Chapter – 1: Introduction
Part – 1: Global/Indian Aviation Industry

1. Air Transport Industry

Aviation sector brings enormous benefits to communities and economies around the globe. It is a key enabler of economic growth, social development and tourism providing connectivity and access to markets. Air transport currently supports 56.6 million jobs in India and over US$2.2 trillion of global GDP. It is a strategic contributor to economic growth and development.

Air transportation industry has climbed to an important stage and has been one of the fastest growing industries in the regional, national and global level. The average annual growth of air passenger and freight traffic was showing an increase of 6.0 % & 7.0 % respectively during the last one decade. However, the economic and political interruptions (11th September) have temporarily destabilized and slowed down the air traffic growth. Nevertheless, recovery was seen after one year and the air transport planners assessed that the air traffic would grow tremendously for the next two decades by forecasting the demand, which demonstrates that the average growth would be 4-5% for passengers and freight transport by 5.5 – 6.5% globally. Among the other region, Asia Pacific is projected to be high growth region in the world during the next 10 years (AIC, ICAO & IATA, 2011).

The growth of air transport has produced number of advantages on economic and social impacts at the local and global scale. The first and foremost is generating employment opportunities directly and indirectly and this stimulated the regional and global economy. Air transportation helps in integrating different regions for cultural co-ordination to attain social progress. Further it helps in environmental protection by prudent use of natural resources. The economic regulation of international air transport is going through a dynamic change as a result of increasing competition, trans-nationalization of business, globalization of the world economy and the emergence of regional economic groups, privatization and liberalization of service industries. In this scenario, the increasing air traffic demand reveals the shortage of airport infrastructure capacity as the crucial one. In

Chapter – 1: Introduction

Part - 3: Capacity Requirement

1. Existing and Future Requirement of Capacity

As discussed above, to meet the future air traffic demand, capacity addition is required in the airport infrastructure which in turn requires the investment in the airport infrastructure that also includes investment in passenger terminal, cargo terminal, ANS/CNS, safety & security etc.

The following Table No C1PIII -7 depicts the actual traffic during 2010-11, forecasted traffic during 2031-32, absolute traffic increase from 2010-11 to 2031-32 and the capacity addition required from 2010-11 to 2031-32.

Table No C1-PIII-7 - Capacity Addition required from 2010-11 to 2031-32

YEAR	AIRCRAFT MVTS (IN '000S)			PASSENGERS TRAFFIC (IN MILLION)			FRIEGHT (IN '000 M.T.)		
	INT'L	DOM	TOTAL	INT'L	DOM	TOTAL	INT'L	DOM	TOTAL
2010-11(Actual)	300.20	1093.66	1393.86	37.91	105.52	143.43	1496.24	852.20	2348.44
2031-32 (Forecast)	1004.29	5214.54	6218.83	151.10	724.18	875.28	8404.80	7023.61	15428.41
Capacity Addition required from 2010-11 to 2031-32									
Capacity Addition	704.09	4120.88	4824.97	113.19	618.66	731.85	6908.56	6171.41	13079.97

2. Conclusion

To add capacity as mentioned above and take into consideration the competition in the domestic routes which, Air Asia India, new low cost airline, a joint venture of Air Asia, Tata Sons and Arun Bhatia of Telestra Trade place with 49:30:21 holding has thrown it's hat in the in the Indian domestic aviation sector. Which is expected to start its operations by the end of July 2014 by planning to connect the tier-II & tier-III cities in India. With this, Indian aviation market is once again expected to witness tough competition which is likely to benefit the passengers in terms of fare reduction which in turn will increase the traffic demand.

particular, some of the matured air transports regions/ markets in us. Europe and some regions in the Asia pacific, the airport capacity has been affected by different operational, economic and environmental constraints which have started to act as "Blockage" in impeding the future growth o airports and air traffic demand.

2. Global Aviation Industry/Global Economic Scenario

(India has surpassed Japan & likely to surpass China by 2020)

Paris-based think-tank Organization for Economic Cooperation and Development (OECD), in its recent Economic Outlook report said that India has probably surpassed Japan to become the world's third largest economy after the US and China. China is likely to surpass the United States as the world's largest economy in the next few years.

Until around 2020, China is set to have to highest growth rate among major countries, but could be then surpassed by India, it further said.

OECD also said that by early 2030s, the BRIICS' (Brazil, Russia, India, Indonesia, China and South Africa) combined GDP should roughly equal that of the OECD (based on current membership), compared with just over half that of OECD now.

"Between now and 2060, GDP per capita is seen to increase more than 8-fold in India, and 6-fold in Indonesia and China," it added.

Till 2031, economic forecast for the world regions are as below:

- ✓ India – 6.8 %
- ✓ China – 7.1%
- ✓ Asia Pacific – 4.6%
- ✓ Latin America – 4.2%
- ✓ Europe – 2.4%
- ✓ World – 3.3%

According to Air Bus Industries forecast, share of regional GDPs contribution to world's GDP by 2030 will be as follows:

- 40% by advanced economies (31 Countries)
- 39% by BRIC economies (4 Countries viz., Brazil, Russia, India & China)
- 21% by other emerging & developing economies

The above economic forecast indicates that Asian and Asia Pacific economies will be better than western and world economy; Indian economy will surpass the Asia Pacific economy.

3. Indian Aviation Industry/Indian Economic Scenario

Brief Introduction

The Indian aviation sector is growing steadily. Passenger output rose from 73 million in FY 2006 to 144 million in FY 2011, according to a study by FICCI–KPMG (2012). The high growth path can be credited to the 11th Five Year Plan (2007–2012). This period saw the completion of four international airport projects through the public–private partnership (PPP) mode, and also witnessed five Indian carriers functioning on international routes.

Air transport in India presently supports 56.6 million jobs and generates over US$ 2.2 trillion of the global gross domestic product (GDP). Air passenger traffic is also growing at a rapid pace, a development driven in no small part by modern infrastructure and facilities.

"The world is focused on Indian aviation – from manufacturers, tourism boards, airlines, global businesses to individual travelers, shippers and businessmen… If we can find common purpose among all stakeholders in Indian aviation, a bright future is at hand," as per Mr Tony Tyler,

Director General and CEO of International Air Transport Association (IATA).
With the advent of economic liberalization during 1991 there has been increase in the economic activities and with the resultant economic boom, disposable income of individuals has reached the new peak. The real GDP per capita of India which was growing at a CAGR of 3.9% during 1992-2001, started growing at an accelerated CAGR of 5.9% during 2001-2011.

Even during the recent global meltdown, India's economy was least affected and then recovered very fast than any other country which explains the strong economic fundamentals of India. India is expected to be on the high growth trajectory during the 12th plan period (2012-2017) also.

Market Size

India is one the fastest growing aviation markets and currently the ninth largest civil aviation market in the world, according to Mr K N Srivastava, India's Civil Aviation Secretary. The sector is projected to be the third largest aviation market globally by 2020.

Currently, India's aviation market caters to 117 million domestic and 43 million international passengers. Over the next decade that market could reach 337 million domestic and 84 million international passengers.

Air transport (including air freight) in the country attracted foreign direct investment (FDI) worth US$ 456.84 million in the period April 2000–July 2013, according to data released by Department of Industrial Policy and Promotion (DIPP).

Key Developments and Investments

Singapore-based Tiger air has entered into an interline agreement with Spicejet, India's second largest low-cost carrier. Tiger air is a low-cost airline in which Singapore Airlines has a 33 per cent stake. Under this agreement, customers commuting on Spicejet's domestic network from

14 Indian cities can connect to Tiger air's Singapore-bound flights through the Hyderabad airport, from January 6, 2014.

Inter Globe Enterprises and CAE, a Canadian civil and military aviation simulation training firm, have jointly launched India's largest pilot simulation training facility in Greater Noida, Uttar Pradesh. The move will cater to India's demand for aviation training facilities. The 50–50 joint venture will set up the centre with an investment of US$ 25 million. "There is a growing need for trained pilots. This centre will help address the requirement," said Mr Rahul Bhatia, Managing Director, Inter Globe Enterprises Group.

Mahindra Aerospace plans to make an 8-seater aircraft at its manufacturing base in Bangalore. The 8-seater GA8 aircraft will have a range of over 1,100 km and will facilitate connectivity between small towns and cities, and is particularly of help to domestic tourists. "Through our utility aircraft, we will get into areas where no one has reached yet," said Mr Anand Mahindra, Chairman of Mahindra & Mahindra Ltd.

India's aviation ministry is looking at small and medium airports to set up centers for maintenance, repair and overhaul (MRO) of aircrafts. Some officials see the airport at Surat as a viable option in this regard. The airport as of now has just three scheduled landing and take offs in a day, by Air India and SpiceJet. Various tests can be carried out in the day within a 1,000 feet and 5 nautical mile area. Currently, India's MRO market is worth US$ 800 million with the likelihood of touching US$ 1.5 billion by 2020.

US companies, encouraged by the growth of the India aviation sector, are keen to invest in the various fields associated with the industry, such as building new airports or security, according to American officials. "Indian aviation is experiencing dramatic growth across the board, from the emergence of new carriers to a growing middle class ready to take travel by air," said US Transportation Secretary Mr Anthony Fox.

Government Initiatives/Aviation Policies

The Cabinet Committee on Economic Affairs (CCEA) has given the approval to Abu Dhabi-based Etihad Airways for buying a stake in Jet Airways. The Rs 2,058-crore (US$ 332.77 million) deal is the largest FDI in Indian aviation. Etihad will hold 24 per cent equity in Jet Airways, Jet Airways will own 51 per cent, and the rest will be floating shares.

Tata Group's proposal to set up a full service airline in collaboration with Singapore Airlines has been given the green signal by the Foreign Investment Promotion Board (FIPB). The US$ 100 million venture will see Tata Group hold a 51 per cent stake in the Tata SIA Airlines with an investment of US$ 51 million; Singapore Airlines will have a stake of 49 per cent with an initial investment of US$ 49 million.

Government of India and Ministry of Civil Aviation is not leaving any stones to un-turn to spur the Indian aviation growth. Following are some of the recent initiatives of the Government to boost the Indian Aviation sector.

Government is encouraging to establish regional airlines and development of aerodromes to connect Tier-II and Tier-III towns/remote areas and interior areas.
Government is encouraging the development of low cost airports at tier II / tier III cities to activate the second spell of aviation boom.
Government envisages regional connectivity as the panacea for the aviation sector and is planning to make around 90 small airports in the country zero-cost for airlines, in addition to providing subsidy to carriers flying on those routes.

Government is encouraging the development of General Aviation to connect the hinterland. Helicopter and Seaplane services can be put into use for

- ✓ For corporate Use
- ✓ Offshore purposes especially helicopters
- ✓ Pilgrim Tourism
- ✓ Leisure Tourism
- ✓ Regular Passenger Services

- ✓ Election Campaigning and other Political Meetings
- ✓ Emergency Medical Services (EMS)
- ✓ Disaster Management
- ✓ Movement of Forces in Naxal Affected Areas

As a result of MOCA's initiatives as discussed above, recently Kerala government has launched the seaplane services to promote tourism in the state.
Investment on Airport Infrastructure during XI five year plan was Rs. 36,371 Crores and an investment of Rs.70,000 Crores is envisaged on airport infrastructure during XII Five Year Plan.

Highlights of Government Aviation Policies

The following are government's policies relating to Indian civil aviation which effect the air traffic growth.

I. 100 per cent FDI under automatic route is permissible for Greenfield airports.
II. For existing airports, FDI up to 74 per cent is permitted through automatic approvals and up to 100 per cent through special permission (from FIPB).
III. Private developers encouraged for setting up of private and public Aerodromes.
IV. 100 per cent tax exemption for airport projects for a period of 10 years.
V. 49 per cent FDI is permissible in domestic airlines under the automatic route, but not by foreign airline companies. 100 per cent equity ownership by Non- Resident Indians (NRIs) is permitted.
VI. 74 per cent FDI is permissible in cargo and non-scheduled airlines.
VII. Indian government has already set up a regulatory authority viz., Airport Economic Regulatory Authority (AREA) to provide a level playing field to all players.

Road Ahead

The potential of the Indian aviation industry is enormous. The market already has about 150 million travelers passing through its airports, with the capacity to grow further. By 2020, traffic at Indian airports is projected to touch 450 million. Furthermore, India's aviation industry supports about 0.5 per cent of the Indian GDP and close to 1.7 million high-productivity jobs. The annual value added by an employee in air transport services in the country is nearly 10 times greater than the Indian average.

Exchange Rate Used: INR 1 = US$ 0.01616 as on May 24, 2014

4. Need & Importance of Study

Global comparison of air travel penetration shows that India (at 0.04 air-trips per capita per annum) stands far behind the developed countries like US and Australia (2 air-trips per capita per annum). China's domestic traffic is five times the size of India's despite having a population just 10% larger. There is significant growth potential for the Indian civil aviation industry as economy grows, disposable incomes rise and the value of time becomes more precious. In order to facilitate this significant growth potential, India will need more airports, higher capacity, supporting infrastructure, finance and human resources.

Hence there is need for capacity assessment keeping in view level of service being provided vis-à-vis recommended by regulating authorities.

Chapter – 1: Introduction
Part – 2: Indian Aviation Industry – An Overview

1. Why Investment in Airport Infrastructure

It is now increasingly recognized that aviation is not only a mere mode of transportation for an elite group but is crucial for sustainable development of trade. The ICAO estimated that $100 spent on air transport produce benefits worth $325 for the economy and 100 additional jobs in air transport result in 610 new economy wide jobs. The ICAO study attributes over 4.5% of global GDP to the air transport component of civil aviation.

There is direct correlation between economic development and air travel. Therefore as Indian economy grows, Indian Civil Aviation is expected to grow significantly. As result of increasing real GDP per capita and with the associated value of time or leisure time, demand for air travel is on rise. Airports facilitate business tourism, medical tourism, educational tourism, ethnic tourism, leisure tourism etc. Manufacturing and service sector activities get escalated with development of airports. In a nutshell, modern airports are engine for growth and economic development of the nation.

Therefore, airports are being viewed as commercial enterprises rather than public service organization. Any progressive commercial enterprises require additional investment to sustain the future demand.

2. Indian Aviation Growth Scenario

Before economic liberalization and introduction of open sky policy in 1991, Aviation was traditionally viewed as an elite activity. The two government airlines Air India (long haul international) and Indian Airlines (domestic and short haul international) were the only Indian carriers. With the advent of open sky policy, private airlines entered into the Indian sky, first as air taxi operators and then as scheduled operators. Indian Aviation witnessed an unprecedented change and the resultant growth after 2003. During this period, the importance of aviation for the development of business, trade and tourism was

recognized and the industry saw dramatic reforms across the aviation value chain.

In 2003, there were just 3 private carriers viz., Jet Airways, Air Sahara and Air Deccan, all operating full service models. The private carriers in those days were limited to operating domestic routes only. In 2011, there are 5 private carriers viz., Jet Airways, Kingfisher, Spice Jet, Indigo and Go Air are operating under 8 brand names and 3 of them are permitted to operate on international routes.

During the 11th Plan, domestic carriers embraced to the Low Cost Carrier (LCC) model. The market share of Low Cost Carrier during 2010-11 has reached 41.5% of the total Domestic Traffic. As a result, Indian carriers catered to 54 million on board domestic passengers and 13 million on board international passengers during 2010-11 and earned total revenues of around Rs 36,000 crores.

During the 11th Plan period, the domestic traffic for Indian carriers grew at a healthy average annual rate of around 12%. The traffic growth has resulted in increased capacity utilization of domestic carriers with average passenger load factor having reached the new peak of 76% mark during 2010-11.

To cater the increasing demand, the domestic carriers have doubled their fleet size from around 200 to 430 during the 11th plan period.

Economic activity and trade are closely connected and interlinked and therefore the fruits of India's impressive growth in international and domestic trade during the 11th plan has been well reaped by the Indian air-cargo industry.

Total freight traffic handled by Indian airports increased at a CAGR of 10.9% in last five years to reach 2.33 MMTPA by 2011. International cargo, which accounts for two-thirds of the total cargo handled, is mainly concentrated at metro airports like Mumbai, Delhi, Chennai, Kolkata, Bangalore and Hyderabad. During the 11th Plan period, these international airports witnessed entry of global players such as Celebi, CSC, Menzies, etc. as cargo terminal operators.

Ground handling business at Indian airports has grown to reach a size of approximately Rs 2,000 Crores. This segment also witnessed increased participation of private players such as SATS, Celebi, Bird Group, Menzies, etc. in JVs AISATS is a JV between national carrier Air India and Singapore Air Transport Services. In 2011, MOCA announced a new ground handling policy under which only three ground handlers would be allowed at each of the six metro airports in the country. One would be an Air India subsidiary, the other a subsidiary of the airport operator and the third one, an entity selected through competitive bidding.

Airports Authority of India (AAI) continued its leadership in creating air connectivity across the country by incurring an expenditure of the tune of Rs 12,500 crores during the 11th Plan period. AAI is upgrading and modernizing 35 non-metro airports in the country, at an estimated cost of about Rs 4,500 crores. Of these 35 airports, 25 have already been developed, while the remaining are likely to be completed by end of 2011-12. AAI is enhancing air connectivity in the Northeast by way of greenfield airports at Pakyong (Sikkim), Itanagar (Arunachal Pradesh) and Cheitu (Nagaland).

The private sector played a major role during the 11th Five Year Plan in the development of airports through PPP model. These include development of greenfield airports at Bangalore and Hyderabad international airports and modernization of Delhi and Mumbai international airports. Total investment made by private airport operators in the last five years being about Rs 30,000 crores which includes investment of Rs.12,857/- crores for commissioning of the 34 mppa capacity Terminal 3 (T3) at the Delhi International Airport.

India has become the 9th largest civil aviation market in the world. The Passenger handling capacity has grown from 72 million during 2005-06 to 233 million during 2010-11, resulting threefold increase. The cargo handling capacity also grown from 0.5 million MT during 2005-06 to 3.3 million MT during 2010-11 i.e more than 6 fold increase.

Connectivity to North Eastern region has gone up from 87 flights per week to 286 flights per week, a 3 fold increase.

Government of India has formed Airport Regulatory Authority of India (AERA) to safeguard the interests of the users and service providers at Indian airports.

3. Air Traffic Growth Experience – Detailed Analysis

Based on the above discussion, growth experience has been analyzed in two different periods. The first period from 1995-96 to 2010-11, which is considered as normal growth period. The second period pertains to 2004-05 to 2010-11 which is considered as high growth period except for one year i.e., 2008-09 in which traffic dipped due to global meltdown.

I. Passengers

It is seen that, total passengers' movement had registered a maximum growth of 11.6% YOY basis, during 1995-96 to 2003-04 whereas YOY basis growth rate various between 21.2% to 31.4% during 2004-05 to 2007-08. Though during global meltdown, i.e., during 2008-09, total passengers traffic registered a negative growth of 6.9%, in the subsequent years, growth rate bounced back to 13.7% and 15.9%.

The following Table No.C1-PII-1 gives the Passengers Traffic at all Indian Airports for 1995-96, 2003-04 and 2010-11.

Table No C1 – PII – 1 Passengers Traffic at Indian Airports

Year	Passengers (in millions)		
	Int'l	Dom	Total
1995-96	11.45	25.56	37.01
2003-04	16.64	32.14	48.78
2010-11	37.91	105.52	143.43
CAGR (1995-96 TO 2010-11)	8.3%	9.9%	9.5%
CAGR (2003-04 TO 2010-11)	12.5%	18.5%	16.7%

In absolute terms also, during 1995-96 to 2003-04(Seven years), total passengers increased by 1.3 times, whereas during 2003-04 to 2010-11(Seven Years) total passengers has increased by 2.9 times.

Compounded Average Growth Rate (CAGR) during the last 15 years (1995-96 to 2010-11) was 9.5% whereas CAGR during the last seven years (2003-04 to 2010-11) was 16.7% in respect of total passengers.

II. Freight

The following Table No.C1 – PII -2 gives the Freight Traffic at all Indian Airports for 1995-96, 2003-04 and 2010-11.

Table No.C1 - PII- 2 Freight Traffic at Indian Airports

Year	Freight (in '000 MT)		
	Int'l	Dom	Total
1995-96	452.85	196.52	649.37
2003-04	693.22	375.08	1068.30
2010-11	1496.24	852.20	2348.44
CAGR (1995-96 TO 2010-11)	8.3%	10.3%	8.9%
CAGR (2003-04 TO 2010-11)	11.6%	12.4%	11.9%

From the Table No.CIPII-2 , it is seen that, in absolute terms, during 1995-96 to 2003-04, international freight had increased by 1.5 times, whereas during 2003-04 to 2010-11 international freight has increased by 2.2 times.

Compounded Average Growth Rate (CAGR) during the last 15 years (1995-96 to 2010-11) was 8.3% whereas CAGR during the last seven years (2003-04 to 2010-11) was 11.6% in respect of international freight.

III. Aircraft Movement

Aircraft movement registered a maximum growth of 14.4% YOY basis, during 1995-96 to 2003-04 whereas YOY basis growth rates various between 11.9% to 28.6% during 2004-05 to 2007-08. Though during global meltdown, i.e., during 2008-09, total aircraft movement registered marginal negative growth of 0.1%, in the subsequent years, growth increased to 1.9% and 4.7%.

The following Table No C1-PII-3 gives the Aircraft Movement at all Indian Airports for 1995-96, 2003-04 and 2010-11.

Table No.C1 – PII - 3- Aircraft Movement at Indian Airports

Year	Aircraft Movement (in '000 MT)		
	Int'l	Dom	Total
1995-96	92.52	314.73	407.25
2003-04	136.19	505.20	641.39
2010-11	300.20	1093.66	1393.86
CAGR (1995-96 TO 2010-11)	8.2%	8.7%	8.5%
CAGR (2003-04 TO 2010-11)	12.0%	11.7%	11.7%

In absolute terms, during 1995-96 to 2003-04, total aircraft movement increased by 1.6 times, whereas during 2003-04 to 2010-11 total aircraft movements has increased by 2.2 times.

Compounded Average Growth Rate (CAGR) during the last 15 years (1995-96 to 2010-11) was 8.5% whereas CAGR during the last seven years (2003-04 to 2010-11) was 11.7% in respect of total aircraft movement.

4. Major Trigger Points

Demand drivers contributing to the air traffic growth can be broadly classified in to:-

i) Economic factors
ii) Government interventional Policies

The following economic factors have been identified for the exceptional growth in the Indian Aviation from 2004-05.

i) India has become the fastest growing economy after China due to liberalization since 1991.

ii) Fast expansion of all sectors of the economy in consonance with economic reforms resulted in robust and sustained GDP growth well above 9% expect 2008-09

iii) Rapid expansion of higher income and middle income group

iv) Market dynamics helped in the emergence of low cost airlines and APEX fare system which in turn helped the middle income group also to travel by air.

The following government interventional policies have been identified as a major cause for the exceptional growth in the Indian Aviation.

i) Open sky policy and liberal policy of license to new scheduled operators.

ii) Waiver of landing charges in respect of aircraft with maximum certified capacity of less than 80 seats operated by domestic scheduled operators and helicopters of all types.

iii) Liberal permission to acquisition of new aircraft

iv) Domestic carriers, including private operators are permitted to operate on international sectors including UK and USA.

v) Private investment is encouraged in both airlines and airport infrastructure development including FDI.

Vi) Liberal bi-lateral relation and agreements

5. Forecasting Growth Rates

I. Passengers

The following Table No C1-PII-4 and Graph No CIPII-4G give the traffic forecast of Passengers till 2031-32.

Table No C1-PII-4 –Traffic Forecast of Passengers

YEAR	Passengers(in millions)		
	International	Domestic	Total
2010-11 (Base Year)	37.91	105.52	143.43
Growth Rate	8.0%	12.0%	11.0%
2016-17	60.16	208.28	268.44
Growth Rate	7.0%	10.0%	9.4%
2021-22	84.38	335.43	419.81
Growth Rate	6.0%	8.0%	7.6%
2026-27	112.91	492.86	605.77
Growth Rate	6.0%	8.0%	7.6%
2031-32	151.10	724.18	875.28

GRAPH NO C1-PII-4G : PASSENGER GROWTH TREND
(PAX IN MILLION)

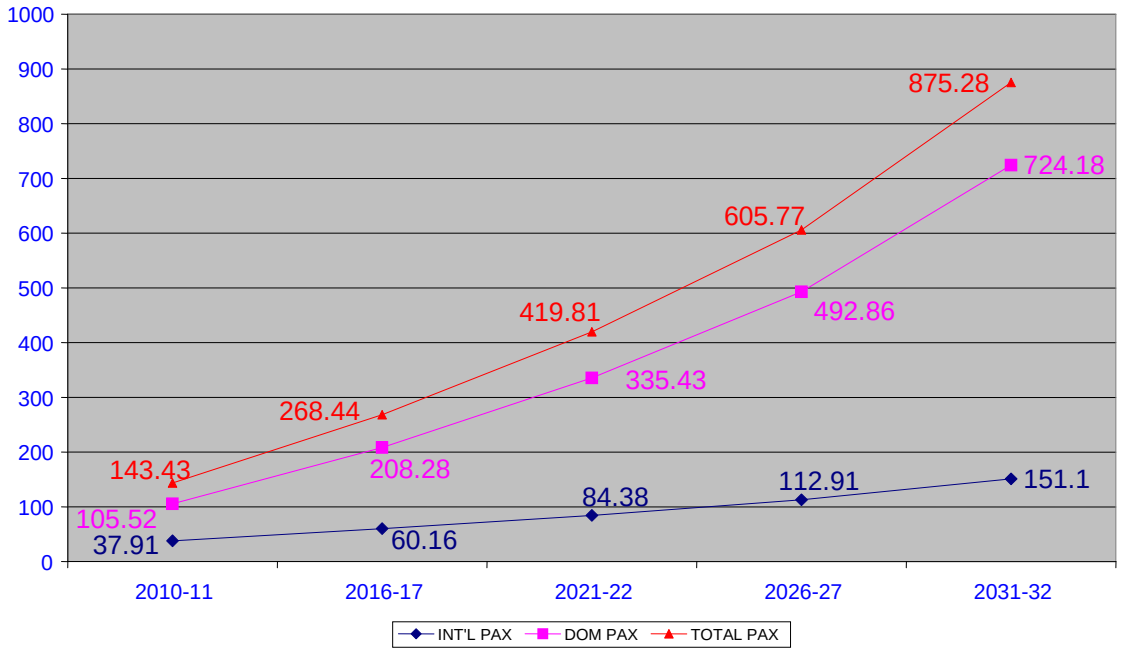


Table No C1-PII-4 reveals that international and domestic passengers are forecasted to grow at the rate of 8% and 12% respectively during 12th plan period. During 13th plan period international passenger is likely to grow at the rate of 7% and thereafter at the rate of 6% till 2031-32. Similarly domestic passengers are forecasted to grow at the rate of 10% during 13th plan period and thereafter at the rate of 8% till 2031-32. In absolute terms, Indian Aviation will be facing about four fold increases in the international passengers while domestic passengers' traffic will encounter with about seven fold increases in the next 20 years.

II. Freight

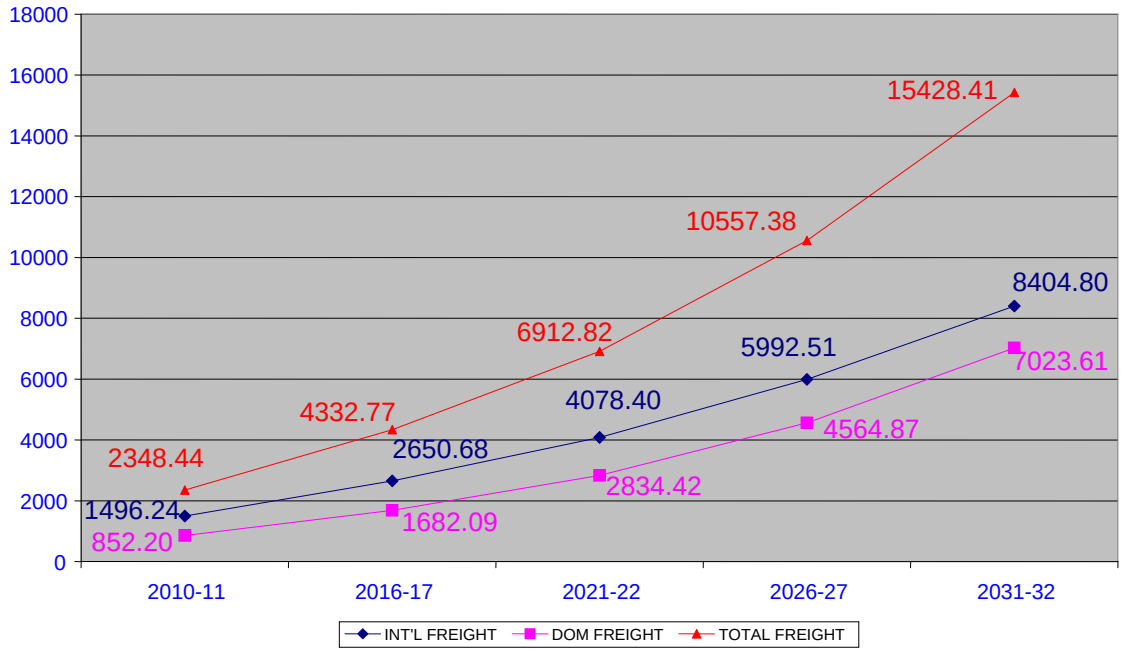
The following Table No. C1PII-5 and Graph CIPII-5G give the traffic forecast of freight till 2031-32.

Table No. C1-PII-5 –Traffic Forecast of freight

YEAR	Freight (in '000 MT)		
	International	Domestic	Total
2010-11 (Base Year)	1496.24	852.20	2348.44
Growth Rate	10.0%	12.0%	10.7%
2016-17	2650.68	1682.09	4332.77
Growth Rate	9.0%	11.0%	9.8%
2021-22	4078.40	2834.42	6912.82
Growth Rate	8.0%	10.0%	8.8%
2026-27	5992.51	4564.87	10557.37
Growth Rate	7.0%	9.0%	7.9%
2031-32	8404.80	7023.61	15428.41

Table No C1PII-5 reveals that international and domestic freight are forecasted to grow at the rate of 10.0% and 12.0% respectively during 12th plan period. International freight is likely to grow at the rate of 9.0%, 8.0% and 7.0% respectively during 13th, 14th and 15th Plan period while domestic freight is likely to grow at the rate of 11.0%, 10.0% and 9.0% during the same period under study. In absolute terms, international cargo is likely to witness 5-6 fold increases while domestic cargo is likely to witness about 8 fold increases

GRAPH NO- C1-PII-5G: FREIGHT GROWTH TREND
(FREIHT IN '000 MT)



III. Aircraft

The following Table No C1PII-6 and Graph NoC1PII-6G give the traffic forecast of aircraft till 2031-32.

Table No C1PII-6 –Traffic Forecast of Aircraft

YEAR	Aircraft (in '000)		
	International	Domestic	Total
2010-11 (Base Year)	300.20	1093.66	1393.86
Growth Rate	7.4%	8.7%	8.4%
2016-17	460.72	1804.10	2264.82
Growth Rate	6.0%	8.0%	7.6%
2021-22	616.55	2650.81	3267.35
Growth Rate	5.0%	7.0%	6.6%
2026-27	786.89	3717.90	4504.78
Growth Rate	5.0%	7.0%	6.7%
2031-32	1004.29	5214.54	6218.83

GRAPH NO- C1-PII-6G: AIRCRAFT MOVEMENT GROWTH TREND
(AIRCRAFT IN '000)

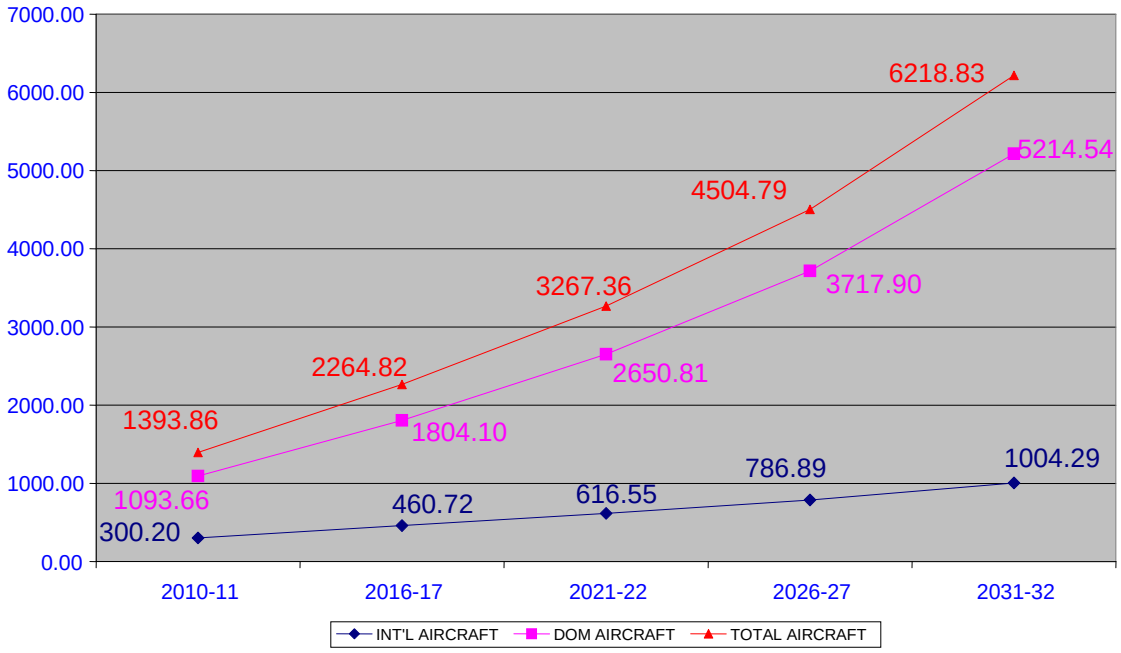


Table No C1-PII-6 reveals that international and domestic aircraft movements are forecasted to grow at the rate of 7.4% to 8.7% respectively during the 12th plan period. International aircraft movements are likely to increase at the rate of 6.0% during 13th plan period and thereafter at the rate of 5.0% till 2031-32. Similarly domestic aircraft movements are likely to increase at the rate of 8.0% during 13th plan period and thereafter at the rate of 7.0% till 2031-32. In absolute terms, Indian airports will witness about 3 fold increases in the international aircraft movements while the domestic aircraft movements will witness 4-5 fold increases in the next 20 years.

6. Indian Air Traffic Forecast by International Agency

Though India is the fastest growing economy after China, India's civil aviation sector is the fastest growing ahead of China. According to Airports Council International (ACI) data, India's civil aviation growth rate (15%) has surpassed China's Growth rate (14%) for the year 2010. ACI has projected that India will be the third largest aviation market in the world within 12 to 15 years. Airbus projects that the domestic

aviation market in India will be the fastest growing market in the world over the next 20 years.

In 12th Plan, provision of Rs. 50,000 Crores through private sector investment and Rs. 20,000 Crores through AAI investment is kept for Airports development.

In view of the above there are tremendous opportunities for Investment & Business Opportunities in Airport Infrastructure Projects in India.