports. The same privatisation model can be applied to other profitable airports, once the four metros are privatised. In the absence of private interest in concession contracts for less viable airports, the government may consider the use of management contracts.

### 4.2.2 Greenfield Airports

Recently, a greenfield airport has been promoted at Kochi, by the Government of Kerala in the private sector. The Union government has also accorded in-principle-approval for two new proposed greenfield airports near Hyderabad and Bangalore with majority private sector participation. In a major development, the Union Cabinet in April approved the much-awaited amendments to the Airports Authority of India Act, 1994, which will help to grant independent status to the long-pending Bangalore international airport project.[63] The new international airport proposed at Shamshabad, 20 km from Hyderabad, is the other proposed greenfield airport.[64]

Recently, the government has decided to review the provision in the National Policy on Airports, 2002, that "no greenfield airport will normally be allowed within an aerial distance of 150 kilometres of an existing airport." Given the difficulties and delays associated with greenfield projects, the Committee recommends that the government may focus its efforts on harnessing efficiency gains through better management of existing capacity. It is critical that investment decisions regarding greenfield airports should be based purely on commercial considerations. Accordingly, central and state governments may refrain from extending concessions in general and subsidies in particular to greenfield airports which might impinge on the viability of existing airports. Additionally, greenfield airports that are envisaged

[63] Bangalore International Airport Ltd (BIAL) has reached consensus with the Ministry of Finance, Government of India on the concessional agreement for 30 years. It has agreed to a concessional fee of four percent of total annual revenue, payable from the first year of operation. The government will extend a grace period of 10 years, and the company will pay the fee from the 11th year of operation together with 10 percent of accumulated fees. BIAL can pass on the fee to airport users at any point of time, with the intervention of the government. Lenders on the project have agreed to facilitate financial closure in Nov, and commencement of work in Dec 2003.

[64] The airport is a joint venture between the Andhra Pradesh government and the Airports Authority of India (AAI), with each holding 13 per cent equity. A private consortium, led by GMR Vasavi Infrastructure Ltd and Malaysia Airports Holding Berhard, is holding 74 per cent balance.

to meet social/strategic considerations can be addressed through the proposed Essential Air Services Fund (EASF) (Chapter 3).

There are many tourist centres in India which can attract a large number of international tourists if they can be easily accessed by chartered flights. The Committee, therefore, recommends that the Government should actively encourage ventures, including in the private sector, to set up small no-frill airports for catering to the needs of chartered flights. Similarly, ventures should also be encouraged to set up heliports, wherever there is a demand for such services.

### 4.2.3 Uneconomical Airports

The case for privatisation becomes exceedingly difficult when considering the case for smaller uneconomical airports. These airports are typically loss-making and serve social obligations of providing nation-wide connectivity, rather than presenting profitable investment opportunities. Countries have developed different mechanisms to deal with what is commonly known as "essential air services" in order to provide connectivity services to remote areas that might not be commercially viable, and are unlikely to attract private investment.

In India too, a large number of airports do not generate enough revenue to meet their operational costs and, as a consequence, the AAI is not in a position to upgrade existing small airports or develop new ones. Hence, financial support for the development and maintenance of essential but commercially unviable airports will be necessary for some time to ensure adequate air connectivity throughout the country. In this context, the Ministry of Civil Aviation should develop objective and transparent criteria for selecting airports that need to be provided with financial support.

In order to improve the efficiency of operations at selected essential but commercially unviable airports, the government can award them to the private sector using minimum subsidy bidding either through a one-time capital grant or annual

payment.[65] Funding for such a subsidy programme can be met through the proposed Essential Air Services Fund (EASF) which is described in detail in Chapter 3.

## 4.3 Regulatory Issues

### 4.3.1 Economic Regulation

Given the potential for abuse of monopoly power in airport activities, the airport operations should be kept under the purview of an independent economic regulator.

One of the areas that is most vulnerable to monopolistic behaviour is the setting of overall airport charges.[66] Here the most common tool for regulating monopoly power is price regulation. In the past, most countries followed ICAO and IATA guidelines and essentially had similar pricing structures based on a landing fee calculated according to aircraft weight and a departure fee for passengers. However, with increased private participation, this uniformity is likely to come under pressure, as airports look to increase efficiency in pricing. A good example of price regulation is prevalent in the U.K. and Australia, where they have adopted a form of multi-year price-cap regulation, known as RPI-X regulation[67] which is applied to revenues from airport charges. The price cap is a weighted tariff basket of annual changes in prices for aeronautical charges. The cap requires that the prices for these services should rise by no more than RPI-X, where RPI is the Retail Price Index (RPI)[68] and a factor X, which is determined for a fixed period of time, say five years after which the level of X is re-examined.[69] This form of regulation provides a strong incentive for airport operators to reduce costs and has proved to be an effective method of regulation provided it is coupled with extensive monitoring of service quality standards.

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[65] The alternative method of bundling profitable airports with unprofitable operations, as was done in Argentina, would bring in cross subsidies, and would hamper the privatisation process of profitable airports.

[66] Airport charges are defined as charges levied on aircraft operators in connection with the landing, parking or take-off activities and charges levied on airport passengers.

[67] The RPI-X regulation has formalised regulatory lag to give companies incentive to operate efficiently in the interval between reviews. The idea is that a private operator is required to keep the increase in its prices to less than the increase in a specified price index, so that prices decline by X percent a year in real terms.

[68] In India, a comparative measure would be the Consumer Price Index (CPI)

[69] Economic Regulation of Australian Airports, Australian Pacific Airports Corporation, April 2000.

Further, to ensure that the operator is not abusing its monopoly power in other airport activities, the regulator can apply the principle of "single-till" regulation. This method involves calculating the appropriate level of airport charges for an operator, by deducting revenues generated by the operator through commercial activities. The single-till method has been applied both in the U.K. and Australia. However, there is an important concern that remains unaddressed in this method, namely, an opportunity to the operators for cross-subsidisation or "price gouging" in some commercial services.

Since, unlike most other regulated businesses airport operators often derive a significant portion of their revenue from other commercial services (see Table 4.2 below), which include ground handling services and airport retail and rental services, it is important to enhance competition in these areas.

**Table 4.2: Revenues of London Airports (Figures in Million Pound Sterling)**

| | 2001-02 | Percent |
|---|---|---|
| Airport charges | 531 | 39% |
| Other operational Activities | 794 | 58% |
| Non-operational activities | 39 | 2% |

Notes: Airport charges include runways, taxiways, airfield supervision and emergency services. Other operational activities relate to refuelling hydrants, electricity, retail (commercial) property management, check-in, baggage claim, car parks, etc. Non-operational activities predominantly comprise advertising.

Source: "Report on the Economic Regulation of the London Airport Companies", BAA plc, October 2002.

There are two ways to increase competition in these commercial activities. One approach, currently being considered in the U.K., would be to adopt dual till regulation. This approach allows for separate regulation of airport activities and other operational (i.e., commercial) activities and therefore prevents the operator from cross-subsidising or abusing its monopoly power in both areas. Alternatively, another method would be to provide effective competition by (a) requiring the operator to issue multiple concessions in commercial services; or (b) mandating free entry into these services where possible. This provision, while ensuring that the operator is not granted exclusivity over these services, is likely have a direct impact on the price that the operator is willing to pay for the concession and should be clearly specified before the bidding process is initiated.

Going forward, given the increasing level of privatisation, it is recommended that the responsibility for ensuring the appropriate level of regulation be vested with an independent Aviation Economic Regulatory Authority (AERA) as enunciated in Chapter 6.

Another area of airport operations that requires regulation is the allocation of slots for airlines. While slot allocation is carried out differently across countries, the key is to ensure that the dominant airline, typically the national or incumbent airline does not hold undue sway over the process and hoard otherwise under-utilised slots. The introduction of a profit-maximising airport operator, as is the case that is being proposed in India, will have strong incentive to extract the maximum revenue possible from each take-off and landing, and will use careful price discrimination between different carriers and routes. However, care needs to be taken to ensure that smaller carriers are not excluded from airport slots and that there is a transparent mechanism for slot allocation and the pricing mechanism for slots prevents hoarding by dominant operators. For further details on how countries have addressed this issue, please refer to examples in Box 3.2 on "Slots" in Chapter 3.

### 4.3.2 Safety Regulation

The role of the regulator in ensuring safety standards broadly consists of two key elements. First, private operators have to adhere to safety and quality standards laid down by the regulator, which needs to be monitored stringently. Secondly, in order to reduce impact on passengers, safety procedures should be streamlined effectively with passenger services to ensure efficient functioning of airports. The DGCA has traditionally been responsible for the implementation and monitoring of stipulated standards regarding the safety of airport and aircraft operations, licensing of personnel and civil airports and it is recommended that this should continue.

# CHAPTER 5. AIR TRAFFIC CONTROL

This chapter delineates a strategy for efficient provision of Air Traffic Control (ATC) services in India, including associated issues such as financing and regulation, based on emerging trends in other countries. More generally, Air Traffic Management Services (ATMS) comprises *en route* and airport air traffic control, airspace management, communication, navigation and surveillance, contingency planning and crisis management, aeronautical & meteorological information, and search & rescue.

It is reported that under the existing arrangement, wherein both airports and ATC services are controlled by a single organisation (i.e. AAI), ATC services often remain neglected on account of inadequate attention from the top management.. Hence, there is an urgent need to review the current practice and evolve an effective mechanism to provide ATC services that are commensurate with the international best practices and standards.

## 5.1 International Trends

Globally, Air Traffic Control (ATC) services have been considered part of airport services and treated as a deemed public-service function, for reasons of safety and security and, consequently it has remained under government control. Over the last couple of decades, in the wake of an increasingly deregulated aviation environments and privatisation of state airlines and growth in the number of independent and low-cost operators that followed, there has been an enormous increase in demand for ATC to manage the increasingly congested airspace. Even as the costs of safely handling increasing traffic levels have escalated,[70] the government procurement processes have been found to be rather restrictive and inflexible. This has hampered the ability of the ATC service providers to acquire modern technologies and equipment, and streamline procedures. Private airlines – the new clients for ATC services – have very different concerns about cost and service levels as compared to their erstwhile government predecessors. Furthermore, in the context of private provision of airport services, clubbing ATC responsibilities with airport operations also raise conflict of interest issues, with consequent safety implications.

[70] Here, it is noteworthy that effective provision of ATC services requires highly trained staff, complex technology, efficient management, and timely investments.

Around the same time, there is increasing realisation that ATC services are distinct from airport services and, accordingly, better provided as part of an integrated airspace management system rather than merely focusing on services at individual airports.

Many governments have responded to recent developments by vesting ATC services with autonomous bodies, with a view to according them financial and operational freedom, and to facilitate introduction of modern business techniques and practices into these services[71] (see Table 5.1 below).

**Table 5.1: A comparative profile of ATC Corporations**

| Country | Corp. Name | Year formed | Ownership | Functions | ATC Funding Source |
|---|---|---|---|---|---|
| Australia | Air Services Australia | 1988 | Govt. | ATC + some regulation | Mostly user fees |
| Austria | Austria Control | 1994 | Govt. | ATC + reg. | 60% user fees |
| Canada | Nav Canada | 1996 | Not-for profit corp. | ATC | 100% user fees |
| Czech Rep. | ATC Admin. | 1993 | Govt. | ATC | Mostly user fees |
| Germany | DFS | 1993 | Govt. | ATC | 100% user fees |
| Ireland | IAA | 1994 | Govt. | ATC + reg. | 100% user fees |
| Latvia | LGS | 1993 | Govt. | ATC | 100% user fees |
| New Zealand | Airways Corp. | 1987 | | ATC | 100% user fees |
| Portugal | ANA | 1992 | Govt. | ATC + airports | 100% user fees |
| Russia | Magadan Aero Control | 1995 | Govt. | ATC | In transition |
| South Africa | AT&NS Co. | 1993 | Govt. | ATC | 100% user fees |
| Switzerland[1] | Swiss Control | 1988 | | ATC | 100% user fees |
| Thailand[1] | AeroThai | 1948 | Govt. | ATC | 100% user fees |
| Ukraine | U.K. SATSE | 1993 | Govt. | ATC | In transition |
| U.K. | NATS | 1996 | Partial privatisation | ATC | Mostly user fees |

**Source**: Based on Robert W. Poole, Jr. "Commercializing Air Traffic Control", Regulation, Summer 1997, updated with information available from other sources.
**Note**: 1. Partial user ownership.

From the Table above, it appears that most of the countries that sought to corporatise their ATC services have opted for a government corporation, with two

[71] The International Civil Aviation Organization (ICAO) argues that air navigation service providers should, where it is in the best interests of providers and users alike, be set up as independent bodies. However, ICAO also recognises that under the Chicago Convention, it is the state that holds both the responsibility for providing an air navigation service, and ensuring it is safe.

notable exceptions though. While the U.K. chose a regulated for-profit corporation,[72] Canada settled for a not-for-profit corporation owned by the users and governed by a stakeholders' board (see Box 5.1 below).

**Box 5.1: Nav Canada**

NAV CANADA is a non-share capital, private corporation which owns and operates Canada's civil air navigation service (ANS). It purchased the system from the Canadian government in November 1996 for $1.5 billion. Its 5,500 employees include air traffic controllers, flight service specialists, electronic technologists, operational support specialists and engineers. It provides airlines and aircraft operators services related to air traffic control, flight information, weather briefings, airport advisory services and electronic aids to navigation. The company's safety performance is regulated by Transport Canada. In 2002, there were approximately 10 million aircraft movements associated with NAV CANADA area control centres, control towers, flight service stations and remote aerodrome advisory services.

The company has no shareholders and is financed entirely through debt. NAV CANADA has issued $2 billion in long term bonds at competitive rates, having got a AA credit rating. The company has invested and committed close to $1 billion in new systems and technologies since 1996 to modernise and enhance the delivery of air traffic services. In accordance with the Civil Air Navigation Services Commercialization Act, NAV CANADA operates on a break-even basis. For fiscal 2001-2002, revenues matched expenses at $971 million (compared to $916 million the previous year), but this was only possible through the full utilisation of the company's Rate Stabilization Account, which is now in a $19 million deficit.

The company is governed by a stakeholder Board of Directors with representation from the four founding members: airlines, general aviation, the federal government and bargaining agents representing employees. The members' representation on the Board is as follows: airlines - 4; general aviation - 1; federal government - 3; bargaining agents - 2. These 10 directors then elect four independent directors, and the Board appoints the President and Chief Executive Officer.

NAV CANADA revenues essentially come from service charges paid by its customers. These fees replaced the Air Transportation Tax (ATT) paid by passengers on commercial flights. The tax was abolished in 1998 at which time the company began to operate solely on the basis of customer service charges.

Source: Nav Canada website, www.navcanada.ca

While many of the aforementioned restructurings are quite recent, some gains have been reported in several countries;[73] It is generally considered that separating

[72] A 46% stake in National Air Traffic Services (NATS) was competitively bid in 2001, with the government retaining a 49% stake and 5% being reserved for an employee Trust. Here, it is noteworthy

ATC systems from government procedures while maintaining government safety regulations works well.[74] For example, in its initial year of operation in 1993, the corporatised German Air Navigation Services (DFS) reduced ATC charges by 25%. User charges in New Zealand have declined by 30% in real terms since corporatisation in 1987. Charges in Australia have fallen by 15% in real terms.[75]

Of crucial importance in a corporatised ATC structure is a workable system of fees and charges. Most corporatised ATC entities, as evident from Table 5.1 above, are funded through user fees. These fees typically include *en route* as well as terminal navigation charges[76] and, in some cases, specialised charges (e.g., aviation rescue or fire fighting). User fees have mostly replaced the earlier system of ticket taxes. Given the natural monopoly characteristics of ATC services, these fees are regulated by the respective economic regulators.

## 5.2 Way Ahead in India

In India, ATC services, including equipment provision, operations and maintenance, had been vested with the erstwhile National Airports Authority since 1986 and then transferred to the successor entity, AAI, since 1995. With the advent of liberalisation and privatisation, India, too, is either already witnessing or likely to face many of the concerns that prompted other countries to restructure their ATC services, viz., additional investment to cope with increase in air traffic, modernisation, unbundling of ATC from privatised airport services and flexibility in procurement decisions. In view of this, the Committee recommends that ATC services be hived off from the current jurisdiction of AAI and, in line with the international trends, constituted as a separate corporate entity (say, ATC Corporation). The reality of imminent privatisation of the two largest airports at Mumbai and Delhi should impart

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that a for-profit corporation for ATC services has raised questions about a "safety versus profits" conflict and has led to controversy in the U.K..

[73] On the other hand, according to the U.S. National Air Traffic Controllers Association (NATCA), privatised ATC corporations (in Canada and the U.K.) required government bailouts in 2001 and 2002, implying that the practice of independent ATC corporations may not be an effective option. Such conclusions, however, need to be tempered with the overall civil aviation environment in those years.

[74] The Responsibilities of Government in the Provision of Airports and Air Navigation Services – A Perspective, presentation by Gunnar Finnsson to the ICAO Aviation Symposium 99, Reykjavik, 17 November 1999.

[75] Robert W. Poole, Jr. "Commercializing Air Traffic Control", Regulation, Summer 1997 and Civil Aviation Navigation Service Organisation (CANSO) website, www.canso.org.

[76] Charged on a price per tonne landed or a factor of tonne-kilometers.

a sense of urgency to this process. Given the systemic safety ramifications of ATC services, though, it might be prudent at this juncture to preserve government ownership of this corporation, while retaining the option of a joint venture with stakeholders in the future.

ATC services, like almost all other segments of aviation services, should be subjected to safety oversight. Given the natural monopoly characteristics of ATC services – and a consequent potential for over-charging in areas with high traffic density – the Committee recommends that they are also kept under the purview of the proposed Aviation Economic Regulatory Authority (AERA).

### 5.3 Meteorological Services for Aviation

The importance of accurate and timely meteorological information in ensuring the safety, regularity and efficiency of air transport operations cannot be over-emphasised, especially in India where adverse weather conditions such as monsoons and fog during winter months can seriously affect air services.

Although the provisions of ICAO Annex 3 should form the primary basis for provisions of these services, the Indian Meteorological Department should ensure that flights are not disrupted for want of necessary meteorological information. In this context, the Committee would like to make the following suggestions:

- There should be proper co-ordination between the IMD and the proposed ATC Corporation, preferably in the form of an agreement.[77]
- The IMD must provide weather information at the destination and alternate stations before the flight departs the originating station.
- In terms of facilities, airports with runways intended for precision approach and landing operation should have automated equipment for measuring, assessing, monitoring and remote indication of weather data as per ICAO provisions. In a similar vein, IMD should provide wind shear measurement devices at major airports in the country. The IMD should

[77] Here, it is noteworthy that until the 1970s, the Indian Meteorological Department (IMD) used to be a part of the Ministry of Civil Aviation.

also ensure that meteorological facilities match with the air navigation and landing facilities provided at the airports. For this purpose, a joint group of representatives from IMD, proposed ATC Corporation, DGCA and Scheduled Operators may be constituted to coordinate planning of meteorological facilities at various airports.

- Necessary meteorological services should also be provided for off-shore helicopter operations.

There is dire need to manage air traffic with meteorological services in an integrated manner. Present system of dual control results in diffusion of responsibility and accountability leading to communication gaps and loss of efficiency. In order to improve co-ordination, the IMD should depute trained meteorological personnel to the proposed ATC Corporation. Such personnel should function under the administrative control of the Officer-In-charge of the airport. In addition, the ATC Corporation could procure the meteorological equipment needed for aviation activities. The IMD should continue to be vested with the responsibilities of training and upgradation of skills of meteorological officers and also development of procedures in accordance with the provisions of ICAO.

## CHAPTER 6. INSTITUTIONAL FRAMEWORK

Aviation as a sector is different from other economic sectors, its operations being an agglomeration of multiple distinct, yet intertwined, commercial functions in different segments – for instance, airlines, ground handling, airport slot allocation, air traffic control, remote area access, competition, safety, security, etc. Aviation oversight functions are currently distributed between the Ministry of Civil Aviation (MoCA), Airports Authority of India (AAI), Directorate General of Civil Aviation (DGCA) and the Bureau of Civil Aviation Security (BCAS). This chapter develops an integrated institutional architecture for these activities that is best suited for India to provide *inter alia* a network with seamless interface in a much more deregulated aviation environment with the objective to preserve competition and facilitate efficient and affordable connectivity while ensuring adherence to safety requirements.

A brief look at the institutional frameworks in selected countries with large and well-functioning aviation sectors or those who have instituted effective deregulation will help clarify the remarks that follow. This comparative picture is given in Appendix 3. As evident from the Table, there is little uniformity in global practices regarding the separation of institutional functions. While these practices do serve to provide a guide to what a sensible institutional framework should be, the Committee feels that it will be best to apply basic first-principles in a pragmatic manner for evolving the right institutional framework in India by mostly incorporating elements of the successful features of foreign practices in an internally consistent manner.

In light of international experience and the road map suggested in this report for liberalising the major operational segments of civil aviation, the Committee envisages the continued need for institutional intervention in the following areas: (i) safety regulation; (ii) limited economic regulation; (iii) essential but uneconomical air services; (iv) management of bilaterals; and (v) aviation security. The following sections recommend the institutions, existing and new, where such functions need to be vested.

## 6.1 Safety Regulation

Aviation safety is paramount and should take precedence over, if not over-ride, commercial considerations in air traffic operations. As the table in Appendix 3 shows, safety regulation in many countries still vests with a unified regulatory authority, for instance, in the U.K., U.S. and New Zealand. On the other hand, Australia has established a separate safety authority, but not a separate aviation sector regulator. In India, aviation safety is in the domain of the DGCA and it has adequately established its credentials for this function though there is need to review and streamline procedures. The Committee feels that it remains adequately suited to fulfil its safety related tasks even with the likely increase in pressures and complexity in a deregulated environment. It therefore makes sense to continue to vest the DGCA with the safety function, but take a good look at the rules and regulations governing aviation safety with a view to bringing them up to date

The Committee would like to stress, however, that safety considerations on the one hand and the associated investment on the other cannot be totally independent of commercial considerations. Because of the huge investment needed for upgrading and maintaining safety-related equipment, aviation stakeholders ought to have a say in the decisions of the DGCA. In the U.S., for instance, the FAA follows processes via its Notice Prior to Rule Making (NPRM) for safety related decisions. The Committee is concerned about an inadequate interface and interactions between the DGCA and the relevant stakeholders. One of the areas requiring close coordination (with the proposed economic regulator) is oversight of charges for air traffic control services, which have systemic safety implications. Hence, the DGCA should initiate a process of meaningful and transparent consultations with stakeholders, similar to what other independent regulators undertake in their respective countries.

There is an urgent need to strengthen the DGCA, by ensuring that it is adequately manned to regulate all important disciplines like airworthiness, flight operations, monitoring air traffic control services, etc. While the airworthiness wing of the DGCA is adequately manned with trained personnel, there is deficiency in the case of personnel required for monitoring flight operations and air traffic control activities.

For monitoring flight operations, highly trained and experienced pilots are required. Presently, line pilots of scheduled carriers are engaged by the DGCA as Flight Inspectors, whose costs are borne by the airlines. This system does not work well. Since the DGCA is constrained by the wage levels and retirement rules of the Government, they have very little flexibility in attracting suitable manpower. While ICAO requirements stipulate maximum age of 60 years for active flying, many countries employ trained pilots beyond the age of 60 years as Flight Inspectors for carrying out operational surveillance. In order to have an effective safety system for flight operations, the DGCA also should be allowed to contract qualified pilots who are either medically grounded or have attained the normal age of retirement from airlines. Such pilots may be contracted up to the age of 65 years (63 years on initial contract and 2 years extension) subject to fitness.

Currently, the DGCA hardly has any capability to monitor the air traffic control services; there is no wing or trained personnel within the DGCA to carry out this job. As in the case of flight operations, here too, the DGCA may be allowed to avail the services of experienced air traffic controllers (ATCOs) from the AAI, who are close to their retirement, through deputation or on contract basis. Additionally, the DGCA should appoint examiners, instructors, monitor air traffic controllers, as is done in cases of pilots, from among the air traffic controllers of the AAI to carry out routine training and proficiency checks of the ATCOs on behalf of the DGCA before licences are granted to them. Such ATCOs should also carry out periodic surveillance of ATC activities and be made responsible for implementing safety regulations in air traffic control activities.

### 6.2 Economic Regulation

So far, economic regulation of the aviation sector has been, at best, an informal exercise, with the AAI combining the functions of operator and regulator of airports and air traffic control services. This has involved an inherent conflict of interest. As argued earlier in this Report, there is a strong case for establishing an independent entity, viz., the Aviation Economic Regulatory Authority (AERA), to oversee and deal with the natural monopoly and "common user/carrier" segments of airports and air traffic control. The scope of this oversight, which should be light handed such as providing multi-year price cap regulation, is provided in detail in sections 2.4, 4.3.1

and 5.2. As regards airlines, their anti-competitive practices can be checked through competition laws (and the Competition Commission of India).

Given the proposed approach of encouraging private participation and also regulating the sector through a light-handed, multi-year regime, the Committee foresees little need for an **elaborate** economic regulatory institution. Accordingly, the Committee would like to suggest that the AERA may be established as a single-member entity, supported by appropriate technical staff.

### 6.3 Essential but Uneconomical Services

The Committee recommends establishment of a dedicated non-lapsable Essential Air Services Fund (EASF), outside the Consolidated Fund of India, to provide explicit subsidy support for essential but uneconomical services including commercially unviable airports. The modalities of this Fund, including the various possible revenues for the fund, have been detailed in Chapter 3. In addition, the Committee suggests that devolutions from the EASF should be made according to pre-defined, transparent criteria and processes. Furthermore, the Committee recommends that the responsibility of managing the EASF be entrusted to an independent board with representatives from the Ministry of Finance and aviation users. With a view to conserving resources and facilitating effective co-ordination, the Committee recommends that, to begin with, the Chairman of AERA may also be appointed chairman of the EASF Board. This arrangement, however, may subsequently be revised, and depending upon how the workload actually evolves in future, the government may consider divesting the responsibility of supervising the EASF to a separate, independent administrator.

### 6.4 Management of Bilaterals

Bilateral rights, i.e., the reciprocal arrangements for landing and parking rights negotiated between countries, being considered a sovereign right, come under the ambit of the Government of India, in line with international practices. Only Australia has established an independent International Air Services Commission to allocate bilateral rights. The Committee recommends that, in India, negotiations of bilaterals should continue to be a sovereign responsibility.

### 6.5 Aviation Security

In the current security environment, a liberalised aviation sector will have to weave the security requirement into almost all aspects of air transport activities. The AAI currently pays significant amounts to the BCAS for security cover of its airport equipment and installations. Following the Chicago Convention, the government, moreover, has the responsibility for sovereign security cover, for instance against terrorist attacks. The Committee feels that the BCAS[78] should continue to remain the nodal agency for aviation security, but the implementation of security functions in the emerging environment has to be fine-tuned. A large part of this process is related to coordination between senior managers of the respective airports and their counterparts in various government bodies, especially the Ministry of Home Affairs. These issues are best handled as part of the implementation processes that will be the subject of Part II of this Report.

To recap, Table 6.1 gives a summary mapping of the vesting of aviation functions with the envisaged institutions, as recommended by this Committee.

**Table 6.1: Mapping of Oversight Functions in an Institutional Framework**

| | | DGCA | AERA | EASF | BCAS | CCI |
|---|---|---|---|---|---|---|
| **Air transport** | Safety | ✓ | | | | |
| | Security | | | | ✓ | |
| | Unfair trade practices | | | | | ✓ |
| | Essential air services | | | ✓ | | |
| **Airports** | Security | | | | ✓ | |
| | Safety | ✓ | | | | |
| | Abuse of monopoly power | | ✓ | | | |
| | Uneconomical airports | | | ✓ | | |
| **Air Traffic Control** | Abuse of monopoly power | | ✓ | | | |
| | Safety | ✓ | | | | |
| **General Aviation** | Safety | ✓ | | | | |

**Legend:**
AERA: Aviation Economic Regulatory Authority, DGCA: Directorate General of Civil Aviation, BCAS: Bureau of Civil Aviation Security, EASF: Essential Air Services Fund, CCI: Competition Commission of India, MoCA: Ministry of Civil Aviation.

[78] The Bureau of Civil Aviation Security (BCAS) is an attached office of the Ministry of Civil Aviation, headquartered in New Delhi, headed by a Commissioner of Civil Aviation Security in the rank of Director General of Police.

## CHAPTER 7. STRATEGY AND SUMMARY OF RECOMMENDATIONS

### 7.1 Enhancing Affordability, Connectivity and General Aviation

The Government of India (GoI) aims to provide world class infrastructure facilities and efficient, safe and reliable air services to meet the requirements of domestic and foreign trade and tourism, and to meet connectivity requirements of remote and inaccessible areas on a priority basis.[79] In line with this, the Committee has been requested to address *inter alia* aspects such as (a) affordability and connectivity in the domestic aviation sector; (b) development of regional air connectivity within the country; (c) promotion of general aviation; and (d) aviation training. In fact, these considerations have underpinned the Committee's deliberations on the various operational segments and institutions in the civil aviation sector. The Committee found it useful to view the aviation sector as comprising of two distinct and separate types of services. The first, a core set of services, to be operated as a business and run on commercial principles and the second, aimed at providing connectivity in consonance with social and distributive objectives, to be supported through direct and transparent subsidies from the government. The Committee would like to highlight that recommendations in the earlier chapters, together, provide a comprehensive strategy – consisting of the four distinct elements – aimed at making air transport affordable and enhancing air connectivity across the various regions of the country:

(a) Immediate measures that are aimed at lowering system costs of the civil aviation sector. These measures *inter alia* include: a liberal fiscal regime; allowing airlines to source ATF from the supplier of their choice; and improving coordination with other Ministries such as Home Affairs and Defence (Chapter 2).

(b) Encourage private participation and competition in air transport services, with a view to lowering fares and, thereby, enhancing affordability. In this regard, the Committee recommends the abolition of route dispersal guidelines; lowering of entry barriers; liberalisation of investment norms for foreign equity and foreign airlines; further liberalisation of the international air transport segment starting with permission for domestic private airlines to operate international services; early privatisation of IA, AI and PHHL; and concessions to regional air services, helicopter operations and general aviation (Chapter 3). Facilitate private participation in the provision of airport services to the maximum possible

[79] Tenth Five Year Plan 2002-07, The Planning Commission, Government of India.

extent, so as to encourage aggressive pursuit of efficiency and facilitate investment in additional capacity (Chapter 4).

(c) As regards ATC services, enhance operational freedom to enable rapid adoption of modern technologies, through unbundling of ATC services from the AAI and vesting them with a government-owned corporation (Chapter 5). Apart from safety oversight by the DGCA, in order to contain the monopoly power of airports and ATC services, place these segments under the purview of an independent Aviation Economic Regulatory Authority (Chapters 4, 5 and 6).

(d) Establishment of an Essential Air Services Fund (EASF) to provide explicit subsidy support to essential but uneconomical services including commercially unviable airports (Chapters 3, 4 and 5). Scope of essential services sought to be supported should be congruent with the quantum of funds available with the EASF. Trying to do "too much" with "too little" will undermine an otherwise laudable endeavour.

The Committee believes that a concerted implementation of the above measures would go a long way in lowering costs for the commercial and general aviation segments, thereby making air transport more affordable and its use more widespread.

### 7.2 Immediate Concerns and Remedies

**Liberal Fiscal Regime:** The government should substantially lower excise duty and sales tax on ATF and abolish import duty and sales tax on AVGAS. Other aviation-related taxes and fees such as IATT, FTT and PSF may be replaced with a single, lower *ad valorem* sector-specific cess, say at 5% of airfare, and the proceeds thereof may be ring-fenced into the proposed non-lapsable Essential Air Services Fund. In case of sales tax, the government may consider categorising ATF as "declared goods" under the Central Sales Tax Act so that sales tax on ATF does not exceed 4%. Furthermore, in case of smaller aircraft that are essentially deployed to enhance regional connectivity, government should do away with the existing discrimination based on the type of aircraft and, accordingly, bring parity in taxes on ATF for jets and turboprop aircraft with maximum certified seating capacity of less than 80.

**Lowering of Airport Charges:** The Committee recommends that airport charges should be substantially brought down to levels comparable with neighbouring South East Asian and Gulf countries.

**Freedom to Source ATF:** Airlines should be allowed to source ATF from the supplier of their choice. In this regard, the Committee suggests that the Airports Authority of India (AAI) should offer to buy out the fuel supply hydrants and associated infrastructure of the government-owned oil companies and provide all oil companies equitable access to such facilities. Alternatively, the government-owned oil companies should be required to provide private oil companies access to these facilities based on a "common user/carrier" principle. In either case, given the potential for abuse of monopoly power, fuel supply infrastructure at airports should come under the purview of the proposed Aviation Economic Regulatory Authority (AERA).

**Ensuring a Level Playing Field:** With a view to ensuring a level playing field between Indian Airlines and domestic private airlines, the Committee recommends the removal of restrictions on travel of government and PSU employees on private airlines. In addition, domestic private airlines should be allowed to operate international services and also be permitted to offer third-party ground handling services. As regards greenfield airports, the Committee endorses the recent government decision to do away with the earlier proposal of not allowing greenfield airports within an aerial distance of 150 kilometres of an existing airport. The Committee, however, suggests that central and state governments may refrain from extending concessions in general and subsidies in particular to greenfield airports in close proximity to the existing airports, which might impinge on the viability of existing airports.

**Ministry of Home Affairs:** At international airports, the operators must ensure availability of more space so as to enable the Ministry of Home Affairs to locate additional counters and deploy more immigration officers. The computer systems at airports should be upgraded within a one year time-frame and the government should ensure that all passports are machine-readable. Furthermore, the paperwork involved in immigration should be reduced in line with international practices. There should be a dedicated cadre of specially trained officers under the direct control of Ministry of Home Affairs for providing immigration services. As aviation and airport security are sovereign responsibilities, they should be taken over and funded by the Ministry of Home Affairs.

**Ministry of Defence:** In order to optimise the use of air space, the Committee recommends that the government may consider the model followed in the U.S. and many other countries, wherein air space is permanently made available for civil aviation and segments of air space are re-vested and made available to defence on request. Furthermore, the defence services should be required to pay user charges as mutually agreed upon for facilities such as runways. To facilitate effective co-ordination of air space and cost-sharing, civil and defence ATCs may be co-located where feasible.

### 7.3 Air Transport Services

In the domestic air transport segment, route dispersal guidelines should be abolished and airlines should be allowed to service the routes of their choice based upon commercial considerations. Simultaneously, the government should provide explicit subsidy support – preferably from the general exchequer and supplemented by a sector-specific cess of 5% on airfare and proceeds from the privatisation of airports – for providing essential, but uneconomical services, and award it through a system of minimum subsidy bidding. Towards this end, a non-lapsable Essential Air Services Fund (EASF) should be established outside the Consolidated Fund of India and its management should be vested with an independent board. The government should fully harness the scope for recovering the cost of EAS operations, as far as possible, through direct user charges. Furthermore, the state governments may contribute to the lowering of the net cost of EAS through fiscal concessions, as for example, by exempting the EAS operations from high incidence of sales tax on ATF. In addition, the Committee recommends that requirements regarding fleet size and equity capital should be removed, so as to encourage entry (and greater competition) and allow operators and their financiers to make decisions based on commercial considerations. Finally, foreign equity investment norms pertaining to both domestic and international scheduled air transport services should be further liberalised, to allow up to 49% foreign investment. As regards investment by foreign airlines, investment up to 49% may be allowed with the approval of Foreign Investment Promotion Board (FIPB). In all other air services, i.e., non-scheduled services such as helicopter operations, foreign investment (including investment by foreign airlines) should be allowed up to 100%.

The government should pursue liberalisation of the international air transport segment in two phases. In the first phase, private airlines based in India – including the existing domestic private airlines – should be allowed to provide international air transport services to and from India. In the next phase, the government should seek more liberal arrangements under the bilaterals and enhance full-access to wider market segments by joining a regional or a plurilateral group of countries with a similar agenda of liberalisation.

With a view to benefit consumers, enhance tax revenues for the government and give a fillip to the retail travel trade, the Committee strongly recommends further liberalisation of air chartered services. Specifically, the Committee recommends relaxation of restrictions pertaining to frequency and foreign ownership norms for chartered operators. In addition, the Committee suggests that tourist charters should be allowed to take Indian Passport holders on board and also to carry a mix of foreign and Indian passengers on domestic tourist circuits.

As regards Indian Airlines and Air India, given the dire need to rapidly improve efficiency, and to augment investment and limit government interference, government should expedite the process of privatisation and transfer management control to strategic private investors. Towards this end, government may consider private placement of shares of IA and AI (after independent valuation) with domestic financial institutions (FIs) and foreign institutional investors (FIIs). This consortium should be allowed to appoint a management team of their choice and exit at their volition.

The Committee is of the view that Pawan Hans Helicopters Limited, which caters mainly to the needs of the oil sector and charter services, has no justification to be in the public sector. Accordingly, the Committee recommends that the Government should disinvest in PHHL by inducting a strategic partner and, thereafter, go in for an Initial Public Offer.

These recommendations relating to Indian Airlines, Air India and Pawan Hans Helicopters will be in tune with the perspective that the Government should focus on policy-making functions and distance itself from the role of an operator.

The Committee recommends that regional air services should be encouraged by reducing route navigation and landing charges for helicopters and aircraft having a maximum certified capacity of less than 80 seats. The Committee also recommends that helicopter operations and general aviation should be incentivised through reduced navigation and landing charges, rationalisation of sales tax on ATF and AVGAS to bring it at par with Central Sales Tax, waiver of the proposed sector-specific cess for subsidising essential air services, lower hangar charges at airports, etc. Furthermore, in order to encourage helicopter operations, the Committee suggests that the DGCA should develop appropriate procedures for regulating such operations and that separate areas including helipads should be developed at major airports.

As regards regulation, the current safety oversight regime under the aegis of the DGCA should be reformed to incorporate a mandatory consultative process with key stakeholders. In order to monitor and checkmate anti-competitive practices by airlines, competition laws (and the Competition Commission of India) should be relied upon.

### 7.4 Airports

Given that the key concerns in the airports sector are inadequate management of existing facilities and the need for additional capital for augmenting capacity, the Committee recommends that the government may focus its efforts on early privatisation of all airports. In line with this, the government should expedite the proposed privatisation of Mumbai and Delhi airports and quickly start the process of privatisation of other airports as well. The government should ensure that all potential hurdles to privatisation such as redeployment of existing employees, bearing of security costs, coordination between security, immigration, etc. and effective relocation of existing tenants are dealt with effectively *ex ante* so that the privatisation process is not delayed. At the same time, the qualification criteria should not be so stringent so as to rule out otherwise competent bidders. The government's aim of providing regional connectivity, and ensuring the development and maintenance of uneconomical airports can be met from the proposed EASF through minimum subsidy bidding.

Economic regulation of airports is necessary given the potential abuse of monopoly power by the airport operator, and should be vested with the proposed Aviation Economic Regulatory Authority (AERA). Safety regulation is a key consideration, and monitoring and enforcement of quality standards should be left to the DGCA.

### 7.5 Air Traffic Control

The Committee recommends separation of ATC services from the AAI and vesting them with a government-owned ATC corporation. Safety regulation of ATC Corporation should be under the purview of the DGCA. In order to contain potential abuse of monopoly power, the ATC Corporation should also be regulated by the proposed AERA. In recognition of the importance of meteorological services in providing effective ATC services, the Committee suggests that the IMD should depute trained meteorological personnel to the proposed ATC Corporation. In order to achieve effective ATC services, meteorologists should function under the control of the ATC Corporation though they may be on deputation. Furthermore, ATC Corporation could procure the meteorological equipment needed for aviation activities after due consultation with IMD. The IMD should continue to be vested with the responsibilities of training and upgradation of skills of meteorological officers and also development of the procedures in accordance with the provisions of ICAO.

### 7.6 Institutional Framework

Safety should remain the paramount priority of all entities. Given the technically complex procedures relating to safety, there should be a specialised regulator overseeing safety issues, separate from an economic regulator. The DGCA remains well-suited for this function and should be tasked with safety regulation. It should, however, reform its regulatory approach to enhance transparency and initiate consultations with aviation stakeholders. In recognition of the urgent need to strengthen the DGCA, it should be allowed to contract qualified pilots who are either medically grounded or have attained the normal age of retirement from airlines. Such pilots may be contracted up to the age of 65 years (63 years on initial contract and 2 years extension) subject to fitness. In a similar vein, the DGCA should be allowed to

avail of the services of experienced air traffic controllers from the AAI, who are close to their retirement, through deputation or on contract basis. Also, a separate wing should be created under the DGCA for licensing and supervision of air traffic controllers.

Security issues will become more dominant in an increasingly liberalised environment. The Committee recommends that the BCAS should continue to remain the nodal agency for aviation security. Presently, all offences relating to aviation security are being treated as offences under the Indian Penal Code. There are no special provisions to tackle offences relating to aviation security. Hence, there is a significant division of responsibility between the security set-up at the airports and the local police. It would be prudent to have special powers for the BCAS and the security forces providing aviation-related security. For this, the BCAS should be vested with adequate powers by amending the relevant Acts and Rules, as required.

Segments of airports and ATC services, which have natural monopoly or "common user/carrier" characteristics, should be subjected to independent economic regulation by the proposed AERA. The Committee also suggests that the AERA should use a light-handed approach such as multi-year price-cap regulation. In line with this, the Committee recommends establishment of AERA as a single-member entity, supported by appropriate technical staff. As the sector develops, the regulator should gradually withdraw from supervision and cede oversight of anti-competitive practices to the Competition Commission of India.

An Essential Air Services Fund (EASF) should be established to provide explicit subsidy support to essential but uneconomical services including commercially unviable airports. Furthermore, the Committee recommends that the responsibility of managing the EASF be entrusted to an independent board with representatives from the Ministry of Finance and aviation users. With a view to conserving resources and facilitating effective co-ordination, the Committee recommends that, to begin with, the Chairman of AERA may also be appointed Chairman of the EASF Board.

Given that complete liberalisation of international air transport services is quite a way off, the government will have to remain involved in negotiating bilaterals. In this process, the government should ensure that such negotiations do not adversely

affect the commercial viability of existing airports, or the vital interests of all the airlines of India.

## CHAPTER 8. ACKNOWLEDGEMENTS

Constitution of the Committee to prepare a Road Map for Civil Aviation Sector generated a lot of interest among key stakeholders, media and concerned citizens, and many of them have enthusiastically forwarded their viewpoints through presentations, letters, articles and e-mails. The Committee is thankful to all the individuals and organisations who have shared their perspectives.

Several officials who had earlier served in the Ministry of Civil Aviation gave their inputs and suggestions. In this context, the Committee is grateful to Shri S.K. Mishra, Shri Yogesh Chandra, Shri Jayakrishnan, Shri Ravindra Gupta, Shri A.H. Jung and Shri H.S. Khola who were ever willing to draw upon their experience in the sector and provide useful insights.

The Committee would like to place on record its appreciation of the invaluable assistance extended by the MoCA, Air India, Indian Airlines and Airports Authority of India and the administrative support provided by the officials of the Integrated Finance Division, viz., Shri Girish Kumar, Shri S.N.Sharma, Shri Rohtas Bhankar and Shri Sudhir Upadhyay.

The Committee interacted with senior officials of the Ministry of Finance, including Dr. Vijay L. Kelkar, Shri D. C. Gupta, Shrimati Vinita Rai, Dr. Ashok Lahiri and Shri D. Swarup. The Committee appreciates their cooperation and constructive suggestions pertaining to the fiscal side.

Here, the Committee would like to particularly mention the valuable contribution of the IDFC team comprising Shri Urjit R. Patel, Shri Sri Kumar Tadimalla, Shri Saugata Bhattacharya, Shrimati Sunaina Kilachand and Shri Athar Shahab, to all aspects of the Committee's work.

The Committee is grateful to all those who have contributed to its endeavour of devising a Road Map for the Civil Aviation Sector in India.

Signed at New Delhi and Mumbai on the 29th day of November, 2003.

Shri Deepak Parekh
Member at Mumbai

Shri K. Roy Paul
Member

Dr. Pronab Sen
Member

Shri V. Subramanian
Member - Secretary

Shri Naresh Chandra
Chairman

**Appendix 1**

F.No.Av.13011/02/2003-DT

Government of India
Ministry of Civil Aviation

"B" Block, Rajiv Gandhi Bhawan,
Safdarjung Airport, Aurobindo Marg,
New Delhi - 110 003. **Dated 21.7.2003**

ORDER

It is recognized that aviation sector can be a catalyst for general economic development of the country. Though there have been separate plans for developing the airlines, airports etc., there does not exist a well-defined roadmap for the entire sector. The Government has, therefore, decided to constitute a Committee comprising the following to prepare a roadmap for the civil aviation sector that will provide the basis for a new National Civil Aviation Policy:-

| | | | |
|---|---|---|---|
| (i) | Shri Naresh Chandra<br>former Cabinet Secretary | - | Chairman |
| (ii) | Shri Deepak Parekh<br>Chairman, HDFC | - | Member |
| (iii) | Dr. Pronab Sen<br>Adviser, Planning Commission | - | Member |
| (iv) | Secretary (Civil Aviation) | - | Member |
| (v) | Addl. Secretary and Financial Adviser<br>Ministry of Civil Aviation | - | Member Secretary |

2. The Committee shall prepare a roadmap for the civil aviation sector covering all relevant aspects including the following:-

(i) Competition in the area of international and domestic airlines and the future role of Air India Ltd. and Indian Airlines Ltd.;
(ii) Restructuring of airports with a view to developing a world-class airport infrastructure including one or more international hubs;
(iii) Affordability and connectivity in the domestic aviation sector;
(iv) Development of regional air connectivity within the country;

(v) Mechanism for providing air service to interior areas and operation of economically unviable but socially essential routes;
(vi) Regulatory mechanism for technical and financial issues;
(vii) Upgradation of systems for air traffic control and meteorological information;
(viii) Promotion of general aviation;
(ix) Aviation security;
(x) Aviation safety;
(xi) Aviation training.

3. The Committee may consult/invite any expert it may consider useful and interact with institutions, individuals and organizations connected with or interested in civil aviation.
4. The Committee shall complete its work and submit its final report within three months and may submit interim recommendations whenever felt necessary.
5. The non-official members of the Committee will be paid TA/DA at the rate applicable to officers of the highest grade in the Central Government for attending the meetings of the Committee. The expenditure on this account will be met from the TA/DA head of the Ministry of Civil Aviation.

Sd/-
(B.K. Dhal)
Under Secretary to the Government of India
Tel. 24640214

To

1. Shri Naresh Chandra, Former Cabinet Secretary, C-4/4053, Vasant Kunj, New Delhi.
2. Shri Deepak Parekh, Chairman, HDFC Ltd., Ramon House, 169 Backbay Reclamation, Mumbai 400020.
3. Dr. Pronab Sen, Adviser, Planning Commission, Yojana Bhawan, New Delhi.
4. Shri K. Roy Paul, Secretary, Ministry of Civil Aviation.
5. Shri V. Subramanian, AS&FA, Ministry of Civil Aviation.

**Appendix 2**

## LIST OF ORGANISATIONS AND INDIVIDUALS CONSULTED BY THE COMMITTEE

| S.N. | DETAILS OF PARTICIPANTS | DATE OF MEETING |
|---|---|---|
| 1. | Preliminary discussions with Senior Officers of Ministry of Civil Aviation and various organizations/PSUs | 7.8.2003 |
| 2. | Presentations by :<br>i) Chairman, AAI and other executives<br>ii) DGCA<br>iii) Federation of Indian Chambers of Commerce & Industry (FICCI)<br>• Ms. Ranjana Khanna, Director<br>iv) CII National Committee on Civil Aviation<br>• Mr. Cyrus Guzder, M.D, AFL Ltd.<br>• Shri V.K. Mathur, Chairman & Managing Director, INAPEX Ltd.<br>• Air Marshal S.S. Ramdas, Director, Blue Dart Express Ltd.<br>• Shri Ravi Bhoothalingam, Chief Executive, Manas Advisory Pvt. Ltd.<br>• Lt. General A. Natarajan, AVSM VSM, Adjutant General<br>• Shri S.K. Datta, Executive Director, Jet Airways<br>• Smt. M. Roy, Dy. Director General, CII<br>(v) Former Secretaries, Civil Aviation (special invitees):<br>• Shri Ravinder Gupta<br>• Shri Yogesh Chandra<br>• Shri S.K. Mishra<br>• Shri A.H. Jung<br>• Shri P.V. Jayakrishnan | 14.8.2003 |
| 3. | Presentations by :<br>(i) MD, Air India Ltd.<br>(ii) CMD, Indian Airlines Ltd. | 18.8.2003 |
| 4. | Discussions on Report of M/s A.T. KEARNEY, Consultant of AI and IA with Consultant & its other team members | 28.8.2003 |
| 5. | Ministry of Tourism<br>• Smt. Rathi Vinay Jha, Secretary<br>• Ms. Rashmi Verma, Additional DG<br>• Shri Amitabh Kant, JS | 15.9.2003<br>10.30 AM |
| 6. | Department of Commerce, Ministry of Commerce & Industry<br>• Shri Vinay Bansal, Addl.Secretary<br>• Shri D.K. Mittal, Jt. Secretary | 15.9.2003<br>11.30 AM |
| 7. | Central Board of Excise & Customs<br>• Shri P.C. Jha, Jt. Secretary | 15.9.2003<br>12.30 PM |
| 8. | M/s Sahara Airlines<br>• Shri U.K. Bose, Chief Executive Officer and other members | 16.9.2003<br>10.30 AM |

| | | |
|---|---|---|
| 9. | Ministry of Home Affairs<br>• Shri K.P. Singh, Addl. Secretary<br>• Shri H.R. Singh, Joint Secretary (PM) | 16.9.2003<br>11.30 AM |
| 10. | Ministry of Petroleum<br>• Shri Prabh Das, Joint Secretary<br>• Shri Ram Singh, Director (F), PPAC<br>• Shri E. Unnikrishnan, DGM (Planning), IOCL | 16.9.2003<br>12.30 PM |
| 11. | Ministry of Defence<br>• Shri Ajay Prasad, Defence Secretary<br>Others present:<br>• Shri Sri Krishnan, Executive Director (ATM), AAI<br>• Shri R.C. Khurana, General Manager (ATM), AAI<br>• Shri H.S. Khola, DGCA (Retd)<br>• Shri Satendra Singh, DGCA | 16.9.2003<br>2.30 PM |
| 12. | M/s Jet Airways<br>• Shri Naresh Goyal, Chairman and other members | 16.9.2003<br>3.30 PM |
| 13. | M/s Deccan Aviation Ltd.<br>• Capt. G.R. Gopinath, Managing Director | 16.9.2003<br>4.30 PM |
| 14. | Indian Airlines Ltd.<br>• Shri Sunil Arora, CMD, Air India & MD<br>• Shri A.K. Goyal, Director (Commercial)<br>• Shri G.D. Brara, Director (Store & Purchase)<br>• Shri H.S. Grover, Company Secretary<br>• Smt. Manjira Khurana, Director (Corporate Affairs) | 23.10.2003<br>11.30 AM |
| 15. | Mr. Ratan Tata<br>Chairman, Tata Sons | 06.11.2003<br>03.00 PM |
| 16. | Visit to Mumbai Airport | 06.11.2003<br>10:00 PM |
| 17. | MEA<br>Shri R.M. Abhyankar, Secretary<br>Shri Rajiv Sikri, Special Secretary | 21.11.2003<br>11.30 AM |
| 18. | Indian Meteorological Department<br>Shri S. Kumar Das<br>Shri P. Rajesh Rao<br>Shri S.K. Shrivastava | 21.11.2003<br>12.30 PM |

## Table: Institutional oversight of aviation activities in selected countries

| | | Airlines | Airports | ATM | Competition | Safety | Security | Bilaterals | Essential services | Training |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Financial / economic oversight | | | | Safety oversight | | Aviation Sector Policy | | |
| | **Australia** | | | | | | | | | |
| 1 | Civil Aviation Safety Authority | | | | | ■ | | | | |
| 2 | Australian Transportation Safety Bureau | | | | | ■ | | | | |
| 3 | Australia Consumer and Competition Commission | | | | ■ | | | | | |
| 4 | Dept. of Transport & Regional Services | | | | | | ■ | | ■ | ■ |
| 5 | International Air Services Commission | | | | | | | ■ | | |
| | **Canada** | | | | | | | | | |
| 1 | Canadian Transportation Agency | | ■ | ■ | | | ■ | | | |
| 2 | Transportation Safety Board of Canada | | | | | ■ | | | | ■ |
| | **Chile** | | | | | | | | | |
| 1 | DGAC | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | **Germany** | | | | | | | | | |
| 1 | LuftFahrt Bundesand (LBA/Civil Aviation Authority) | ■ | ■ | ■ | ■ | ■ | | | | |
| 2 | Federal Ministry of Transport and Housing (BMVBW) DGCA | | | | | | ■ | ■ | ■ | ■ |
| | **New Zealand** | | | | | | | | | |
| 1 | Civil Aviation Authority of New Zealand | ■ | ■ | ■ | ■ | ■ | | | | ■ |
| 2 | Aviation Security Service | | | | | | ■ | | | |
| | **South Africa** | | | | | | | | | |
| 1 | Civil Aviation Authority | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | **UK** | | | | | | | | | |
| 1 | Civil Aviation Authority (CAA) | ■ | ■ | ■ | ■ | ■ | ■ | | | ■ |
| 2 | Dept. of Transport, Local Govt. and the Regions | | | | | | ■ | ■ | | |

| | | Airlines | Airports | ATM | Competition | Safety | Security | Bilaterals | Essential services | Training |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Financial / economic oversight | | | | Safety oversight | | Aviation Sector Policy | | |
| 3 | UK Competition Commission | | | | | | | | | |
| | USA | | | | | | | | | |
| 1 | Federal Aviation Administration (FAA) | | | | | | | | | |
| 2 | National Transportation Safety Board (NTSB) | | | | | | | | | |
| 3 | Federal Trade Commission (FTC) | | | | | | | | | |
| 4 | Department of Transportation | | | | | | | | | |

**Sources:** Websites of individual organisations and entities.

**Legend:**

Primary area of oversight

Secondary area of oversight

Safety investigations after accidents