

Volume 2, Issue 2, November 2017, ISBR Management Journal

ISSN(Online)- 2456-9062

**COMPARATIVE STUDY ON GROWTH AND FINANCIAL
PERFORMANCE OF JET AIRWAYS, INDIGO AIRLINES &
SPICEJET AIRLINES COMPANIES IN INDIA**

Author

Bharath K. A.

bharathka93@gmail.com

ABSTRACT:

A comparison of financial performance is based on Growth, Challenges and Service quality of company. After LPG regulation, the Indian government has taken free sky policy to lead and compete with International Airlines. The study focuses on major three Indian Airline growth and Challenges. The study is based on Ratio analysis and ANOVA for testing of hypothesis. Finally study helps to find, the overall better performer of Airline company in India with respect to growth and financial performance.

Key Words: Market Share, Profit margin, Return on Assets(ROA) and Return on Equity(ROE)

INTRODUCTION

Indian, formerly Indian Airlines (Indian Airlines Limited from 1993 and Indian Airlines Corporation from 1953 to 1993) was a major Indian airline based in Delhi and focused primarily on domestic routes, along with several international services to neighboring countries in Asia. It was state-owned, and was administered by the Ministry of Civil Aviation. It was one of the two flag carriers of India, the other being Air India. The airline officially merged into Air India on 27 February 2011.

The airline was set up under the Air Corporations Act, 1953 with an initial capital of Rs.32 million and started operations on 1 August 1953. It was established after legislation came into force to nationalize the entire airline industry in India. Two new national airlines were to be formed along the same lines as happened in the United Kingdom with British Overseas Airways Corporation (BOAC) and British European Airways (BEA). Air India took over international routes and Indian Airlines Corporation (IAC) took over the domestic and regional routes.

OBJECTIVES OF THE STUDY

- To Understand current and future evolution of the Airline industry in India
- To Study the financial performance of selected Airlines in India
- To analysis of Growth and Trend performance of selected Airlines in India

.

METHODOLOGY

RESEARCH DESIGN

This study employed quantitative research approach. A quantitative approach is relevant because it employs statistics, which is a comparative methodological discipline that uses mathematical ideas for descriptive data analysis, point inference, and hypothesis testing.

PERIOD OF STUDY

The study evaluated Financial Performance of selected Indian Airline from 2012 to 2016 focusing on peer airlines

SAMPLE SIZE OF THE STUDY

The study with respect to sample size of Three (3) Airlines such as JET AIRWAYS, INDIGO AIRLINES & SPICEJET AIRLINES

COLLECTION OF DATA

The research study is based on Secondary data collected from respective Company websites, Journals, Magazines , News paper etc.

KEY PERFORMANCE RATIOS

NET PROFIT MARGIN

Net Profit Margin is the ratio of net profits to revenues for a company or business segment - typically expressed as a percentage – that shows how much of each dollar earned by the company is translated into profits. Net margins can generally be calculated as:

$$\text{NET PROFIT MARGIN} = \frac{\text{NET PROFIT}}{\text{REVENUE}}$$

Where Net Profit = Revenue –COGS-Operating Expenses – Interest and Tax

OPERATING PROFIT MARGIN

Operating Profit Margin is a measurement of what proportion of a company's revenue is leftover after paying for variable costs of production such as wages, raw materials, etc. It can be calculated by dividing a company's operating income (also known as "operating profit") during a given period by its net sales during the same period.

“Operating income” here refers to the profit that a company retains after removing operating expenses (such as cost of goods sold and wages) and depreciation. “Net sales” here refers to the total value of sales minus the value of returned goods, allowances for damaged and missing goods, and discount sales.

Operating margin is expressed as a percentage, and the formula for calculating Operating margin can be represented in the following way:

$$\text{Operating Margin} = \frac{\text{Operating Income}}{\text{Net Sales}}$$

RETURN ON ASSETS (ROA)

Return on assets is an indicator of how profitable a company is relative to its total assets.

ROA gives an idea as to how efficient management is at using its assets to generate earnings.

Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment".

The formula for return on assets is:

$$\text{RETURN ON ASSETS} = \frac{\text{NET INCOME}}{\text{TOTAL ASSETS}}$$

TOTAL ASSETS

The ROA is often referred to as ROI

RETURN ON EQUITY (ROE)

Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

ROE is expressed as a percentage and calculated as:

$$\text{RETURN ON EQUITY} = \frac{\text{NET INCOME}}{\text{SHAREHOLDER'S EQUITY}}$$

Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares.

HYPOTHESIS OF THE STUDY

The following hypotheses are framed for testing

Hypothesis 1

Null Hypothesis: Ho NPJA=NPIA=NPSJ

There are no significance differences on Net Profit Margin among the peer airlines group.

Alternate hypothesis: H1 NPJA≠NPIA≠NPSJ

There are significance differences on Net Profit Margin among the peer airlines group.

Hypothesis 2

Null Hypothesis: Ho OPJA=OPIA=OPSJ

There are no significance differences on Operating Profit Margin among the peer airlines group.

Alternate hypothesis: H1 OPJA≠OPIA≠OPSJ

There are significance differences on Operating Profit Margin among the peer airlines group.

Hypothesis 3

Null Hypothesis: Ho ROAJA=ROAIA=ROASJ

There are no significance differences on ROA among the peer airlines group.

Alternate hypothesis: H1 ROAJA≠ROAIA≠ROASJ

There are significance differences on ROA among the peer airlines group.

Hypothesis 4

Null Hypothesis: Ho ROEJA=ROEIA=ROESJ

There are no significance differences on ROE among the peer airlines group.

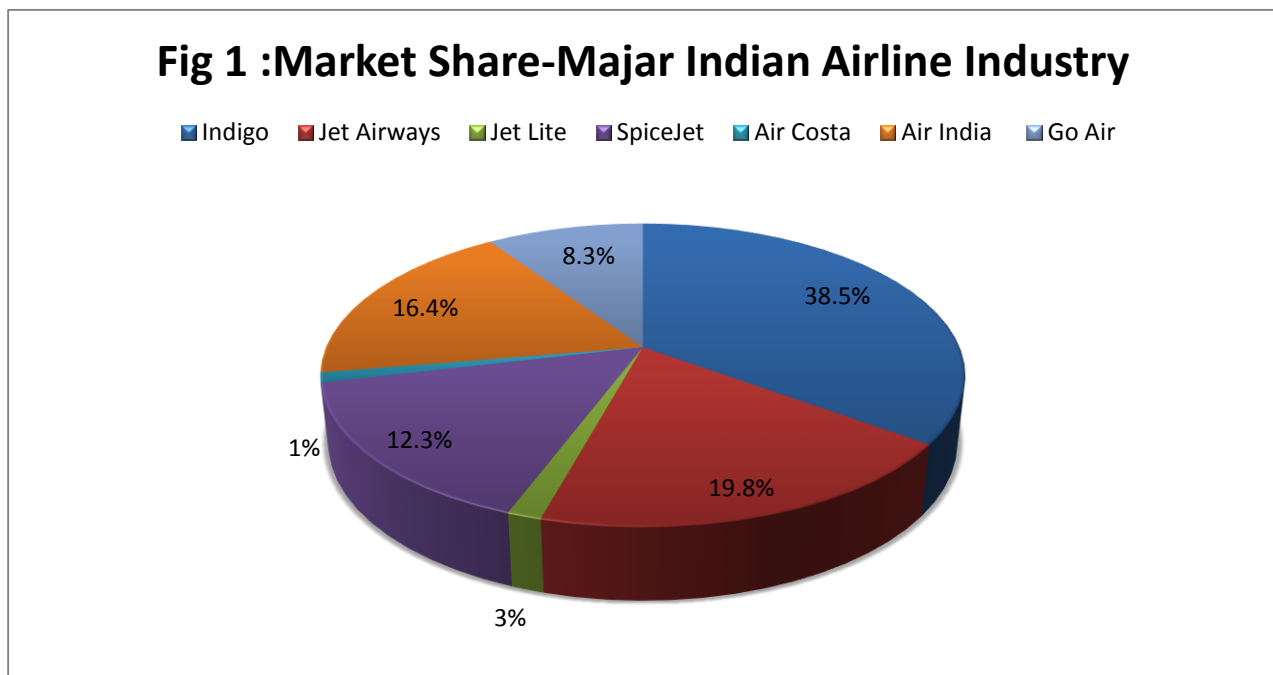
Alternate hypothesis: H1 ROEJA≠ROEIA≠ROESJ

There are significance differences on ROE among the peer airlines group.

MARKET SHARE ANALYSIS OF THE PLAYERS

Players in Indian Aviation Industry are fighting to gain maximum market share. Domestic market is dominated by LLCs such as IndiGo and SpiceJet. IndiGo is the only domestic company which has shown all time profits in its balance sheet. At the time of crisis IndiGo sustained itself while gaining profits. It is India's most preferred LLC.

According to analysis presented by Business Standards IndiGo retained at top position followed by Jet Airways. This analysis was at the end of January, 2017.



Considering passenger load factor analysis, Indigo and Air India has shown better results. From the data of CAPA we can compare it for the month of April 2013 to January 2017. All the companies are trying to increase load factor to 100 percent. This will directly results into their profit gain.

CHALLENGES OF INDIAN AIRLINE INDUSTRY

During 2016-17 industry has gone through tough time. The industry was facing major challenges such as

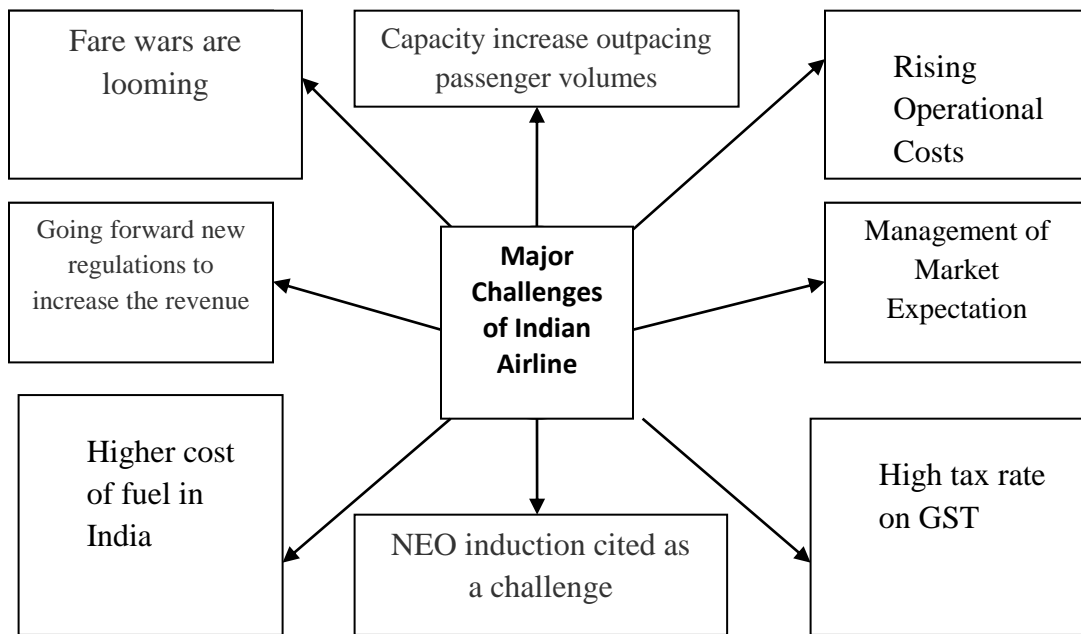


Fig. 2: Challenges of Indian Airline Industry

DATA ANALYSIS AND INTERPRETATION

Table -1: DESCRIPTIVE STATISTICS OF NET PROFIT MARGIN

DESCRIPTION	JET AIRWAYS	INDIGO	SPICEJET
MEAN	-8.32	7.94	-8.874
MEDIAN	-8.34	8.51	-13.2
STANDARD	8.162514931	4.911776664	8.566015993

DEVIATION			
SAMPLE VARIANCE	66.62665	24.12555	73.37663
KURTOSIS	1.36764031	-0.069365224	-1.271331482
SKEWNESS	-1.058059347	0.57048974	0.901718785
MINIMUM	-21.19	2.52	-15.91
MAXIMUM	0.07	15.11	3.51
SUM	-41.6	39.7	-44.37
COUNT	5	5	5

INTERPRETATION

According to the Table shown above the Mean, Median, Skewness, Minimum, Maximum, Sum is highest for Indigo Airlines. Standard Deviation is highest for Spice Jet Airlines Sample Variance is applicable for Indigo. Kurtosis is positive for Jet Airways.

TABLE -2: DESCRIPTIVE STATISTICS OF OPERATING PROFIT MARGIN

DESCRIPTION	JET AIRWAYS	INDIGO	SPICEJET
MEAN	2.196	9.424	-8.544
MEDIAN	1.52	9.71	-12.65
STANDARD DEVIATION	8.01785071	7.011168234	7.484345663
SAMPLE VARIANCE	64.28593	49.15648	56.01543
KURTOSIS	0.692038328	-1.186797772	-1.507220785
SKEWNESS	0.09687181	0.105420359	0.847148602
MINIMUM	-8.58	0.87	-15.17
MAXIMUM	13.28	18.57	2.1
SUM	10.98	47.12	-42.72
COUNT	5	5	5

INTERPRETATION

According to the table shown above, Mean and Median is highest for the Indigo Airlines. Standard Deviation is highest for Jet Airways. Sample Variance is effective for Indigo Airlines. Kurtosis is highest for Jet Airways .Skewness is highest for Jet Airways. Minimum, Maximum and Sum is highest for Indigo Airlines .

TABLE -3: DESCRIPTIVE STATISTICS OF RETURN ON ASSETS

DESCRIPTION	JET AIRWAYS	INDIGO	SPICEJET
MEAN	-7.572	12.078	-19.07
MEDIAN	-5.95	12.25	-24.74
STANDARD DEVIATION	7.750027097	8.665810406	20.02194546
SAMPLE VARIANCE	60.06292	75.09627	400.8783
KURTOSIS	1.063973672	-0.907780123	-0.928711542
SKEWNESS	-1.109392946	0.521291543	0.715857106
MINIMUM	-19.76	3.75	-39.34
MAXIMUM	0.05	24.36	9.65
SUM	-37.86	60.39	-95.35
COUNT	5	5	5

INTERPRETATION

Mean and Median is the highest for Indigo Airlines. Standard Deviation is the highest for Spice Jet . Sample Variance is the lowest for Jet Airways. Kurtosis is the highest for Jet Airways. Skewness is the highest for Indigo Airlines. Minimum, Maximum and Sum is the highest for Indigo Airlines.

TABLE -4: DESCRIPTIVE STATISTICS OF RETURN ON EQUITY

DESCRIPTION	JET AIRWAYS	INDIGO	SPICEJET
MEAN	36.72	176.33	136.16
MEDIAN	46.75	173.48	221.5
STANDARD DEVIATION	372.0731062	123.798694	329.9452465
SAMPLE VARIANCE	138438.3964	15326.11663	108863.8657
KURTOSIS	4.999963576	-2.672934349	5
SKEWNESS	-2.236057785	0.050325115	-2.236067977
MINIMUM	-831.69	40.59	-737.78
MAXIMUM	1.16	317.71	0
SUM	-830.53	881.63	-737.78

COUNT	5	5	5
-------	---	---	---

INTERPRETATION

Mean and Median is the highest for Indigo Airlines. Standard Deviation is the highest for Spice Jet . Sample Variance is the lowest for Jet Airways. Kurtosis is the highest for Jet Airways. Skewness is the highest for Indigo Airlines. Minimum, Maximum and Sum is the highest for Indigo Airlines.

HYPOTHESIS TESTING

HYPOTHESIS 1

Null Hypothesis(Ho): *There are no significance differences on Net Profit Margin among the peer airlines group*

Alternate hypothesis(H1):*There are significance differences on Net Profit Margin among the peer airlines group*

LEVEL OF SIGNIFICANCE

0.05 level

IDENTIFICATION OF TEST STATISTICS

2-WAY ANOVA (Analysis Of Variance)

TEST RESULTS

SOURCE OF VARIATION	SS	df	MS	F	P-VALUE	F CRITICAL
ROWS	656.4876	1	656.4876	63.64966	0.004109	10.12796
COLUMNS	103.101	3	34.36701	3.332049	0.174651	9.276628
ERROR	30.94224	3	10.31408			
TOTAL	790.5309	7				

INTERPRETATION

The ANOVA table reveals the table p-value is 0.004 which is less than 0.05, level of significance hence the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, there

are significance differences on Net Profit Margin among the peer airline groups. Hence the financial performance of all three airline groups regarding this ratio is different.

ROW-WISE F: The variation between F (63.65) and F- critical (10.13) is too high. So it implies that there is huge difference among each airline.

COLUMN-WISE F: The variation between F (3.33) and F-critical (9.28) is high. So it implies that the year-on-year growth of airline is marginal.

HYPOTHESIS 2

Null Hypothesis: Ho

There are no significance differences on Operating Profit Margin among the peer airlines group.

Alternate hypothesis: H1

There are significance differences on Operating Profit Margin among the peer airlines group.

LEVEL OF SIGNIFICANCE

0.05 levels

IDENTIFICATION OF TEST STATISTICS

2-WAY ANOVA (Analysis Of Variance)

TEST RESULTS

SOURCE OF VARIATION	SS	df	MS	F	P-VALUE	F CRITICAL
ROWS	672.8946	1	672.8946	44.15132	0.006946	10.12796
COLUMNS	128.7856	3	42.92855	2.816714	0.208843	9.276628
ERROR	45.72194	3	15.24065			
TOTAL	847.4022	7				

INTERPRETATION

The ANOVA table reveals the table p-value is .006 which is lower than 0.05, level of significance. Hence the null hypothesis is rejected. Therefore, there are no significance differences on Operating Profit Margin among the peer airline groups. Hence the financial performance of all three airline groups regarding this ratio is same.

ROW-WISE F: The variation between F (44.15) and F- critical (10.13) is high. So it implies that there is a huge difference among each airline groups.

COLUMN-WISE F: The variation between F (2.82) and F-critical (9.28) is high. So it implies that the year-on-year growth of airline groups is high.

HYPOTHESIS: 3

Null Hypothesis: Ho

There are no significance differences on ROA among the peer airlines group

Alternate hypothesis: H1

There are significance differences on ROA among the peer airlines group

LEVEL OF SIGNIFICANCE

0.05 level

IDENTIFICATION OF TEST STATISTICS

2-WAY ANOVA (Analysis Of Variance)

TEST RESULTS

SOURCE OF VARIATION	SS	<i>df</i>	MS	F	P-VALUE	F CRITICAL
ROWS	2486.183	1	2486.183	72.7038	0.003389	10.12796
COLUMNS	581.7027	3	193.9009	5.670273	0.093986	9.276628
ERROR	102.5881	3	34.19605			
TOTAL	3170.473	7				

INTERPRETATION

The ANOVA table reveals the table p-value is .003 which is less than 0.05, level of significance. Hence the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, there are significance differences on ROA among the airline groups. Hence the financial performance of all three airline groups regarding this ratio is different.

ROW-WISE F: The variation between F (72.70) and F- critical (10.13) is too high. So it implies that there is huge difference among each airline groups.

COLUMN-WISE F: The variation between F (5.67) and F-critical (9.27) is considerably high. So it implies that the year-on-year growth of airline groups is high.

HYPOTHESIS 4

Null Hypothesis: Ho

There are no significance differences on ROE among the peer airlines group

Alternate hypothesis: H1

There are significance differences on ROE among the peer airlines group

LEVEL OF SIGNIFICANCE

0.05 level

IDENTIFICATION OF TEST STATISTICS

2-WAY ANOVA (Analysis Of Variance)

TEST RESULTS

SOURCE OF VARIATION	SS	<i>df</i>	MS	F	P-VALUE	F CRITICAL
ROWS	223623.3	1	223623.3	4.559583	0.122394	10.12796
COLUMNS	308482.9	3	102827.6	2.096611	0.279357	9.276628
ERROR	147134.1	3	49044.68			
TOTAL	679240.2	7				

INTERPRETATION

The ANOVA table reveals the table p-value is 0.122 which is higher than 0.05, level of significance. Hence the null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, there are no significance differences on ROE among the airline groups. Hence the financial performance of all three airline groups regarding this ratio is not different.

ROW-WISE F: The variation between F (4.56) and F- critical (10.13) is considerably low. So it implies that there is no considerable difference among each airline groups.

COLUMN-WISE F: The variation between F (2.10) and F-critical (9.28) is slightly high. So it implies that the year-on-year growth of airline groups is marginal.

FINDINGS & SUGGESTIONS

This project analyzed the financial performance of India's aviation sector over the period of 5 years from 2012 to 2016. The results indicate that the overall airlines financial performance in terms of profitability measured in terms of NPM, OPM, ROA, and ROE.

In case of NPM Jet Airways and Spice Jet Airlines was not doing well but Indigo Airlines started off with high margin in 2012 and did not perform well in the next 3 years and going once again high in 2016 .

In case of OPM Jet Airways and Spice Jet Airlines started off well but declined from 2015 onwards. Indigo Airlines kept up with a consistent growth.

In case of ROA Jet Airways and Spice Jet Airlines did not perform well from the beginning itself and declined from 2015 onwards. Indigo Airlines kept up with a consistent growth without going too low.

In case of ROE both Jet Airways and Spice Jet Airlines made a huge hike in the year 2015 but came down a few percentages in 2016 whereas Indigo Airlines was consistently growing in its ROE and made a huge rise in 2016.

Therefore from all the ratios it is understandable that the INDIGO Airlines is performing well and that they are using a good strategy and being competitive from other airline groups.

CONCLUSION

This research brings out the various comparisons between the companies which have taken under study, different Financial parameters through which the airline companies do growth, challenges, pricing activities to attract the travelers. It also shows the financial prospects of companies with the help of the annual reports published by them. This project reflects the Management team and their work, the Corporate Social Responsibilities taken by them. On the basis of the study it was

found that Indigo was best in its business packages and vacation packages offered by them. Spice Jet and Jet Airways have competed excellently with Spice Jet varying prices of their in-flight services and cash discounts given to different customers. Jet Airways always concentrated on giving best services to their customers in comparison to the other two. Hence, Indigo is good with low price and easy planning, then Spice Jet mixes well with price and service if need and last but not the least Jet Airways concentrates on luxurious services for the esteemed customers.

REFERENCES

1. <http://www.jetairways.com/>
2. www.spicejet.com/
3. <https://book.goindigo.in/>
4. <https://www.iata.org/>
5. Httpcentreforaviation.com/images/stories/2013may13/Indian_Domestic_Market_Share_by_Airline_Mar_13.png
6. http://www.moodiereport.com/document.php?doc_id=37741
7. <http://www.jetairways.com/EN/IN/ProductAndServices/Entertainment.aspx>
8. <http://www.jetairways.com/EN/IN/ProductAndServices/skycafe.aspx>
9. <http://getpacking.goindigo.in/Indigo.Client/Home1.aspx>
10. <http://www.spicejet.com/FlightMealLanding.aspx>
11. <http://www.spicejet.com/StudentDiscountLanding.aspx>
12. <http://www.myspicetrip.com/package/search?q=dubai+ipl+packages>
13. <http://www.jetairways.com/doc/InvestorRelations/AnnualReport2015-16.pdf>
14. <http://corporate.spicejet.com/Content/pdf/2014-15Annual%20Report.pdf>
15. <http://corporate.spicejet.com/Content/pdf/2013-14Annual%20Report.pdf>
16. <http://www.jetairways.com/doc/InvestorRelations/JetAR2011.pdf>