Scholastic Seed Inc.

www.gjeis.com

global Journal of ENTERPRISE INFORMATION SYSTEM

Challenges of Indian Aviation Industry and Strategies to Deal with them: A Case Study

– Riya Gupta*

Research Scholar, J.C. Bose University of Science and Technology, YMCA, Faridabad

riyagupta767@gmail.com https://orcid.org/0000-0003-2134-1317

– Teena Hassija

Assistant Professor, Manav Rachna International Institute of Research and Studies, Faculty of Commerce and Business Studies,Faridabad

teena.fcbs@mriu.edu.in https://orcid.org/0000-0002-4148-4457

ARTICLE HISTORY

Paper Nomenclature: Case Study Based Paper

Paper Code: GJEISV12N1JM2020CSBP1

Submission Online at www.gjeis.com : 21-March-2020

Manuscript Acknowledged: 21-March-2020

Originality Check: 21-March-2020 (Fast Track)

Originality Test (Plag) Ratio (Urkund): 5%

Author Revert with Rectified Copy: 21-March-2020

Single Blind Reviewers Remarks: 24-March 2020

Double Blind Reviewers Remarks: 25-March 2020

Triple Blind Reviewers Remarks: 14-April 2020

Peer Reviewers Comment (Open): 30-April-2020

Authour Update (w.r.t. correction, suggestion & observation): 01-May 2020

Camera-Ready-Copy: 04-May 2020

Editorial Board Excerpt & Citation: 09-May 2020

Published Online First: 31-May 2020

ABSTRACT

Purpose: Purpose: This research paper has been carried out with the aim to investigate the challenges faced by the Indian aviation industry in this scenario where almost every airline company is facing losses.Complexities in the Indian aviation market have made the situation even more cumbersome with external factors further hampering the situation.So, it becomes necessary to identify those challenges and find counter's measures for them to ensure sustainability and growth in the global market.

Design/ Methodology/ Approach: Micro and macro challenges have been identified from review of literature. Then, the researchers have considered the case of the top three airlines to understand and find out the challenges by drafting SWOT analysis with the help of cost sheet of the airlines related to year ending March 2018 and further some strategies are suggested to counterfeit the problems.

Findings: Operating costs should be minimized to have better flow of funds and the sector should efficiently be dealing with financial cost otherwise airlines may have to bear losses as evidenced by Air India. The financial burden of non- government airlines is low leading to the overall profitability of Indigo and Spicejet.

Paper Type: Case study based emphasize on Complexities in the Indian aviation market

KEYWORDS Indian Aviation Industry | Micro and Macro Challenges | Losses | Strategies | SWOT Analysis

Introduction

Aviation industry being a part of a dynamic environment has evolved again and again over time. It has experienced structural changes in the previous decades from implementing deregulation act to introduction of Low- Cost Carriers (LCC) which has brought up many new destinations at affordable airfares (Abdelhady, 2019). Before implementation of the deregulation Act in the 1970s, there were no rigorous efforts on the part of marketers to promote their airlines and the industry was clogged with various regulations. Pampered by the government protectionist approach and with meager competition, the industry was following the sellers' concept. So negligible contribution was made to develop the infrastructure and enhance the distribution system. After 1980, owing to changes occurring in socio-economic, demographic, and technological factors the industry started to transform while restructuring the processes. Arrival of Staggers Act 1981 in the U.S. initiated the process of deregulation in the aviation industry. Soon after, the industry started following the customer- oriented approach with increasing marketing efforts and emphasized on customer satisfaction in order to increase profitability (Kaynak et al., 1994).

***Corresponding Author** (Riya et Al)*

- Present Volume & Issue (Cycle): Volume 12 | Issue 1 | Jan-Mar 2020
- International Standard Serial Number: Online ISSN: 0975-1432 | Print ISSN: 0975-153X
- DOI (Crossref, USA) https://doi.org/10.18311/gjeis/2020
- Bibliographic database: OCLC Number (WorldCat): 988732114
- Impact Factor: 2.69 (GIF, Citescore, SIF), CiteFactor: 3.57 (2019-20)
- Editor-in-Chief: Dr. Subodh Kesharwani
- Frequency: Quarterly
- Published Since: 2009
- Research database: EBSCO https://www.ebsco.com
- Review Pedagogy: Single Blind Review/ Double Blind Review/ Triple Blind Review/ Open Review
- Copyright: ©2020 GJEIS and it's heirs
- Publisher: Scholastic Seed Inc. and KARAM Society
- Place: New Delhi, India.
- Repository (fighare) :704442/13

After deregulation, the industry faced various challenges, growing competition being one of them. Earlier the airlines that did not indulge in spending much on marketing started to center everything according to customer perspective as they feared the declining market share and loss of revenue. Even after the deregulation, the countries all around the world are bind by some sort of regulations exercised by their respective governments. More and more challenges are confronted by airlines ever since the inception of the aviation industry.

Indian Aviation Industry

India is currently the fastest-growing and third-largest civil aviation market in the world. It has been reportedly supporting 6.2 million jobs and air transport has contributed 1.5% to the total GDP. It is forecasted that Indian air transport can grow by 262% in the coming 20 years. Also, jobs up to 9.1 million can be created in the future keeping in mind this scenario (IATA India Report, 2019). With such growth prospects, every airline has the opportunity to excel in the Indian aviation market. But with opportunities, there are plenty of challenges that pose obstacle in the way of targeted growth. Complexities in the Indian aviation market have made in fulfilling its goals and customer satisfaction; situations even creates more cumbersome with external factors which further hampering the situation. So, it becomes necessary to identify those challenges and find counter's measures for them to ensure sustainability and growth in the global market.

Research Genesis and Objectives

Declining growth rate of the Aviation Industry has alarmed the researchers to study the matter and find the major challenges facing by the industry. During the initial study, it was observed that there is a rise in national and international flight revenue in both the categories (passengers and commercial) but at the same time, there is a continuous fall in profits or otherwise, losses have been reported by almost every aviation company in India. The researches were inclined to look for the causes behind this scenario and wished to derive certain suggestions for the upliftment of the industry. Although many research studies have been conducted in U.S., Europe, Africa and some other parts of the world, but there is limited literature on the survival of the aviation industry and strategies to deal with it related to Asia. India has also experienced the least of such researches that has defined the strategies and solutions appropriately. No categorization has been done based on micro and macro factors challenging the growth of the aviation industry. Depicting the strengths, weaknesses, opportunities, and threats with the help of cost sheets and literature review altogether provides a fresh scenario of conducting a SWOT analysis.

Thus, the present research aims to fulfill the following objectives to review the current scenario of Indian aviation industry:

1. To identify the controllable and uncontrollable challenges in the Aviation Industry;

2. To suggest strategies; this may be helpful for the industry to overcome with the challenges and to ensure sustainability and growth.

Review of Literature

A remarkable contribution has been made by the researchers in the aviation industry. Many studies have been conducted at a global level to identify the causes for slow down in the industry. Some of the studies are dealing with challenges faced by the industry and also have provided many useful suggestions to overcome them. Almost every research has identified a few common factors which are major causes for the slow down as fuel cost, airport charges, intense competition, insufficient personnel, and poor management among the factors responsible for the unfavorable condition of the industry. In the present study, the researchers have considered a few research studies held globally.

International Researches

Addepalli et al. (2018) aimed to identify 'Push and Pull' factors that are leading to the rise of demand in the aviation sector. To identify the factors, the researchers have selected three variables namely: Social, economic and demographic which could influence demand. 'Environmental awareness' and 'Propensity to travel' are among those social factors that are considered in this research. After the social factors, economic factors are analyzed in four categories namely: key economic indicators, liberalization, airline business model, and external shocks. Economic development is the major factor among others while factors like GDP, private consumption, crude oil prices, and international trade, tourism, and airline profits are also dominant. For competing with Low-Cost Carriers, legacy carriers are restructuring their processes; whereas, LCCs are trying to cater to long hauls to surpass network carriers and legacy carriers. For many years the aviation industry is facing external shocks such as oil- price hike, wars, and security hampering conditions. By analyzing the above factors, it was concluded that economic indicators pull the demand while liberalization and business models are push factors.

Banuara and Purba (2018) concluded that airfare yield has a significant positive impact on domestic passenger growth. On the other hand, air traffic has no direct and significant impact on domestic passenger growth. Per capita income is also found to be an insignificant factor as, during 2013 when per capita growth was a decline, the passenger growth still increased.

Sultana (2018) explored the current situation of the Aviation Industry in Bangladesh. The study is an attempt to identify the major problems in the industry and recommended

to develop long term plans, infrastructure, import new and efficient aircrafts as some unhealthier ones are still in use, better customer service, reliable safety measures, reduce fares, increase promotional offers such as frequent flyer package and punctuality to deal with the major issues in the industry.

Bastola (2017) empirically traced some major causes behind the slow-paced growth of the aviation industry and its impact on the economy. The one major reason was traced for the in air travel in Nepal is the increase in accessibility through road transport and other problems are like political instability and poor managerial skills. According to the research Nepal experiences many air accidents mainly due to human negligence and lack of leadership skills along with poor technical skills. Also, corruption is the reason for the slow growth in this region.

Zhao (2017) empirically tested the impact of the aviation industry on Henan Transportation's development and tried to identify major problems being faced by the industry such as lack of competitiveness due to scattered firms, just one university for aviation studies leading to a lack of qualified personnel, weak international bonding, increasing competition from neighboring regions, increasing environmental hazards and less innovation. The researchers further suggested some measures that can do wonders like building of aviation research institute in the province, strengthening cooperation between the firms and promoting more advanced aircraft enterprises, attracting new talent, reducing wastage and promoting a green economy, developing e-commerce services across border to increase the demand for cargo aircraft and guidance and regulatory policies from government.

Červinka et al. (2012) in their study focused on developing strategies to reduce the cost in the aviation industry. Here, the researchers have advised using own sources and services to cut the cost. There are two approaches to this. First is the traditional airline model that maintains wealthy customers and try to attract customers from those companies who are lowering costs but simultaneously reducing the quality of services. Second is a low-cost model that attracts customers based on lower prices. Use of in-sourcing in low-cost carriers leads to significant cost reduction. Moreover, it leads to an increase in revenue. Researchers explain the difference between the two models and measures bringing cost down. Through in-sourcing companies can save cost by direct online sales without involving the travel agents, providing online check-in system, reduction free services in flights and charging for the same, self- advertisement and PR, point- to-point connection and non- refundable tickets. Measures other than in-sourcing that can cut costs are maintaining the same type of aircraft, using less crowded airports which reduce low landing and airport charges and cooperating with hotels and car rental services. Legacy (traditional) carriers have to compete with lost cost ones.

Indian Researches

Though many research studies have been conducted globally but there is a lack of commendable work done in the Indian context. Few studies are referred to know the contribution of Indian authors in identifying challenges and workable solutions in the Indian industry.

Rameshan P. (2018) also identified various challenges facing by India top leading aviation industry 'Air India'. The study found some major reasons for the losses in the company as limitation on foreign investment by the government, high wage structure with inefficient employees, resistance from hedging in case of jet fuel, heavy burden of insurance premium, mix a variety of aircraft, excess capacity and competition leading to low fare and hence low revenue emerged as difficulties for Air India.

Yadav (2017) has found that new entrants, terrorist attacks and government interference in some matters are threats to the airline industry while high operational cost, fuel cost, taxes, airport congestion, lack of manpower and infrastructure and competition from other airlines are further issues faced by the industry.

Banerji, Mukherjee & Siroya (2016) studies the cost-effectiveness strategies with the help of Indigo's case study. In their study, the researchers identified some major strategies which are majorly cost-effective such as making use of fuel efficient engines and patented navigation performance technique, using single type of aircrafts reducing inventory costs, having lower turnaround time with the help of automated system, maximizing flight usage by opting for connecting flights and keeping just two luxury services- extra leg space and pre-ordered meal.

Chattopadhyay (2015) identified constant capacity expansion of aircrafts leading to oversupply, lack of trained commercial pilots, government regulations in long haul international routes, high fuel costs, monopoly exercised by airports and the aircraft manufacturers and high cost of capital as the major issues need to be addressed and technology could be considered as a means for industry growth in India.

Choudhuri et al. (2015) also tried well to trace various issues and challenges faced by the Indian civil aviation industry. Indian aviation sector comprises of 41 million international and 121 million domestic passengers; so, the industry occupies a spot in the top ten in the global market in terms of size. Apart from this much growth in the customer base, the industry is under losses; as reported in the 2014 financial year no major private player was making profits except one or two like Indigo. The researchers were able to identify some major challenges for the situations such as high airport charges, high engineering charges for maintenance, lack of skilled manpower, lack of government initiative to form long- term policies for the aviation industry, low customer base, lack of competition among the airports and

the high price of Aviation Turbine Fuel which is highest in the world. The researchers further gave some solutions to overcome the problems such as tax structure should be rationalized for fuel, Encouraging FDI in aviation sector, Reducing MRO charges, appoint competent staff and provide them proper trainings.

From the above review of literature, the researchers inferred that there is almost similar kind of problems facing by the industry. Some of these problems are due to due to internal affairs, in other words, due to negligence and lack of efficient management; hence controllable with corrective measures. Whereas, some other problems aroused due to the external environment and it is comparatively difficult to control them.

The present study further tried to summarized major challenges and their possible solutions to control them in the below table. Table no. 1 contains the challenges identified by various researchers over a decade. These challenges are further categorized into micro (controllable) and macro (uncontrollable) levels on their basis of their control and management. Airlines can control micro-level challenges to some extent while macro-level challenges cannot be controlled by the airlines alone without the support of government and global forces.

Table No. 1: Challenges faced by aviation industry(A Review of Literature)

CHALLENGES		AUTHOR
Micro	**Macro**	
High wage structure with inefficient employees Resistance from hedging in case of jet fuel Heavy burden of insurance premium Mix variety of aircrafts Excess capacity Allocation of funds	Limitation on FDI Competition	Rameshan P. (2018)
High fares On- board services Safety concerns Training of employees Time management by airline staff	Lack of infrastructure Low profitability in least popular routes	Sharmin Sultana (2018)
high operational cost Fuel cost	Airport congestion Lack of manpower an infrastructure Competition from other airlines New entrants Terrorist attacks Government interference Taxes	Anuradha Yadav (2017)
Poor managerial skills Lack of leadership skills	Increasing competition from road transport Political instability Corruption	Dipak Prasad Bastola (2017)
Less innovation	Lack of competitiveness due to scattered firms Single university for aviation studies Leading to lack of qualified personnel Increasing competition fromneighbouring regions Increasing environmental hazards	Shaoxia Zhao (2017)
High price of jet fuel Congestion at the airports leading to wastage of fuel	Competition among premium airlines after arrival of LCCs Price war Domination of AAI	Anubhav Singh (2016)

Capacity expansion of aircrafts leading to oversupply Lack of trained commercial pilots High fuel cost	Government regulations in long haul international routes Monopoly exercised by airports and aircraft manufacturers High cost of capital	Chandrani Chattopadhyay (2015)
	Crude oil prices depreciating value of rupee fall in number of passengers	Manjula Shastri (2014)
Communication costs System upgradation and training costs Maintaining good reputation and leading with a strong brand name	No switching cost for customers Intense competition due to some airlines forming alliance Bankruptcy protection enjoyed by some competitors Increased operating cost in the form of rise in fuel, labour and security measures	Marcella Riwo-Abudho, Lily W. Njanja & Isaac Ochieng (2013)
Overcapacity of aircrafts Availability of capital Fuel cost	Various regulations Low economic growth Oil price hikes Airport infrastructure Level of political interference	Md Atiqur Rahman Sarker, Chowdhury Golam Hossan & Laila Zaman (2012)
Ineffective management Decaying air conditioners and toilet facilities Lack of security measures at airport	Lack of efficient air transport Regulatory policy Frequent air crashes Competition from foreign airlines	Suleiman Iguda Ladan (2012)
Poor management Overcapacity Inappropriate marketing strategies Baggage and check- in issues Jet fuel price	Government regulations	Mansoor Nazir Bhatti, Muhammad Imran Qureshi and Khalid Zaman (2010)
Need of improvement in navigation system High fuel consumption	Increase in competition Gaps in infrastructure Air traffic congestions Rise in Aviation Turbine Fuel price Heavy taxes Supply of skilled personnel	S.C. Bansal, M.N. Khan & V.R. Dutt (2008)

The researchers identified various challenges by analyzing the literature. Several challenges listed were at micro level but the most common ones include high operational costs, lack of trained and inefficient employees, safety concerns, lack of management skills, congestion at airport due to oversupply of aircrafts, proper handling of technology and automation systems and satisfactory services to customers. While at macro level factors such as high competition, poor infrastructure, government and political interference, tax regulations and crude oil price hike were dominant. Since micro factors can be controlled at company level but macro ones are unfeasible, they can pose a serious threat to the industry. Hence they are included in SWOT analysis for further clarification.

Research Methodology

This paper is conceptual as secondary data sources were used to conduct this research. Research was carried out by conducting a case analysis of a few major players in the aviation industry. The reason for picking these cases was that these are the top players of the aviation industry. This paper aims to analyze the Indian aviation industry by examining the three airlines: Indigo, Spicejet and Air India finalized based on turnover and hence the top three are selected for the research. Air India is from the government sector whereas Spice jet and Indigo are from the non-government sector. In the recent past, Reddy and Agrawal (2012) have mentioned in their paper 'Designing case studies from secondary

sources – a conceptual framework' about the importance of case study design, development and writing style in management education for building subject foundation, developing theories and concepts as a token of contribution to the existing literature. They have validated the use of case study methods for building a conceptual framework from secondary data sources such as websites, annual reports, news archives and industry reports (a detailed list is stored by authors of this paper). According to Reddy (2015), it has been argued by many researchers in the recent past that western theories are not highly satisfactory to study the phenomenon of theemerging market such as India. This problem is due to data collection, data analysis, and theory development. In answer to this problem, Reddy (2015) has designed a new case study research design by the name '*Test-Tube*' typology. Through this research design, he has proposed to build theory from emerging markets to add new knowledge particularly in the field of management and social sciences with the help of the case study method.

According to literature, one can build theory from multiple cases as it is likely to have stronger internal validity, higher conceptual level, novelty, testability, and empirical validity and helps in generalizing the data (Eisenhardt and Graebner, 2007; Quinton and Smallbone, 2006). An exhaustive literature survey has been done in this study from various researches in this field to identify the micro and macro challenges associated with the aviation industry and further also identified the opportunity and threat prevalent in this field. The researcher has also used cost sheets and financial statements to identify the strength and weaknesses related to the aviation industry. From the above analysis, the researcher has further formulated the opportunity and threat matrix for the aviation industry. Based on this analysis, the researcher has proposed a few strategies for the growth of the aviation industry for economic development.

Analysis and Interpretation

This section of the study will focus on the comparison of financial statements, cost sheet, and SWOT Analysis of the three firms. From the cost sheet, the researchers have identified the strengths and weaknesses related to the aviation industry. From the literature review, the researchers have identified the macro and micro challenges associated with the aviation industry. Also by analyzing the cost sheet, the researchers have formulated the opportunity and threat matrix for the aviation industry

Profit and loss statement

Profits and losses of Indigo and Spicejet (Non-government sector) and Air India (Government sector) are analyzed to know their profitability and consistency.

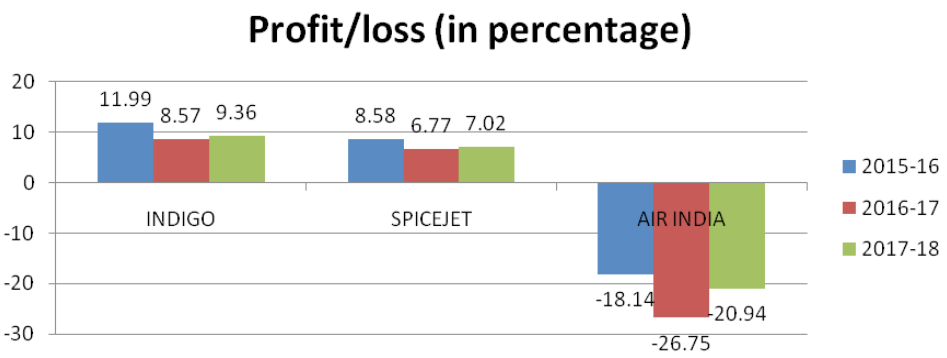
Table 2: Profit/loss of airlines in three consecutive years (F.Y. 2015-16 to F.Y. 2017-18)

YEAR--→	2017-18			2016-17			2015-16		
AIRLINE	Revenue	Expenses	Profit/ Loss	Revenue	Expenses	Profit/ Loss	Revenue	Expenses	Profit/ Loss
Indigo	239,677.43	208,411.16	22,423.24	193,695.70	172,252.71	16,591.47	166,013.02	137,723.52	19,897.207
Spice Jet	79,335.31	73,763.25	5,572.06	63,031.92	59,145.26	4,272.20	52,401.28	48,540.34	4497.88
Air India	276,920.1	333,541.4	(57,999.1)	255,878.5	302,908.3	(68,458.1)	237,601.2	279,780.2	(43,106.5)

Source: compiled data from official websites of respective airlines

Graphical Re-presentation

Figure 1: Profit and loss in percentage of three consecutive years
(F.Y. 2015-16 to F.Y. 2017-18)



From the above table/ diagram, we can infer that in the government sector, revenue generated by Air India is the highest but expenses are exceeding the revenue because of which it is incurring loss since last three years. The revenue generated by non- government sector is not exceeding the expenses so it is running in profit, year by year. It was observed that the airlines in the non- government sector observed a decline in profit % from the year 2015-16 to 2016-17 but a hike was recorded in the following year. A similar trend was followed by Air India where the calculated loss % increased from 2015-16 to 2016-17 but the year ending March 2018 observed a decrease in loss %. The result of the above table is presented graphically in figure no. 1.

Cost Sheet

Further to understand the reason behind the profit of non- government sector and loss for the government sector in the aviation industry, we have gone through the cost sheet of the three companies. It comprises of major expenses of the three airlines in proportion to the total expenses. It will help to understand their cost structure. The cost sheet is divided based on operating and financial costs. This format is inspired by absorption costing wherein variable cost and fixed cost both are charged to the units of cost.

The above table suggests that Air India is better at controlling most of the components of operating costs rather than the financial cost. It is overburdened by interests and fixed commitments in various forms. But the other two airlines are better off in terms of financial cost.

A major portion of income is spent on aircraft fuel in every airline with Indigo incurring maximum expense. Aircraft and engine rentals include the charges paid for leasing the engines and aircraft to save capital expenditure. Other than that, the airlines are spending huge amounts on their employees as can be seen from this table. Air India is a leading airline where employees enjoy more benefits and job security than other airlines. Air India is the airline with a minimum of repair and maintenance cost which has become possible since it has its own and the biggest MRO (Maintenance, Repair, and Overhaul) center. Non- government airlines have to spend more on selling and advertisements to attract more customers while the government airline has a different set of customers and has government support. Passenger amenities include all the in-flight offerings made by the airlines to passengers that also include meals and beverages. Airlines spend a good amount on pampering their employees with high facilities while traveling. Investment in human resources can lead to beneficial results if it stays within the paying capacity of the

Table 3: Specific expenses in proportion to total expenses

Expenses	Indigo	Spicejet	Air India
OPERATING COST			
Aircraft fuel expense	77,601.36- **37.23%**	24,326.27- **34.49%**	85,361.0- **25.59%**
Aircraft and engine rentals	36,101.99- **17.32%**	16,699.92- **23.67%**	27,901.3- **8.36%**
Employee benefit expense	25,883.82- **12.41%**	8,616.92- **12.22%**	47,523.2- **14.24%**
Aircraft maintenance and repair cost	11,637.42- **5.58%**	4,692.91- **6.65%**	16,449.0- **4.93%**
Selling and advertisement cost	7,353.83-**3.52%**	2,226.36- **3.15%**	6,436.7- **1.92%**
Passenger amenities	1,080.74- **0.51%**	884.34- **1.25%**	9,259.5- **2.77%**
Crew accommodation and travelling cost	2904.96- **1.39%**	368.30- **0.52%**	2601.8- **0.78%**
Landing , navigation and other airport charges	23,768.35- **11.40%**	6,605.56- **9.36%**	20,639.6- **6.18%**
Aircraft insurance	352.28- **0.16%**	227.39 - **0.31%**	1,174.7- **3.52%**
FINANCIAL COST			
Finance cost	3,398.15- **1.63%**	923.30- **1.30%**	46,721.9- **14%**

Source: compiled data from official websites of respective airlines for the year ending 31st March 2018

companies. Airport charges including landing, navigation, parking, and some other expenses also form a major share of expense for Indigo and Spicejet but Air India due to its status of national carrier enjoys various privileges and hence, low amount is charged. Aircraft insurance provides the airlines with a future security in monetary terms in case something unfortunate happens with the aircraft. Air India is incurring maximum expenditure on this while the other two airlines are spending a minor amount. While the other two airlines do not have much of financial cost burden, Air India has to shed a massive amount of money due to its huge accumulated debt.

SWOT Analysis

According to Philip Kotler, "the overall evaluation of a company's strengths, weaknesses, opportunities, and threats is called SWOT Analysis." Strengths and weaknesses are identified by analyzing the cost sheet of the three airlines thoroughly and they are categorized as government airline and non- government airlines.

airlines. (DGCA, 2016-17) discussed the criteria of revenue per employee, an indicator denoting employee productivity and stated that Air India is way behind than its counterparts. This came out as the satisfaction for employees and strength for the government airline.

While the other two airlines do not have much financial cost burden, Air India has to shed a massive amount of money due to its huge accumulated debt. Air India after the merger with Indian Airlines (IA) in 2007 is burdened with the combined losses of both that keep on accumulating over the years.

Air India is the airline with a minimum of repair and maintenance cost which has become possible since it has its own and the biggest MRO (Maintenance, Repair and Overhaul) center. Non- government airlines that have to outsource the respective operations have to incur more costs. Non- government airlines are incurring more expenditure on selling and advertisement as there is intense competition and price war among them. But the government airline

Table 4: Strengths and Weaknesses of airlines on the basis of cost sheet (Table no. 3)

Particulars	Government airline		Non- government airlines	
	Strength	Weakness	Strength	Weakness
Fuel expense	✓			
Aircraft and engine rentals	✓			
Employee benefit expense	✓			
Finance costs		✓	✓	
Aircraft maintenance and repair cost (MRO)	✓			✓
Selling and advertisement cost	✓			✓
Landing, navigation and airport cost	✓			✓
Passenger amenities		✓	✓	
Aircraft insurance		✓	✓	

The above table shows a comparative analysis between government and non-government airlines; which further depicts that the government airline optimized the fuel consumption more appropriately. A major portion of income is spent on fuel expense of every airline but the expenditure incurred by Air India is far behind than the other aviation companies. The other finding was that the non- government airlines have high engine and aircraft rental costs implying that they have leased more aircraft than government airlines which is a weakness for non- government airlines. Shortage of surplus funds may be the reason behind engine and aircraft rentals.

Other than that, the airlines are spending huge amounts on their employees. Air India is a leading airline where employees enjoy more benefits and job security than other

maintains a strong brand image and does not need to inform the customers very often.

Airport charges including landing, navigation, parking, and some other expenses also form a major share of expense for Indigo and Spicejet but Air India due to its status of national carrier enjoys various privileges and hence, a low amount is charged.

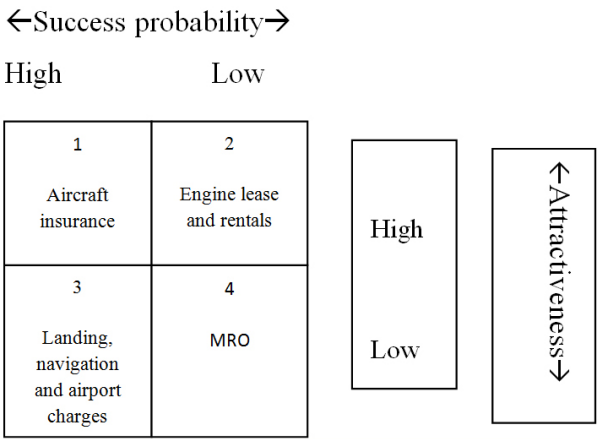
Non- government airlines are at an advantageous situation when it comes to passenger amenities as even by spending less on it, the airlines are enjoying profits whereas the government airline is spending more and still facing losses.

Aircraft insurance is forming a larger portion of the expense in government airline as compared to other airlines. Maybe the government airline is more risk-averse as Indigo has more aircraft in its fleet as compared to Air India and even then it is spending less on insurance.

Opportunities and Threats (Micro level Challenges facing by Aviation Industry in India)

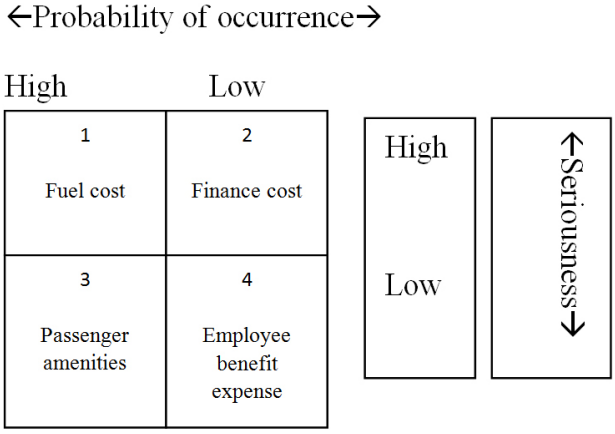
From the above cost sheet the researchers have further designed the opportunity and threat matrix where the success probability and attractiveness of an element is considered (Kotler et al., 2018). This opportunity and threat matrix further help the researchers in identifying the root cause challenges so corrective measures can be traced accordingly.

Opportunity Matrix for aviation industry on the basis of cost sheet of top three airlines



1. **Aircraft insurance**: The cost of a single aircraft is very high, be it a small one or a large one. Ensuring the asset is, therefore, carries prior responsibility on the part of airlines. But some airlines spent huge amount whereas some can optimize this cost smartly. A huge difference was found in the insurance cost of Air India and the other two players.
2. **Engine lease and rentals**: Engine and aircraft lease and rentals form a reasonably big amount of expense. But it is not easy to avoid these costs as maintaining own aircraft involves a huge amount of capital costs. But if an airline formulates strategies to minimize these costs then to some extent cost can be reduced leading to save some expenses.
3. **Landing, navigation and other airport charges**: Airport charges are levied heavily by the airport authorities for providing various facilities to the airlines. Forming hubs on secondary airports is one of the ways to control this cost. Optimizing this cost can prove to be a boon for the airlines as it forms a huge burden for the industry.
4. **MRO (Maintenance, Repairs, and Overhaul):** Maintenance and repairsare the revenue expense for the airlines. Every aircraft needs repair and depreciates over some time. There is less scope for minimizing costs in this area. Therefore, firms don't find this area attractive enough to indulge in resources.

Threat Matrix for aviation industry on the basis of cost sheet of top three airlines



1. **Fuel cost:** The industry experiences unexpected hike in fuel price sometimes which is difficult to manage and this hike carries extreme seriousness as it is not easy to control and affects the operating profit directly.
2. **Finance cost:** Fixed financial costs can bea huge burden for any firm. The airline industry involves huge investment but the firms should be able to cater to its financial commitments. If it is not managed then it can seriously damage the firm.
3. **Passenger amenities:** Spending money beyond limits to satisfy customers can lead to extra costs. There are high chances that airlines make this mistake to gather customers from competitors.
4. **Employee benefit expense:** Expense on crew and other staff members should be rationally thought upon as employees play a very important part of any organization. But they should be compensated according to the revenues and paying capacity of the airlines. Exceeding beyond that further adds to the burden of the company.

Findings and Suggested strategies for growth of Aviation Industry in India

The researchers have formulated SWOT based on cost sheet tabulated according to the criteria of absorption costing and observed that Air India is far better than its counterparts in controlling operating costs. Operating cost is a measure to know the expenditure incurred being necessary for the functioning of daily operations of airlines. Since, Air India is managing it well it can run its organization even in the critical conditions like an economic slump. But due to its failure in

restricting financial cost, it has loaded itself with debt unable to fulfill its fixed commitments leading to overall losses. No other airline can manage operating costs so well but the financial burden is low leading to the overall profitability of Indigo and Spicejet.

Based on the cost sheet and SWOT analysis following strategies are suggested to deal with the challenges prevalent in the Indian aviation industry. These strategies are driven from the above cases and the suggestions are authenticated with the references means many other authors have also suggested the same strategies to deal with slow down situation and to ensure growth in this competitive world.

1. Airlines should opt for fuel-efficient aircraft and keep on formulating strategies to minimize fuel wastage; which is evidenced by Air India. This is one of the key factor by which Air India is able to keep its operating cost low; hence better results could be expected in near future. A few researchers (Sharmin, 2018; Chattopadhyay, 2015) have also suggested that importing efficient aircraft along with technological advancement saving fuel should be promoted.

2. Hedging of fuel is suggested to be done a long time in advance when the crude oil price rates are stable to be in an advantageous situation in the future as firms' revenues are hardly hit in case of hike in fuel price as was observed in case of all the three airlines where fuel cost forms the major portion of expense. (Singh, 2016) also emphasized on hedging fuel expenses in his research to escape from high prices in future.

3. Rationalization of tax structure is recommended to lower the burden of the tax. (Yadav, 2017) also supported this argument in his research. Currently, airlines are dealing with burdensome tax obligations where they are paying tax on tax. But the government is planning to rationalize the tax structure (Hindustan Times, 2019).

4. Operating from secondary airports reduces costs as there is less congestion and hence parking charges, landing, and navigation charges are minimized. Indigo and Spicejet are spending a lot of amount on these airport charges and there is an urgent requirement to curtail these expenses to lower the operating cost. (Shastri, 2014) in her study also suggested the need for shifting the inbound and outbound traffic to non- metro airports to deal with problems of congestion and parking.

5. Government should invest in aviation infrastructure and favorably work on the policies to ease the regulations for airlines to widen the opportunity framework for airlines. Though government and political interference present obstacles in the path of airlines' success but in the current scenario government is trying to introduce measures supporting the airlines for example, 5/20 rule was modified into 0/20 rule for airlines wanting to start international operations (Economic Times, 2018). Some studies (Zhao, 2017; Singh, 2016; Yadav, 2017&Ladan, 2012) also focused on the role of government for betterment of the aviation industry.

6. Expense on crew and other staff members should be rationally thought upon as employees play a very important part of any organization. It has been found in research that satisfied employees in the service sector can only satisfy customers. But they should be compensated according to the revenues and paying capacity of the airlines. Exceeding beyond that further adds to the burden of the company. Air India is spending more proportion of revenue on its employee as compared to the other two airlines which amounts to a considerably a large portion even though it is dipping down into losses.

7. The government sector of the aviation industry should also try to widen its segmentation strategy for survival. After comparing the pricing strategies of both the sectors, it is found that the present government is charging higher price as compared to the non-government sector, which is affordable for only a few segment that is the elite class in the society. It is not tapping other segments like middle-middle class, which is being targeted by the non-government sector. So to survive and have a competitive advantage in the long-run the company particularly of government sector needs to change its marketing strategies in terms of segmentation and pricing policies of the companies in this industry.

Implications of the study

This paper provides insight about the current situation of the airline industry and suggested ways to deal with them. It clearly describes the whole scenario and challenges faced by this industry. Research scholars and academicians that are researching about this industry will have an addition to the existing literature. Also policy makers of various airlines can benefit by analyzing the SWOT Analysis presented in this paper. Moreover, prospective investors and employees may gain information regarding the financial aspect of the industry and their ability to pay them.

Limitations of the study

This findings and conclusion of the study is based on the cases of only three airlines; more authentic results could be expected by considering more airlines companies under study. Thus, more airlines could be added for an enhancedoutlook of the Indian airline industry.Due to time constraint, researchers were not able to conduct a primary survey and hence the analysis is based on only secondary data.

Conclusion of the study

Analyzing the current performance along with past ones and careful examination of costs prove to be a key factor helpful in strategy formulation. Right strategies can lead an airline company to climb stairs of success and a wrong one has the power to finish off its mere existence External and internal environment scanning clarifies every doubt regarding customers' expectations and prevailing gaps that need to be filled in order to satisfy them. Airlines should focus on grabbing the present opportunities to get advantage from the prevailing situations that can contribute positively towards their revenue. It was found that following the right strategies has supported Indigo to emerge as a leader in terms of profit as well as market share whereas Spicejet is also trying to cope up by implementing policies helping it in maintaining a reasonable share. But when it comes to controlling operating cost, Air India opted for much better strategies. Unfortunately, its accumulated debt emerged as the reason behind the airline incurring continuous losses since years. Only careful implementation of strategies can be used as a tool to make the airlines come out of their current state of downfall and shine like before.

References

- Abdelhady, M. R. R., Fayed, H. A. K., & Fawzy, N. M. (2019). The Influence of Airlines' Marketing Mix Elements on Passengers' Purchasing Decision-Making: The Case of FSCs and LCCs. *International Journal of Hospitality & Tourism Systems*, *12*(2).
- Addepalli, S., Pagalday, G., Salonitis, K., & Roy, R. (2018). Socio-economic and demographic factors that contribute to the growth of the civil aviation industry. *Procedia Manufacturing*, *19*, 2-9.
- Anuradha Yadav et al., Emerging Scenario of Indian Aviation Sector Facing Issues and Challenges in Economy. *Int J Recent Sci Res*. 8(6), pp. 17527-17531
- Banerji, D., Mukherjee, P., & Siroya, N. (2016). Case Study-Soaring into the High Skies. *Available at SSRN 2873325*.
- Bansal, S., Khan, M., & Dutt, V. (2008). Economic Liberalisation and Civil Aviation Industry. *Economic and Political Weekly,43*(34), 71-76.
- Banuara, S., & Purba, J. T. (2018). Analysis of the Aviation Industry in Indonesia Period 2003-2015 Based on Domestic Passenger Growth and the Strategic Implication for Airlines and Government. *Jurnal Manajemen dan Pemasaran Jasa*, *10*(1), 73-94.
- Bastola, D. P. (2017). Analysis of The Aviation Industry As A Growth Sector Of Economy: A Study Of Nepali Aviation Industries. *International Journal of Advanced Research and Publications*, *1*(2), 70-75.
- Bhatti, M. N., Qureshi, M. I., & Zaman, K. (2010). Future of air travel industry: relation of growth and consumer satisfaction. *International Journal of Economics and Research*, *1*(1), 19-37.
- Cervika, M.; Stverkova, H.; Humlova, V. (2012). Insourcing as a key factor of competitiveness in aviation. *Issues of Business and Law, 4, 86-93.*
- Chattopadhyay, C. (2015). Aviation Industry: Challenges and Prospects. *Journal of Research in Business, Economics and Management*, *3*(2), 145-149. Retrieved from http://scitecresearch.com/journals/index.php/jrbem/article/view/206
- Choudhuri, S., Dixit, R., & Tiwari, R. (2015). Issues And Challenges Of Indian Aviation Industry: A Case Study. *Pezzottaite Journals*, *4*(1), 1557-1562
- Eisenhardt, K.M. and Graebner, M.E. (2007) 'Theory building from cases: opportunities and challenges', *Academy of Management Journal*, Vol. 50, No. 1, pp.25–32.
- Kaynak, E., Kucukemiroglu, O., & Kara, A. (1994). Consumers' perceptions of airlines: A correspondence analysis approach in a global airline industry. *MIR: Management International Review*, 235-254.
- Kotler, P., Keller, K. L., Ang, S. H., Tan, C. T., & Leong, S. M. (2018). *Marketing management: an Asian perspective*. Pearson.
- Ladan, S. I. (2012). An analysis of air transportation in Nigeria. *JORIND*, *10*(2), 230-237.
- Quinton, S. and Smallbone, T. (2006) *Postgraduate Research in Business: What is Management Research and What Does It Mean at Masters' Level?*, Sage Research Methods [onlineversion].
- Rajan, S. (2015). A going concern's growing concerns: A case study on Spice Jet-India. *International. Journal Mgmt. Research. & Business Strategies*, *4*(2).
- Reddy, K.S. (2015) 'Beating the odds! Build theory from emerging markets phenomenon and the emergence of case study research – a 'test-tube' typology', *Cogent Business and Management*, Vol. 2, No. 1, p.1037225.
- Reddy, K.S. and Agrawal, R. (2012) 'Designing case studies from secondary sources – a conceptual framework', *International Management Review*, Vol. 8, No. 2, pp.63–70.
- Sarker, M. A. R., Hossan, C. G., & Zaman, L. (2012). Sustainability and growth of low cost airlines: an industry analysis in global perspective. *American Journal of Business and Management*, *1*(3), 162-171.
- Shastri, M.(2014) 'Indian Aviation: Flying Through Turbulence', *International Journal of Engineering Research & Management Technology*, 1(6), 127-138
- Singh, A. (2016). A study of Current Scenario of Aviation Sector in India. *International Journal of Innovative Knowledge Concepts*, *4*(4).
- Sultana, S. (2018). Economic growth of airlines industry: An overview of domestic airlines in Bangladesh. *Journal of Management Research and Analysis*, *5*(1), 61-68.
- Zhao, S. (2017). Problems and Countermeasures of Aviation Industry Development in Henan Province. In *MATEC Web of Conferences* (Vol. 100, p. 01008). EDP Sciences.

Web Links

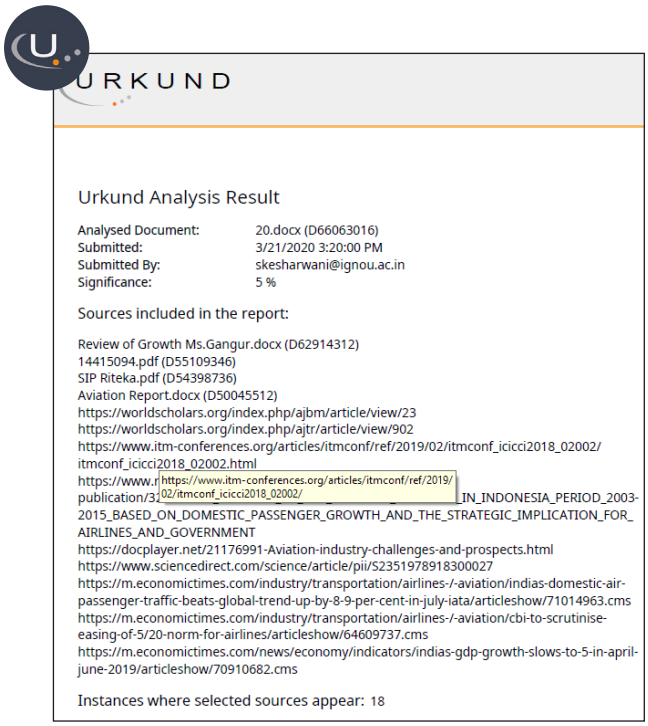
- https://www.researchgate.net/publication/322243689
- https://www.iata.org/publications/economics/Reports/voa-country reports/2019/IATA_India_Report.pdf
- http://www.airindia.in/AnnualReport.htm?30
- https://www.goindigo.in/information/investor-relations/annual-report.html
- https://www.spicejet.com/InvestorsFinancialInformation.aspx
- https://m.economictimes.com/industry/transportation/airlines-/-aviation/cbi-to-scrutinise-easing-of-5/20-norm-for-airlines/articleshow/64609737.cms
- https://dgca.gov.in/digigov-portal/

GJEIS Prevent Plagiarism in Publication

The Editorial Board had used the Urkund – a Swedish anti-plagiarism software tool which is a fully-automatic machine learning text-recognition system made for detecting, preventing and handling plagiarism and trusted by thousands of institutions across worldwide. Urkund is GDPR compliant with privacy by design and an uptime of 99.9% and have trust to be the partner in academic integrity. https://www.urkund.com] tool to check the originality and further affixed the similarity index which is {5%} in this case (See Above Annexure-I). Thus, the reviewers and editors are of view to find it suitable to publish in this Volume-12, Issue-1, Jan-March, 2020.

Annexure 1

Submission Date	Submission Id	Word Count	Character Count
21-March-2020	D66063016 (Urkund)	6752	44508



URKUND

Urkund Analysis Result

Analysed Document: 20.docx (D66063016)
Submitted: 3/21/2020 3:20:00 PM
Submitted By: skesharwani@ignou.ac.in
Significance: 5 %

Sources included in the report:

Review of Growth Ms.Gangur.docx (D62914312)
14415094.pdf (D55109346)
SIP Riteka.pdf (D54398736)
Aviation Report.docx (D50045512)
https://worldscholars.org/index.php/ajbm/article/view/23
https://worldscholars.org/index.php/ajtr/article/view/902
https://www.itm-conferences.org/articles/itmconf/ref/2019/02/itmconf_icicci2018_02002/itmconf_icicci2018_02002.html
https://www.r https://www.itm-conferences.org/articles/itmconf/ref/2019/02/itmconf_icicci2018_02002/
publication/3 IN_INDONESIA_PERIOD_2003-2015_BASED_ON_DOMESTIC_PASSENGER_GROWTH_AND_THE_STRATEGIC_IMPLICATION_FOR_AIRLINES_AND_GOVERNMENT
https://docplayer.net/21176991-Aviation-industry-challenges-and-prospects.html
https://www.sciencedirect.com/science/article/pii/S2351978918300027
https://m.economictimes.com/industry/transportation/airlines-/-aviation/indias-domestic-air-passenger-traffic-beats-global-trend-up-by-8-9-per-cent-in-july-iata/articleshow/71014963.cms
https://m.economictimes.com/industry/transportation/airlines-/-aviation/cbi-to-scrutinise-easing-of-5/20-norm-for-airlines/articleshow/64609737.cms
https://m.economictimes.com/news/economy/indicators/indias-gdp-growth-slows-to-5-in-april-june-2019/articleshow/70910682.cms

Instances where selected sources appear: 18

Editorial Excerpt

At the time of submission, the paper had 5 % of plagiarism which is an accepted percentage as per the norms and standards of the journal for the publication. As per the editorial board's observations and blind reviewers' remarks the paper had some minor revisions which were communicated on timely basis to the authors (Riya, Teena & Priyanka) and accordingly all the corrections had been incorporated as and when directed and required to do so. The comments related to the manuscript are related to the theme **"Challenges of Indian Aviation Industry and Strategies to Deal with them: A Case Study"** both subject-wise and research-wise. At the time when Indian aviation industry is facing losses, the paper has investigated the challenges faced to help them to find measures for their sustainability and growth in global market. The authors have taken top three airlines i.e. Indigo, Spicejet and Air India as the sample, Micro and Macro challenges are identified from the literature and SWOT analysis is performed for each for an overall evaluation. The paper is well written and some important considerations are highlighted. Overall, the paper promises to provide a strong base for the further study in the area. After comprehensive reviews and editorials boards remarks the manuscript has been decided to categorise and publish under the **"Case Study Based Paper (CSBP)"** category.

Acknowledgement

Author's Riya, Teena and Priyanka) is highly indebted to university research cell, libraries and research group for accomplishing this task.

Disclaimer

All views expressed in this paper are my/our own. Some of the content is taken from open source websites & some are copyright free for the purpose of disseminating knowledge. Those some We/I had mentioned above in the references section and acknowledged/cited as when and where required. The author/s has cited their joint own work mostly, Tables/Data from other referenced sources in this particular paper with the narrative & endorsement has been presented within quotes and reference at the bottom of the article accordingly & appropriately. Finally, some of the contents which are taken or overlapped from open source websites for the knowledge purpose. Those some of i/we had mentioned above in the references section.

Reviewers Comment

Reviewer Comment 1:
The present study seems to be a work on a contemporary topic which has attracted many researchers due to slowdown and economic repercussions on different sectors. The profitability and other parameters taken in the study are appropriate for making a comparison between airlines in the country.

Reviewer Comment 2:
Introduction portion of the paper is quite impressive. The study has showed interesting facts.SWOT analysis of three aviation industry in India is explained well.

Reviewer Comment 3:
The study has been supported by the very recent and updated data and facts & figures from various sources is used for the various analysis in the study which is commendable. Tabulated analysis of ROL makes the study more lucid and understandable for the readers.

Reviewer Comment 4:
The paper is working on a relevant topic. Literature review has to be precise. The writer has written elaborately about the contents of the paper reviewed which could be shortened. Otherwise, contents, research methodology, conclusions are as required. Fit for publication. You may go ahead and publish with certain rectification mentioned.

Citation

Riya Gupta and Teena Hassija
"Challenges of Indian Aviation Industry and Strategies to Deal with them: A Case Study"
Volume-12, Issue-1, Jan-Mar, 2020. (www.gjeis.com)

https://doi.org/10.18311/gjeis/2020
Volume-12, Issue-1, Jan-Mar, 2020
Online iSSN : 0975-1432, **Print iSSN** : 0975-153X
Frequency : Quarterly, Published Since : 2009

Google Citations: Since 2009
H-Index = 96
i10-Index: 964

Source: https://scholar.google.co.in/citations?user=S47TtNkAAAAJ&hl=en

Conflict of Interest: Author of a Paper had no conflict neither financially nor academically. To execute the research the self-funding model has been created for collection of data and preparation of a questionnaire.

Scholastic Seed Inc.
www.scholasticseed.in