

# [Indian aviation an insight engineering essay](https://assignbuster.com/indian-aviation-an-insight-engineering-essay/)

[Engineering](https://assignbuster.com/essay-subjects/engineering/)

Report submission for Indian EconomySAMAY S SABHARWALThis is an insight into the Indian Aviation sector. It gives the details of the market structure, the entry requirments, routes and slots allocation, airports, pricing, taxation, and FDI. Executive SummaryThis report identified a number of rules and regulations which according to our evaluation parameters inhibit competition within India‘ s civil aviation sector. In the next few pages, this report will briefly list the regulation, its competitive implications and recommendation. Sections beyond this executive summary will address each issue in more detail. In terms of allocation of take-off and landing slots, India follows the International Air Transport Association (IATA) guidelines, which include the grandfathering of slots, according to which a service provider will control slots that he utilizes in perpetuity. The IATA slot guidelines also entail a use it or lose it‘ principle which adversely affects competition in cases of mergers since the merged entity will retain slots based on historic precedence as long as they are utilized. Application of the grandfather rule limits the ability of new service providers to compete with incumbent service providers at different airports, since the only slots that new service providers can access are underutilized slots which tend to be at odd times and off peak hours. Therefore, application of the use it or lose it rule after mergers, limits the ability of other service providers to compete with the merged service provider. Based on experiences of the United Kingdom, United States, and European Union, India may want to expand its slot allocation system to include more market based tools such as allowing slot trading and auctioning off a fraction of underutilized slots by an independent authority, modelling the process after the UK. Proceeds of the auction can be used to incentivise airports to improve and expand available airport infrastructure. TABLE OF CONTENTSINTRODUCTIONTIMELINEMARKET STRUCTUREFLEET AND ENTRY REQUIREMENTSSLOT ALLOCATIONAIRPORTSANTICOMPETITIVE BRHAVIOUR AND PRICINGTAXATION AND PRICING OF ATFCONCLUSIONINTRODUCTIONA country‘ s transportation sector plays an integral role in the growth and development of an economy. According to the Indian Aerospace Industry Analysis report, in terms of passenger traffic, India is currently the ninth largest aviation market in the world. With regards to air cargo tonnage, India leads the South Asian region -consisting of Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka. Currently, India has 128 airports - including 15 international airports. Over the past ten years the Indian civil aviation sector grew by 14. 2% in terms of domestic passengers and 7. 8% in terms of air cargo (in CAGR - compound annual growth rate). In 2010-11 six major Indian carriers with around 400 aircraft catered to 143 million passengers, including 38 million passengers that originated abroad. In 2010-11, Indian airlines carried approximately 1. 6 million tons of air cargo. Further growth of the aviation sector between 2011- 2013 is estimated at 15%. India‘ s civil aviation sector has evolved over time. On February 18, 1911 India‘ s first commercial airplane flew between Allahabad and Naini. In 1912, India‘ s first commercial international flight operated by the erstwhile Imperial Airways took place and connected Delhi to Karachi and beyond. In 1932, J. R. D. Tata flew an air mail service airplane, after which Tata Airlines ventured into scheduled air transport services. At the time of India‘ s independence in 1947, nine air transport companies, carrying both air cargo and passengers, operated in the country. To further strengthen the national aviation sector, the Government of India and Air India - Tata Airlines was renamed Air India in 1946 - set up a joint sector company, Air India International Ltd. In order to address the deteriorating financial health of India‘ s civil aviation sector, the Government of India passed the Air Corporations Act of 1953, which nationalized all carriers providing services within India‘ s civil aviation industry. Up until the late 1980s, India‘ s civil aviation sector remained monopolized by India‘ s government owned airlines. However in 1986, the Indian government once again granted permission to private sector companies to provide air taxi service. Additionally, India‘ s Open Sky Policy of 1990 and the Air Corporations (Transfer of Undertakings and Repeal) Act of 1994 further freed up India‘ s civil aviation industry and eradicated the government carrier monopoly. While these policy changes led to a dramatic increase in the number of private airline carriers; due to viability issues, by the end of the 20th century all private air carriers, except Jet Airlines and Air Sahara, exited the market. In 2003 the introduction of a new type of airline service called low cost carriers - LCCs or no- frills air service - by Air Deccan, reinvigorated India‘ s civil aviation sector. By bringing competition into the Jet Airlines-Air Sahara duopoly, Air Deccan brought a new competitive spirit to India‘ s civil aviation. Furthermore, introduction of low cost airlines also changed the perception that air travel was reserved only for the elites. By 2007 mergers and acquisitions became common in India‘ s civil aviation sector. Within a span of two years Air India and Indian Airlines merged, as did Jet Airways and Air Sahara, and Kingfisher Airlines and Air Deccan. Currently, India maintains bilateral Air Service Agreements (ASAs) with 108 countries. While 72 foreign airlines fly in and out of India, four private domestic carriers - Jet Air, IndiGo, SpiceJet and Kingfisher - fly to 35 destinations in 25 countries. Air India, the national carrier maintains a number of international routes: seven destinations in North America, nine destinations in Europe, 12 destinations in the Gulf, two destinations in the Middle East, two destinations in Africa, and 13 destinations in West and East Asia. TIMELINE1911, Feburary: First commercial flight from Allahabad to Naini made by a French pilot Monseigneur Piguet covering a distance of about 10 km and carrying 6500 mails on a Humber biplane. This is considered to be the world’s first airmail service and the beginning of civil aviation in India. 1912, December: The first domestic air route between Karachi and Delhi was opened by the Indian State Air services in collaboration with Imperial Airways, UK. 1915: The first Indian airline, Tata Sons Ltd., started a regular airmail service between Karachi and Madras without any patronage from the government. 1920, January: Royal Airforce started regular airmail services between Karachi and Bombay. 1924: Construction of civil airports began in India. Construction began at Dum Dum in Calcutta, Bamrauli in Allahabad and Gilbert Hill in Bombay. 1927, April: Department of Civil Aviation was set up to look after all civil aviation matters.  Aero Club of India was also established. 1932: Tata Airlines came to being as a division of Tata Sons Limited. It started Air Mail services on the Karachi, Ahmedabad, Bombay, Bellary, Madras routes on 15 October, 1932. Between 1933 and 1934: Number of Indian airlines – Indian Trans Continental Airways, Madras Air Taxi Services, Indian National Airways etc. commenced operations. 1937: The Indian Aircraft Act was promulgated in 1934 and was formulated in 1937. 1940: Hindustan Aeronautics Limited (HAL) was set up by Walchand Hirachand in association with the then Mysore Government at Bangalore. 1941, July: India’s first aircraft, the Harlow trainer was rolled out for test flight in July 1941. 1945: Deccan Airways was founded – jointly owned by the Nizam of Hyderabad and Tatas. Its first flight began inJuly 1946. 1946: ‘ Air India’ came into being when Tata Airlines changed its name to Air India. 1947: At the time of Independence, Nine Air Transport Companies were operational. Later the number reduced to eight when the Orient Airways shifted its base to Pakistan. The then operational airlines were Tata Airlines, Indian National Airways, Air Service of India, Deccan Airways, Ambica Airways, Bharat Airways and Mistry Airways. These airlines were operating within and beyond the frontiers of the company, carrying both air cargo and passengers. 1948: Air India signed an agreement with the Government to operate international services under the name Air India International Ltd. On June 8, Air India inaugurated its international services with a weekly flight between Bombay and London via Cairo and Geneva. 1953, March: The Indian Parliament passed the Air Corporations Act, 1953 and Indian Airlines and Air India International were set up after nationalisation of the entire airline industry. Eight formerly independent domestic airlines: Deccan Airways, Airways India, Bharat Airways, Himalyan Aviation, Kalinga Air Lines, Indian National Airways, Air India, Air Services of India were merged. 1953: Civil Helicopter Services were introduced in the country1972: The International Airports Authority of India (IAAI) was constituted. 1981: Vayudoot Airlines (a Government owned Airline Company) started operations. 1985: Pawan Hans Helicopters Limited (PHHL) and Indira Gandhi Rashtriya Uran Academy (IGRUA) in Fursatganj, Rai Bareli in Uttar Pradesh for training of pilots were established. 1986: The National Airports Authority was constituted. 1987: The Bureau of Civil Aviation Security was established. 1990, April: The Government adopted Open-sky policy and allowed air taxi- operators to operate flights from any airport, both on a charter and on a non charter basis and to decide their own flight schedules, cargo and passenger fares. East-West Airlines was the first national private airline to operate in the country after almost 37 years. 1991, September 20: Sahara Airlines started its operations. 1993, May: Jet Airways started its operations. 1994, March 1: Air Corporations Act, 1953 was repealed and was replaced by Air Corporations (Transfer of Undertaking and Repeal) Act, 1994 thus enabling private operators to operate scheduled services and number of private players including Jet Airways, Air Sahara, Modiluft Airlines, Damania Airways, NEPC Airlines and East West Airlines commenced domestic operations. 1995: India’s six private airlines accounted for more than 10% of domestic traffic. Many foreign airlines started providing international services. In 1995, 42 airlines operated air services to, from, and through India. 1995, April 1: Airport Authority of India was constituted by merging the International Airport Authority of India with National Airports Authority. 1997: Policy on Airport Infrastructure of India was developed for the use and development of airport infrastructure. 1999, June 10: CIAL Airport was the first airport in India which was built with public-private participation and was made operational. The process for development of CIAL as a private airport began in 1993. 2000, October 2: Sahara Airlines was rebranded as Air Sahara. 2003: Entry of low cost carriers. Air Deccan started its services2004: Government approved setting up of private Greenfield airports at Hyderabad and Bangalore. 2004, June: Low Cost Carrier – GoAir started it operations. 2004, December: Indian Scheduled carriers with a minimum of 5 years of continuous operations and a minimum fleet size of 20 aircraft, were permitted to operate scheduled services to international destinations. 2005: Indian Airlines was rebranded as Indian. The Government designated Air India, Indian Airlines, Jet Airways and Air Sahara to operate international services. 2005, May: Kingfisher Airlines (Full Service Carrier) and Spice Jet (Low Cost Carrier) commenced operations. 2006, August: Low Cost Carrier – Indigo started its operations. 2006: The government approved the restructuring and modernisation of Mumbai and Delhi brownfield airports through the public-private partnership model. 2007: The Regional Airlines Policy was announced wherein licenses were given for operation of airlines within a particular region. 2007: Indian aviation saw three mergers : 2008, August: Simplifly Deccan was renamed as Kingfisher Red. 2009, May 12: AERA was established to regulate the economic aspects of airports. It is an autonomous body set up by an Act of Parliament. 2010: Airport Economic Regulatory Authority Appellate Tribunal (AERAAT) was established. MARKET STRUCTUREIndia‘ s civil aviation sector is much younger than other modes of transportation, and its market structure has changed frequently over the last few decades. India‘ s civil aviation sector evolved from a market tightly controlled by the government with two air carrier service providers to a relatively competitive market with a somewhat small number of domestic and international air carriers. Some features of India‘ s civil aviation sector include a large number of consumers (passengers and cargo), a relatively small number of airlines with significant market share, significant cost barriers to market entry, differentiated services, and competitive firms affecting each other‘ s business decisions. These market characteristics indicate that India‘ s civil aviation sector has an inherent oligopolistic market structure. Since within India‘ s civil aviation sector, economies of scale and scope exist; in order for each market participant to break even, the firm must achieve a minimum efficient scale of operation. FLEET AND ENTRY REQUIRMENTSIndia‘ s Civil Aviation Requirement (CAR) Section 3, Part II and III mandates that a scheduled service operator that applies to provide services using aircraft with a takeoff mass of 40, 000 kg or more must purchase or lease a minimum of five aircraft with start-up equity requirement of Rs 50 crore. Additionally, as an airline‘ s fleet grows in increments of up to five planes, equity requirements grow by Rs 20 crore. With regards to aircraft with take-off mass of less than 40, 000 kg, the start-up fleet minimum remains at five aircraft - purchased or leased - with the minimum equity requirement starting at Rs 20 crore and growing by Rs 10 crore with every five additional aircraft. For non-scheduled operators, the fleet requirements as stated in Civil Aviation Requirement Section 3, Series C, Part III Section 4. 2 are minimal - requires possession of just one aircraft - there exist equity requirements based on the number of aircraft owned or leased by the operator, which create an additional financial barrier to entry. SLOT ALLOCATIONIn India, AAI and DGCA allot slots in accordance with the IATA worldwide slot guidelines. According to the IATA principles of slot allotment 7. 1. 1 Sections e and f, an incumbent airline is entitled to retain a group of slots based on historic precedence, if the slots in question have been allocated by the slot coordinator to a passenger air carrier and have been utilized at least 80% of the time in the preceding season. Furthermore, Section g states that slots may not be withdrawn from a carrier in order to accommodate new entrants. From the pool of available slots, new entrants have access to only 50% of the slots. This is termed as grandfather type of allocation of slots. Furthermore, in accordance with IATA guidelines, when airlines merge, the AAI applies the use it or lose it rule which allows a merged entity to retain access to all infrastructure, including slots, controlled by the airlines prior to the merger. B. Impact on CompetitionThese rules create barriers to entry for new entrants, thus limiting the number and range of air carrier service providers. By keeping all allotted pre-merger slots, a newly merged carrier has time to capture a greater share of the aviation market at the expense of other incumbent carriers and new entrants. Slot allocation regulations also limit the ability of suppliers to compete. Application of the grandfather rule limits the ability of new carriers to compete for slots at different Indian airports. Underutilized slots only free up every six months. Furthermore, slots that are utilized 80% or more during an assignment season by a carrier are controlled by that carrier service provider the following season. Slots that meet utilization requirements tend to bring high revenue and as a result of the grandfather rule are not available to new carriers, thus limiting the new air carriers ability to compete on lucrative routes and maximize new carriers return on investment. In the Competition and Regulatory Deficit Civil Aviation Sector in India report, the author points to the use it or lose it rule application at times of mergers and acquisitions of India‘ s domestic airlines - as another competition impeding slot allocation procedure. Application of the use it or lose it rule following a merger of two air carriers limits the ability of other carriers to compete with the merged carrier. While this use it or lose it rule is not inherently anti-competitive, the application of this rule at the time of mergers and acquisitions of Indian airlines restricts the supply of slots for all carriers. More specifically, according to the use it or lose it rule, post-merger slots of both merging companies stay with the merged entity and slots are only returned to the unallocated slot pool if the merged airline fails to utilize individual slots. Underutilized slots tend to be at odd times and not peak hours. Since the number of slots controlled by an air carrier is positively correlated with market power, the merged air carrier can potentially increase its market power since the firm controls all slots of the previously independent carriers, thus giving the merged air carrier an unfair competitive advantage over other air carriers. Therefore, airline mergers create an artificial scarcity of slots and restrict competition. Lastly, while trading of slots between carriers is allowed by the IATA guidelines, provided that the member country creates regulations guiding such activities, this activity is not legal within the Indian regulatory framework. Slot distribution and assignments in India, while guided by the IATA are managed by separate agencies including the DGCA, AAI, Bureau of Civil Aviation, which all coordinate with individual airports. Regulatory overlap exists; as a result it is difficult to distill a clear and uniform slot allocation policy. The resulting regulatory overlap and lack of a clear policy hampers the ability of incumbent and new market participants to compete due to a lack of a predictable path of outcomes. AIRPORTSEconomic Regulation of Airports and Airport Fee AssessmentThe Indian press recently reported on a developing conflict regarding the regulation of airports. India‘ s Ministry of Civil Aviation stated that it will soon create new guidelines that will spell out a specific framework for economic regulation of future airports. The new guidelines, once implemented, may create a two pronged economic regulatory framework - one applied to existing airports and one applied to airports built in the future. 92 New guidelines coming from India‘ s civil aviation ministry will not just create regulatory conflict between the Ministry of Civil Aviation and the institution created in 2009 to regulate airports - AERA - but will also undermine AERA‘ s authority and create a climate of uncertain outcomes for airport operators and investors. Privatization of AirportsPresently, there are just five private airports in India. Furthermore, Indian airports fare poorly in terms of non-aeronautical earnings. According to the report, Airport Privatization in India - A Study of Different Modes of Infrastructure Provision, a major reason for low non-aeronautical earnings is that most Indian airports come under the Airports Authority of India (AAI) and the Authority cannot afford to invest much from its scarce fund in these services. 99 Therefore, to make Indian airports internationally competitive, the government must attract private investment into India‘ s civil aviation infrastructure. ANTICOMPETITIVE BRHAVIOUR AND PRICINGWithin the past year, pricing in the airline industry has ranged from excessively high prices to low prices potentially affecting the financial viability of the carriers as well as impacting consumer spending on air travel services. While the excessively high prices charged by the airlines seem to indicate possible coordination or cartel like behavior among the operators, the abnormally low prices are indicative of another type of anticompetitive behavior, i. e., predatory pricing. Cartel behavior in the airline industry is not uncommon. There are natural barriers to entry owing to the high level of investments and liquidity required to cover startup and high operational costs that limit entry and protect the functioning of a cartel. Furthermore, regulations relating to fleet and financial requirements, and slot allocations further prevent entry and could increase the likelihood of cartel behavior. One problem that the airline industry in India is currently facing is the abnormally low prices that are affecting the financial viability of the airlines. For such pricing by an airline to be construed as predatory however, the following conditions have to be met: the prices must be below average cost; there should be exit of competitors from the market; and the airline should have a mechanism by which it can recoup the losses suffered in the short-run. While a cartel would erect barriers to entry into the market place, predatory pricing itself makes it unprofitable for new entrants and thus limits competition. In either case competition will be harmed, and the long term viability of the industry itself will be at stake to the detriment of consumers. TAXATION AND PRICING OF ATFIndia‘ s multilayer fuel taxation system which includes the central excise duty , and sales tax levied by the state governments (varying from 4% to 30%), limits the number and range of air carrier service providers and the ability of Indian carriers to compete with foreign carriers providing international carrier services. Furthermore, within India‘ s civil aviation sector, pricing of ATF is determined by a small number of suppliers. Indian ATF consumers‘ choice is restricted to four suppliers. Three suppliers are state owned oil companies that enjoy access to essential facilities within India‘ s airports and maintain refinery capacity, resulting in market dominance. The total cost of fuel does not just make it difficult for incumbent Indian airlines to grow; high fuel costs also make it hard for new air carrier service providers to enter India‘ s civil aviation market. Before entering India‘ s civil aviation market, a potential market entrant must consider the price of fuel, how the price of India‘ s ATF moves, and the effect state and central government taxes will have on the firm‘ s overall operational expenses. Additionally, the potential entrant firm needs to determine whether or not it can absorb such fuel expenses both in the short- and long-term. High fuel expenses prevent Indian airlines from buying more aircraft and servicing more routes, which in turn contributes to overall market growth. Currently, fuel expenses make up approximately 40% of India‘ s operational expenses. For example, seeking to reduce operating costs, Kingfisher Airlines, an air carrier which has been canceling flights due to financial difficulties, has applied to the Director General of Foreign Trade (DGFT) for an import exemption on ATF. If Kingfisher Airlines is successful in obtaining this exemption, the firm is likely to save 25-30% on state level ATF taxes, which may reduce the carrier‘ s operating expenses and improve the firm‘ s financial outlook. CONCLUSIONIn accordance with the requirements set forth by the Ministry of Corporate Affairs of the Government of India, this report analyzed competition inhibiting provisions of statutes, rules, policies and practices found within the regulatory framework of India‘ s civil aviation sector. This report broadly analyzes India‘ s civil aviation sector, while recognizing the necessity that deeper assessments of each sub-sector of India‘ s civil aviation must be undertaken individually. While assessing India‘ s civil aviation sector‘ s regulatory framework, certain provisions that limit competition within the industry came to light. All regulations were analyzed and categorized by looking at whether or not they limit the number and range of suppliers, limit the suppliers‘ ability to compete, reduce the incentive of the suppliers to compete, and affect investment. The civil aviation policy should aim to reduce artificial barriers to entry such as fleet and equity requirements. It should have clear delineation between regulatory authorities that oversee activities in this sector, which would result in clear and predictable regulatory outcomes. Furthermore, it should include a framework for monitoring anticompetitive pricing behavior within the sector. Additionally, this policy should aim to create a more level competitive field between India‘ s private, national and foreign carriers. It should also aim to introduce market mechanisms and incentives into the distribution of slots and dispersion of routes. Lastly, this policy should aim to attract greater private investment into India‘ s airports and improve the competitiveness of the government procurement process within this sector.