

Public Private Partnerships (PPPs) In India: Cochin International Airport - Trends and Opportunities

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Abstract: It is considered that India's inability to achieve the high figure GDP is due to the lack of infrastructural facilities. No government in the world can alone meet the infrastructural requirements of its country. This is where the role of private parties comes to play. Private capital within the country and abroad is to be mobilized and channelized towards this end in view. Government of India has been encouraging private sector investment and participation in all sectors of infrastructure. It is in this context that Public Private Partnerships (PPP) are fast emerging as a way for India to grow. The study concluded that PPPs model adopted in Indian aviation sector is successful both in term of profitability and passenger traffic.

Keywords: Public Private Partnership, PPP, CIAL.

1. Introduction

Transport is a key driver of economic and social development, bringing opportunities for the poor and enabling economies to be more competitive. Transport infrastructure connects people to jobs, education, and health services, and enables the supply of goods and services around the world. Modernizing ports, airports, roads, railroads and urban transportation systems is essential to development. Incomplete and inadequate transportation infrastructure can mean the difference between sustainable progress and persistent under-development.

In India, the Provision of public services and infrastructure is inadequate when compared to similar developed countries. However, with increasing budgetary demands for social welfare schemes coupled with growing aspiration of the people, the government's ability to adequately address infrastructure needs through traditional means has been severely constrained. Construction of infrastructure in India requires large capital outlays and there is a deficit in supply. The Government of India identified Public-Private Partnerships (PPPs) as a way of developing the country's infrastructure. This has led the Government of India to increasingly facilitate the private sector to be a partner in supplementing public investments and provide public services through Public Private Partnerships (PPPs).

In the 1990s, during India's first liberalization wave, there were various attempts to promote PPPs. However, some infrastructure projects in some sectors implemented during 1990s under PPPs were failed. India was perceived as too risky and there was significant opposition to private sector investment. It is only in the first half of the 2000s that the first PPPs were signed and implemented.

2. Meaning of Public-Private Partnership (PPP)

Public-Private Partnership (PPP) refers to a long-term contractual partnership between the public and private sector agencies, specifically targeted towards financing, designing, implementing and operating infrastructure facilities and services in the State. It is "an arrangement between a government / statutory entity / government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or public services, through investments being made by the private sector entity for a specified period of time. These schemes are sometimes referred to as PPP or P3. Thus, these PPPs aim to achieve the twin objectives of high growth and equity on a sustainable basis.

The Government of India defines a P3 as "a partnership between a public sector entity (sponsoring authority) and a private sector entity (a legal entity in which 51% or more of equity is with the private partner/s) for the creation and/or management of infrastructure for public purpose for a specified period of time (concession period) on commercial terms and in which the private partner has been procured through a transparent and open procurement system.

3. Common Forms of PPP Models in India

The Government of India recognizes several types of PPPs. While the preferred forms of PPP model are the ones where the ownership of underlying assets remains with the public entity during the contract period and the project gets transferred back to public entity on contract termination, the final decision on the form of PPP is

determined using the Value for Money Analysis. Some of the commonly adopted forms of PPP include management contracts, Build-Operate-Transfer (BOT) and its variants Design-Build-Finance-Operate-Transfer (DBFOT) and Operate-Maintain-Transfer (OMT). As of November 2020, 1,103 PPP projects were launched in the country, representing a total of \$274,959,000,000 of committed investments.

4. Airports and Aviation Infrastructure

Airports Authority of India (AAI) came into existence on 1st April, 1995. India has 464 airports and airstrips, of which 125 airports are owned by Airport Authority of India (AAI). AAI has been constituted as a statutory authority under the Airports Authority of India Act, 1994. It has been created by merging the erstwhile International Airports Authority of India and National Airports Authority with a view to accelerate the integrated development, expansion and modernization of the air traffic services, passenger terminals, operational areas and cargo facilities at the airports in the country

AAI operates and maintains 136 airports including 11 International Airports, 30 Civil Enclaves at Défense airfields in the country, 10 are AAI Customs airports including 4 Customs Civil Enclaves; and 76 are AAI Domestic (Operational) airports, including 21 Domestic (Operational) Civil Enclaves. Government agencies projects requirement of around 250 brownfield and green-field airports by 2020. There is demand of \$ 120 bn investment in airport infrastructure. India aims to become the third-largest aviation market globally by 2024.

5. Statement of the Problem

To a large extent, the growth and development of an economy is dependent on the growth of the transport sector. The airport sector is considered as one of the essential elements of the transport sector, as growth of the airport sector is crucial for the overall growth of the transport sector and the Indian economy. The Public Private Partnerships (PPPs) have emerged as a very feasible, viable, and growing mode of creating infrastructure for our country. PPPs addresses the serious problems of insufficient ground handling systems, obsolete infrastructure, night landing facilities and poor passenger services in the aviation industry.

The apparent question that arises is whether PPP model of investment in infrastructure in aviation sector is really feasible or not with respect to profitability of the project. Overall, this research work is intended to answer the following research question: What are the trends and opportunities of PPPs activities in Indian Aviation Sector? Initiation of a new study on PPPs model of investment in infrastructure will naturally throw up additional information which will be useful to the policy makers in meeting the challenges ahead. The present study is undertaken with this end in view. The findings of the study contribute to the existing literature on Indian airports.

6. Research Methodology

This research article is conceptual research with an explorative methodology. The study is based on undertaking desk research in exploring PPPs in the aviation sector. The study covers a period of 18 years. The secondary data and information's were collected from various sources viz. documents of GOI and other publicly available material, nondisclosed project documents, newspapers and research papers. Author have used several search engines and databases including Google Scholar. For analyzing the data statistical tools like Compound Annual Growth Rate (CAGR) was used.

7. Objectives of the Study

The main objectives of the present study are the following:

- 1) To study the concept of public-private partnerships in India.
- 2) To study the progress of PPPs in Indian Aviation Sector.
- 3) To assess the profitability of Cochin International Airport Ltd.

8. PPP Airports in India:

The airports being developed and run PPP way so far include those at Hyderabad, Bengaluru, Delhi, Mumbai, Kochi, Ahmedabad, and Lucknow. Airport Authority of India has recently, awarded six of its airports viz., Ahmedabad, Jaipur, Lucknow, Guwahati, Thiruvananthapuram and Mangaluru for Operations, Management and Development to the highest bidder i.e., M/s Adani Enterprises Limited (AEL) under Public Private Partnership (PPP) mode for a lease period of 50 years.

9. Important PPP Airports in India:

Leading PPP model airports in India are Delhi, Mumbai, Hyderabad, Bengaluru and Kochi. Table 1 discloses the cost, pattern of equity holding and status of the five major PPP Airports in India.

**Table1
Five Major PPP Airport Projects in India**

No.	Name of Airport Time Period	Year & Status of the Project	Cost (₹ in crore)	Pattern of Equity Holding
1	Delhi International Airport Limited (DIAP)- (Brownfield)- NCR	2006 Under Construction	8,600	Pvt: 74% AAI 26%
2	Mumbai International Airport Limited (MIAL)- (Brownfield)-Maharashtra	2006 Under Construction	5,800	Pvt: 74% AAI 26%
3	Hyderabad International Airport Limited, (HIAL)-(Greenfield)-Andhra Pradesh	2003 Under Operations	24,780	Pvt: 74% AAI 13%, Govt. of Andhra Pradesh 13%
4	Bangalore International Airport Limited, (BIAL) Greenfield- Karnataka	2008 Under Operations	12,690	Pvt: 74%, AAI 13%, Govt. of Karnataka 13%
5	Cochin International Airport Limited, (CIAL)-Greenfield- Kerala	1999 Under Operations	303	Pvt: 57.9% Govt. of Kerala & Public Sector Units 42.1%

Source: Compiled by Researcher

- i) Delhi International Airport Limited (DIAL):** Delhi International Airport is managed by the Delhi International Airport Limited (DIAL) since 2006 under PPP model with an investment outlay of ₹ 8,600 crore. DIAL is a joint venture, formed as a consortium between three major players: GMR Group (64%), Fraport AG (10%) (private sector 74%) and government owned AAI (26%).
- ii) Mumbai Chhatrapati Shivaji International Airport (CSIA):** With the privatization of the Mumbai Chhatrapati Shivaji International Airport, India experienced a momentous change in its civil aviation history. In 2006, Mumbai International Airport Pvt. Ltd. (MIAL), is a joint venture between the GVK led consortium (74%) and Airports Authority of India - AAI (26%). The investment outlay for MIAL was ₹5,800 crore.
- iii) Hyderabad Rajiv Gandhi International Airport (HIAL):** Hyderabad International Airport Limited is operated by the Hyderabad International Airport Limited which signed a concession agreement with the Government of India in December 2004 for a period of 30 years. Hyderabad International Airport Limited is a joint venture formed as a consortium between GMR Group (63%), Malaysia Airports Holding Bhd (11%) with a total private equity of 74%. Government of India's AAI hold 13% and Government of Telangana hold 13% of total equity holding. The model of PPP for Hyderabad Airport is based on a Build-Own-Operate-Transfer (BOOT) with an outlay of ₹ 24,780 crore.
- iv) Bangalore International Airport Limited (BIAL):** Bangalore International Airport Limited designed, built, owns and operates (DBOO) the Kempegowda International Airport. A foreign consortium holds a 74% stake in BIAL which consists of the following private promoters: GVK Group India (43%), Siemens Project Ventures GmbH (26%) and Flughafen Zurich AG Ltd. (5%). The remaining 26% are owned by AAI as well as the Karnataka State Industrial Investment & Development Corporation Limited (KSIIDC) hold each 13% was constructed with an outlay of ₹12,690 crore.
- v) Cochin International Airport Limited (CIAL):** Cochin International Airport Ltd. is operated by, a unique entity founded in 1994. It is the first green field airport in the country, build from scratch, with private participation and is thus a pioneer of the Indian airport public-private partnership (PPP) model. It is the busiest and largest airport in the state of Kerala. The state-of-the-art international airport was built in 800 acres at just INR 230 Crores. The paid-up capital of the company is Rs.382.57. By the end of 2020, the

company accrued gross assets worth ₹ 2455.64 Cr. which includes three sprawling terminals having two million SFT of the area and offering state of the art passenger facilities, a convention centre, a golf course, and an aircraft maintenance hangar. The company has been paying dividends from 2003-04 and with the year 2019-20, the total dividend pay-out has touched 282%. Ever since commercial operations started on 10th June 1999, CIAL, has grown rapidly becoming the 4th largest International Airport in India in terms of international passenger traffic in just four years. CIAL was seen as a potential model not just in India in other parts of the world as well said National University of Singapore in its manuscript titled “The Privatization of Airports in Asia”.

CIAL is the World’s first airport fully powered by solar energy. The eco-friendly initiative of CIAL won international accolades including “The Champions of the Earth Award-2018” from the United Nations. At present, the total installed capacity of solar power plants at CIAL is 40MWp.

The government of Kerala holds 33.36% stake, making it the single largest investor in the project. Indian government companies like Air India, BPCL, AAI hold 8.74% stake (total Government holding 42.1% and private 57.9%), while foreign companies like Abu Dhabi based Emke Group, the Oman-based Galfar Group, UAE based Majeed Bukatara Trading holds 5.42% stake. Scheduled commercial banks like Federal Bank, SBT and Canara Bank holds 5.91%. The remaining 38.03% stake is held by more than 10,000 personal investors from 31 countries, mostly non-resident Indians³.

Table 2 depicts the passenger traffic movement in five PPP airports in India for the financial year 2016 to 2020.

Table 2
Passenger Traffic in Major PPP Airports

Name	Passenger Traffic Handled (in Million)				
	FY-16	FY-17	FY-18	FY-19	FY-20
Delhi International Airport Limited	48.42	57.70	65.69	69.23	67.30 (6.81%)
Mumbai International Airport Limited	41.67	45.15	48.50	48.82	45.87 (1.94%)
Hyderabad International Airport Limited	12.39	15.10	18.16	21.40	21.65 (11.81%)
Bangalore International Airport Limited	18.97	22.88	22.89	33.31	32.36 (11.27%)
Cochin International Airport Limited	7.71	8.94	10.01	10.02	9.71 (4.72%)

Source: Compiled by Researcher

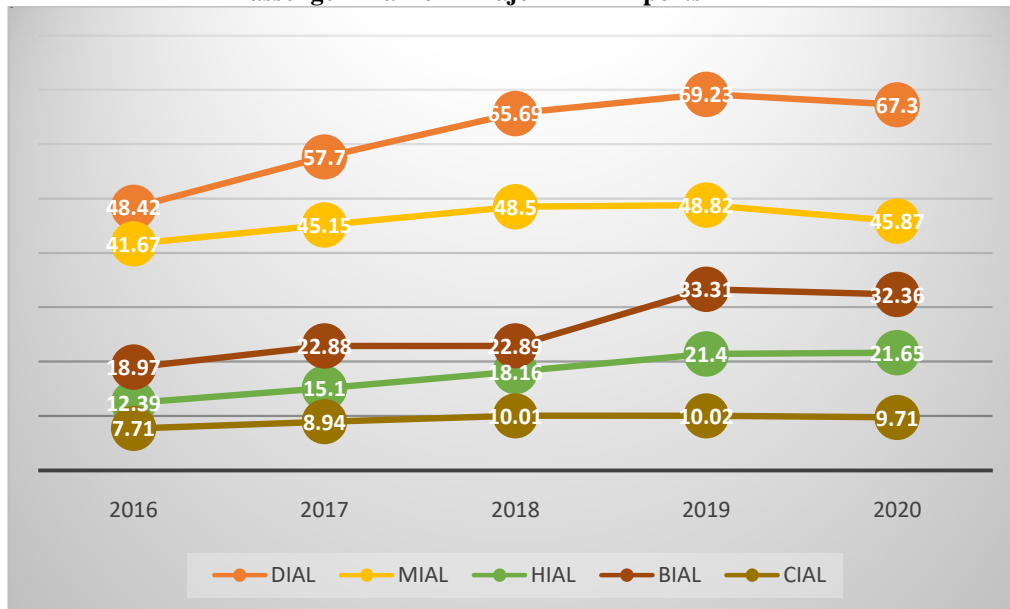
Percentage in bracket indicates Compound Annual Growth Rate.

Table 2 exhibits the trends on passenger traffic quoted by AAI (Airport Authority of India) from the financial year 2016 to 2020. The study revealed that there was rapid growth in aircraft passenger traffic. During the last five years passenger traffic increased in all the five Airports. Passenger traffic handled by Delhi Airport showed an increase from 48.42 million in the financial year 2016 to 67.30 million in 2020 shows a compound annual growth rate of 6.81%. There was rapid growth in passenger traffic in Hyderabad Airport which shows the highest compound annual growth rate of 11.81% followed by Bengaluru 11.27%. Whereas Mumbai Airport shows the lowest compound growth rate of 1.94% in passenger traffic.

The study revealed that the passenger traffic of CIAL showed an compound growth rate of 4.72 per cent over a period of five years. CIAL, has grown rapidly becoming the 4th largest International Airport in India in terms of international passenger traffic in just four years. The decrease in passenger traffic in all the five airports except HIAL during the year 2020 was due to the adverse effect of the COVID-19 pandemic on the airlines operating in the country, which were already reeling under heavy losses, was unprecedented.

Figure 1 depicts the pictorial representation of passenger traffic in five PPP airports.

**Figure1
Passenger Traffic in Major PPP Airports**



10. CIAL – Analysis of Net Profit and Dividend Paid

Table 3 depicts the net profit earned and the percentage of dividend paid to shareholders by CIAL for a period of 16 years from 2003-4. The graphical representation of profit earned and dividend paid is given in Figure 2.

**Table 3
CIAL –Net Profit after Tax (amount in ₹) and Dividend Payout Ratio**

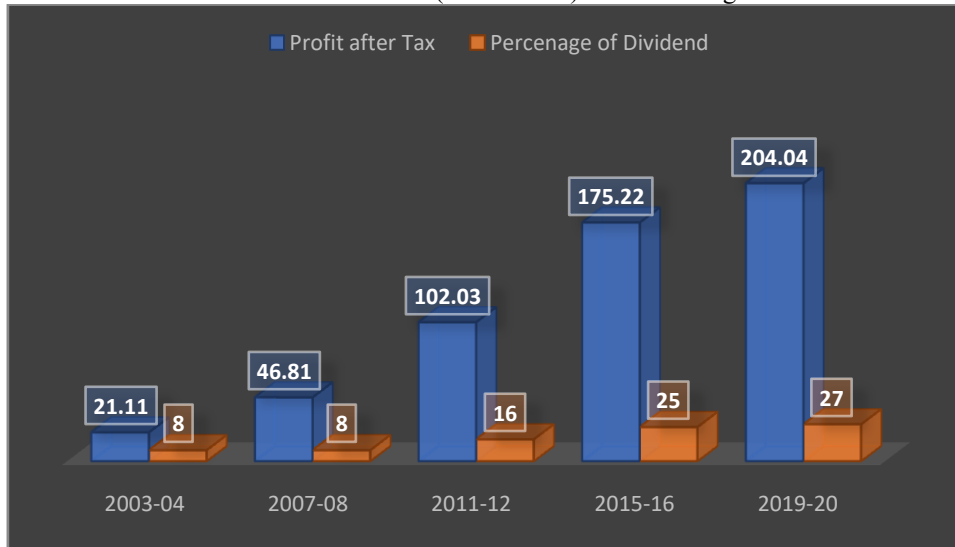
Year	Profit After Tax	Compound Growth Rate	Dividend (%)	CAGR*
2003-04	21.11	-	8	-
2007-08	46.81	22.03	8	0.00
2011-12	102.03	21.51	16	18.92
2015-16	175.22	14.48	25	11.8
2019-20	204.04	3.88	27	1.94
CAGR*		15.23		7.9

*CAGR – Compound Annual Growth Rate - #Profit after Tax (Rupees in Crore)

From the Table 3 it is clear that there is an increase in net profit after tax from the F.Y 2003-04 till 2019-20. In the year 2003-04 the net profit after tax was just ₹21.11 crore which sharply increased to Rs. 204.04 in 2019-20. Even though there has been an increase in profit it is worthwhile to note that the growth rate is not steady and consistent as far as the PAT of CIAL is considered which usually depends on the passenger growth and cargo movement through the airport and the taxation policies of the government. The Compound Annual Growth Rate of net profit after tax over a period of 16 years is 15.23 per cent.

The company has been paying dividends from 2003-04 and with the year 2019-20, the total dividend pay-out has touched 282%. The percentage of dividend to the shareholders of the company shown an upward trend from the year 2003 to 2020. The percentage of dividend was 8 in the year 2003 which improved to 16 per cent in 2016. For the year 2018-19 the company paid 25 percent dividend which further augmented to 27 per cent in the year 2020. The balance sheet also is sound as the profit ratio exceeds 35%.

Figure 2
CIAL - Net Profit after Tax (amount in ₹) and Percentage of Dividend Paid



11. Conclusion

The present paper attempted to analyze the trends and progress of PPPs applied in the Indian aviation sector. The study assessed Indian experience with private participation in infrastructure from a broader economic perspective using PPPs literature. Considering India's infrastructural needs, PPPs are not just an option, but a necessity. It has been seen that PPP has many advantages such as large investment in public infrastructure, efficient service delivery, cost-effectiveness, sharing of risks, effective use of assets and opportunities of long-term investment. Though a mixed economic approach is followed by India, Public Private Partnership in infrastructure create considerable value to the Indian government and its citizens with respect to enhancement in time efficiency, greater convenience, increased reliability and saving costs along with easy availability of information. The study concluded that all important PPP running airports are telling success stories which are viable both in terms of profitability and aircraft passenger traffic. Considering all this, we can conclude that mere PPP is not sufficient for India, but an effective PPP is required.

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