PERFORMANCE ANALYSIS OF GREENFIELD AIRPORTS IN INDIA

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Abstract:

This paper focuses on studying the performance of all the three Greenfield airports set up in India under Public-Private Partnership (PPP). The public private partnership model is one among the latest models for developing infrastructure in the country. Previously in India all infrastructure projects like roads, ports, airports etc. were built using the traditional model whereby the Government took the responsibility of construction, operation and maintenance. But, the capital available with the Government played a constraint leading to shortage of world class infrastructure in India. Thus about, two decades ago the Government started allowing private parties to participate in developing infrastructure projects thus paving way for PPP. Under PPP innumerable infrastructure projects have begun operations in the past decade. Major highways, ports, airports were constructed under this model. Thus this study focuses upon the 3 airports. The data related to the study are drawn from the secondary sourcesincluding balance sheet profit and loss accounts and websites and the same have been analysed using ratios to arrive to the necessary results.

Key words: *Airport Infrastructure, Public Private Partnership and Performance Analysis.*

Introduction

Infrastructure development has always been on priority for any developing country similarly it has been the top agenda for India, considering the current global economic dynamics as well as domestic growth necessities it has emerged as one of the single largest vital requisite which could seriously negotiate the economic growth route.

The Indian civil aviation industry has witnessed, and continues to witness unprecedented growth. To meet this expanded as well as the anticipated demand; there would be a need for approximately 350-375 operational airports across the country. This implies that significant private investments will have to be attracted as the Airports Authority of India (AAI) alone will not be able to raise the required funds of approximately US $ 30 billion. The " Five Year Plan estimates that almost $15 billion of investments will be needed across airports in India and a significant portion of this investment will be driven by the private sector. The Government of India has taken number of initiatives to open the airport sector to private

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sector participation by modernizing existing brownfield airports (Mumbai and Delhi) as well as setting up of new Greenfield airports (Bengaluru, Hyderabad and Kochi) using the Public Private Partnership model. These five airports have demonstrated that Public Private Partnerships are successful and preferred models for the development of airport infrastructure in the country.

Greenfield airports refer to airports that have been constructed from the scratch. In India there are at present only three such airports. The successes of these airports are very essential for Government to take a call on whether investment in other such airports is called for or not. Further, establishment of Greenfield airport ensures high standards and stipulated timefor project completion, they also ensure world class management and latest technology into airport construction and maintenance. Thus, these airports have become quintessential for the development of a country and looking at the booming Indian aviation sector it is need rather than want.

Objectives of the Study:

The study basically aims

1. To study the performance of 3 Greenfield airports in India
2. To compare the performance of 3 Greenfield airports and draw inferences.

Methodology

The study uses, passenger traffic, cargo growth and other ratios as a tool to draw inference on the performance of the three Greenfield airports. As there are only 3 Greenfield airports operational in India, all the three that is Bengaluru, Hyderabad and Kochi are chosen for the study. The data used for the study is secondary in nature and is drawn from various secondary sources like the annual reports the websites of the three airports to name a few.

Analysis of data

Brief profile of Bangalore International Airport Limited (BIAL):

Bangalore International Airport is an airport set up in Devanahalli, Bengaluru Karnataka. The airport has a capacity of 50mppa (million passenger per annum) and is currently operating with about 11.5 mppa. The airport is spread around 4300 acres and hosts all prime facilities. It came up under the PPP model using the BOOT (Build Own Operate Transfer) model. The contract period is of 30 years and the name of the developer company is BIAL. The airport was built with a whopping project cost of INR 1930 crores.

Brief profile of Cochin International Airport Limited (CIAL)

Cochin International Airport is an airport set up in Nedumbassery, Cochin Kerela. The airport has a 3400 meter long runway. The airport is spread around 1200 acres and hosts all prime facilities. It came up under the PPP model using the BOO (Build Own Operate) model. The name of the developer company is CIAL. The airport was built with a meagre project cost of INR 303 crores.

Brief profile of Hyderabad International Airport Limited (HIAL)

Hyderabad International Airport is an airport set up in Shamshabad, Hyderabad Telengana. The airport has a capacity of 40 mppa (million passenger per annum) and is currently operating with about 5 mppa. The airport is spread

around 4000 acres and hosts all prime facilities. It came up under the PPP model using the BOOT (Build Own Operate Transfer) model. The contract period is of 30 years and the name of the developer company is HIAL. The airport was built with a whopping project cost of INR 2480 crores.

Table: 1: Passenger Traffic at Bangalore International Airport Limited

Passenger Traffic at Bangalore International Airport Limited(in Millions)									
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Domestic	8.6	7.1	8	9.4	10.3	9.5	10.2	12.5	15.6
International	1.6	1.6	1.9	2.2	2.4	2.5	2.6	2.9	3.4
Total Passengers	10.1	8.8	9.9	11.6	12.7	12.0	12.9	15.4	19

The passenger traffic has seen an increase from 10 million in 2007-08 to 19 million in 2015-16. This is an indication that the passengers preferring to travel through BIAL has increased over the years. Though majority of the passengers travel within the country the international passengers have grown to almost double which is a great sign.

Table: 2:Passenger Traffic at Cochin International Airport Limited

Passenger Traffic at Cochin International Airport Limited(in Millions)									
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Domestic	1.6	1.4	1.7	2	2.1	2	2.1	2.7	3.1
International	1.8	2	2.2	2.4	2.6	2.9	3.3	3.7	4.7
Total Passengers	3.3	3.4	3.9	4.3	4.7	4.9	5.4	6.4	7.7

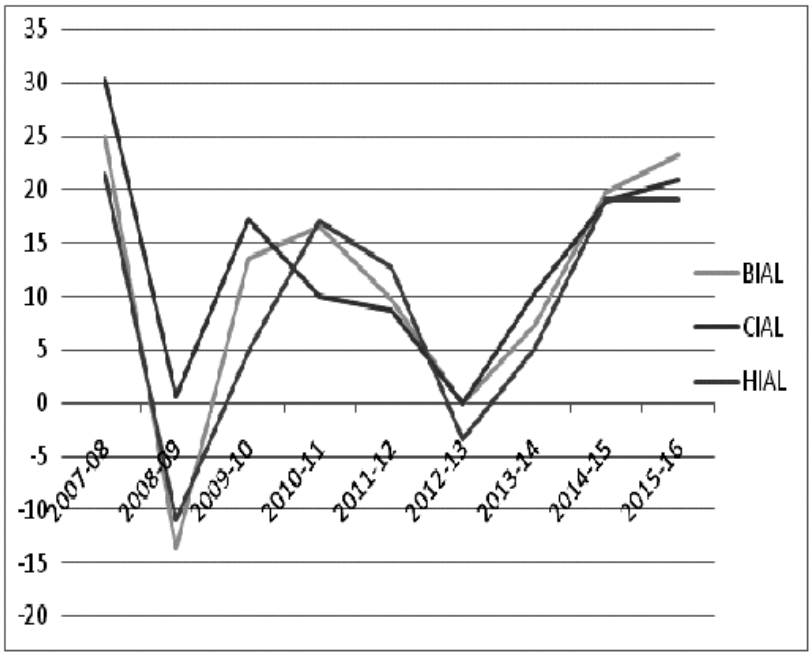
The passenger traffic has seen an increase from 3.3 million in 2007-08 to 7.7 million in 2015-16. This is an indication that CIAL has been consistent in increasing the passenger traffic over the years. However, it is interesting to see that CIAL boosts majority of international passengers which is not the case for bigger airports like BIAL and HIAL. This can be attributed to a number of Keralites who travel from gulf countries.

Table: 3: Passenger Traffic at Hyderabad International Airport Limited

Passenger Traffic at Hyderabad International Airport Limited (in Millions)									
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Domestic	5.5	4.6	4.8	5.8	6.7	6.2	6.4	7.6	9.2
International	1.4	1.6	1.7	1.9	1.9	2.2	2.4	2.8	3.2
Total Passengers	7	6.2	6.5	7.6	8.6	8.3	8.7	10.4	12.4

The passenger traffic has seen an increase from 7 million in 2007-08 to 12.4 million in 2015-16. This is an indication that the passengers preferring to travel through HIAL has increased over the years but the rate of increase has been slow. Though majority of the passengers travel within the country the international passengers have grown to almost double which is an indication towards awaited growth.

Chart: 1:Comparison of Growth of Passenger Traffics Across All the Three Airports



It could be seen that all the 3 airports have grown in the past. All airports faced a steep decline during the Recession of 2008. The highest hit was for BIAL. But, all of them have eventually come out of it and are progressing in the direction of growth in more or less the same pace which is commendable for the economy of the country.

Table: 4:Percentage of Passenger Traffic handled by BIAL in comparison with all Airports

Percentage of Passenger Traffic handled by BIAL in comparison with all Airports									
Domestic	9.9	9.2	8.9	8.9	8.5	8.2	8.4	8.9	9.2
International	5.2	5.2	5.6	5.9	5.8	5.8	5.7	5.8	6.2
Total	8.7	8	8	8.1	7.8	7.5	7.6	8.1	8.5

Table: 5:Percentage of Passenger Traffic handled by CIAL in comparison with all Airports

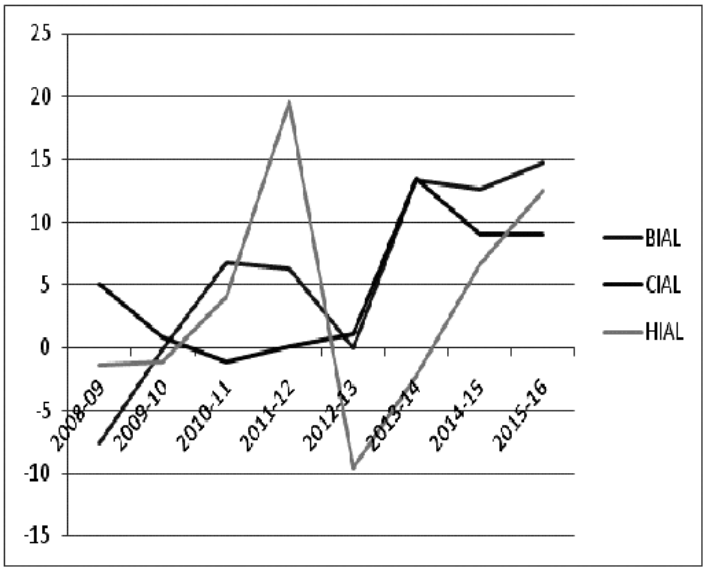
Percentage of Passenger Traffic handled by CIAL in comparison with all Airports									
Domestic	1.8	1.7	1.9	1.9	1.8	1.7	1.7	1.9	1.8
International	5.9	6.4	6.5	6.2	6.3	6.8	7	7.4	8.5
Total	2.9	3.1	3.2	3	2.9	3.1	3.2	3.4	3.5

Table: 6:Percentage of Passenger Traffic handled by HIAL in comparison with all Airports

Percentage of Passenger Traffic handled by HIAL in comparison with all Airports									
Domestic	6.4	6	5.4	5.5	5.5	5.3	5.2	5.5	5.5
International	4.8	5	5	4.9	4.7	5.0	5.1	5.5	5.8
Total	6.0	5.7	5.3	5.3	5.3	5.2	5.2	5.5	5.5

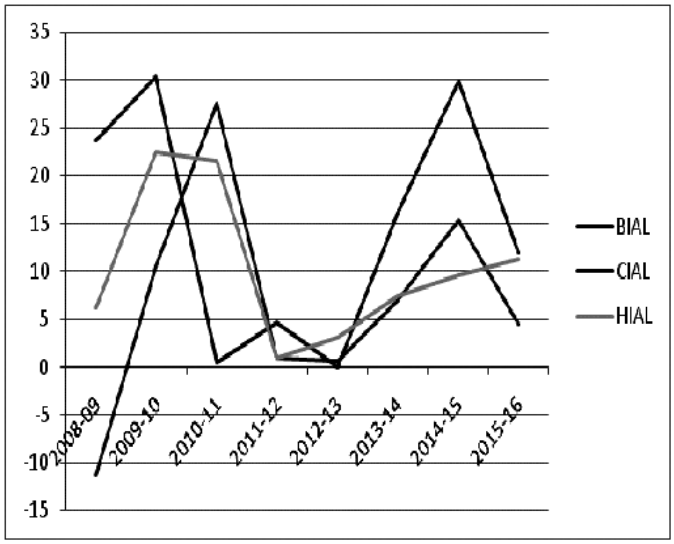
The highest percentage of traffic is handled by BIAL followed by HIAL and then CIAL. Combined together they handle almost 18% of total India's passenger traffic. This shows the important position of these green field airports in Indian aviation infrastructure.

Chart: 2: Comparison of Growth of Air Traffic Movement (ATM) Across All the Three Airports



Air Traffic Movement (ATM) represents the number of arrival and departures that has taken place in an airport in a particular year. The comparison shows that though all the 3 airports are experiencing growth in the ATM at the present, HIAL has been the most volatile with fluctuating ATM across the period of comparison whereas BIAL and CIAL have been relatively consistent.

Chart: 3:Comparison of Growth of CargoTraffic Across All the Three Airports



The comparison of the cargo traffic shows that there has been a decline in the cargo traffic from 2014 onwards. HIAL though is steadily increasing in cargo traffic but both BIAL and CIAL has seen a deep fall in the cargo traffic.

Table: 7: Financial Performance of BIAL (2009-2013)

Year	2013	2012	2011	2010	2009
Earnings Per Share (Rs)	2.71	4.18	3.43	2.02	-2.52
EBIT Margin (%)	35.55	48.81	49.69	45.54	3.26
PAT Margin (%)	17.07	26.54	23.8	16.73	-31.35
ROA (%)	3.61	6.64	5.67	3.44	-4.35
ROE (%)	15.89	30.76	35.4	28.8	-41.42
ROCE (%)	8.83	14.33	13.52	10.59	0.51
Asset Turnover(x)	0.21	0.25	0.24	0.21	0.14
Sales/Fixed Asset(x)	0.3	0.31	0.28	0.24	0.16
Fixed Capital/Sales(x)	3.28	3.28	3.55	4.2	6.26
Net Sales Growth (%)	0.93	9.12	19.44	50.15	0
EBIT Growth (%)	-26.5	7.19	30.34	1998.97	0
PAT Growth (%)	-35.11	21.7	69.92	180.12	0
EPS Growth (%)	-35.11	21.7	69.92	180.12	0
Total Debt/Equity(x)	3.04	2.42	3.67	5.61	7.44

BIAL has seen reduction in Profit after Tax (PAT) from 2012 to 2013, but it has eventually outdone itself from 2009 where it made loss. The same is affected in the Earnings per Share (EPS) and others like Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE) which are all dependent over profits. Sales here represent the total earnings of BIAL by rendering the services. There has been a steep reduction in the growth of sales in 2013. The debt equity ratio is on the higher verge but is still good as it is a huge organization.

Table: 8: Financial Performance of CIAL (2009-2013)

Year	2013	2012	2011	2010	2009
Earnings Per Share (Rs)	3.64	3.33	3.04	2.62	2
EBIT Margin (%)	49.58	52.32	51.24	54.08	47.78
PAT Margin (%)	38.6	39.27	38.42	42.55	40.57
ROA (%)	13.89	13.99	13.52	13.12	11.73
ROE (%)	21.4	21.85	21.5	20.3	16.88
ROCE (%)	27.48	29.08	28.57	25.67	19.77
Asset Turnover(x)	0.36	0.36	0.35	0.31	0.29
Sales/Fixed Asset(x)	0.48	0.46	0.44	0.38	0.35
Fixed Capital/Sales(x)	2.1	2.17	2.29	2.62	2.82
Net Sales Growth (%)	11.11	10.78	28.72	24.57	23.89
EBIT Growth (%)	5.29	13.11	21.96	41	30.71
PAT Growth (%)	9.19	13.24	16.24	30.63	26.77
EPS Growth (%)	9.19	9.54	16.24	30.63	26.77
Total Debt/Equity(x)	0	0	0	0	0.01

Though CIAL has seen reduction in Profit after Tax (PAT) from 2012 to 2013, but it is a very small dip and it could not be taken as a base for saying that the company hasn't performed well. It has been on a consistent rise from 2009 and has always managed to make profits. The same is affected in the Earnings per Share (EPS) and others like Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE) which are all dependent over profits. Sales here represent the total earnings of CIAL by rendering the services. The company has been performing consistently over the years and earning good value for the shareholders. Furthermore it has managed to remain a zero debt company which is a rare feet for a company to achieve when all its contemporaries are highly leveraged.

Table: 9: Financial Performance of HIAL (2009-2013)

Year	2013	2012	2011	2010	2009
Earnings Per Share (Rs)	2.8	0.44	2.75	-2.89	-3.18
EBIT Margin (%)	51.34	43.72	38.93	23.62	10.78
PAT Margin (%)	15.06	2.79	20.13	-25.21	-31.43
ROA (%)	3.61	0.59	3.59	-3.55	-3.79
ROE (%)	27.1	5.08	40.4	-43.95	-39.59
ROCE (%)	13.24	9.59	7.21	3.62	1.45
Asset Turnover(x)	0.24	0.21	0.18	0.14	0.12
Sales/Fixed Asset(x)	0.26	0.23	0.19	0.15	0.14
Fixed Capital/Sales(x)	3.84	4.38	5.26	6.48	7.28
Net Sales Growth (%)	17.06	16.24	19.23	13.45	0
EBIT Growth (%)	37.45	30.54	96.51	148.67	0
PAT Growth (%)	532.77	-83.91	195.21	9	0
EPS Growth (%)	532.77	-83.91	195.21	9	0
Total Debt/Equity(x)	5.16	7.05	7.59	13.56	8.36

HIAL has seen growth in Profit after Tax (PAT) from 2012 to 2013, it has eventually outdone itself from 2009 and 2010 where it made loss. The same is affected in the Earnings per Share (EPS) and others like Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE) which are all dependent over profits. Sales here represent the total earnings of BIAL by rendering the services. There has been steady increase in the performance of the airport which is a sign of relief as the company was in loss for 2 consecutive years. The debt equity ratio has declined over the years and is attributable as a good sign.

Findings

1. The passenger traffic of BIAL has seen an increase from 10 million in 2007-08 to 19 million in 2015-16.
2. The passenger traffic of CIAL has seen an increase from 7 million in 2007-08 to 12.4 million in 2015-16.
3. The passenger traffic of HIAL has seen an increase from 3.3 million in 2007-08 to 7.7 million in 2015-16.
4. The highest percentage of traffic is handled by BIAL followed by HIAL and then CIAL.

5. The comparison shows that though all the 3 airports are experiencing growth in the ATM at the present, HIAL has been the most volatile with fluctuating ATM across the period of comparison whereas BIAL and CIAL have been relatively consistent
6. The comparison of the cargo traffic shows that there has been a decline in the cargo traffic from 2014 onwards
7. It could be seen that all the 3 airports have grown in the past in passenger traffic. All airports faced a steep decline during the Recession of 2008.
8. BIAL has seen reduction in Profit after Tax (PAT) from 2012 to 2013
9. The debt equity ratio of BIAL is on the higher verge
10. CIAL has seen reduction in Profit after Tax (PAT) from 2012 to 2013
11. CIAL has been on a consistent rise from 2009 and has always managed to make profits
12. CIAL has remained a zero debt company
13. HIAL has seen growth in Profit after Tax (PAT) from 2012 to 2013
14. There has been steady increase in the performance of HIAL which is a sign of relief as the company was in loss for 2 consecutive years
15. The debt equity ratio of HIAL has declined over the years

Conclusion

The comparison of performance of airports show that CIAL has been the consistent performer but it hasn't been able to reach the top most position in passenger traffic cargo traffic or air traffic movement. Even though, it has made profits every year. The airport is built at the lowest cost and provides all necessary amenities as per international standards. It is the only airport with more international passenger movement than domestic.

BIAL and HIAL have more or less been similar in majority of things like in terms of their financial performance, both made losses in the initial year but made up for it. They both have come up under the BOOT approach of PPP with concessional agreements lasting for 30 years. They have state of the art infrastructure and all necessary amenities. Though BIAL has an upper hand in passenger traffic HIAL is not lagging very far.

Thus it can be concluded that ball the 3 green field airports are performing well and are setting new examples for successful implementation of PPP in Indian Airports.

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