Navajyoti, International Journal of Multi-Disciplinary Research
Volume 4, Issue 1, August 2019

COMPARATIVE ANALYSIS OF REVENUE OF DIFFERENT BRANCHES IN AIR INDIA LIMITED

Ms. Chippimol Tom,
Operations Analysis Analyst, IHS market,
Bangalore.

Abstract: Air India is the flag carrier airline of India. It is owned by Air India Limited, a government-owned enterprise, and operates a fleet of Airbus and Boeing Aircraft to 94 domestic and international destinations. The airline was founded by Shri J. R. D. Tata as Tata Airlines in 1932. Air India is the third largest domestic airline in India in terms of passengers carried (after IndiGo and Jet Airways) with a market share of 13.5% as of July 2017. The airline became the 27th member of Star Alliance on 11 July 2014. The data was collected from primary and secondary sources and analyzed with the help of AVOVA, T - test, Co – efficiency of variance, Average revenue. The objective of the study is to find out uniformity in sales among various branches and to find out which branch is more consistent among sales and also to check which branch is giving more revenue to the company. The study has been undertaken to analyze deeply into the sales data of Air India's different branches especially of Bangalore and Mangalore Booking Office, Airport and Airport Cargo. It has been noticed that there is a wide fluctuation in overall sales among the branches.

Keywords: Sales, Uniformity.

1. INTRODUCTION

Revenue generation is a process by which a company plans to market and sell its products or services in order to generate income. Revenue is the money that comes in to a business from the sale of goods or providing services. It is also the income or salary received from employment as well as income from business. Revenue is also referred to as sales or turnover. Some companies

receive revenue from interest, royalties and other fees. In accounting, the balance statement is a subsection of the Equity section and revenue increases equity. It is often referred to as the "top line" due to its position on the income statement at the very top which is to be contrasted with the "bottom line" which denotes net income (gross revenues minus total expenses). Revenue is the most important measure to assess a company's performance and prospects.

Government revenue includes all amounts of money (i.e., taxes and fees) received from sources outside the government entity. Large governments usually have an agency or department responsible for collecting government revenue from companies and individuals. Government revenue may also include Reserve Bank currency which is printed. This is recorded as an advance to the retail bank together with a corresponding currency in circulation expense entry, ie., the income derived from the Official Cash rate payable by the retail banks for instruments such as 90-day bills.

2. LITERATURE REVIEW

Stephen and Osagie (1985) Public revenue is concerned with various ways in which the government raises revenue. From the definitions, it can be said that revenue is the total amount of income accruing to a state from various sources within a specified period of time. State government, like the other two tiers of government, has sources and uses of revenue.

Pearce (1986) defined government revenue as all the money received other than from issue of and debt, liquidation of investments. Government revenue includes tax collections, charges and miscellaneous revenues, utility and insurance trust revenue for all funds and agencies of a government.

Osisami (1994) states that there are basically two types of revenue that accrues to state governments. These are internally generated revenue and revenue allocated from the Federation Account. Internally generated revenue are those revenues that are derived within the state from various sources such as taxes (pay as you earn, direct assessment, capital gain taxes, etc), and motor vehicle license, among others. While the statutory allocation from Federation Account, Value Added Tax constitute the external source. Most states of the federation get the bulk of their

revenue in form of statutory allocation from the federation account to finance their expenditure programmers'.

Bhatia (2001) contend that revenue receipt include "routine" and "earned" income. According to him, revenue does not include borrowing and recovery of loans from other parties, but it includes tax receipts, donations, grants, fees and fines.

Adam (2006) defined revenue as the fund required by the government to finance its activities. These funds are generated from different sources such as taxes, borrowing, fine, fees etc and also defined as the total amount of income that accrues to an organization (public or private) within a specified period of time.

Hamid, 2008 States revenue comprises of receipt from taxation as well as those which are not the proceeds of taxation, but of either the realization from the sale of government properties or other interests and returns from loans and investment earning.

3. RESEARCH METHODOLOGY

3.1 BACKGROUND OF THE STUDY

For any company, profit plays a major role. Revenue is one of the major sources of economic well being because it means incomes and opportunities to develop production. Profit is the major interest in income formation process of market production of all the companies. Income formation in market production is always a balance income generation and income distribution.

3.2 STATEMENT OF THE PROBLEM

To retain the customers, enhance the profit and to find out which is weak zone and strong zone based on that the researcher can find out the promotional strategies.

3.3 NEED AND IMPORTANCE OF THE STUDY

It helps in knowing the market position of the company. The company can improve its sales production and services in which ever area it is less. There should be more improvement in the production and services to attract more number of customers and to enhance the profit.

3.4 OBJECTIVES OF THE STUDY

- To find out uniformity in sales among various branches

- To find out which branch is more consistent among sales
- To check which branch is giving more revenue

3.5 TYPE OF RESEARCH

The study is based on analytical research where the researcher has used facts or information already available, and analyze them to make a critical evaluation of the material. It involves the in-depth study and evaluation of available information in an attempt to explain complex phenomenon.

3.6 RESEARCH INSTRUMENT

The tool used for the research are ANOVA & T – Test, Co –efficiency of variance, Average Revenue

3.7 LIMITATIONS OF THE STUDY

- Difficulties faced due to the time constrains.
- The analysis of the financial performance is based on the information available in the company and the same would be reflected in the study.
- The figures and facts claimed in the annual reports and other forms are assumed to be true.
- It is also based on the data provided by the company personnel.

4. DATA ANALYSIS AND INTERPRETATION

BO – BOOKING OFFICE, APT – AIRPORT, BLR – BANGALORE, APT – AIRPORT MGLR – MANGALORE

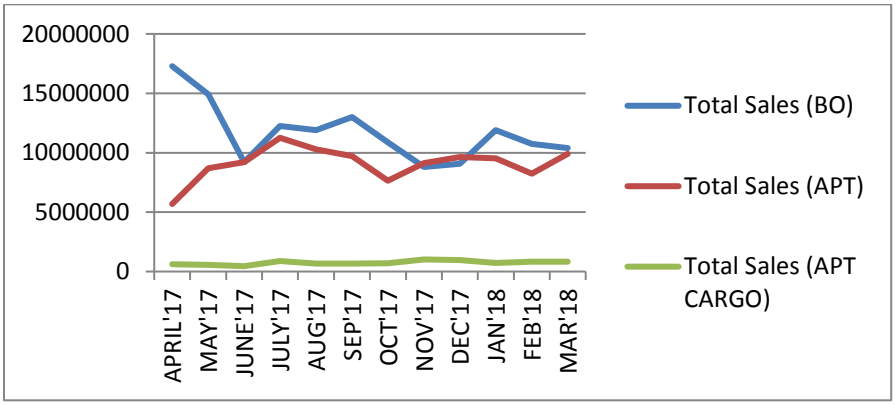
ANOVA TEST

An ANOVA test is a way to find out if survey or experiment results are important. They help you to figure out if you need to reject the null hypothesis. Basically, it is testing the groups to see if there's a difference between them.

- **ANOVA BLR**

BANGALORE			
Month	Total Sales (BO)	Total Sales (APT)	Total Sales (APT CARGO)
APRIL'17	17284951	5686129	610473
MAY'17	14918429	8707122	553248
JUNE'17	9203221	9203221	452884
JULY'17	12237139	11255119	877547
AUG'17	11888386	10295638	681177
SEP'17	13016556	9721269	660413
OCT'17	10889685	7632434	702130
NOV'17	8802649	9119262	1017423
DEC'17	9061418	9630083	962978
JAN'18	11896343	9518988	723937
FEB'18	10737000	8229187	821525
MAR'18	10384000	9908559	823442

Table 4.1 Table showing the Bangalore sales



Graph 4.1 Graph showing the Bangalore sales

Ho: There is no significant difference with respect to various modes of operation

H1: There is significant difference with respect to various modes of operation

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Total Sales (BO)	12	1E+08	11693315	6.2E+12
Total Sales (APT)	12	1E+08	9075584	2E+12
Total Sales (APT CARGO)	12	9E+06	740598.1	2.8E+10

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	7.9E+14	2	3.93E+14	142.125	6E-17	3.2849
Within Groups	9.1E+13	33	2.76E+12			
Total	8.8E+14	35				

f calculated	142
f table	3.28

cal> tab Accept H1

INTERPRETATIONS

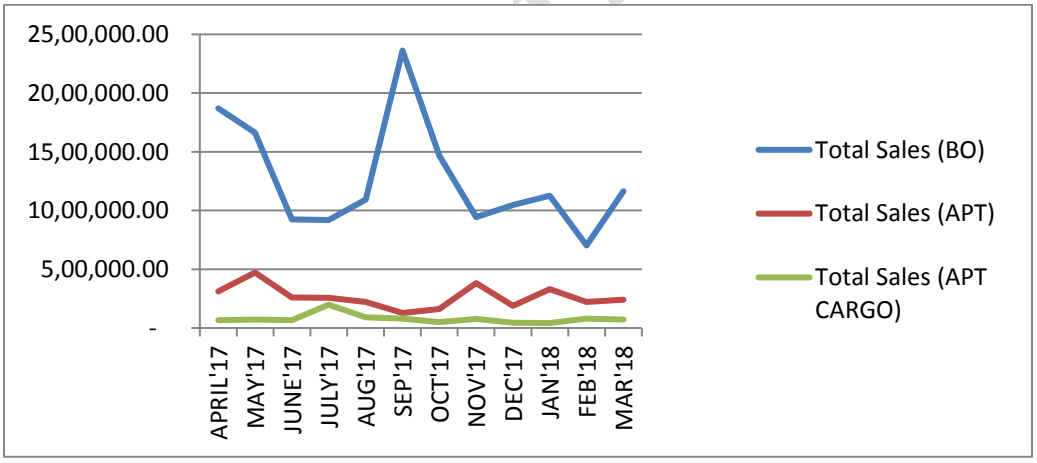
The above table shows that there is a significant difference between the different groups, where the calculated value (142) is greater than the table value (3.28).In the graph there is a fluctuation in both the total sales of Bangalore booking office (BO) and airport (APT). In BO there is a decreasing trend and in APT there is an increasing trend but still it fluctuates, but in the total sales of APT Cargo it shows a consistency

- **ANOVA MGLR**

MANGALORE			
Month	**Total Sales (BO)**	**Total Sales (APT)**	**Total Sales (APT CARGO)**
APRIL'17	1,870,912.00	310,417.00	66,740.00
MAY'17	1,662,477.00	472,369.00	71,254.00
JUNE'17	924,059.00	260,689.00	67,164.00

JULY'17	919,848.00	255,937.00	198,367.00
AUG'17	1,093,212.00	222,057.00	91,272.00
SEP'17	2,362,605.00	127,979.00	80,952.00
OCT'17	1,466,416.00	162,428.00	49,680.00
NOV'17	944,508.00	381,931.00	77,574.00
DEC'17	1,046,286.00	189,514.00	43,498.00
JAN'18	1,125,804.00	331,505.00	42,128.00
FEB'18	703,123.00	222,781.00	78,863.00
MAR'18	1,163,951.00	241,409.00	72,291.00

Table 4.2 Table showing the Mangalore sales



Graph 4.2 Graph showing the Mangalore sales

Ho: There is no difference in sales with respect to various modes of operation

H1: There is a significant difference in sales with respect to various modes of operation

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Total Sales (BO)	12	15283201	1273600	2.3E+11
Total Sales (APT)	12	3179016	264918	9.31E+09
Total Sales (APT CARGO)	12	939783	78315.25	1.66E+09

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	9.92E+12	2	4.96E+12	61.76744	6.99E-12	3.284918
Within Groups	2.65E+12	33	8.03E+10			
Total	1.26E+13	35				

CONCLUSION

f calculated	61.76
f tab	3.28

cal> tab

ACCEPT H1

INTERPRETATIONS

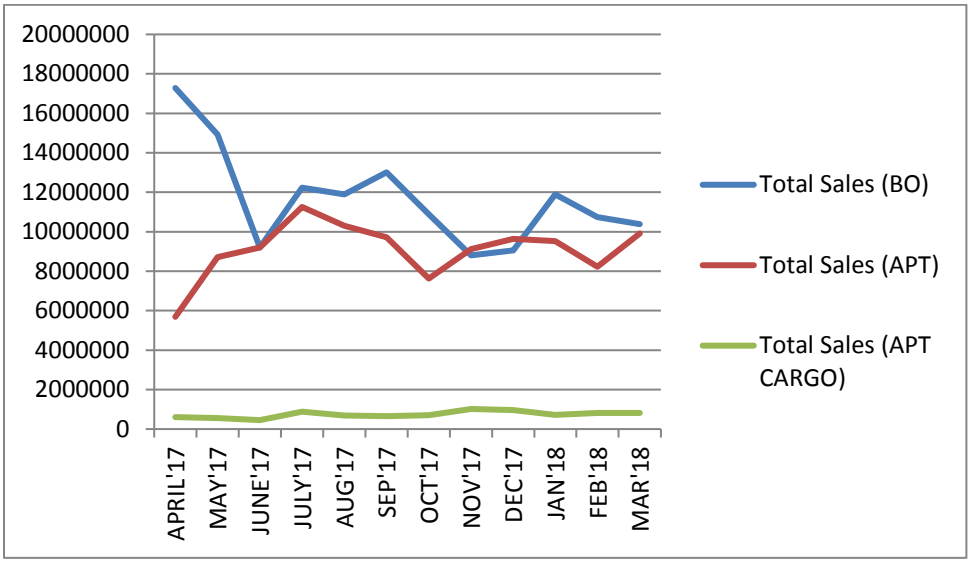
The above table shows that there is a significant difference between the different groups, where the calculated value (61.76) is greater than the table value (3.28).In the graph there is a fluctuation in the total sales of Mangalore booking office (BO). In BO there is a decreasing trend and in APT and APT Cargo it is fluctuating in the same range that is below 500,000. APT Cargo is consistent.

- **ANOVA BLR TIME**

Month	Total Sales (BO)	Total Sales (APT)	Total Sales (APT CARGO)
APRIL'17	17284951	5686129	610473
MAY'17	14918429	8707122	553248
JUNE'17	9203221	9203221	452884
JULY'17	12237139	11255119	877547
AUG'17	11888386	10295638	681177

SEP'17	13016556	9721269	660413
OCT'17	10889685	7632434	702130
NOV'17	8802649	9119262	1017423
DEC'17	9061418	9630083	962978
JAN'18	11896343	9518988	723937
FEB'18	10737000	8229187	821525
MAR'18	10384000	9908559	823442

Table 4.3 Table showing the Bangalore sales with respect to time



Graph4.3 Graph showing the Bangalore sales with respect to time

Ho: There is no difference in sales with respect to time

H1: There is a change in sales with respect to time

Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*

APRIL'17	3	2E+07	7860518	7.3E+13
MAY'17	3	2E+07	8059600	5.2E+13
JUNE'17	3	2E+07	6286442	2.6E+13
JULY'17	3	2E+07	8123268	4E+13
AUG'17	3	2E+07	7621734	3.7E+13
SEP'17	3	2E+07	7799413	4.1E+13
OCT'17	3	2E+07	6408083	2.7E+13
NOV'17	3	2E+07	6313111	2.1E+13
DEC'17	3	2E+07	6551493	2.4E+13
JAN'18	3	2E+07	7379756	3.5E+13
FEB'18	3	2E+07	6595904	2.7E+13
MAR'18	3	2E+07	7038667	2.9E+13

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.7E+13	11	1.5E+12	0.043	1	2.2163
Within Groups	8.6E+14	24	3.6E+13			
Total	8.8E+14	35				

f cal	0.043
f tab	2.216

cal< tab

ACCEPT H0

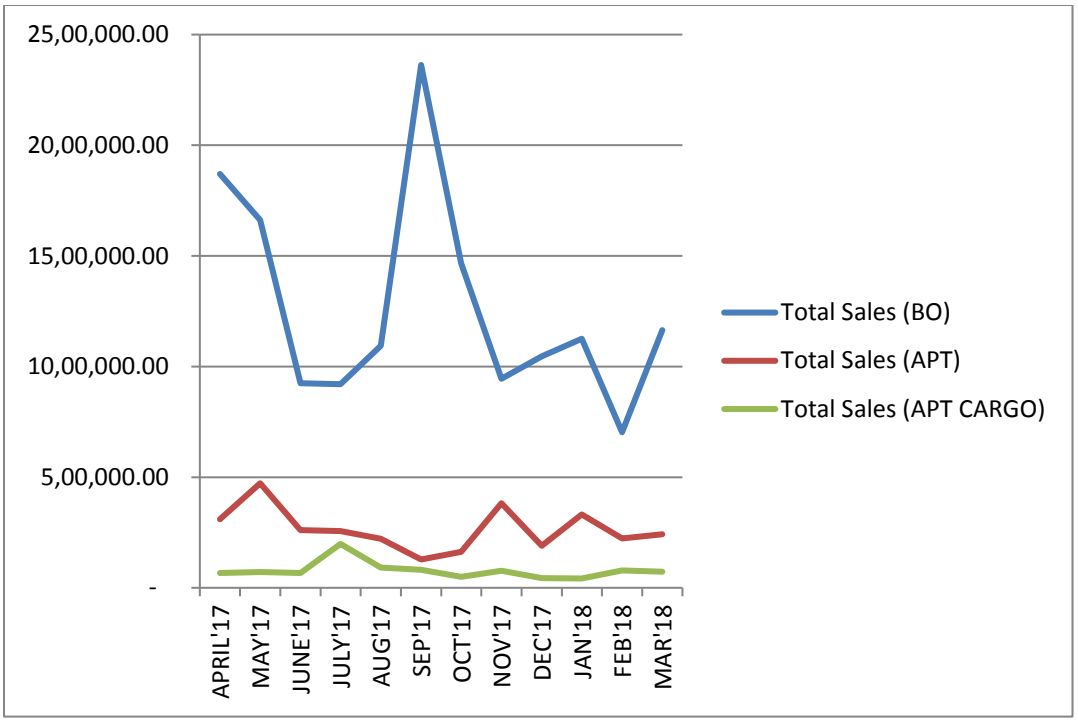
INTERPRETATIONS

The above table shows that there is no difference in sale with respect to time. The calculated value (0.043) is less than the table value (2.216). It shows that there is a fluctuation between Bangalore BO and APT. Where the BO rate falls and rises but still is in a decreasing trend whereas the APT is increasing and APT Cargo is constant in its place with slight changes.

- **ANOVA MGLR TIME**

Table 4.4 Table showing the Mangalore sales with respect to time

Mon**th**	Total Sales (BO)	Total Sales (APT)	Total Sales (APT CARGO)
APRIL'17	1,870,912.00	310,417.00	66,740.00
MAY'17	1,662,477.00	472,369.00	71,254.00
JUNE'17	924,059.00	260,689.00	67,164.00
JULY'17	919,848.00	255,937.00	198,367.00
AUG'17	1,093,212.00	222,057.00	91,272.00
SEP'17	2,362,605.00	127,979.00	80,952.00
OCT'17	1,466,416.00	162,428.00	49,680.00
NOV'17	944,508.00	381,931.00	77,574.00
DEC'17	1,046,286.00	189,514.00	43,498.00
JAN'18	1,125,804.00	331,505.00	42,128.00
FEB'18	703,123.00	222,781.00	78,863.00
MAR'18	1,163,951.00	241,409.00	72,291.00



Graph 4.4 Graph showing the Mangalore sales with respect to time

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
APRIL'17	3	2248069	749356.333	9.5826E+11
MAY'17	3	2206100	735366.667	6.8487E+11
JUNE'17	3	1251912	417304	2.0196E+11
JULY'17	3	1374152	458050.667	1.6077E+11
AUG'17	3	1406541	468847	2.9665E+11
SEP'17	3	2571536	857178.667	1.7003E+12
OCT'17	3	1678524	559508	6.2004E+11
NOV'17	3	1404013	468004.333	1.9345E+11
DEC'17	3	1279298	426432.667	2.9349E+11
JAN'18	3	1499437	499812.333	3.1483E+11
FEB'18	3	1004767	334922.333	1.0686E+11
MAR'18	3	1477651	492550.333	3.4523E+11

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	8.21414E+11	11	7.4674E+10	0.15248125	0.9987823	2.2163086
Within Groups	1.17534E+13	24	4.8973E+11			
Total	1.25748E+13	35				

CONCLUSION

f cal	0.152
f tab	2.216
cal< tab	
ACCEPT H0	

INTERPRETATION

The above table shows that there is no difference in sale with respect to time. The calculated value (0.152) is less than the table value (2.216). It shows that there is a fluctuation in Mangalore BO, where it increased after a fall but still falls again after a certain period whereas both APT and APT Cargo fluctuating within 500,00.

T – TEST

The t - test (also called as Student's T Test) compares two averages (means) and tells if they are different from each other. The t-test also tells how important the differences are.

TWO SAMPLE TEST OF (BO)

Month	Total Sales (BLR BO)	Total Sales (MGLR BO)
APRIL'17	17284951	1870912
MAY'17	14918429	1662477
JUNE'17	9203221	924059
JULY'17	12237139	919848
AUG'17	11888386	1093212
SEP'17	13016556	2362605
OCT'17	10889685	1466416
NOV'17	8802649	944508
DEC'17	9061418	1046286
JAN'18	11896343	1125804
FEB'18	10737000	703123
MAR'18	10384000	1163951
average revenue	11693314.75	1273600.083
standard deviation	2496393.818	479607.7784

coefficient of variation	21.34889782	37.65764346

Table 4.5 Table showing T-test of Booking Office

H0: There is no difference in sales with respect to Bangalore booking office and Mangalore booking office.

H1: There is a change in sales in Bangalore booking office and Mangalore booking office

t-Test: Two-Sample Assuming Unequal Variances

	Total Sales (BLR BO)	*Total Sales (MGLR BO)*
Mean	11693314.75	1273600.083
Variance	6.23198E+12	2.30024E+11
Observations	12	12
Hypothesized Mean Difference	0	
Df	12	
t Stat	14.19916417	
P(T<=t) one-tail	3.63319E-09	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	7.26638E-09	
t Critical two-tail	2.178812827	

cal > tab

14.19 > 7.2E-09

Accept H1

INTERPRETATION

The above table shows that the calculated value (14.19) is greater than the table value (7.2). The Bangalore BO is highly fluctuating whereas the Mangalore BO is slightly fluctuating with n in same range.

- **TWO SAMPLE TEST OF APT**

	Total Sales (BLR ATP)	Total Sales (MGLR ATP)
APRIL'17	5,686,129.00	310,417.00
MAY'17	8,707,122.00	472,369.00
JUNE'17	9,203,221.00	260,689.00
JULY'17	11,255,119.00	255,937.00
AUG'17	10,295,638.00	222,057.00
SEP'17	9,721,269.00	127,979.00
OCT'17	7,632,434.00	162,428.00
NOV'17	9,119,262.00	381,931.00
DEC'17	9,630,083.00	189,514.00
JAN'18	9,518,988.00	331,505.00
FEB'18	8,229,187.00	222,781.00
MAR'18	9,908,559.00	241,409.00
Average Revenue	9,075,584.25	264,918.00
Standard Deviation	1423669.252	96501.53468
coefficient of variation	15.69	36.43

Table 4.6 Table showing T-test of Airport

H0: There is no difference in sales with respect to Bangalore airport and Mangalore airport

H1: there is difference in sales of Bangalore Airport and Mangalore Airport

t-Test: Two-Sample Assuming Unequal Variances

	Total Sales	*Total Sales*
Mean	9075584.25	264918
Variance	2.02683E+12	9312546195
Observations	12	12
Hypothesized Mean Difference	0	
Df	11	
t Stat	21.38921484	
P(T<=t) one-tail	1.29862E-10	
t Critical one-tail	1.795884814	
P(T<=t) two-tail	2.59723E-10	
t Critical two-tail	2.200985159	

CONCLUSION

cal > tab

21.38 > 2.5E-10

ACCEPT H1

INTERPRETATION

The table shows that the calculated value (21.38) is greater than the table value (2.59). The Bangalore APT is increasing as well as falling with a small variation and the Mangalore APT is stable or constant in the same range

5. SUMMARY

FINDINGS

- There is a decreasing trend in BLR BO and an increasing trend in APT but still it fluctuates, but in the total sales of APT Cargo it shows a consistency and in MGLR there is a decreasing trend in BO and in APT and APT Cargo it is fluctuating in the same range that is below 500,000. APT Cargo is consistent.

- There is a fluctuation between Bangalore BO and APT. Where the BO rate falls and rises but still is in a decreasing trend whereas the APT is increasing and APT Cargo is constant in its place with is slight changes.

o There is a fluctuation in Mangalore BO, where it increased after a fall but still fall again after a certain period whereas both APT and APT Cargo is fluctuating within 500,00.

- The Bangalore BO is highly fluctuating whereas the Mangalore BO is slightly fluctuating within a same range
- The Bangalore APT is increasing as well as falling with a small variation and the Mangalore APT is stable or constant in the same range.

RECOMMANDATIONS

- Infusion of funds is advisable to revive the airline from its present scenario. To have united employee union and management to make wok environment efficient and achieve the airline objectives.
- There can be stringent strategies to increase the profit by reduction of overhead and cost, efficient utilization of fleet, to grow and retain market share with reduction of fares and special packages along with unique marketing strategies.
- To ensure that there is work ethics and governance for the appropriate publicity which in turn affects the sentiments of the customer and indeed revenue growth can be seen.
- The company must take appropriate steps to achieve higher operating profit as the cost incurred will be stabilized with the sales of the company.

6. CONCLUSION

The Indian Aviation industry holds a lot of promise to the huge population owing increased affordability and making the services accessible to the common man. But, the sector is highly susceptible to turbulence in economy. The customer base has to increase rather than sharing old customer base. The pie has to be enlarged rather slicing same one. Also, consolidation seems like the most logical step in the civil aviation industry that demand lofty capital investment and increased pressure on revenue.

Private companies are more in number and those are the competitors for Air India in the market. Also, since it is a government organization, decision making is slow and to get approvals is not an easy task. Air India expense department is suffering from the problem of understaffing as many employees are retiring every week, so they should adopt fresh recruitments as it is the need of the hour.

References:

https://en.wikipedia.org/wiki/Revenue

https://www.linkedin.com/pulse/revenue-definition-importance-types-accounting-fareed

https://www.mbaskool.com/business-concepts/marketing-and-strategy-terms/11371-revenue-generation.html

https://www.annuitas.com/blog/2011/06/15/the-characteristics-of-revenue-generating-companies/

Pearce, D. W. (1986). *Macmillan Dictionary of Modern Economics.* .Macmillan International Higher Education

Hamid, K. T. (2008). "SWOT analysis on sources of revenue at state government level". In *A Paper Presented at the Bi-Annual Conference of the Federal and State Auditors-General Held at Tahir Guest Palace, Kano*.