

An Insight of Indian Aviation Industry: Analysis and Way Ahead

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Abstract: *The paper is a bird’s eye view to understand the concepts of the current and future prospects of Indian Aviation Industry. At present, India is the third largest domestic aviation market in the world and it is expected to be the third largest air passenger market by 2024(1). The growth rate is so rapid that India is struggling with its Air Traffic Control (which has lead to frequent delays and near collision between aircrafts), recruitment of enough and qualified staff, building airports and buying sufficient passenger aircrafts. This creates a lot of entrepreneurial opportunities, which are also briefly discussed in this paper. Problems faced by service providers are analyzed and suggestions given. The paper also studies the future of Indian aviation and deals with its growing transport needs. Secondary sources of information were used for this article. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.*

Key Words: *Indian Aviation Sector, Entrepreneurial Opportunities, Problems faced in Indian Aviation Sector, Future of Indian Aviation.*

1. History of Indian Aviation Sector:

Jahangir Ratanji Dadabhoy (JRD) Tata, the ‘Father of Indian Aviation’ founded ‘Tata Airlines’ in 1932, at Mumbai. It was the first Indian commercial carrier that transported mails and passengers within India. In 1946, Tata Airlines was renamed as Air India (2). Two years, after independence, the government of India decided to take 49% of the company’s share, the airline was nationalized and JRD Tata headed the international division. All other airlines were merged either with Indian Airline Cooperation or Air India International (2). It was after the liberalization of 1990’s that the private players were allowed to participate.

Table 1. Brief history of the Indian Aviation sector (3)

Year	Event
Before 1953	Only 9 airlines existed which included Air India and Indian Airlines
1953	Air Corporations Act nationalized all private airlines
1986	Private players got permission to operate as air taxi operators
1994	Air Corporation Act, 1953 revoked. Private players were now permitted to operate as scheduled airlines
1995	Modiluft, East-west, Jet, Sahara and Damania were granted scheduled carrier status
1997	Only Sahara and Jet Continue
1997	First Greenfield Public Private Partnership (PPP) airport was developed in Cochin
2001	Decontrolled Aviation Turbine Fuel (ATF) prices
2003	India's first low-cost carrier (LCC) - Air Deccan starts its operations
2004-5	Paramount, Kingfisher, Spicejet, Go Air and Indigo commence operations
2007	Air India acquires Indian Airlines, Jet Airways acquires Air Sahara and Kingfisher acquired Air Deccan
2010	Spice Jet goes international
2011	Indigo commences international operations; Kingfisher makes an exit from LCC segment
2012	Direct ATF imports were allowed by the government FDI for foreign airlines was allowed up to 49% and 100% was permitted for NRIs
2013	Singapore's Tiger Air entered into an interline agreement with Spice Jet
2014	Vistara (a joint venture between Tata Sons and Singapore Airlines) and Air Asia (Joint venture of Tata Sons, Malaysia's Air Asia Berhard, and Arun Bhatia's Telestra Tradeplace) enter the market . 24% stake in Jet Airways was purchased by Etihad Airways
2015	One of the largest IPOs in the Indian history was launched by Indigo
2016	Jet Airways to merge with JetLite to complete its exit from LCC segment

2. Current Scenario of Indian Aviation Sector:

Although, India had an early start in the 1990s but growth was slow, mainly because; air transport was considered only for elites and not masses. Nonetheless, there has been an exponential growth in the sector due to structural reforms, improvement in quality of services, entry of low-cost carriers, privatization and government support in terms of land allotments, financing, etc.

India is the second most densely populated country in the world with 1.35 billion people and therefore has a plethora of opportunities and scope of expansion in the aviation sector.

Airports

Currently, there are 450 airports and airfields in India, of which 101 were operational in December 2018. The Airports Authority of India (AAI) owns 125 of them. Six airports, namely- Delhi, Bengaluru, Mumbai, Hyderabad, Cochin, and Nagpur operate under Public Private Partnership (PPP) model (4). There are a total of 24 International airports in India with Indira Gandhi International Airport as the largest one constructed over 5,495 acres of land.

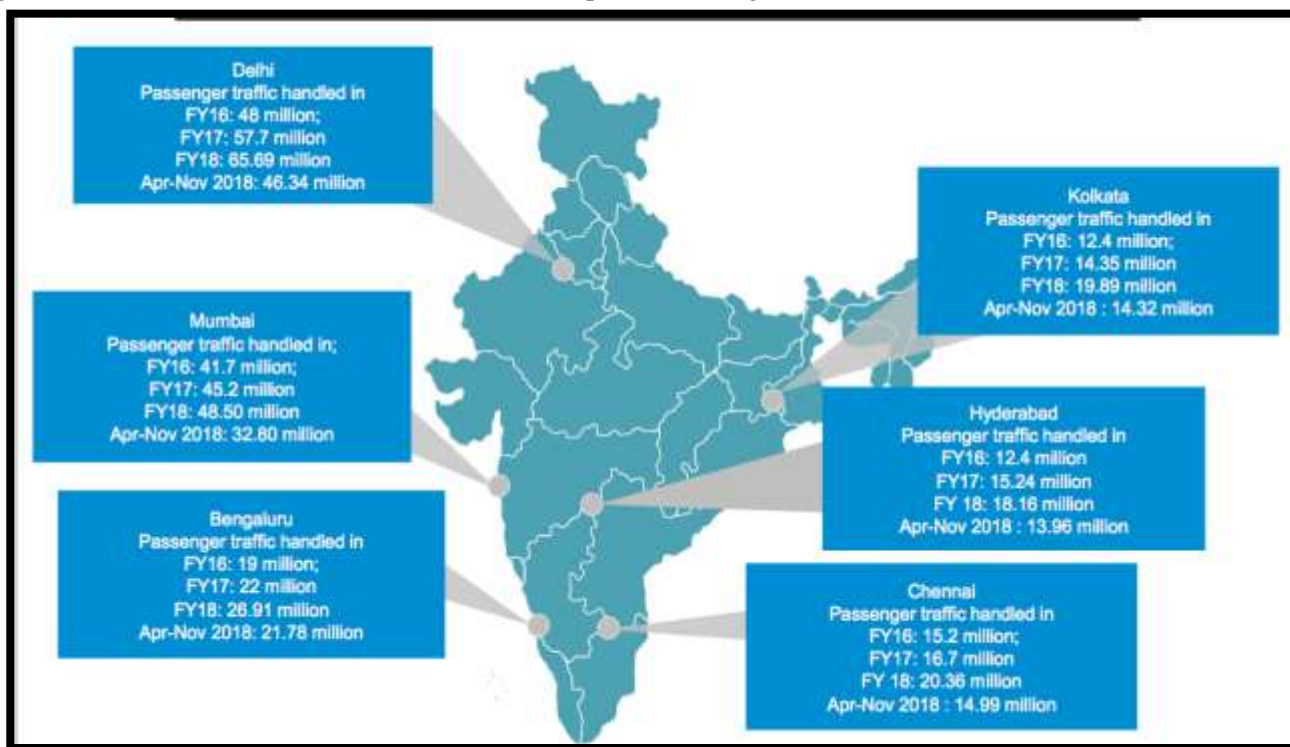


Figure 1. Major Airports in India(5)

Airlines

Airlines in India are operated through scheduled and non-scheduled operators. Transportation, travel and cargo are driven by scheduled airlines. There are 14 scheduled operators (6).

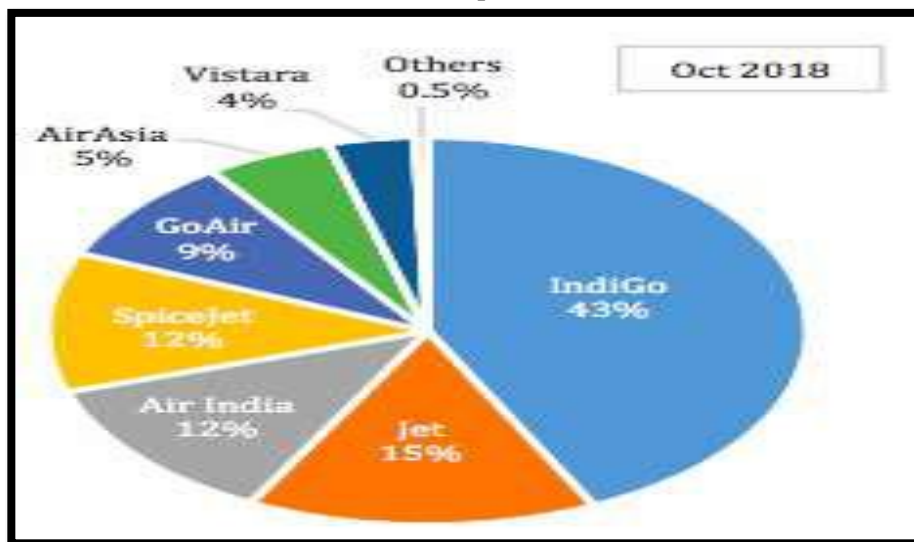


Figure 2. Market Share of leading Indian airlines (7)

The general aviation has not been very successful, as the number of aircrafts in the fleet has been declining. The reasons are poor airport infrastructure and high customs duty on the import of aircrafts for private use (8). The Non-Scheduled Operator's Permit (NSOP) fleet has 356 aircraft inclusive of helicopters (6). Of the total 35 non-scheduled international operators, the top 15 operators accounted for more than 80% of the total number of international flights operated in the financial year 2018. Of the total 76 NSOP domestic operators, the top 15 operators accounted for more than 60% of domestic flights operated in the financial year 2018 (4).

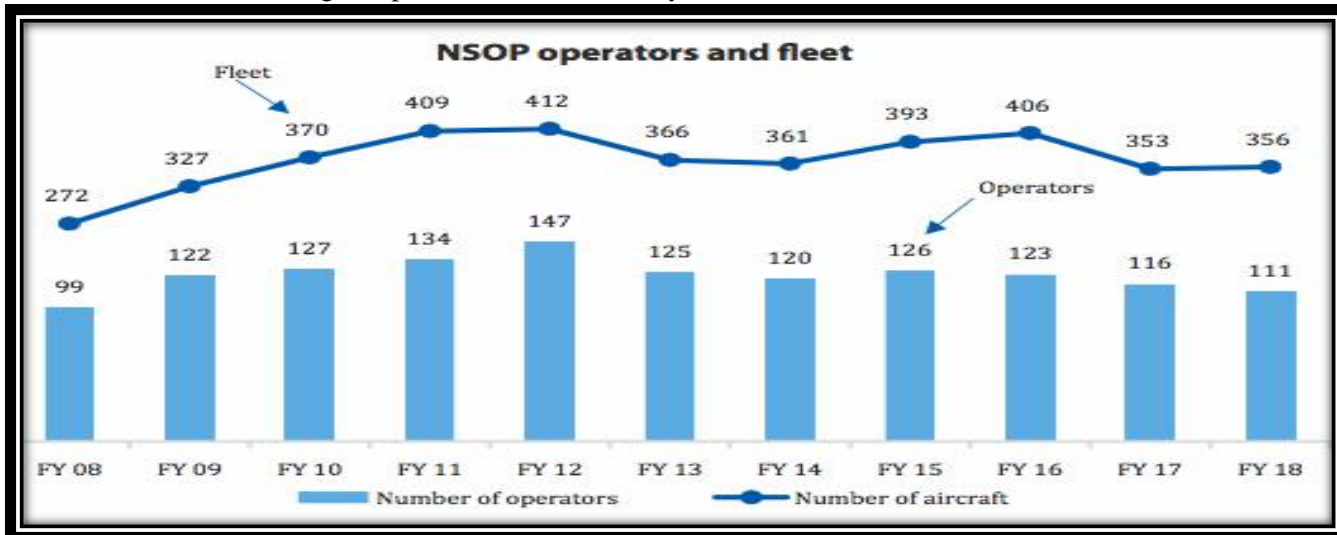


Figure 3. NSOP Operators and Fleet (7)

3. Drivers of Growth in Indian Aviation Sector:

The aviation industry of India is on a high growth path. The domestic passenger traffic in the period Jan – Nov 2018 grew by 19.2% due to the various governmental initiatives. It handles the third largest domestic traffic after the USA and China (7). Some of the critical drivers for rapid growth rate are:

- **Robust Demand:** There is a rise in the working group and widening of middle-class demography, which lead to an increase in demand. Future increase in the number of airports would also increase demand, as it would be able to cater to leisure and business travel.
- **Increasing Investments:** Investments in the form of Public-Private Partnership and FDI are on rise.
- **Opportunities in Maintenance, Repair, and Overhaul (MRO):** The current MRO market is worth \$700-800 million, with the expected growth to \$1.2 billion by 2020 (7). India has enormous opportunities in terms of skill development, as MRO is a technology-intensive industry.
- **Policy Support:** FDI has increased to 49% in scheduled air transport service.

It is estimated that the total passenger traffic in India would increase six folds from 187 million in FY 2018 to 1124 million in FY 2040 (7).

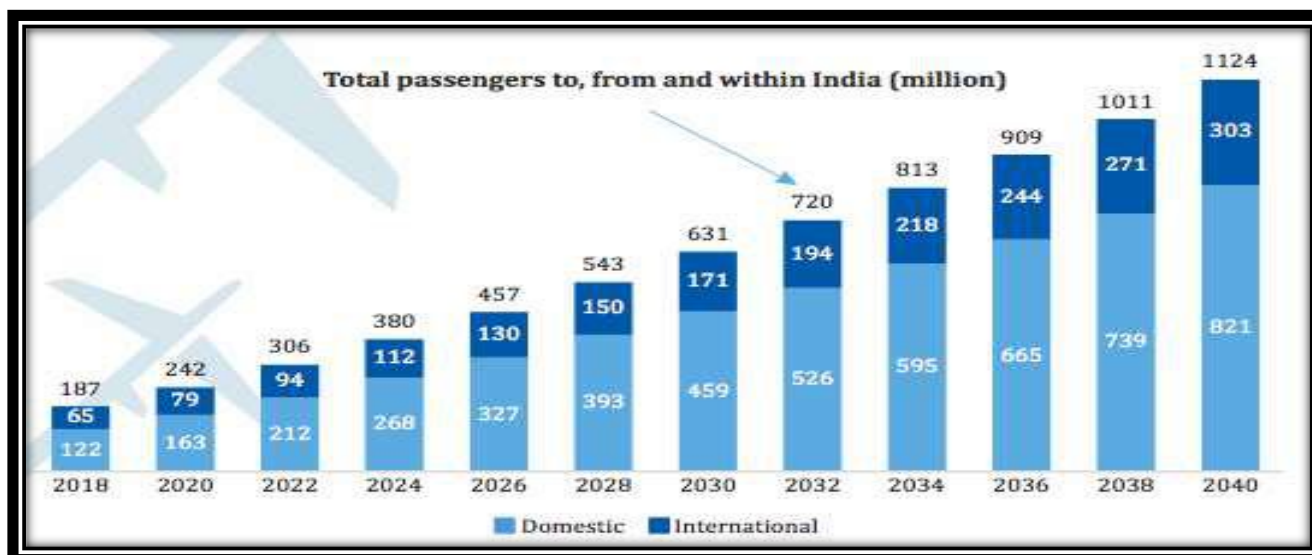


Figure 4. Total passengers to, from and within India (million) (7)

4. Schemes Introduced:

- **Regional Connectivity Scheme (RCS)** of 2016: Also known as UDAN (Ude Desh ka Aam Nagrik) is planned to connect the unused and unmaintained airports of India. RCS plans to make air travel affordable for ordinary people. This scheme is the cornerstone of the National Civil Aviation Policy (NCAP). The selection of the operators is made through a transparent electronic bidding process.
- **International UDAN:** This seeks international connectivity to non-metropolitan cities. The government has currently decided on eight routes (7).
- **NextGen Airports for Bharat (NABH) Nirman :** This is a scheme for capacity augmentation based on the principles of sustainability, affordability and predictability. India is anticipated to have 190-200 operational airports by 2040.
- **Air Sewa:** It is a digital grievance redressal platform. The latest version of AirSewa app was launched in November 2018, through which complaints can be registered via social media using hashtag AirSewa. The platform also includes features like interactive Chatbot, link with BHIM payment app and information details of flights and airports on a real-time basis.
- **DigiYatra:** For paperless air travel.
- **Green Airport:** Cochin Airport has been awarded as Champion of Earth Prize for installing solar panels for electricity. Many other airports have taken this cue and are now implementing the same.

5. Analysis of Problems faced in Aviation Sector (9):

• Equity and Fleet Requirement:

Current Situation:

- a) As per the Section 3, Part II and Part III of India's Civil Aviation Requirement (CAR), it is mandatory for a scheduled operator to have a minimum of five aircrafts, purchased, or leased with equity of Rs 50 crore.

Impact on Competition:

- a) It is a huge entry barrier for new incumbents

Suggestion:

- a) India should consider the financial viability of the new and incumbent air carrier service along with their plan to succeed in the aviation market.

• Route Dispersal Guidelines:

Current Situation:

- a) Govt. of India order no AV11012/2/94-A regulates the allocation of a fleet by the service provider to different parts of the country
- b) Routes are divided into three categories – category 1 includes popular serviced routes like large cities; category 2 and 3 include relatively smaller and unpopular routes
- c) This regulation ensures services to all Indian destinations

Impact on Competition:

- a) Reduces competitive drive in incumbents as underserved destinations are not that profitable
- b) New entrants have to bear with the losses of serving in unpopular routes
- c) Promotes only large players to enter the industry
- d) Indirectly gives Indian international carriers advantages in the domestic market

Suggestion:

- a) Polling can be done in which the carriers vote for their preferred routes; in this way, large carriers will choose busy routes, and this will give a chance to new entrants to enter the market and perform
- b) Incentives like subsidies in airport fees can be offered to air services which opt for underserved routes
- c) Market participants can decide on new routes and develop them

• Slot Allocation:

Current Situation:

- a) It is in accordance with IATA slot guidelines worldwide
- b) Out of the available slots, a new incumbent can only use 50% - grandfather type of allocation of slots.
- c) Use it or lose it rule –a merged entity can retain access to infrastructure, slots even after the merger

Impact on Competition:

- a) Use it or lose it rule allows the carrier to capture more significant share of the market by limiting the ability of other service providers to compete.
- b) Competition between the suppliers is limited.

- c) Underutilized slots tend to be at odd hours.
- d) In India, slot distribution is further managed by agencies like DGCA, AAI, Bureau of Civil Aviation

Suggestion:

- a) Trading and auctions of slot allocations can be allowed through independent agencies.
- b) Opening up funds from slot auction can be provided to airport developers for further expansion of the airport's infrastructure.

• Anticompetitive Behavior and Pricing:

Current Situation:

- a) Due to the lower prices, the financial viability of the carriers has been affected
- b) It has also affected the way passengers spend on air travel.

Impact on Competition:

- a) Cartel like behavior and predatory pricing restricts the new entries in the industry

Suggestion:

- a) Empirical benchmarks to compare the market price with should be created

• Pricing and Taxation of Air Turbine Fuel (ATF):

Current Situation:

- a) India has a multilayered taxation system like excise duty, sales tax, etc. which limits the range of air carrier service provider.

- b) A small number of suppliers decides price of ATF.

Impact on Competition:

- a) High fuel prices make it difficult for incumbents to enter the aviation market.
- b) High fuel prices restrict airlines from buying more aircrafts and serving new routes.
- c) Higher fuel prices are passed on to the customers which already have fewer choices

Suggestion:

- a) Analyzing and investigating by comparing fuel pricing structure and component with the neighboring countries.

• Foreign Direct Investment (FDI):

Current Situation:

- a) Foreign equity is allowed up to 49% but People of Indian Origin (PIO) or Non-Resident Indians (NRIs) can invest up to 100%

Impact on Competition:

- a) Foreign equity will help more new firms to enter the aviation market
- b) With the capped investments by foreign players, the number and range of suppliers are limited

Suggestion:

- a) Proposed cap of foreign airline's FDI is 24% which can be increased depending upon the requirements and situations.

• Procurement:

Current Situation:

- a) Lack of adequate and fair competition between agencies which provide goods and services
- b) Analysis of the AAI website shows that there are cases where time provided for bids is less than the stipulated time frame by the Central Vigilance Commission (CVC)
- c) Operational requirements for service providers have been set.

Impact on Competition:

- a) Bids with shorter timeframes ensure that lesser number of contractors bid.
- b) Uncompetitive bidding process
- c) Due to the set operational requirements, a group of preferred vendors is created

Suggestion:

- a) A centralized procurement procedure can be created with an online database with real-time access.

6. Entrepreneurial Opportunities:

- **Maintenance, Repair, and Overhaul (MRO):** MRO can be divided into the following categories:
 - a. Line maintenance:- After 100-150 flying hours, on the hanger.^[LSEP]
 - b. Component MRO:- After 500-600 flying hours, every three months.^[LSEP]

- c. Engine Overhaul:- After 5000 flying hours, every 12-18 months.
- d. Aircraft Heavy Maintenance and Modifications:- Comprehensive check, every 4-5 years (10).

Indian MRO services are only for categories A and B, but for categories C and D, India has to send the aircraft either to US, UK or Europe. India is home for more than 500 million skilled and semi-skilled labors and 55 Aeronautical Maintenance Centers, making it the next MRO hub in Asia. Currently, there are eight players in the market namely, Air Works, AIESL, Indamer Private Ltd., Taj Air, Deccan Charter, GMR Aero Technic Ltd., Bird ExecuJet and Max MRO Pvt. Ltd which capture more than half of the market revenue in the financial year 2018 (11). With the increase in passenger traffic, expansion of the fleet size and other governmental initiatives, there has been an increase in MRO services.

- **Training Schools:** The two most substantial operating expenses of this industry are labor and fuel, which constitute almost half of the total operating costs. There are currently 31 (12) DGCA approved flying training organizations in India and many franchises for cabin crew training. As there would increase in traffic and route augmentation, therefore training academies for cabin crews, trained ground force, technicians and pilots would be a profitable venture.
- **Manufacturing Sector:** Decisions to keep the older aircrafts will slow the airlines' efforts to cut on harmful emissions. New aircrafts are expected to constitute 42% of the fleet and will produce 15-20% fewer emissions as compared to the older ones (13). New aircrafts would also have the potential to reduce fuel consumption.
- **Security:** India is on its way to becoming the largest aviation market by 2040, thus there is a need to ensure that India develops Safety programs, in line with International Civil Aviation Organization (ICAO) guidelines. India is expected to introduce Artificial Intelligence to monitor safety parameters and inform Directorate General of Civil Aviation (DGCA) about any issue. Air Navigation System would soon be automated using GPS Aided GEO Augmented Navigation (GAGAN). Remotely Piloted Aircrafts (RPA) or drones would be used first for cargo delivery and then for passenger travel. There is a massive scope for any security venture to develop.
- **Biofuels:** Biofuels are expected to become a competitive substitution product before 2020 (14). They are carbon neutral, greenhouse gas neutral, reduce air pollution and would bring down the bills on crude oil. The first flight using biofuels was of Spicejet from Dehradun to Delhi (15). The fuel was sourced from 500 farmers. Therefore, it is an excellent opportunity for alternative and sustainable fuels.
- **Ground Handling:** It deals in aircraft cleaning and servicing, passenger handling, cargo, baggage handling, etc. The ground handling market globally is expected to be USD 360 million and will get doubled in the next 3-5 years (7). India currently has eight major GHAs namely AIATSL, Celebi, AISATS, Bird, Menzies Bobba, GGI, IndoThai, and Bhadra, which account for 80% of the market share.
- **Catering Service:** During long flights and waiting, passengers feel the need for food. So with the expansion of the number of flight, routes, and airports, there is a massive market for catering services.
- **Supply of Spare parts:** With the increase in the fleet size, there would be an instant need for replacement or repair of part instantly. This creates enormous opportunities for profit.
- **Consulting Services:** Manpower consulting has always been in demand, and with the increase in airports, fleet size, and carrier, there would be an urgent need of recruiting trained staff.

7. Conclusion:

The people are traveling more quickly and efficiently these days. The rise in the per capita income, disposable income, perceived value of time, expanded number of routes and introduction of low-cost carriers have led to an increase in the air passenger traffic. According to the reports of the International Air Transport Association (IATA), the number of passengers globally would double by 2037. There are various opportunities in the aviation industry to flourish as an entrepreneur, but it requires many investments. Though the growth of the sector is phenomenal but the industry would see lesser profit growth over the period of next ten years as the economic growth would be slow worldwide with the increase in operating costs (13). Therefore, it is necessary to have a single aviation policy, which can reduce artificial barriers, improve competition and attract greater private investments.

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