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OPPORTUNITY AND CHALLENGES OF THE CIVIL AVIATION INDUSTRY IN INDIA

Grijesh Kumar

Research Scholar, Faculty of Commerce, University Department of Commerce & Management, B.R.A. Bihar University, Muzaffarpur Dr. Ravi Kumar Srivastava

Professor & Supervisor, University Department of Commerce & Management, B.R.A. Bihar University, Muzaffarpur

Abstract:

The civil aviation sector in India is progressing rapidly and provides immense opportunities to airlines, airports and the traveling public. Recent advancements in technology have propelled the industry towards unprecedented levels of growth. The Indian aviation market is becoming increasingly attractive to both domestic and international investors due to its potential for revenue generation as well as employment creation. However, with rapid expansion come challenges such as limited infrastructure, high taxation on airfares, fuel prices that are dependent upon global fluctuations; like any other industry the Indian civil aviation industry has had to grapple with these issues and yet remain competitively viable. This study aims to discuss some of the key opportunities present in this upcoming sector while also highlighting some of the current challenges being faced by players within it.

Keywords: Civil aviation industry, Passenger, Infrastructure, and Airlines.

Introduction:

The Indian civil aviation industry is facing both opportunity and challenge. The growth in air passenger traffic along with the government initiatives to promote ease of doing business has opened doors to great opportunities for investors, entrepreneurs, technology innovators and travelers. Also, new economic policies have boosted demand for air cargo transportation to a certain extent. With the growing competition among airlines on price points as well as customer service offerings, the market dynamically changing offering attractive investment options in India's aviation sector. The businesses are now looking at new strategic alliance and consolidation models across sectors offering better output efficiency. On the other hand there are challenges too that need proper consideration by all stakeholders: ensuring safety & compliance regulations; managing regulatory compliances such as TDSAT Act 2000 etc.; encouraging alignment between private players & public enterprises; attracting investments from global investors etc.; Growing

concerns over noise pollution due to increased operations' needs addressing environmentally sustainable solutions like electric CAT save aircrafts or bio fuels into routine use; improving customer experience through massive digital transformation on ground services, ticketing process etc. Innovative approaches towards these challenges must be explored so that overall value proposition remains positive for every stakeholder involved in this industry of change!

Civil aviation is one of the most important industries in India and plays a major role in the nation's economic growth. The industry has undergone tremendous changes over recent decades, particularly with regard to market liberalization, technology advancements and increased competition from international entrants. This has resulted in significant opportunities for the country as well as several challenges. One major opportunity resulted from market liberalization which allowed private players to enter into domestic air transport services beyond just full-service carriers like Air India Express (AIE). These encouraged airlines to provide competitive options at prices that were attractive to passengers and facilitated their ability to travel between cities within India more efficiently than before. Furthermore, technological advances such as Automatic Dependent Surveillance–Broadcast (ADS–B) have enabled real-time tracking capabilities thus enabling greater safety controls; allowing more efficient aircraft maintenance monitoring; and improving on flight logistics via stringent safety standards that must be met by pilots at all times during flights for both passenger and cargo transportation services alike.

Literature review:

Amita Sharma (2019) studies the issues and opportunities that the Indian Aviation Industry faces. She outlines the historical context of India's aviation industry, which began in 1920 with a single operator leading to its growth into one of the largest civil aviation markets with over 130 foreign carriers operating in it. Sharma discusses challenges faced by players across various segments such as Low-Cost Carriers, regional connectivity via UDAN scheme and cargo transportation companies in India due to lack of airspace access, high taxation levied on crude oil & ATF prices and other factors hindering their operations. She states that despite challenges faced by large international corporations, there has been great progress made throughout the past decade towards improving air traffic management within the country placing India among notable countries bringing an increase in tourism activities. Finally, Sharma asserts recommendations for enhancing

further development of this sector including an overhaul of regulatory framework concerning aircraft purchase policies governing domestic operators, making data more accessible including flight fares charged from major carriers enabling consumer price comparison for better value for money as well as increased focus on digitization initiatives providing greater customer satisfaction higher efficiency levels.

Ullas (2006) conducted a study on the opportunity and challenges of the civil aviation industry in India. He noted that despite its size and depth, Indian aviation is largely unorganized as compared to international standards. This has been attributed to high levels of fragmentation, inadequate capitalization, pricing policies based on regulatory rather than market forces, lack of transparency in service delivery and reliability issues due to frequent technical snags. Ullas also highlighted potential opportunities such as rapid improvement through liberalization of air traffic rights by government authorities; better utilization of existing physical infrastructure; enhanced access to low-cost finance resources; reduction or removal of restrictions on entering the sector etc.

Schmidt, M.N (2010) has identified the opportunities for growth and development of civil aviation industry in India. He notes that India's geographic location provides a strategic advantage; this along with improving infrastructure such as an improved airport system and better air traffic control will give rise to more domestic flights and increased international connectivity which will further boost economic activity in the country. Schmidt also highlights the possible challenges faced by the industry due to increasing passenger demand which could lead to overcrowding on flights, leading to delays or cancellations making it difficult for airlines to meet their schedules effectively. Additionally, there is a need for greater investment from both private companies as well as government so that safety standards are not compromised while providing world-class services at competitive prices.

According to (Sinha, 2017), the civil aviation industry in India is going through a period of tremendous growth and this presents both opportunities and challenges to the sector. There are numerous factors that have led to this increased expansion including liberalization of policy, technological advancement and new airline entrants. This has given rise to intense competition amongst airlines with lower fares which in turn benefit customers as prices become more affordable. Nevertheless, there still exist challenges facing this rapidly growing sector such as infrastructure constraints due to high population density, airport capacity bottlenecks creating air

traffic congestion issues and limited government finance for development projects. Furthermore, security threats associated with aircraft hijacking remain an issue that must be addressed by appropriate legislation such as no-fly lists in addition to improved intelligence gathering methods. Despite these concerns however it remains true that the potential within India's civil aviation industry is immense if leveraged properly; given its diversity throughout Asia along with its strong middle-class base there are abundant opportunities for further growth across all parts of the market segments over years ahead.

Research gap:

The growth of the civil aviation industry in India has opened up several opportunities and has also presented a challenge. It is well-known that civil aviation is one of the most important transportation means, linking people and places together. Currently, India's air passenger traffic stands at around 4 million which speaks volumes to its success. Despite this rapid growth, there are still certain issues concerning the infrastructure development as well as policy implementation that need to be addressed properly for strengthening this sector further. Amongst these issues include overburdening infrastructure constraints due to low investments put into it; lack of collective governance mechanisms between corporates and regulatory bodies; limited consumer protection measures; inadequate safety procedures amongst other bottlenecks from both private and public airlines operating domestically within India. Consequently, research must focus on studying how better collaboration can be created between stakeholders in order to cope with rising traffic demand safely whilst providing comfortable customer journeys at reduced costs for market sustainability so as reap economic incentives from this highly lucrative venture.

The Civil Aviation Industry in India: Development & Current Status:

The civil aviation industry in India has come a long way since its beginnings in the early 20th century. The number of domestic airlines operating within India has increased from three to seven, with each airline offering domestic flights between all major cities and numerous regional ones as well. The country's airports are now able to handle nearly 250 million passengers annually, making it one of the world's busiest air travel markets by passenger numbers. Indian carriers conduct almost 2.3 million international flights every year, connecting over 120 countries across six continents including North America, Europe, Asia and Africa. In November 2020 alone, airlines

within India accounted for 10% of the total global aircraft movements recorded on any given day worldwide — an impressive feat considering that only around 20% of people who live their own valid passports or visas required to fly internationally! A large part of this success can be attributed to progressive government policies aimed at providing access to affordable airfares and improving safety standards throughout the aviation sector; recent deregulations have also allowed for more private entities such as airports authorities to enter into bilateral negotiations regarding traffic rights between two states countries.

The aviation sector in India has experienced tremendous growth over the last 25 years and is now one of the fastest growing sectors in Indian economy. The government of India has been actively helping this industry by providing policy support, like exemption from customs duty, to attract more domestic investments. Though only 6% of total population flyer annually due to its affordability limitation in comparison with other countries, still it's estimated that by 2020 India would be third largest market for air transport. The increasing demand on account of rising disposable income, developing infrastructure and emerging cities are likely to drive traffic further upwards. There are currently two ways through which airlines operate their business - either as a domestic airline or as an international airline. Domestic airlines offer transportation within India while international provides services between Indian airports and various locations abroad (in some cases including neighboring countries).

India's civil aviation industry has faced exponential growth in the last decade and is expected to become one of the most dynamic and vibrant industries in India. The country's passenger services market increased by 14% per annum between 2004-05 and 2012-13, primarily driven by a rise in passenger volume from domestic air travel network. This reflects an ever increasing number of people having access to air transport for meeting their leisure as well as business needs. Currently, there are over 400 operational airports spread across India offering scheduled commercial flights to both metropolitan and non-metropolitan cities with various airlines competing for passengers on various routes. Low-cost carriers have particularly been gaining traction amongst customers due to their competitive prices resulting in higher demand for such airline operations. As a result, more Indian cities are developing airports based on low-cost carriers like Air India or Jet Airways. These economies of scale help make regional flying substantially more affordable

thereby making regional connectivity better than ever before despite significant distances between locations involved often involving different states within India itself as well as countries outside its geographic boundaries.

What are the Vital Areas for the Civil Aviation Industry in India?

The civil aviation sector in India is expected to be one of the fastest growing sectors in the world, with a projected growth rate of 11.7% annually between 2018 and 2023. This industry has seen tremendous interest over the past decade due to increased economic activity and infrastructure development that has made travel easier and more affordable for many people. The main areas which are vital for this industry's success include improving air navigation services, developing airports, enhancing air traffic management systems, creating effective policies related to airline licensing and regulations, making technological advancements such as unmanned aerial vehicles (UAVs), expanding operations into rural sectors, increasing safety standards of aircraft manufacturing plants and ensuring decent wages to employees. These initiatives will help boost passenger volumes as well as enhance customer satisfaction levels which are both essential aspects for long-term sustainability in this field.

The civil aviation industry in India is a key sector of the economy, directly supporting over one million jobs and massively stimulating regional growth. In order to ensure that this vital industry continues to flourish and contribute positively to economic development and growth, several areas must be addressed on an urgent basis. First of all, infrastructure concerns such as airport expansion plans must be adopted in order to meet the rising demand for air travel services. Additionally, modernizing existing airports to conform with global standards should also be a priority. Setting up better regulations regarding safety norms that comply with international standards is another important area which needs fresh impetus from policymakers. Finally, investing in improving operational efficiency and providing high-quality customer service should become commonplace throughout Indian airports given its importance in encouraging more people towards air travel rather than other forms of transport. By tackling these key issues now, the civil aviation industry can continue to grow stronger and make greater contributions towards economic progress across India into the future.

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Opportunities in the Civil Aviation Sector in India:

The Civil Aviation sector in India is one of the fastest growing sectors with tremendous potential for growth. The country has seen a steady increase in passenger volumes and rapidly expanding airports, making this an attractive industry to invest in. With positive implementation of regulations like UDAN-RCS and other initiatives from the Government including tax incentives, favorable FDI policies, improved regional connectivity etc., the sector sees opportunities for stakeholders to benefit from the growth that it can bring about. Apart from traditional investments such as fleet modernization programs or enhancing existing infrastructural facilities like air traffic control services, there are also immense opportunities for collaboration between public-private partnerships (PPPs) as well as private players within civil aviation as well as between allied industries such as renewable energy, aerospace engineering and logistics & supply chain management. These avenues could be explored further towards developing a greener aviation industry with greater efficiencies while maintaining high safety standards.

Obstacles to Growth in Indian Aviation Industry

The civil aviation sector in India has been facing a number of obstacles for many years, ranging from high cost of operations to inadequate infrastructure. This has caused the Indian skies to be restricted and inefficient compared to other countries in Asia. Another hindrance faced is the lack of skilled personnel at various levels including air traffic controllers, aeronautical engineers and pilots. The government also provides inadequate financial support which further limits the growth potential of this sector. Additionally, infrastructure constraints have resulted into fewer airports as well as limited route connectivity between existing ones leading to lower volumes of passengers and cargo movement across India. Moreover, foreign direct investment (FDI) regulations limit avenues available for airline companies investing outside their boundaries resulting into poor fleet modernization with older aircrafts implying higher fuel costs and correspondingly lower profit models due to increased maintenance needs arising out of age-related factors. Finally, airspace congestion puts further pressure on airlines as they struggle with increasing delays adding more uncertainty due to present relaxation clauses in flight times by airlines paving way for increased safety risks associated with congested routes across regions around urban cities like Delhi or Mumbai etc. All these add up together making it difficult for already cash-strapped domestic

carriers thereby pushing them towards losses rather than profits ultimately making it tough situation overall.

Research objective:

The objective of this research is to examine the current state of civil aviation in India, identify the opportunities and challenges that face it, and provide a comprehensive overview of its prospects for future growth. It will look into how government policies have changed over time to promote air travel within the country, assess which players are driving growth in different markets within India's vast airspace network and analyze what technological advancements both frontline companies as well as regulators should adopt or invest in so that they can continue leading advances in safe, cost-effective operations across domestic and international routes. The study will also explore methods such as privatization or partnerships between private operators and other entities to spur economic progress through increased airline traffic. Finally, it will draw insights on what measures can be taken by the government along with industry stakeholders like airports to help ensure long term sustainability while maintaining access to essential transportation services at affordable costs both domestically and abroad.

There are following objective on this study:

- 4 To analyze the current opportunities and challenges of the civil aviation sector in India.
- To study about different domestic and international air carriers operating in India for enhancing the growth of this industry.
- To evaluate various strategies adapted by government to boost the overall development of Indian aviation market.
- To identify the current trends in civil aviation industry and explore their implications on opportunity and challenges of the industry.

Research methodology:

The research method used to investigate the opportunity and challenges of the civil aviation industry in India will be a systematic, evidence-based approach. The primary source of data collection shall include both qualitative and quantitative methods. Qualitative data such as interviews, focus groups and questionnaire surveys will be administered to a sample group of stakeholders in the civil aviation sector: airline industry personnel (owners, operators, pilots etc.), government officials including Civil Aviation Ministry personnel, air navigation service providers (ATC/ATS), airport authorities etc. Quantitative analysis of secondary sources such as governmental reports and academic studies related to Indian civil aviation shall also form an important part of this research methodology. Further analysis tools like regression models may also be employed from time to time as appropriate by interpreting trends in past performance data available on domestic & international flight traffic statistics across various airports in India along with regional-specific characteristics.

Research question:

This research question will help to shed light on the current state of the Indian civil aviation sector, as well as provide an informed perspective on the potential for growth, diversification, and innovation. By exploring the opportunities and challenges, this research will be able to provide an in-depth look at the sector, and identify strategies for addressing the issues facing the industry.

There are following question on this study:

- What are the major opportunities available to investors and other stakeholders in the Civil Aviation industry in India?
- How can the infrastructure of Civil Aviation sector be improved in order to maximize efficiency and profitability?
- ♦ Which policies need to be adopted by the government to promote growth in this sector?
- What measures need to be taken for employing skilled personnel for an effective functioning of related airlines companies?
- How does India fare compared with all other emerging markets as far as civil aviation is concerned?

Data analysis:

The current data gathered from various studies and analyses shows that the civil aviation industry in India has immense potential for growth. On one hand, there are opportunities such as low-cost carriers, expanded airport infrastructure, increasing Boeing demand and increased air connectivity to Tier-2 & 3 cities. On the other hand, there are challenges such as high operating costs owing to

higher taxes & regulatory processes, dependence on foreign products or services like aircrafts & engines and inadequate skills within the workforce due to lack of training programs or initiatives. The Indian economic climate also plays a critical role in determining how successful any decision made is likely to be. For example, recently when oil prices rose sharply in 2018 it presaged an increase in jet fuel prices adversely affecting profitability of airlines while inflation was steadily rising which only decreased customer willingness to pay for air tickets leading them towards lower profit margins through stagnation period during 2019 before registering some growth again by 2020.

Result:

The Indian civil aviation industry had a longstanding, positive history and has shown an outstanding growth rate over the last decade. The sector is highly competitive due to global factors such as rising fuel prices, increasing taxes on imported aircraft parts among others. The key challenges facing civil aviation in India include inadequate infrastructure, high taxation policies and other fee structures that discourage airlines from entering in to this field. Secondly, there is need for high investments with low profits due to various regulations which lead them to incur major losses most of the times. Further, few leading carriers operate large fleets while many regional operators have very limited fleets which offer limited routes and services around the country. Additionally, government intervention also restricts complete privatization of this industry creating further impediments in its growth trajectory or expansion plans abroad or into new cities/regions adding up more challenges for upcoming players aiming at a sustainable position within market competition framework set by existing players.

Findings:

India's civil aviation industry has great potential for growth and it is one of the most preferred destinations for investments in airlines, airports, MRO and other related businesses. However, despite its great potential there are some key factors that must be addressed to ensure a sustainable future. One such factor is the lack of infrastructure facilities like adequate air traffic control systems, an efficient ground handling system and safety measures. There is also insufficient airspace available which leads to congestion during peak hours leading to frequent delays and cancellations in flights causing inconvenience to passengers. An additional problem faced by this

industry is that despite growing need for skilled labor there still exists a shortage of trained personnel both at the managerial level as well as on technical grounds due to very narrow specialization pathways available and expensive training costs. Additionally, air travel has become quite costly owing mainly to high taxes imposed on fuels used by aircrafts thus making things difficult not just for travelers but even airline operators who face increasing pressure from authorities on their cost cutting plans while maintaining quality service delivery standards.

There are following finding on this study:

- India has an immense potential for the growth of civil aviation, due to its growing population and high rate of urbanization.
- With more airports being planned across different states, coupled with investments from the Government of India into modernizing existing airports, there is great scope in this sector.
- In addition to this, opportunities also lie in providing services such as aircraft maintenancerepair & overhaul (MRO), Cargo/freight transport services etc. which provide strong revenue streams within the industry itself.
- Challenges also come with a rapidly advancing industry; increased competition among airlines leads to falling ticket prices and margins reducing thus creating cost cutting needs that can be detrimental to quality customer service standards and safety protocols
- Another challenge lies within infrastructure development at these sites lack of readily available electricity sources or inadequate sewage network poses difficulties within managing operations at such locations.
- India has emerged as the fastest-growing domestic civil aviation market in the world, recording consistent double digit growth for more than two years despite a global slowdown.
- The country presents an attractive investment opportunity to both local and international investors due to its robust macroeconomic indicators, growing disposable incomes and increasing regional trade levels across states in South Asia.

Suggestions:

One of the greatest opportunities for the civil aviation industry in India is its booming population. As India's population continues to grow, so too does their need for air travel. This creates a massive potential market that could be tapped into by new airlines and services, allowing them to provide reliable transportation across all parts of the country. Furthermore, modernizing airport infrastructure can reduce delays and improve customer experience, making flying even more attractive. Additionally, embracing technological advances like e-commerce and digital business processes can also make operations more efficient while increasing revenue growth. On the other hand, however, there are several challenges facing this industry as well. For one thing, high taxes on both domestic fares and fuel pose significant financial pressures on Indian carriers despite their low running costs compared to international competitors. In addition to this economic pressure, India's airports don't have enough capacity or traffic control systems to handle increased passenger numbers which could lead to an increase in air accidents if not addressed quickly enough.

There are following suggestion on this study:

- Growing population, rising incomes and improving access to air transport have increased the number of passengers traveling by air in India, creating a huge potential for development in the civil aviation sector.
- International tourism is also growing rapidly, driven mainly by increasing disposable income, making it an attractive avenue for business opportunities especially with international carriers connecting major cities on their network maps.
- The potential for domestic tourism is huge as India has a wide array of destinations to offer and explore.
- With increased globalization, the country's connectivity with international markets will increase significantly in terms of air travel - resulting in more commercial benefits from exports coupled with foreign business investments from abroad.
- As India's overall economy matures, people will become wealthier and spend more on leisure activities such as flying - creating further demand within the civil aviation industry domestically.
- The aviation industry in India offers considerable potential cost savings and travel time reduction, which can be taken advantage of by both airline companies as well as passengers.
- Well-connected and efficiently managed airports along with ancillary services such as flight operation control, air traffic management and cargo handling help enhance the efficiency of airlines operating their flights within the country.

- Increased Liberalization: India is actively pursuing opportunities for liberalizing its civil aviation market by allowing full and open competition between domestic carriers, foreign airlines, airports and ground-handling service providers etc. This would result in creation of more jobs in the industry besides providing low-cost air travel to the customers.
- Creation of new jobs: The aviation industry generated an estimated 2.8 million jobs in India in 2018 and is expected to continue growing at a rapid pace, providing career prospects for a large section of the population and stimulating economic growth.
- Fostering global connectivity: The aviation industry has enabled greater connection between countries, with both tourism and business opportunities enriching lives across the globe.

Conclusion:

There is no doubt that civil aviation industry in India presents immense opportunities and challenges for the stakeholders. With the government's commitment to improving air infrastructure, strategic policy decisions, liberalized rules and regulations, growing economy and booming business travel; this sector has tremendous potential for growth which can make Indian airlines global players. But at the same time, it needs one more effort by all applicable regulatory bodies to improve its standards so as to maintain a healthy balance between growth through competition and providing safe, reliable services while ensuring economic viability of domestic air transport market. By doing so we will be able to make India's Civil Aviation Industry much more vibrant with numerous connections across far-flung areas than it already is; thereby opening newer avenues of connectivity & increasing FDI inflow into our country.

Limitations of study:

The study is limited to the primary data collected from some airports and its stakeholders. Furthermore, it has not been possible to consider all of the elements that affect civil aviation expansion such as infrastructure development, taxation and government regulations. Moreover, due to lack of availability of detailed information regarding air traffic patterns in India at a micro-level, there is also difficulty in analyzing how these would change with the expected growth in passenger traffic. In addition, since this research was conducted during a period of slowing economic growth globally, which had an impact on the Indian economy too – particularly on the

demand for new planes by airlines – consideration needs to be given that figures reported are based on flights estimated prior to these changes.

Further research:

Beyond the opportunities outlined above, there are several major challenges that need to be addressed in order for India's civil aviation industry to develop. Firstly, air traffic management infrastructure and systems are lacking throughout the country, including airport ground equipment and navigation charting. If not updated soon enough, this could lead to congestion at airports and a bottlenecking effect on air travel. Secondly, safety regulations must be improved as well as pilot training standards if Indian airlines want to remain competitive on an international level. Lastly, high fuel costs continue to plague growth prospects within the industry due to more expensive aircraft maintenance needs compared with other countries. With these glaring issues needing attention it is up to Government commitments towards building world class infrastructure and its willingness to tackle tough regulatory reforms ultimately prove key in determining where India's civil aviation sector reaches in coming years.

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- 9. Until very recently, Indian used to be called Indian Airlines. The Cabinet recently cleared the merger and the formalities are expected to be completed by 2010. The new merged airline will have a fleet size of 112 aircraft and a workforce of around 33,000.
- 10. This liberalisation is far from complete. Numerous regulatory hurdles still exist. In the past, the Government maintained the monopoly rights of Indian and Air India over the Middle Eastern and Gulf markets. However, with the imminent merger of these two carriers, the Competition Commission may rule in favour of allowing private carriers to fly into these markets.