

STUDY

ON

**EFFICIENT OPERATION AND
MAINTENANCE EXPENSES**

for

Kannur International Airport (KIA)

(First Control Period: FY 2018-19 to FY 2022-23)

Initiated by Airports Economic Regulatory Authority of India (AERA)

November 2023

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1. Aeronautical ratio of O&M expenses before and after reallocation

Glossary

Abbreviation	Full Form
AAI	Airports Authority of India
A&G	Administrative & General
AERA	Airports Economic Regulatory Authority
AECOM	Architecture, Engineering, Construction, Operations, and Management
AO	Airport Operator
ATM	Air Traffic Movement
CAGR	Compounded Annual Growth Rate
CISF	Central Industrial Security Force
CNS	Communication, Navigation and Surveillance
CSR	Corporate Social Responsibility
CUTE	Common User Terminal Equipment
DIAL	Delhi International Airport Limited
EHCR	Employee Head Count Ratio
FRoR	Fair Rate of Return
FY	Financial Year
GAL	GMR Airports Limited
GFA	Gross Fixed Asset
GIL	GMR Infrastructure Limited
GoI	Government of India
GHIAL	GMR Hyderabad International Airport Limited
IATA	International Air Transport Association
IMG	Inter-Ministerial Group
INR	Indian Rupee
IT	Information Technology
KIAL / AO	Kannur International Airport Limited
KITCO	Kerala Industrial and Technical Consultancy Organization
MIA	Mangaluru International Airport
MPPA	Million Passengers Per Annum
MYTP	Multi Year Tariff Proposal
NCAP	National Civil Aviation Policy
O&M	Operation and Maintenance
ORAT	Operational Readiness and Airport Transfer
PAX	Passenger Traffic
R&M	Repairs & Maintenance
RAB	Regulatory Asset Base
RFP	Request for Proposal
Sq.m.	Square metre
VIP	Very Important Person
WPI	Wholesale Price Index

1. BACKGROUND

Kannur International Airport (KIA) is the fourth International Airport and second Greenfield Airport in Kerala set up under the Public Private Partnership (PPP) model. It is located 28 Kms east of Kannur and close to the municipality of Mattannur in Kannur district of Kerala. The airport commenced its commercial operations in December 2018 and caters primarily to the catchment area of Kannur, Wayanad, Kasaragod and northern Calicut district. The annual passenger throughput in FY 2019-20 is 1.59 MPPA and in FY 2022-23 is 1.26 MPPA.

KIA is one of the Major Airports, as per the definition of Major Airport under section 2 (i) of Airports Economic Regulatory Authority of India Act, 2008, read with AERA (Amendment) Act 2019 and 2021. KIA commenced its commercial operations only in December 2018 and reported an actual passenger throughput volume of 1.59 MPPA for FY 2019-20 which was lesser than the threshold limit of 3.5 MPPA defined under the AERA Act 2008 read with AERA (Amendment) Act 2019. However, based on KIA's certified built-up capacity of 9.34 MPPA as well as the built-up terminal area of 96,143 Sq. m., AERA declared KIA as a 'Major Airport' vide Amendment to Public Notice 17/2019-20 dated March 16, 2020 under the AERA Act 2008 read with AERA (Amendment) Act 2019.

Pursuant to AERA Act 2008, the Authority had issued Guidelines for the purpose of determination of Aeronautical tariff for Major Airports. As per the Guidelines, AERA had issued Tariff Order No. 26/2018-19 dated November 9, 2018, in the matter of determination of Aeronautical tariff For KIA for the First Control Period (FY 2018-19 to FY 2022-23).

Pursuant to the AERA Act, 2008 read with AERA (Amendment) Act 2019 and 2021 and AERA Guidelines for the purpose of determination of Aeronautical tariff for Major Airports, Kannur International Airport Limited ('Airport Operator' / 'KIAL') had submitted its initial Multi Year Tariff Proposal (MYTP) on October 27, 2022 and the revised MYTP on March 27, 2023 for the Second Control Period from FY 2023-24 to FY 2027-28.

OBJECTIVE:

Establishing efficient Operation and Maintenance (O&M) expenses is fundamental to the effective execution of determination of tariff for Aeronautical services. The O&M expenses of Airports across the Country have been increasing consistently, driven by investments in expanding, modernising and improving the operational efficiency of airports. In addition, there is increased adoption of latest technology for improving the efficiency of operations and services at the airports, which has resulted in various technology related products and services being utilised at the airports through both in-house and third-party involvement.

Assessment of O&M expenses requires examination of financial information submitted by the Airport Operator and independent assessment of baseline operating expense levels, expense reduction, efficiency initiatives and the conduct of benchmarking exercise.

The objective of the Study is to understand and analyse the historical trends of change in O&M expenses and how KIA has been performing in comparison to select peers in the industry, which in turn is expected to help understand the reasons for current expenses being higher or lower than the efficient expense levels. The outcome of the same would assist the Authority in determining the efficient O&M expenses of KIA.

The study also aims to assess the allocation of O&M expenses as Aeronautical, Non-aeronautical and Common expenses, as per the general principles followed by AERA, so that the passengers and other stakeholders are not burdened with resultant incremental fees / charges.

Towards this objective, AERA has decided to conduct an independent study on efficient Operation and Maintenance (O&M) expenses and their allocation as Aeronautical and Non-aeronautical components in respect of O&M expenses appearing in the True up submission of KIA based on the audited financial statements for the year ended March 31, 2022 and unaudited financials for the year ended March 31, 2023.

As part of this Study, the following documents have been examined:

- a. AERA Act, 2008 read with AERA (Amendment) Act, 2019 and 2021 (“AERA Act”) and AERA Guidelines issued from time to time.
- b. AERA Order No. 14 / 2016-2017 dated January 23, 2017 [In the matter of aligning certain aspects of AERA’s Regulatory Approach (Adoption of Regulatory Till) with the provisions of the National Civil Aviation Policy 2016 (NCAP 2016) approved by the Government of India]
- c. AERA Tariff Order No. 26/2018-19 dated November 9, 2018 for KIA and previous tariff orders for other similar airports.
- d. True up submissions of KIA.
- e. Audited financials, Annual Reports, clarifications and other details received from AO.

2. TERMS OF REFERENCE AND OUR WORK PERFORMED

2.1. Terms of Reference

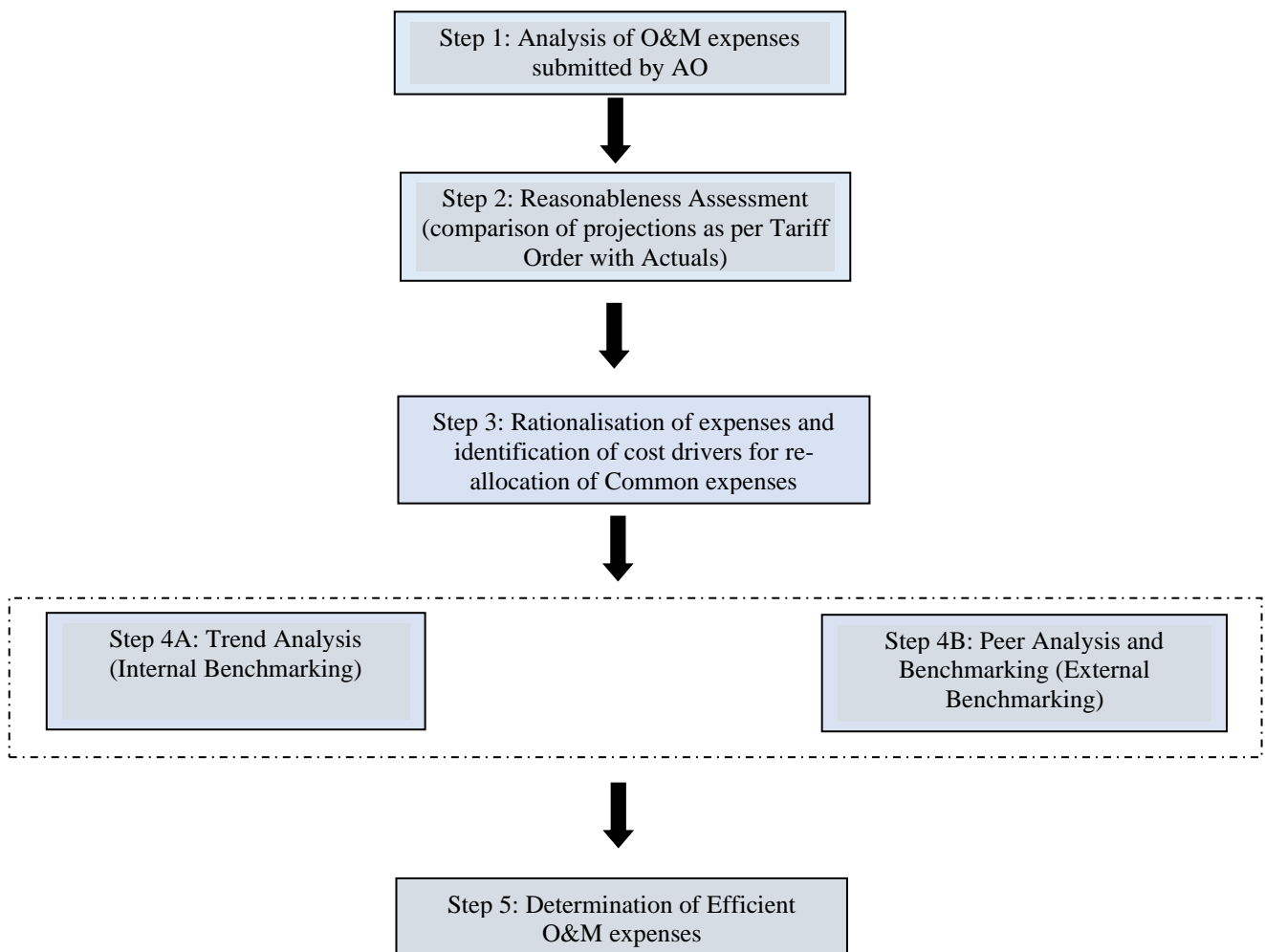
2.1.1. AERA has outlined the scope of work for the Study to include segregation of O&M expenses between Aeronautical and Non-aeronautical activities and determination of efficient O&M expenses, as stipulated in the following documents:

- Tariff Order No. 26/2018-19 dated November 9, 2018 for the First Control Period For KIA
- RFP No. 01 / 2022-23 dated August 30, .2022 for engagement of consultants to assist AERA in determination of tariffs for Aeronautical services at various Major Airports (refer paragraph 2.1.1 (v), “Asset / OPEX segregation between Aeronautical and Non-aeronautical”, and clause 3.1 (v) of Schedule 1 (Terms of Reference) of the RFP document).

2.2. Work Performed

2.2.1. The following steps have been followed as part of this Study for determining the efficient O&M expenses For KIA:-

Figure 1: Approach for this Study



Step 1: Analysis of O&M expenses submitted by AO

The following components of O&M expenses submitted by AO (Airport Operator) for the period from FY 2018-19 to FY 2022-23 have been analysed as part of the Study report.

Components of O&M expenses as per AO

- **Employee Cost** such as salaries, wages, bonus, contribution to provident fund, staff welfare expenses, etc. incurred for employees
- **Airport Operating Expenses** such as Repairs & Maintenance, Operations & Maintenance, Security, Power and fuel, Other utility (water charges), Housekeeping, CISF induction fee, Customs cost recovery charges, Aviation meteorological services cost, Air navigation, communication and surveillance charges, Insurance, etc.
- **Other Expenses** such as Administrative expenses, Consultancy charges, Legal and professional fees, CSR expenses, Rent, Travelling, Insurance – operations, cargo handling and related expenses, etc.
- **ORAT expenses** is Operation Readiness and Airport Transfer/ Infrastructure for a new airport
- **Airport inauguration expenses** such as marketing / advertising / branding & promotion costs towards commencement of airport operations.

Step 2: Reasonableness assessment (Comparison of Tariff Projections vs. Actuals)

Reasonableness Assessment of the total O&M Expenses for the First Control Period (FY 2018-19 to FY 2022-23) has been performed by comparing the approved O&M expenses as per the Tariff Order for the First Control Period with the actual expenses incurred up to FY 2021-22 and Unaudited figures for the last FY, i.e., FY 2022-23.

Step 3: Rationalisation of expenses and identification of cost drivers for re-allocation of Common expenses

Based on the assessment of reasonableness of actual expenses incurred in the First Control Period vis-à-vis that approved in the Tariff Order for the First Control Period, the Study has rationalized the O&M expenses.

Further, the basis used by AO for segregation of Common expenses between Aeronautical and Non-aeronautical expenses has been analyzed and wherever necessary, an alternate basis of allocation has been proposed, based on principles laid down as under:

- Common expenses pertaining to terminal operations have been segregated between Aeronautical and Non-Aeronautical expenses based on the Terminal Building ratio.
- Common employee related expenses have been segregated between Aeronautical and Non-Aeronautical expenses based on the Employee Head Count ratio.
- Common expenses included in O&M components, such as Repairs & Maintenance expenses and in Administrative and other expenses, such as property taxes have been segregated between Aeronautical and Non-Aeronautical expenses on the Gross Fixed Assets (GFA) ratio.

Step 4A: Trend analysis (Internal Benchmarking)

Trend analysis of O&M expenses for the period from FY 2018-19 to FY 2021-22 (i.e., first 4 tariff years of the First Control Period) have been performed by correlating each component of O&M expenses with the data on Passenger (PAX) traffic and air traffic movement (ATM) for the respective years. FY 2022-23 has been excluded from the analysis since it is based on unaudited financials.

Based on the trend analysis, the CAGR of O&M expenses vis-à-vis growth in Passenger traffic and ATM for each year has been correlated and in-depth analysis has been performed in respect of growth in O&M expenses that are disproportionate to the growth in Passenger traffic and ATM.

Step 4B: Peer analysis and benchmarking (External Benchmarking)

The benchmarking of O&M expenses with comparable airports have been done to ascertain the reasonableness of the O&M expenses of KIA. Based on parameters such as passenger traffic, terminal building area, aeronautical revenue and average gross block, the major O&M expenses of KIA have been benchmarked against Mangaluru International Airport (MIA), Cochin International Airport (CIAL) and Calicut International Airport (CCJ).

The benchmarking exercise has been performed for the major Aeronautical O&M expenses incurred during the period from FY 2018-19 to FY 2021-22 (i.e., first 4 tariff years) and the last year, i.e., FY 2022-23 has been excluded since the same is based on unaudited financials

Step 5: Determination of Efficient O&M expenses

The Study, based on various types of analysis performed as mentioned in Steps 1 to 4B above, proposes to either allow or rationalise the components of O&M expenses and consequently determine the allowable efficient O&M expenses of KIA for the First Control Period.

3. OPERATION AND MAINTENANCE EXPENSES FOR THE FIRST CONTROL PERIOD

3.1. O&M expenses and allocation as submitted by AO for the Second Control period from FY 2018-19 to FY 2022-23

The O&M expenses approved by the Authority as per the Tariff Order for the First Control Period have been compared with the true up submission made by the Airport Operator and analysed in terms of reasonableness as shown in the following paragraphs.

3.1.1. In the Tariff Order No. 26 /2018-19 issued on November 9, 2018 for the First Control Period, the Authority had approved Aeronautical O&M expenses of ₹ 225.49 Crores, based on its analysis of the submissions made by AO, as shown in the table below:

Table 1: Aeronautical O&M expenses approved by the Authority in the Tariff Order for the First Control Period

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Land lease rental	0.01	0.01	0.01	0.01	0.01	0.05
Employee costs	4.34	10.56	11.29	12.09	12.93	51.21
Power & Water	1.61	3.91	4.11	4.31	4.53	18.47
Repair & Maintenance	-	18.86	19.24	19.62	20.02	77.74
Administration	2.41	5.86	6.27	6.71	7.18	28.43
Marketing Cost	0.88	2.02	2.3	2.6	2.95	10.75
Security	2.41	5.86	6.27	6.71	7.18	28.43
Stores & Spares	-	2.52	2.57	2.62	2.68	10.39
TOTAL	11.66	49.60	52.06	54.67	57.48	225.49

3.1.2. The Aeronautical O&M expenses as per Airport Operator's True up submission are provided in the table below:

Table 2: Aeronautical O&M expenses submitted by AO for the First Control Period

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23*	TOTAL
Land lease rental	-	-	-	-	-	-
Employee costs	7.33	11.05	10.99	11.45	11.11	51.92
Power, Fuel & Water	3.58	12.47	8.96	9.56	11.33	46.71
Repair & Maintenance	5.83	16.04	16.80	18.85	19.60	76.31
Administration	7.66	4.20	3.77	4.04	5.09	24.75
Marketing Cost	-	-	-	-	-	-
Security	-	0.44	0.43	0.47	0.75	2.09
Stores & Spares	-	-	-	-	-	-
Other Airport Operating Expenses	4.21	17.58	17.63	15.47	22.02	76.92
CISF Induction fee	9.80	-	-	-	-	9.80
Cargo related expenses	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	11.72	-	-	-	-	11.72
Total	51.64	61.78	58.59	60.04	70.31	302.36

*Unaudited figures submitted by AO for FY 2022-23

3.2. Analysis of Airport Operator's submission of O&M expenses as per Study

- 3.2.1. The total expenses submitted by AO have been verified with the audited financials for the first 4 tariff years, i.e., FY 2018-19 to FY 2021-22 and were observed to be in order. Analysis has been done as part of the Study to examine the efficiency and reasonableness of the O&M expenses.
- 3.2.2. AO has submitted the unaudited figures for FY 2022-23 and it is proposed to consider the same, for further analysis.
- 3.2.3. The following expense heads, appearing in the audited financial statements of the Airport Operator have not been considered as part of O&M expenses, for the purposes of the Study.
- Depreciation and Amortization expenses, as these are considered as a separate building block.
 - Finance charges (other than bank charges), as these are factored in the computation of Fair Rate of Return (FRoR).

3.3. Comparison of Aeronautical O&M expenses approved as per Tariff Order for the First Control Period vis-à-vis the actual expenses incurred for the First Control Period

- 3.3.1. The Comparison of Aeronautical O&M expenses as per approved tariff order of First Control Period (FCP) with actual expenses incurred by AO is shown in the table below:

Table 3: Aeronautical O&M expenses of KIA for the First Control Period - Projections vs. Actuals

(₹ in Crores)

Particulars	Projections (as per the Tariff Order) (A) (refer Table 1)	Actuals of KIA (B) (refer Table 3)	Variance (C = B - A)	Variance (%) (D = C / A)
Land lease rental	0.05	-	(0.05)	(100.00) %
Employee Cost	51.21	51.92	0.72	1.40%
Power, Fuel & Water	18.47	46.72	28.25	152.95%
Repair & Maintenance	77.74	76.30	(1.44)	(1.85) %
Administration	28.43	24.76	(3.67)	(12.93) %
Marketing Cost	10.75	-	(10.75)	(100.00) %
Security	28.43	2.09	(26.34)	(92.64) %
Stores & Spares	10.39	-	(10.39)	(100.00) %
Other Airport Operating Expenses	-	76.91	76.91	100.00%
CISF Induction fee	-	9.80	9.80	100.00%
Cargo related expenses	-	0.62	0.62	100.00%
ORAT	-	1.52	1.52	100.00%
Airport inauguration expenses	-	11.72	11.72	100.00%
Total Aeronautical O&M expense for the Second Control Period	225.47	302.36	76.89	34.10%

- 3.3.2. Further, it is observed from the above table that, the total Aeronautical expenses claimed by AO as part of true up were 34.10% higher than the amount approved as per Tariff Order of the First Control Period and the reasons for the deviation, have been analysed in the following paragraphs.

3.3.3. Assessment of reasons for the deviations in the O&M expenses

(i) Land lease rental**Table 4: Comparison of Land lease rental expenses as per tariff order of First Control Period vs Actuals***(₹ in Crores)*

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Land lease rental as per Tariff Order (A)	0.01	0.01	0.01	0.01	0.01	0.05
Land lease rental submitted by AO (B)	-	-	-	-	-	-
Variance (C=B-A)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.05)

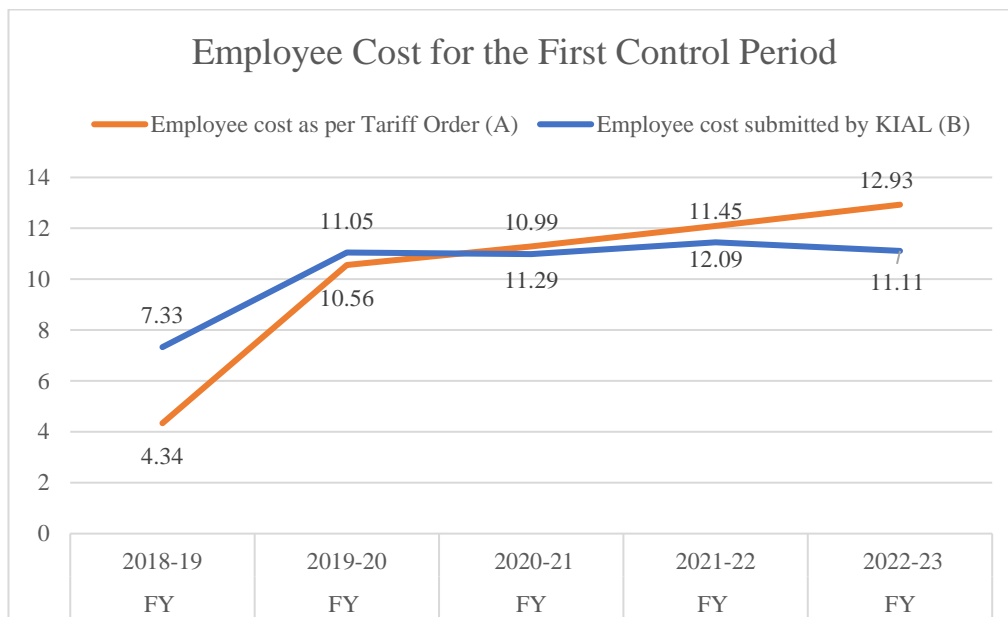
It is observed that AO has not claimed land lease rental in the true up of First Control Period. Upon further clarification, AO explained that AERA had approved land lease rental expense in the Tariff Order of the First Control Period based on the assumption that AO would be leasing 1,176.48 acres of land from M/s. KINFRA at the rate of ₹ 100 per acre per annum (refer table 15 of the Tariff Order of the First Control Period). However, AO had subsequently acquired 1,192.18 acres of land from KINFRA for ₹ 316 Crores towards development of Phase I of the Airport.

Further, it is observed that AO has taken on lease approx. 71 acres of land from the Kerala State Government (i.e., apart from acquiring 1,192.18 acres of land) and carried out development on such land (near the runway) but has not yet finalized and signed the lease agreement. Hence, AO has not considered any land lease rental expense in the true up submission of the First Control Period.

(ii) Employee Cost**Table 5: Comparison of Employee benefit expenses as per tariff order of First Control Period vs Actuals***(₹ in Crores)*

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Employee cost as per Tariff Order (A)	4.34	10.56	11.29	12.09	12.93	51.21
Employee cost submitted by AO (B)	7.33	11.05	10.99	11.45	11.11*	51.93
Variance (C = B - A)	2.99	0.49	(0.30)	(0.64)	(1.82)	0.72
Variance in %						1.40 %

* Amount for FY 2022-23 considered as per Table 2

Figure 2: Analysis of Employee Cost

From the above table and figure, it can be observed that the total Employee benefit expenses of ₹ 51.93 Crores claimed by AO are more or less in line with the approved amount of ₹ 51.21 Crores as per the Tariff order for the First Control period. It is also observed that the expenses are higher than the approved amount for the first 2 tariff years and lower than the approved amount for the remaining 3 tariff years of the First Control Period.

It is noted that AERA had approved employee expenses in the Tariff Order of the First Control Period based on a positive growth trend in traffic numbers. A comparison of the same with the actual PAX submitted by AO for the First Control Period is shown below:

Table 6: Comparison of traffic growth approved as the tariff order of First Control Period vs actual traffic submitted by AO

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
PAX Traffic approved as per Tariff Order (in MPPA) = (a)	0.81*	1.81	2.03	2.26	2.51
PAX Traffic submitted by AO (in MPPA) = (b)	0.22	1.58	0.48	0.80	1.26 #
Traffic actually achieved as a % of that approved in the Tariff Order = (b)/(a)%	27%	87%	24%	35%	50%

* Only 50% of the total traffic considered for FY 2018-19 based on projected commencement of operations i.e., October 1, 2018

Actual traffic number considered for FY 2022-23 as against Projection submitted by AO

It can be seen from the above table that actual passenger traffic achieved is much lower as compared to the approved traffic in the Tariff Order of the First Control Period and considering the same, it is noted that the employee expenses claimed by AO are higher as compared to the growth in traffic.

Upon further clarification with AO regarding the higher employee cost claimed as compared to the traffic growth, the following explanation was received vide email dated January 27, 2023:

“KIA started its full operations with higher passengers and connectivity in the year FY 2020. The increase of employee cost in FY 2020 is due to the ramp up in the number of employees required for the start of operations. Further, a salary hike averaging ~50% was also provided to employees effective from the date of commissioning. However, within 1 year of operations the airport was

severely impacted by the pandemic. This led to postponement of hiring plans in FY 2020 and FY 2021. Moreover, the airport being a partly government owned entity, had to fulfil social obligations due to which, the measures to reduce cost by rationalizing manpower were limited.”

In respect of higher employee costs incurred by KIA in the first 2 tariff years as compared to approved cost as per the tariff order, it has been observed that AO had provided salary hike to the employees, in the first tariff year, i.e., FY 2018-19 effective from the date of commissioning of the airport and also, the employee numbers were ramped up in the next year, i.e., FY 2019-20 in expectation of traffic growth. Hence, higher employee cost was incurred in the first 2 tariff years.

Further, as part of the Study, the employee expenses were analysed with respect to two parameters such as number of passengers per employee and average salary per employee for the First Control Period.

Based on global benchmarks, the level of staffing for an airport is generally considered to be optimum when the number of passengers per employee is around 15000-17000¹. The details For KIA are show below:

Table 7: Analysis of Employee expenses of KIA

(₹ in Crores)

Particulars	UoM	FY 2018-19*	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Employee expenses – as submitted by AO (A)	INR Cr.	7.33	11.05	10.99	11.45	11.11	51.93
Number of aeronautical employees (Aeronautical) refer Table 19 (B)	Nos	169	160	155	156	142	-
Average salary per employee (C = A / B)	INR Cr.		0.07	0.07	0.07	0.08	-
Number of PAX (D)	In Million	0.22	1.59	0.47	0.80	1.26 [#]	-
Number of passengers per employee (E = D/B)	In '000	1.30	9.94	3.03	5.13	8.87	-

* FY 2018-19 had only approx. 4 months of operations since the airport commenced only in December 2019

Actual PAX traffic of FY 2022-23 considered instead of projected figure

From the above table, it is evident that the Average salary per employee shows an increase in the second tariff year since the FY 2019-20 was the first full year of operations (as compared to approx. 4 months in FY 2018-19) and has remained the same in the next three years. However, in respect of number of PAX per employee, it is observed that the same is significantly low in comparison to the global benchmark which indicates excess employee headcount as compared to the PAX traffic.

Based on the above analysis, it is noted that the employee numbers of KIA are higher as compared to the traffic growth and global benchmarks. Hence, it is proposed to analyse and rationalise the employee numbers and the corresponding cost (refer Chapter 4).

(iii) Power, fuel & water

Table 8: Comparison of Power, fuel & water as per tariff order of First Control Period vs Actuals

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Power & water as per Tariff Order (A)	1.61	3.91	4.11	4.31	4.53	18.47
Power expenses submitted by AO (B)	3.25	11.93	8.65	9.19	10.64*	43.66

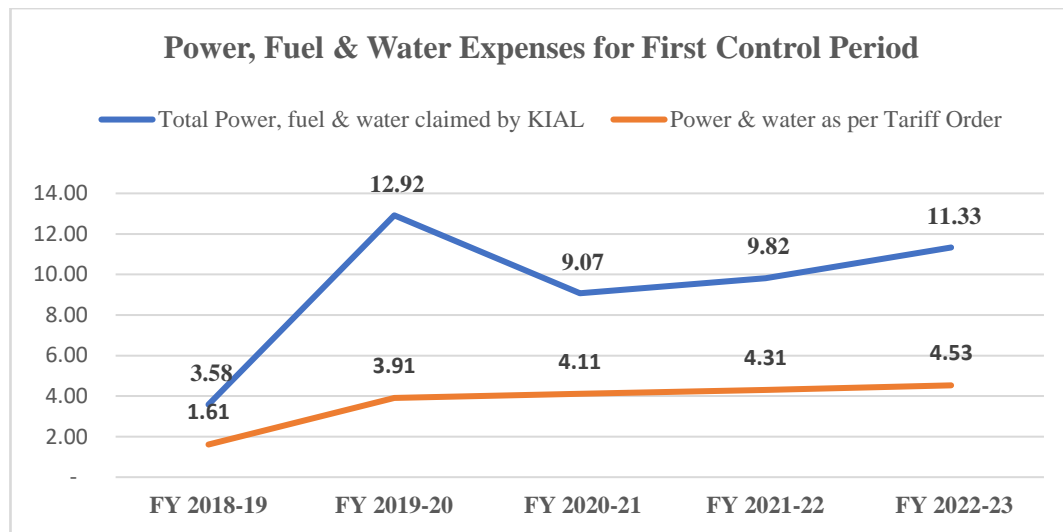
¹ Source: ACI Airport Key Performance Indicator 2019

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Fuel expenses submitted by AO** (C)	-	0.45	0.11	0.26	0.09*	0.91
Water expenses submitted by AO (D)	0.33	0.54	0.31	0.37	0.60*	2.15
Total Power, fuel & water claimed by AO (E = B+C+D)	3.58	12.92	9.07	9.82	11.33	46.72
Variance (F= E-A)	1.97	9.01	4.96	5.51	6.80	28.25
Variance in %						153%

* Amount for FY 2022-23 considered as per Table 2

**Amount for Fuel has been derived from Repair & Maintenance expenses and subsequently, same amount has been deducted from Repair & Maintenance. Fuel refers to diesel for DG set

Figure 3: Analysis of Power, Fuel & Water expenses



It is observed from the above table and figure that, the Power, fuel & water expenses of ₹ 46.72 Crores submitted by AO for true up are much higher than ₹ 18.47 Crores approved by the Authority in the Tariff Order for the First Control Period which has resulted in overall deviation of 153% over the approved amount.

It is observed that the major reason for such deviation is the significant spike in actual power cost incurred during FY 2019-20, i.e., the Pre-COVID year during which KIA achieved its highest traffic growth during the First Control Period. Subsequently, the power cost decreased in the next two tariff years on account of the impact of the pandemic and has again increased in the last tariff year, since the same has been projected based on expected traffic growth.

It is pertinent to note here that AERA had approved Power & water expenses in the Tariff Order of the First Control Period based on a positive growth trend in traffic numbers. However, as already explained in Table 6, the actual traffic achieved is much lower than approved traffic numbers mainly due to the adverse effect of the COVID-19 pandemic. Considering the adverse growth trend in the traffic, Power, fuel & water expenses ought to have been lower or in line with the approved amount. On the contrary, it is observed that the actual power cost is much higher than the approved amount.

Upon further clarification with AO regarding the significantly higher Power, fuel & water cost claimed as compared to the approved amount considering the lower traffic, the following explanation was received vide email dated January 27, 2023 along with the details of actual power consumption and corresponding charges of KIA for the period April 2019 up to June 2022:

“The projections of cost for power and fuel in the MYTP submission for the First Control Period was done basis the benchmark study with other airports such as Kochi, Calicut and Trivandrum as there was no historical data with respect to power and water consumption. However, the actual power cost in the First Control Period is governed basis the standard industrial rates as negotiated with Kerala State Electricity Board (KSEB), which is a government run entity. Hence, request Authority to consider the power and fuel charges basis the actuals. Fuel charges include diesel procured for Generators, 4 Airfield Crash Fire Tenders”.

The details of the actual power consumption submitted by AO, the corresponding charges incurred and the explanation provided for the same were examined. It is observed that, the AO has considered Power & fuel expenses by applying the ratio of 86.65% in the FY 2018-19, 93.06% in the FY 2019-20 and 100% Aeronautical for the remaining three tariff years. Upon further clarification, it is noted that, AO has considered the Power & fuel expenses after netting off the recoveries from the Concessionaires (i.e., recovery @ 13.35% for FY2018-19 and @6.94% for FY 2019-20). Further, it has been clarified that, AO was able to recover from the Concessionaires only during the first 2 tariff years when KIA had full-fledged airport operations, i.e., FY 2018-19 and FY 2019-20 but could not recover any amount during the next two years, i.e., FY 2020-21 and FY 2021-22 due to the impact of the COVID-19 pandemic.

Power expenses of KIA were compared with MIA (Mangaluru International Airport) and CCJ (Calicut International Airport) which are the comparable airports in terms of PAX traffic, topography, climatic conditions etc. The details of the same are shown below:

Table 9: Comparison of Power, fuel & water expenses of KIA with comparable airports

FY 2018-19 to FY 2022-23 (First Control Period)		
Particulars	Utility expenses (₹ in Crores)	Terminal Building area (in Sqm)
KIA	46.71	96,143
MIA	35.22	37,322
CCJ	49.03	56,536

From the above table, it is evident that although AO has incurred Power, fuel & water expenses, higher than that of MIA, it is pertinent to note that the Terminal Building area of KIA is significantly higher than the other comparable airports. Further, it is noted that higher Utility charges (Power, fuel etc.) had been incurred by the AO, as the infrastructure had been built to handle passenger capacity of 9.34 MPPA. It is further noted that due to the lower traffic during the First Control Period, KIA had utilised only a limited portion of the Terminal Building and therefore, the higher power expenses are not justified. Based on the above factors, it is proposed to rationalize the power expenses (refer Chapter 4).

However, it is proposed that AO should explore and invest in alternative power sources such as solar energy etc, to bring in more efficiency over a period of time.

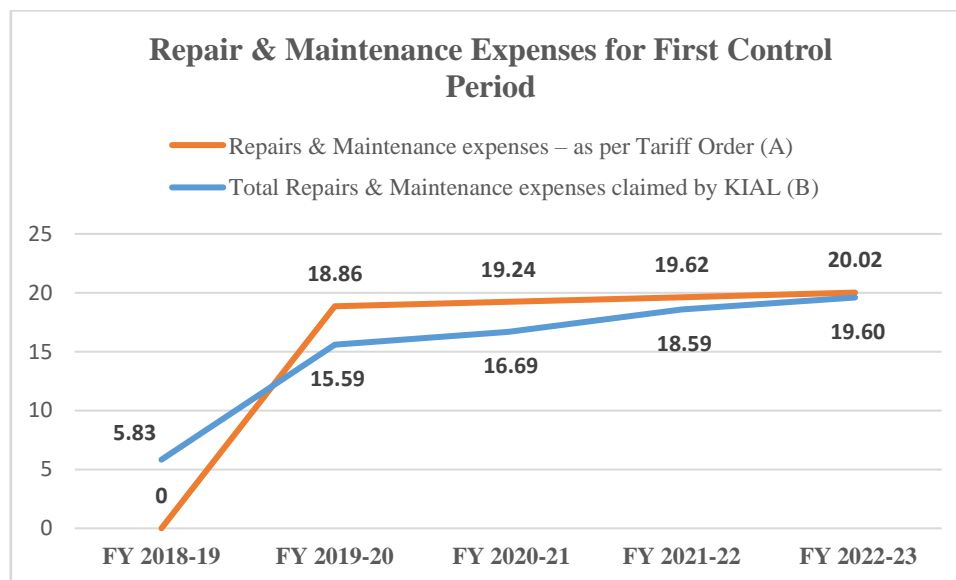
(iv) Repairs & Maintenance expenses

The Repair & Maintenance expense includes Housekeeping and Other Repair & Maintenance expenses. The comparison of the Repair & Maintenance Expenses against the expenses approved as per the Tariff Order are shown below: -

Table 10: Comparison of Repairs & Maintenance expenses as per tariff order of First Control Period vs Actuals

Particulars	(₹ in Crores)					TOTAL
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	
Repairs & Maintenance expenses – as per Tariff Order (A)	-	18.86	19.24	19.62	20.02	77.74
Repairs & Maintenance expenses – as per Actuals submitted by AO						
Housekeeping charges	3.13	8.98	8.44	9.08	9.89*	39.52
Other Repairs and maintenance	2.70	6.61	8.25	9.51	9.71*	36.78
Total Repairs & Maintenance expenses claimed by AO (B)	5.83	15.59	16.69	18.59	19.60	76.30
Variance (C = B – A)	5.83	(3.27)	(2.55)	(1.03)	(0.42)	(1.44)
Variance in %						(1.85) %

* Amount for FY 2022-23 considered as per Table 2

Figure 4: Analysis of Repairs & Maintenance expenses

From the above table and figure, it can be observed that the Repairs & Maintenance expenses of ₹ 76.30 Crores claimed by AO for true up are mostly in line with the approved expenses of ₹ 77.74 Crores as per the Tariff Order of the First Control Period.

It is noted that the total Repairs & Maintenance expenses are within the limit of 6% of Opening RAB (determined in line with the approach of the Authority in other similar airports) for all the FYs except for FY 2018-19, as the Airport commenced its operations only in December 2018.

However, it is observed that AO has incurred actual expenses in the 1st tariff year as against NIL amount approved by the Authority in the tariff order of the First Control Period. In this respect, the break-up of such expenses provided by AO were examined and it was noted that the major amount has been incurred towards 'housekeeping' charges which was not specifically provided for in the tariff order of the First Control Period. Considering that the AO had to carry out housekeeping of the Terminal building and other buildings during FY 2018-19 which was the first year of operations, the same is found to be reasonable and justified.

Further, it has been observed that the Repairs & Maintenance expenses include mainly housekeeping charges of Integrated Terminal Building, ATC building, administrative offices and other ancillary buildings (approx. 51% of the total R&M expenses), various Annual Maintenance Contract (AMC) charges for maintenance of civil, electrical and miscellaneous works at the airport, landscaping maintenance charges, runway friction testing, airside pavement marking, building & property taxes paid to the local panchayat, consumables & spares, maintenance of various assets and equipment such as DG sets, pumping station, substation, Air Conditioners (AC), Passenger Boarding Bridge (PBB), Visual Guidance Docking System (VGDS), Baggage Handling System (BHS), Escalators, elevators, Inline baggage screening system, AGL system, AGL substation and other electrical works, Airside & landside ELV system, CCR, etc.

It has been noted that the housekeeping charges which form the major part of Repairs & Maintenance expenses are incurred based on contracts entered into with the following third-party vendors:

- (i) QUESS CORP LIMITED for interior area housekeeping at Passenger Terminal Building, ATC, Cargo complex, Office building and Ancillary buildings
- (ii) M/s. BVG India Limited for exterior housekeeping at International Terminal Building and
- (iii) M/s. BVG India Limited for housekeeping of toilet blocks / rest rooms / baby care rooms / janitor blocks at International Terminal Building.

Considering that KIA has a Terminal Building area of 96,139.65 Sq.m which needs to be maintained according to the required standards (as compared to Terminal area of 37,322 Sq.m for MIA and 56,536 Sq.m for CCJ), it is proposed to consider the housekeeping charges of KIA i.e., ₹ 39.52 Crores as reasonable and justified.

However, considering that KIA is a new airport and all the assets have been newly created / acquired since it commenced operations only in December 2018, it is noted as part of the Study, that the Repairs & Maintenance expenses, (i.e., apart from housekeeping charges) amounting to ₹ 36.78 Crores are on the higher side. Therefore, as part of the Study the R&M expenses have been benchmarked with other similar airports such as MIA (Mangaluru International Airport) and CCJ (Calicut International Airport). The details of the same are shown below:

Table 11: Analysis of Repairs & Maintenance expenses (excluding housekeeping) of KIA with comparable airports

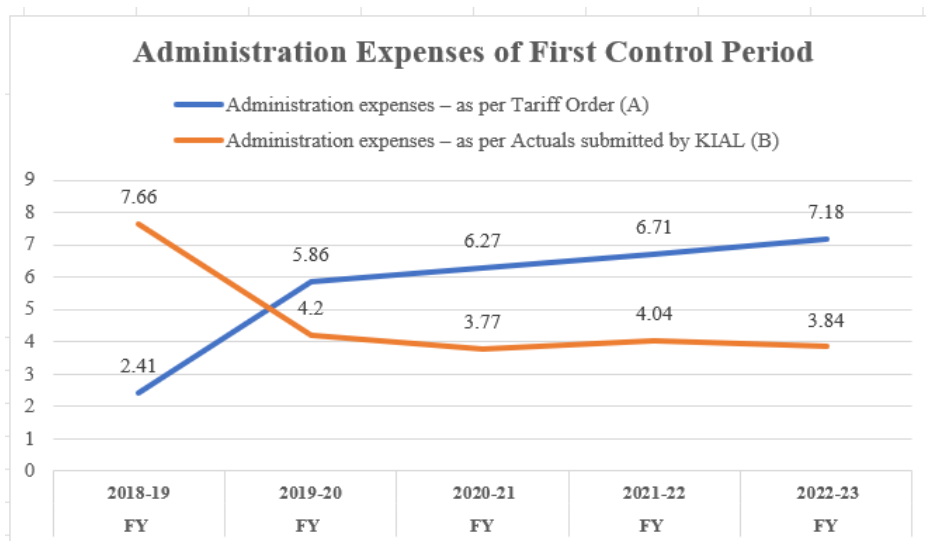
Particulars	R&M expenses (excluding housekeeping) (₹ in Crores)	PAX traffic (in Million)	KIAL's R&M expenses as a % of comparable airports	KIAL PAX traffic as a % comparable airports
KIAL	36.78	4.34	-	-
MIA*	38.36	6.03	96%	72%
CCJ*	63.67	9.62	58%	45%

* For MIA and CCJ – both Other R&M expenses and PAX traffic have been considered proportionately for 113 days in the FY 2018-19 in order to make it comparable to KIA which commenced its operations only in December 2018.

From the above table, it is evident that KIA has incurred, a relatively higher Repairs & Maintenance expenses (excluding housekeeping) although it has a lower passenger traffic base, as compared with other similar airports. Therefore, it is proposed to rationalise the Repairs and Maintenance expenses as part of the Study. (refer Chapter 4).

(v) **Administration expenses****Table 12: Comparison of Administration expenses as per tariff order of First Control Period vs Actuals**

						(₹ in Crores)
Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Administration expenses – as per Tariff Order (A)	2.41	5.86	6.27	6.71	7.18	28.43
Administration expenses – as per Actuals submitted by AO (B)	7.66	4.20	3.77	4.04	5.09	24.76
Variance (C = B - A)	5.25	(1.66)	(2.50)	(2.67)	(2.09)	(3.67)
Variance in %						(12.91%)

Figure 5: Analysis of Administration expenses

From the above figure and table, it can be observed that the total Administration expenses of ₹ 24.76 Crores claimed by AO for the First Control Period is within the amount ₹ 28.43 Crores approved in the tariff order for the First Control Period.

It is proposed that various expenses such as consultancy charges, travelling, printing & stationery, legal & professional charges, postage & courier, employee training, CSR expenses, rent, miscellaneous administrative expenses, etc are included under Administration expenses.

Further it is observed that the expenses are higher only in the first tariff year (i.e., FY 2018-19) than the approved amount, whereas the same are within the approved figures for the remaining tariff years. Upon further clarification, AO vide email dated April 5, 2023 submitted the following explanation:

“Expenses are based on actuals. The expenses in FY 2018-19 refers to the consultancy engagements with AECOM and KITCO. During COVID years, airport has cut down on consultancy charges. However, with resumption of normal operations, several consulting projects are anticipated due to which the said amount has been budgeted.”

The break-up of actual expenses for FY 2018-19 was examined and it was observed that the same are higher mainly because of consultancy charges and legal & professional fees totalling to ₹ 5.18 Crores incurred by AO towards consultancy engagements with AECOM India Private Limited

(AECOM) for runway related work and KITCO for terminal building related work, as well as professional charges incurred towards various professional service providers engaged on account of commencement of airport operations during the first tariff year. Hence, it is proposed to consider the same.

It has been noted that AO has incurred ₹ 1.23 Crores towards CSR expenses during the First Control Period (i.e., ₹ 0.37 Crores in FY 2018-19, ₹ 0.78 Crores in FY 2019-20 and ₹ 0.08 Crores in FY 2020-21). In this regard, the statutory provisions of the Companies Act, 2013 towards allowance of CSR expenses was reviewed and the extract of the same has been provided as under:

Section 135 (1) of Companies Act, 2013 states that ‘Every company having net worth of rupees five hundred crore or more, or turnover of rupees one thousand crore or more or a net profit of rupees five crore or more during immediately preceding financial year shall constitute a Corporate Social Responsibility Committee of the Board consisting of three or more directors, out of which at least one shall be an independent director.’ Further section 135(5) states that ‘The Board of every company referred in section 135(1), shall ensure that the company spends, in every financial year, at least two percent of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility’.

It is noted that AO has incurred losses in all the five tariff years during First Control Period. Therefore, it is proposed to not consider the above expenses incurred by AO towards CSR.

The details of Administration expenses considered as part of true up of First Control Period is shown below:

Table 13: Administration expenses as per tariff order of First Control Period vs Considered as per the Study

Particulars	(₹ in Crores)					TOTAL
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	
Administration expenses – as per Tariff Order (A)	2.41	5.86	6.27	6.71	7.18	28.43
Administration expenses – as per Actuals submitted by AO	7.66	4.20	3.77	4.04	5.09	24.76
Administration expenses – recommended as per the Study (B)	7.29	3.42	3.69	4.04	5.09	23.53

Based on the same, the it is proposed to consider the Administration expenses of ₹ 23.53 Crores as part of true up of First Control Period.

(vi) Marketing cost

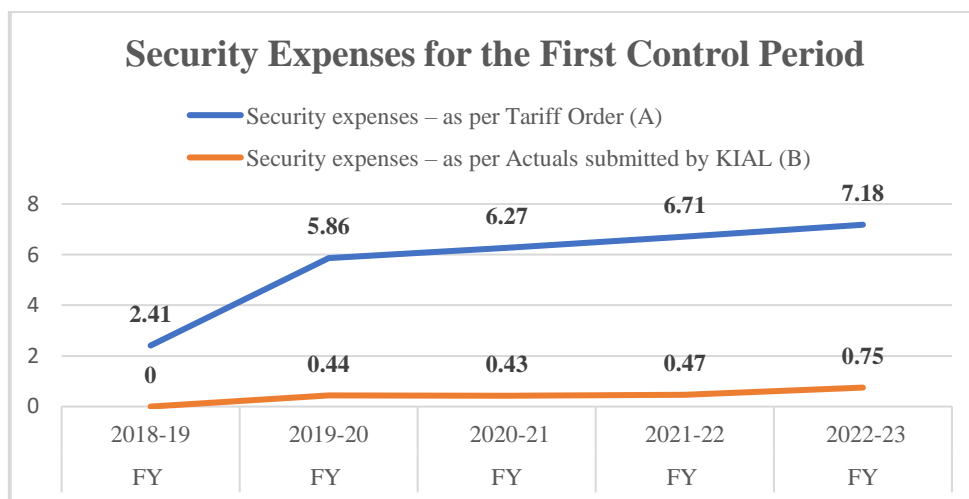
It is noted that AO has not claimed any amount towards marketing cost as part of true up in comparison to ₹ 10.75 Crores approved in the tariff order for the First Control Period. Upon further clarification with AO, the following explanation was received vide email dated January 27, 2023:

“Since KIAL is a greenfield airport sandwiched between two international airports within 100km distance, significant marketing efforts were envisaged to attract passengers in the initial years. However, the same were put on hold due to severe impact from pandemic. Therefore, the same won’t be reflected in the true up calculation as it has been deferred till operation returns to normalcy. Further, we also request you to allow us to account this marketing expense in the next control period projection since KIAL will be undertaking marketing initiatives to attract the traffic.”

After reviewing the above explanation of KIA, it is proposed not to consider any amount towards marketing cost as part of true up.

(vii) **Security expenses****Table 14: Comparison of Security expenses as per tariff order of First Control Period vs Actuals**

Particulars	(₹ in Crores)					TOTAL
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	
Security expenses – as per Tariff Order (A)	2.41	5.86	6.27	6.71	7.18	28.43
Security expenses – as per Actuals submitted by AO (B)	-	0.44	0.43	0.47	0.75	2.09
Variance (C = B - A)	(2.41)	(5.42)	(5.84)	(6.24)	(6.43)	(26.34)
Variance in %						(92.65%)

Figure 6: Analysis of Security Expenses

It is observed from the above table that the Security expenses claimed by AO are much lower as compared to the amount approved in the tariff order for the First Control Period. Upon further clarification, AO vide email dated January 27, 2023 provided the following explanation:

“The projections of cost for security in the MYTP submission for the first control period was done basis the benchmark study with other airports such as Kochi, Calicut and Trivandrum as there was no historical data with respect to security expenditure. Based on the initial traffic estimates KIAL had envisaged support from outsourced parties for providing security services at the airport considering the size of the asset. However, the expenses are based on the actual contracts outsourced to third party for providing security services in the city side. We request you to consider the expenditure basis the actual figures reported.”

It is observed that Security expenses claimed by AO are much lower than the approved amount because the security services from outsourced parties that were originally envisaged, based on traffic estimates did not materialize due to lower traffic which was in turn due to impact of the pandemic. However, it is observed that AO has engaged a third-party service provider (i.e., outsourced security services) for providing security in addition to CISF personnel, both in front of and inside the Terminal Building. Considering all the above factors, it is proposed to allow Security expenses as mentioned in Table 14 for true up of the First Control Period.

(viii) Store and spares

It is observed that AO has not separately claimed any amount towards Stores and spares as compared to the approved amount of ₹ 10.39 Crores in the tariff order of First Control Period. Upon further clarification, KIAL vide email dated January 27, 2023 submitted the following explanation:

“The costs incurred as part of stores and spares are considered as part of repairs and maintenance.”

Based on the above, it is proposed to consider stores and spares already included under ‘Repairs and Maintenance’ expenses.

(ix) Other Airport Operating expenses

It has been observed that the aforementioned expenses totalling to ₹ 76.91 Crores claimed by AO are unapproved as per the tariff order of the First Control Period. The details of such expenses are shown in the table below:

Table 15: Details of Other Airport Operating expenses claimed by AO as part of true up for the First Control Period

Particulars	(₹ in Crores)					TOTAL
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	
Customs Cost Recovery Charges (A)	2.53	8.65	8.78	10.82	12.72*	43.50
Aviation Meteorological Support Services (B)	0.24	0.98	1.08	1.19	1.37*	4.86
Communication, Navigation and Surveillance and Air Traffic Management (CNS-ATM) Services (C)	1.26	6.78	6.22	1.81	6.14*	22.21
Trolley Retrieval Services (D)	-	0.50	0.55	0.35	0.58*	1.98
Insurance (E)	0.19	0.67	1.00	1.30	1.22*	4.38
Total Other Airport Operating expenses (F=Sum(A:E))	4.21	17.58	17.63	15.47	22.02	76.91

* Amount for FY 2022-23 considered as per Table 2

Upon further clarification with AO regarding the expenses, the following documents and clarification were provided:

- (i) Customs cost recovery charges refer to the reimbursement of salary cost of customs officials posted at Kannur International Airport vide Circular No. 16/2013 – Customs dated April 10, 2013 issued by Central Board of Excise & Customs, Department of Revenue, Ministry of Finance. The Office of Commissioner of Customs issues a letter / raises a note along with the details of salary cost of customs staff posted at KIA

According to the norms for identifying the class of an airport, the minimum number of International Flights per annum and minimum number of passengers per annum should be 3,500 & 3 Lakh respectively for Class C Airport in the each of the preceding two financial years. After analysing the trend of the PAX and ATM of Kannur Airport, it is noted that the same qualifies as a Class C airport, for which the total staff as per the norms should be 28 (such as 8 Superintendent, 16 Inspector & 4 Sepoy), as against 36 staff claimed by AO.

Accordingly, the Custom cost recovery expenses have been rationalised in Chapter 4 based on staffing norms applicable for Class C airport, as per the above-mentioned Circular.

- (ii) Aviation Meteorological Support Service charges refer to the reimbursement of salary cost and support service charges payable on monthly basis to Indian Meteorological Department (IMD) by AO for the aviation meteorological services provided to the airport and is based on a Memorandum of Understanding (MOU) entered into between AO and IMD.
- (iii) Communication, Navigation and Surveillance and Air Traffic Management Service charges refer to charges payable by AO to AAI on 'quarterly cost recovery' basis for CNS-ATM services rendered by AAI at Kannur International Airport and the same is based on the terms and conditions of the agreement entered into between AAI and KIAL (as per Clause 5.1.1 and 7.4 of the Agreement between KIAL and AAI).
- (iv) AO has provided the copies of letters-cum-notes issued by Office of the Commissioner of Customs / MOU with IMD / Agreement with AAI, etc. along with break-up of amounts, vide emails dated January 27, 2023 and April 5, 2023.
- (v) In respect of trolley retrieval services, AO has confirmed that the same have been outsourced to a third-party vendor and incurred based on agreed terms and conditions of the agreement entered with the vendor. Further, insurance refers to insurance expenses incurred on various assets and equipment of the Airport.
- (vi) AO vide email dated January 27, 2023 has provided the following explanation regarding the essentiality of aforementioned services and related charges:

"KIAL is a greenfield airport, and these charges are governed as per the terms in the contract for greenfield airports signed between KIAL and the respective central government agencies. Such contracts were not executed during the submission of MYTP for the First Control Period and the historical figures for the same were not available and hence were unable to estimate the expenditure for the same during the time of submission. The services are provided on a cost recovery basis as per the terms and conditions. Further, such costs are only existent for a greenfield airport and hence KIAL was not able to benchmark the same since a comparable greenfield airport with similar passenger and aircraft traffic profile was not available. These charges are inevitable for any airport since such services are critical for carrying out operations at any airport. Hence, we request you to consider the same on actuals."

In respect of Customs cost recovery charges and Aviation Meteorological Support Service charges, AO has availed the services of the concerned Government Authority / Department for the functioning of smooth conduct of airport operations and incurred the expenses based on agreed terms. Hence, both the expenses are recommended as part of the Study.

However, it is pertinent to note that CNS-ATM services are currently being provided by AAI at Kannur International Airport and the tariff for ANS is presently regulated by the Ministry of Civil Aviation. All the assets, expenses and revenues pertaining to ANS are considered separately by the Ministry while determining tariff for ANS services. Further, the tariff for ANS services is determined at the Central level by the Ministry of Civil Aviation to ensure uniformity across the Airports in the Country. Hence, AERA determines tariff for Aeronautical services of the Airport Operator, by excluding the assets, expenses and revenues from ANS. Based on the same, it is proposed not to consider the CNS-ATM charges of ₹ 22.21 Crores claimed by AO during the First Control Period.

However, it is proposed to consider trolley retrieval service charges and insurance (on assets) as part of the Study.

Based on all the above, it is proposed to consider Other Operating expenses of ₹ 54.71 Crores for the First Control Period as shown below:

Table 16: Details of Other Airport Operating expenses claimed by AO vs Considered by the Study

(₹ in Crores)						
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	TOTAL
Total Other Airport Operating expenses – claimed by AO (refer Table)	4.21	17.58	17.63	15.47	22.02	76.91
Other Airport Operating expenses considered by the Study						
Customs Cost Recovery Charges	2.53	8.65	8.78	10.82	12.72	43.50
Aviation Meteorological Support Services	0.24	0.98	1.08	1.19	1.37	4.86
Trolley Retrieval Services	-	0.50	0.55	0.35	0.58	1.98
Insurance	0.19	0.67	1.00	1.30	1.22	4.38
Total Other Airport Operating expenses considered by the Study	2.96	10.80	11.41	13.66	15.88	54.71

(x) **CISF induction fee**

It has been assessed that AO has claimed an unapproved amount of ₹ 9.80 Crores towards CISF Induction fee during FY 2018-19. Upon further clarification, AO has submitted the following explanation:

“KIAL had not included the expenses related to CISF in line with Authority’s direction in the first control period. However, KIAL based on demand letter dated May 7, 2018 placed a security deposit of Rs.982.03 Lakh with the Ministry of Home Affairs (MoH), towards deployment of CISF staff induction. Subsequently, KIAL requested vide letter dated October 29, 2019 for a refund of such deposit from MoH. The MoH had responded vide letter dated December 2, 2019, that upon clearance from Ministry of Civil Aviation (MoCA) for refunding the deposit the same shall be processed. As per the discussions held with the MoCA on June 4, 2021, KIAL was informed that the matter was taken up with the MoH and they stated that the fund was deposited in the consolidated fund of India and the fund is non-refundable.

KIAL is of the view that the Security Deposit was paid from its own resources and this deposit was to be recouped from PSF collections after commencement of operations. Due to low passenger volumes since Government of India is not allowing foreign carriers, PSF collections were inadequate to recoup the Security Deposit and meet the Cost of Deployment of CISF personnel and their related expenses. Hence KIAL is of the view that since security function is also a sovereign function and considering the fact that PSF cannot be used For KIA’s own expenditure, CISF cost is to be borne by the Government of India”.

It has been identified that AO is claiming the disputed amount deposited earlier with the Government and subsequently not refunded, as an ‘expense’ only for Aeronautical purposes (i.e., regulatory filing) since the same is not recoverable from PSF collections. However, it is observed that in the audited financials of KIA for the period up to FY 2021-22, the amount is classified as ‘Security deposit’ and hence, the same cannot be considered differently i.e., as an ‘expense’ only for the purpose of regulatory filing. It is observed that, there is a bright possibility of KIA recovering the deposit amount from PSF collections in the next Control Period, with expected increase in the

passenger volumes. Furthermore, it is pertinent to note that , paras 8.4 and 3.a. of the tariff order of First Control Period mentions the following about CISF costs:

8.4 *“The Authority has noted that AO has included CISF cost as part of security expenses while computing operation and maintenance expenditure proposed to be incurred during the first control period. Since CISF costs form part-of PSF (security), the Authority has proposed to exclude such amounts from security expenses while computing O&M expenditure proposed to be incurred during the first control period.”*

3.a *“The Authority has decided to exclude expenses relating to the staff of CISF.”*

Based on the above factors, it is proposed not to consider the CISF Induction fee of ₹ 9.80 Crores as part of the Study.

(xi) Cargo related expenses

It has been observed that AO has claimed unapproved Cargo related expenses of ₹ 0.62 Crores for the First Control Period, i.e., actual expenses of ₹ 0.21 Crores towards Cargo handling and other related costs for the FY 2021-22 and Unaudited figures of ₹ 0.41 Crores for the last tariff year, i.e., FY 2022-23.

In this respect, it is observed that AO has selected the Cargo O&M vendor i.e., Cargo Service Centre India Private Limited, based on competitive bidding process and after carrying out necessary technical / financial evaluation of all the bid proposals. AO subsequently entered into a Contract with the vendor (i.e., O&M agreement) on February 2, 2021 for cargo handling operations.

It is pertinent to note here that, AO started Cargo operations in October 2021 out of an interim cargo facility and the operations are presently continuing from the same facility. It is observed that the international imports were commenced only in May 2022 and the international cargo represents approx. 99% of the total cargo volume handled by AO. Based on the same, it is proposed to consider the Cargo related expenses of ₹ 0.62 Crores claimed by AO, as shown below:

Table 17: Cargo related expenses as per tariff order of First Control Period vs Considered as per the Study

Particulars	(₹ in Crores)					TOTAL
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	
Cargo related expenses as per Tariff Order (A)	-	-	-	-	-	-
Cargo related expenses considered as per the Study (B)	-	-	-	0.21	0.41*	0.62

* Amount for FY 2022-23 considered as per Table 2

(xii) ORAT

It is noted that AO has claimed unapproved amount of ₹ 1.52 Crores towards Operational Readiness Activation and Transition (ORAT) in the FY 2018-19 and provided detailed break-up and reports relating to completion of ORAT process. Upon further clarification, AO vide email dated January 27, 2023 provided the following explanation:

“These costs are related to the Operational readiness and Airport Transfer (ORAT) which involves series of testing activities carried out before an airport starts its operations. KIAL being a greenfield airport, ORAT was required prior to start of operations. However, the expenditure related to the same was not available during the time of submission and hence was not included as part of projections. Therefore, we request you to consider the same on actuals.”

Upon examination of the above explanation provided by AO and AERA's Tariff Order issued for BIAL (refer para 5.5.24 and 7.5.32 of Order No. 11 / 2021-22 for the Third Control Period of KIA, Bengaluru) wherein it was noted that ORAT was considered as part of CAPEX along with Pre-operative expenses and included in the RAB. It is pertinent to note here that the ORAT process was conducted by BIAL's internal team and the expenses included costs relating to BIAL's core team, delivery specialists, transportation cost, training charges, provision of various facilities, consumables, etc. (refer para 7.2.65 and Table 133 of Order No. 11 / 2021-22).

However, in respect of KIA, it has been identified that the ORAT process was handled by a third-party service provider, i.e., GMR Airport Developers Ltd and the entire amount of ₹ 1.52 Crores refer to the professional fees / charges paid to the third-party service provider. Based on the same, it is proposed to consider ORAT under O&M expenses of FY 2018-19 and not as part of RAB.

(xiii) Airport inauguration expenses

It has been noted that AO has claimed ₹ 11.72 Crores towards Airport inauguration expenses as part of true up which was not specifically approved by AERA in the tariff order of the First Control Period. AO has also submitted a detailed break-up of the same and vide email dated January 27, 2023, the following explanation in support of its claim:

“KIAL is a greenfield airport which is sandwiched between two international airports (Mangalore and Calicut) within a ~100-150 km radius. Calicut and Mangalore have been in operation for past few decades and have a strong presence in their respective catchments (which include the catchment area for Kannur airport also). Therefore, being a greenfield airport, KIAL had to carry out various initiatives as part of airport inauguration to attract the passengers to the airport. The initiatives supported in achieving the PAX movement of 1.6 million in first operational year for a greenfield airport such as KIAL in a competitive environment. Hence, we request you to consider the expenses on actuals.”

It is noted that approx. 92% of the expenses pertain to marketing cost i.e., advertisement & promotion / branding expenses both prior to and after the commencement of the operations during the first tariff year, i.e., FY 2018-19. In this regard, inferences were drawn from the Authority's Tariff Order No. 64/2020-21 (para 6.2.41) issued for MIAL on February 27, 2021 pertaining to treatment of advertising expenses:

- Airport is an essential utility service and its use does not necessarily depend on advertisements given or lack of it;
- Most of these advertisements carry the promoter's logo in addition to the logo of the airport and perhaps is a way to promote promoter's interest while publicizing the airport;
- Advertising cost is a corporate overhead, as advertisements given promote non-aeronautical services as well as aeronautical services rendered by the Airport Operator.

AO has allocated the advertisement & branding cost as fully Aeronautical. It is noted that the inauguration expenses have been incurred for the first time by the Airport Operator. However, on comparing the same with other similar airports, such expenses seems to be on the higher side and the same have been rationalised under Chapter 4 of this Study report.

Based on the above observations, the allowable Aeronautical O&M expenses has been determined, which is subject to further analysis on rationalisation and re-allocation of the expenses. The same has been presented below:

Table 18: Aeronautical O&M expenses considered from FY 2018-19 to FY 2022-23 as per the Study (prior to rationalisation and re-allocation)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
O&M Expenses Submitted by AO (refer Table 3)	51.65	61.78	58.58	60.05	70.30	302.36
O&M expenses considered by the Study						
Land lease rental	-	-	-	-	-	-
Employee costs	7.33	11.05	10.99	11.45	11.11	51.93
Power, Fuel & Water	3.58	12.92	9.07	9.82	11.33	46.71
Repair & Maintenance	5.83	15.59	16.69	18.59	19.60	76.30
Administration	7.29	3.42	3.69	4.04	5.09	23.53
Marketing Cost	-	-	-	-	-	-
Security	-	0.44	0.43	0.47	0.75	2.09
Stores & Spares	-	-	-	-	-	-
Other Airport Operating Expenses	2.96	10.80	11.41	13.66	15.88	54.71
CISF Induction fee	-	-	-	-	-	-
Cargo related expenses	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	11.72	-	-	-	-	11.72
Total	40.23	54.22	52.28	58.24	64.16	269.13

3.4. Summary

- 3.4.1. The Aeronautical O&M expenses amounting to ₹ 225.47 Crores was approved by the Authority in the Tariff Order for First Control Period.
- 3.4.2. The Aeronautical O&M expenses as per AO's True up submission for the period from FY 2018-19 to FY 2022-23 aggregates to ₹ 300.55 Crores, wherein AO had claimed audited actuals of ₹ 232.06 Crores up to FY 2021-22 and unaudited actuals of ₹ 70.30 Crores for the last tariff year, i.e., FY 2022-23 (totalling to ₹ 302.36 Crores for the First Control Period)
- 3.4.3. The Aeronautical O&M expenses of ₹ 302.36 Crores are higher than the amount of ₹ 225.47 Crores approved in the Tariff Order for the First Control Period, resulting in a deviation of 34.10%.
- 3.4.4. It is observed that the major reasons for the overall deviation of 34.10 % are the increase in actual expenses relating to Power, fuel & water, as compared to the amount approved in the Tariff Order and the claim for certain unapproved expenses such as Customs cost recovery charges, Aviation Meteorological service charges, CNS-ATM service charges, CISF induction fee, ORAT & Inauguration expenses.
- 3.4.5. It is observed that the Power, fuel & water expenses were higher than the amount approved in the Tariff Order, mainly due to actual electricity expenses being significantly higher than the amount approved in the Tariff Order of the First Control Period. Further, it is noted that higher Utility charges (Power, fuel etc.) had been incurred by the AO, as the infrastructure had been built to handle passenger capacity of 9.34 MPPA. It is further noted that due to the lower traffic during the First Control Period, KIA had utilised only a limited portion of the Terminal Building and therefore, the higher power expenses are not justified. Based on the above factors, it is proposed to rationalize the power expenses (refer Chapter 4).

- 3.4.6. It has been determined that the employee costs are higher as compared to its traffic growth and against global benchmarks and therefore, it is proposed to rationalise the same (refer Chapter 4).
- 3.4.7. KIA being a new airport wherein all the assets have been newly created / acquired since it commenced operations only in December 2018. The Repairs and Maintenance (R&M) expenses were noted to be within the cap of 6% of opening Net Block of each tariff year of the First Control Period. However, it is noted that KIA has incurred, a relatively higher Repairs & Maintenance expenses (excluding housekeeping) although it has a lower passenger traffic base, as compared with other similar airports. Therefore, it is proposed to rationalise the Repairs and Maintenance expenses as part of the Study (refer Chapter 4).
- 3.4.8. It is proposed not to consider CSR expenses, as the same is derived as NIL based the statutory provisions of the Companies Act, 2013.
- 3.4.9. It has been determined that the unapproved expenses such as Customs cost recovery charges, Aviation Meteorological service charges and ORAT are costs incurred towards essential services of the Airport and hence proposed to consider the same as part of true up of the First Control Period. However, it is proposed not to consider expenses towards CISF induction fee and CNS-ATM charges, as part of the Study for true up of the First Control Period.
- 3.4.10. Aeronautical O&M expenses summing up to ₹ 269.13 Crores have been considered as a part of True up, which is subject to further analysis on rationalisation and re-allocation of expenses (refer Chapter 4 and Chapter 5).

4. RATIONALISATION OF O&M EXPENSES

4.1. Background

- 4.1.1. Based on the Assessment of reasonableness of O&M expenses discussed in Chapter 3, it is observed that certain expenses claimed by AO during the First Control Period (FY 2018-19 to FY 2022-23) such as Employee expenses, Power, fuel & water expenses, Repairs & Maintenance expenses and Airport Inauguration expenses are not in line with normal operating efficiency levels. Accordingly, it is proposed to rationalise the same.
- 4.1.2. As part of the Study, the unapproved expenses such as Customs cost recovery charges, Aviation Meteorological service charges and ORAT have been determined as costs incurred towards essential services of the airport and hence it is proposed to consider the same as part of true up of the First Control Period.
- 4.1.3. However, it is proposed not to consider certain other expenses claimed by AO towards CISF induction fee, CNS-ATM service charges (both being unapproved expenses) and CSR expenses.

4.2. Rationalisation of O&M expenses

The detailed analysis of O&M expenses is expected to help in understanding the reasons behind the existing expense levels being over/under the efficient expense levels. Based on this analysis, the existing expenses have been rationalised in accordance with AERA Guidelines, so as to determine the efficient Operation and Maintenance expenses For KIA.

4.2.1. Rationalisation of Employee expenses

- 4.2.1.1. Based on the analysis in para 3.3.3 (ii) it has determined that the Employee Head Count and corresponding cost should be rationalised. Based on the same, the department-wise breakup of employees submitted by AO, has been examined for the First Control Period along with the basis of computing the Employee Head Count ratio. The details are shown below:

Table 19: Employee details submitted by AO

Department	Classification	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23*
MD's Office	Common	4	5	4	4	4
Liaison Office	Non-Aeronautical	0	1	1	1	1
Human Resources	Common	3	3	2	3	2
Finance	Common	5	5	6	6	6
Admin & Land	Common	4	3	2	2	2
Secretarial	Aeronautical	3	3	3	3	1
Engineering-Civil & Electrical	Aeronautical	18	17	17	15	14
IT & Electronics	Aeronautical	5	4	4	4	4
Commercial	Non-Aeronautical	2	3	5	5	6
Operations	Aeronautical	29	28	28	27	24
Airport Security	Common	31	31	29	35	33
ARFF	Aeronautical	67	62	62	60	55
Corporate Affairs	Common	1	1	0	0	0
Total		172	166	163	165	152
Direct Aeronautical Employees		122	114	114	109	98
Common employees		48	48	43	50	47

Department	Classification	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23*
Direct Non- Aeronautical Employees.		2	4	6	6	7
Common employee's apportionment						
Aeronautical		47.23	46.37	40.85	47.39	43.87
Non- Aeronautical		0.77	1.63	2.15	2.61	3.13
Total		48	48	43	50	47
Head Count after apportionment of Common employees						
Total Number of Aero Employees		169	160	155	156	142
Total Number of Non-Aero Employees		3	6	8	9	10
Employee Head Count ratio (Aeronautical: Non-aeronautical)		98.39%	96.61%	95.00%	94.78%	93.33%

4.2.1.2. It is noted that Security department head count submitted by AO for the First Control Period are on the higher side as compared to the level of operations, lower traffic growth and the employee headcount of other similar airports.

4.2.1.3. Upon further analysis of the Headcount of Security personnel for each Financial Year, it was noted that the same includes Baggage Screener Executives and Trainees, who are generally engaged for monitoring passenger flow through screening checkpoints to ensure order and efficiency at the airport. The Headcount of Baggage Screener Executives included as part of Security for the First Control Period, were 25 for FY 2018-19, 23 for FY 2019-20 and FY 2020-21 and 8 for FY 2021-22 and FY 2022-23. As these Screeners cater to the essential requirements of the passengers, the expenses incurred towards them have been considered as Aeronautical.

4.2.1.4. It is noted that majority of the Headcount included under Security Personnel for the FY 2018-19, FY 2019-20 and FY 2020-21 pertains to Screener Executives. Therefore, it is proposed to consider the actual Headcount of Security Personnel, submitted by AO for the aforementioned tariff years. However, in the last 2 tariff years, the Headcount of Screeners is much lesser. Further, it is noted that Headcount of Security personnel for the last 2 tariff years are on the higher side when compared with the level of operations, lower traffic growth and the employee numbers of other similar airports. Based on the above factors, it is proposed to consider 50% of the Security headcount (other than Screeners) for the last 2 tariff years i.e., FY 2021-22 and FY 2022-23

Further, it is noted that the employees of Secretarial department and IT & Electronics department have been classified as 'Aeronautical' which, as part of the Study, is proposed to be reclassified as 'Common' based on the approach adopted for other similar airports. Based on the above factors, the Aeronautical Employee Head Count and the corresponding ratios for all the FYs have been recomputed. The details of the same are as follows:

Table 20: Employee Head Count and ratio as per Study

Department	Classification	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
MD's Office	Common	4	5	4	4	4
Liaison Office	Non- Aeronautical	0	1	1	1	1
Human Resources	Common	3	3	2	3	2
Finance	Common	5	5	6	6	6
Admin & Land	Common	4	3	2	2	2

Department	Classification	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Secretarial	Common	3	3	3	3	1
Engineering-Civil & Electrical	Aeronautical	18	17	17	15	14
IT & Electronics	Common	5	4	4	4	4
Commercial	Non- Aeronautical	2	3	5	5	6
Operations	Aeronautical	29	28	28	27	24
Airport Security	Common	31	31	29	20	19
ARFF	Aeronautical	67	62	62	60	55
Corporate Affairs	Common	1	1	-	-	-
Total		172	166	163	150	138
Direct Aeronautical Employees						
Direct Aeronautical Employees		114	107	107	102	93
Common employees						
Common employees		56	55	50	42	38
Direct Non- Aeronautical Employees						
Direct Non- Aeronautical Employees		2	4	6	6	7
Common employee's apportionment						
Aeronautical		55	53	47	39	35
Non- Aeronautical		1	2	3	3	3
Total		56	55	50	42	38
Head Count after apportionment of Common employees						
Total Number of Aero Employees		169	160	154	141	128
Total Number of Non-Aero Employees		3	6	9	9	10
Employee Head Count ratio (Aeronautical: Non-aeronautical)		98.28%	96.40%	94.69%	94.44%	93.00%

4.2.1.5. Based on the above rationalisation in employee headcount and reclassification of two departments, the corresponding reduction in employee cost is shown below:

Table 21: Employee Cost as per AO vs Revised cost as per the Study

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
As per AO						
Total Employee Head Count as per AO	172	166	163	165	152	
Total Employee cost as per AO	7.45	11.44	11.57	12.08	11.90	54.44
Aero ratio applied by AO	98.39%	96.61%	95.00%	94.78%	93.33%	
Aeronautical Employee Cost claimed by AO (A)	7.33	11.05	10.99	11.45	11.11	51.93
As per Study						
Total Employee Head Count revised as per Study	172	166	163	150	138	
Aero ratio applied as per Study	98.28%	96.40%	94.69%	94.44%	93.00%	
Aeronautical Employee Cost considered by Study (B)	7.32	11.03	10.95	10.35	10.05	49.70
Amount proposed not to be considered by the Study (C = A-B)	0.01	0.02	0.04	1.10	1.06	2.23

Based on all above factors, it is proposed to consider the Employee cost of ₹ 49.70 Crores as per Table 21 for the First Control Period.

4.2.2. Rationalisation of Power, fuel & water expenses

4.2.2.1. Based on the detailed analysis given in para 3.3.3 (iii) and Table 9, the expenses towards the Aeronautical Power, fuel & water expenses of KIA has been rationalised by considering the expenses of MIA as the base (since its more comparable to KIA) and has derived the proportionate cost of KIA on the basis of PAX traffic which works out to ₹ 25.34 Crores (i.e., ₹ 58.41 (Utility expense of MIA/ PAX) x 4.34 MPPA (PAX of Kannur Airport)). The Study proposes to allow ₹ 25.34 Crores as against ₹ 46.71 Crores claimed by AO and reduce the differential amount of ₹ 21.38 Crores (i.e., ₹ 46.72 Crores minus ₹ 25.34 Crores) over four tariff years starting from FY 2019-20 since the airport commenced its operations and was functional only for approx. four months in the first tariff year, i.e., FY 2018-19. The details of the same are shown below:

Table 22: Adjustment to Power, fuel & water expenses proposed by the Study

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Power, fuel & water expenses claimed by AO (A)*	3.58	12.92	9.07	9.82	11.33	46.72
Power, fuel & water expenses considered by the Study (B)	3.58	7.37	3.85	4.45	6.09	25.34
Amount proposed not to be considered by the Study (C = A - B)	-	5.55	5.22	5.37	5.24	21.38

* Amount derived as per Table 2

It is suggested that the AO should implement energy saving measures, by optimizing power consumption in areas within the Terminal Building, where there is no passenger movement.

4.2.3. Rationalisation of Repairs & Maintenance expenses

4.2.3.1. Based on the analysis performed in Table 11, it is proposed to rationalise the Repairs & Maintenance expenses apart from housekeeping charges by considering the expenses of MIA as the base (since its more comparable to KIA) and has derived the proportionate cost of KIA based on the PAX traffic, which works out to ₹ 27.61 Crores (i.e., ₹ 63.62 (expense of MIA / PAX Traffic) x 4.34 MPPA (PAX of KIA) . Based on the above factors, it is proposed to allow ₹ 27.61 Crores *as against* ₹ 36.78 Crores claimed by AO and reduce the differential amount of ₹ 9.17 Crores (i.e., ₹ 36.78 Crores minus ₹ 27.61 Crores) over four tariff years starting from FY 2019-20 since the airport commenced its operations and was functional only for approx. four months in the first tariff year, i.e., FY 2018-19. The details of the same are shown below:

Table 23: Adjustment to Repairs & Maintenance expenses proposed by the Study

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Repairs & Maintenance expenses – as per Actuals submitted by AO						
Housekeeping charges	3.13	8.98	8.44	9.08	9.89	39.52
Other Repairs and maintenance	2.70	6.61	8.25	9.51	9.71	36.78
Total Repairs & Maintenance expenses claimed by AO (A)	5.83	15.59	16.69	18.59	19.60	76.30
Repairs & Maintenance expenses – as per the Study						
Housekeeping charges	3.13	8.98	8.44	9.08	9.89	39.52

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Other Repairs and maintenance	2.7	4.15	5.45	6.86	8.45	27.61
Total Repairs & Maintenance expenses considered by the Study (B)	5.83	13.13	13.89	15.94	18.34	67.13
Amount proposed not to be considered by the Study (C = A - B)	-	2.46	2.80	2.65	1.26	9.17

4.2.4. Rationalisation of Other Airport Operating Expenses

4.2.4.1. As stated in para 3.3.3 (ix) (i), Custom Cost Recovery expenses claimed by AO have been proposed to be rationalised based on the Staffing Norms defined for Class C Airport, as per the Circular No. 16/2013 – Customs dated April 10, 2013 issued by Central Board of Excise & Customs, Department of Revenue, Ministry of Finance. Accordingly, the Customs Recovery costs have been determined as ₹ 33.70 Crores (considering proportionate salary costs of 28 officers as per norms, as against 36 officers claimed by AO) for the period from FY 2018-19 to FY 2022-23, as against ₹ 43.50 Crores claimed by AO (refer Table 16). The details of the same are shown below:

Table 24: Adjustments for Other Airport Operating Expenses proposed by the Study

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Total Other Airport Operating expenses – considered for True up (refer Table 16) (A)	2.96	10.80	11.41	13.66	15.88	54.71
Other Airport Operating expenses considered by the Study						
Customs Cost Recovery Charges (B)	1.96	6.69	6.81	8.39	9.87	33.72
Aviation Meteorological Support Services (C)	0.24	0.98	1.08	1.19	1.37	4.86
Trolley Retrieval Services (D)	-	0.50	0.55	0.35	0.58	1.98
Insurance (E)	0.19	0.67	1.00	1.30	1.22	4.38
Total Other Airport Operating expenses proposed by the Study (F= B+ C+ D+ E)	2.39	8.84	9.44	11.23	13.04	44.94
Amount proposed not to be considered by the Study (G = A - F)	0.57	1.96	1.97	2.43	2.86	9.78

4.2.5. Rationalisation of Airport inauguration expenses

4.2.5.1. Based on analysis performed in para 3.3.3 (xiii), it is proposed to rationalise the Airport inauguration expenses claimed by AO which are mostly in the nature of advertisement, branding and promotion. Taking cognisance of the fact that such expenses have been incurred for the first time by AO, it is proposed to consider the same for true up of the First Control Period. However, on a comparison of such expenses incurred by other similar airports, it appears ₹ 11.72 Crores claimed by AO is on the higher side. Therefore, it is proposed to consider ₹ 5.86 Crores (which is about 50% of the expense claimed by AO), for true up of the First Control Period. The details of the same are shown below:

Table 25: Adjustment to Airport inauguration expenses proposed by the Study
(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Airport inauguration expenses – as per Actuals submitted by AO (A)	11.72	-	-	-	-	11.72

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Airport inauguration expenses – considered by the Study (B)	5.86	-	-	-	-	5.86
Amount proposed not to be considered by the Study (C = A - B)	5.86	-	-	-	-	5.86

4.2.5.2. Based on the observations made in Chapter 3 (refer para 3.3.3 (i) to (xiii)), Table 21, Table 22, Table 23 and Table 25 above, it is proposed to consider the following Aeronautical O&M expenses of KIA (prior to reallocation/post rationalisation), which is subject to further analysis on reclassification and re-allocation of ratios:

Table 26: Aeronautical O&M expenses post rationalisation proposed by the Study

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Aeronautical O&M expenses recommended as a part of True up (refer Table 18) = A						
Land lease rental	-	-	-	-	-	-
Employee costs	7.33	11.05	10.99	11.45	11.11	51.93
Power, Fuel & Water	3.58	12.92	9.07	9.82	11.33	46.71
Repair & Maintenance	5.83	15.59	16.69	18.59	19.60	76.30
Administration expenses	7.29	3.42	3.69	4.04	5.09	23.53
Marketing Cost	-	-	-	-	-	-
Security	-	0.44	0.43	0.47	0.75	2.09
Stores & Spares	-	-	-	-	-	-
Other Airport Operating Expenses (refer Table 16)	2.96	10.80	11.41	13.66	15.88	54.71
CISF Induction fee	-	-	-	-	-	-
Cargo related expenses	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	11.72	-	-	-	-	11.72
Total Aeronautical O&M expenses recommended as part of True Up (refer Table 18) (A)	40.23	54.22	52.28	58.24	64.16	269.13
Rationalisation proposed by the Study = B						
Land lease rental	-	-	-	-	-	-
Employee costs (refer Table 21)	0.01	0.02	0.04	1.10	1.06	2.23
Power, Fuel & Water (refer Table 22)	0.00	5.55	5.22	5.37	5.24	21.38
Repair & Maintenance (refer Table 23)	0	2.46	2.80	2.65	1.26	9.17
Other Airport Operating Expenses (refer Table 24)	0.57	1.96	1.97	2.43	2.86	9.78
Airport inauguration expenses (refer Table 25)	5.86	-	-	-	-	5.86
Total Adjustments made by the Study (B)	6.44	9.99	10.03	11.55	10.42	48.42
Expenses post rationalisation, as proposed by the Study: C = A - B						
Land lease rental						
Employee costs	7.32	11.03	10.95	10.35	10.05	49.70
Power, Fuel & Water	3.58	7.37	3.85	4.45	6.09	25.34

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Repair & Maintenance	5.83	13.13	13.89	15.94	18.34	67.13
Administration expenses (refer Table 13)	7.29	3.42	3.69	4.04	5.09	23.53
Marketing Cost	-	-	-	-	-	-
Security (refer Table 14)	-	0.44	0.43	0.47	0.75	2.09
Stores & Spares	-	-	-	-	-	-
Other Airport Operating Expenses	2.39	8.84	9.44	11.23	13.02	44.92
CISF Induction fee	-	-	-	-	-	-
Cargo related expenses (refer Table 17)	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	5.86					5.86
Total Aero O&M expenses considered by the Study (C = A – B)	33.79	44.23	42.25	46.69	53.75	220.71

4.2.5.3. Based on the Table 26 above, it is proposed to consider the Aeronautical O&M expenses of ₹ 220.71 Crores, for further analysis on re-classification and re-allocation of expenses based on appropriate ratios.

4.3. Summary of rationalisation of O&M expenses

- 4.3.1. The Aeronautical O&M expenses of KIA for the First Control Period (i.e., FY 2018-19 to FY 2022-23) is ₹ 302.36 Crores (refer Table 2).
- 4.3.2. Based on the observations made in Chapters 3 and 4, the allowable Aeronautical O&M expenses has been determined as ₹ 269.13 Crores (refer Table 18), which is subject to further analysis on re-classification and reallocation of expenses based on appropriate ratios.
- 4.3.3. The impact due to rationalisation is ₹ 48.42 (which is ₹ 269.13 Crores less ₹ 220.71 Crores) for the FY 2018-19 to FY 2022-23.
- 4.3.4. Further, it is observed that since certain Aeronautical expenses such as Employee cost, Power, fuel & water, Repairs & Maintenance (excluding housekeeping charges), Custom Cost Recovery (included in Other Airport Operating Expenses) Airport inauguration expenses have already been rationalised, the same will not be considered for further analysis relating to reclassification and ratio reallocation. Similarly, the expenses which have not been considered by the Study such as CISF induction fee, CNS-ATM charges and CSR expenses will not be taken up for analysis of ratio reallocation.

5. ALLOCATION OF O&M EXPENSES BETWEEN AERONAUTICAL AND NON-AERONAUTICAL ACTIVITIES (FY 2018-19 TO FY 2022-23)

5.1. Basis of segregation of expenses

5.1.1. Principle for allocation of expenses

The O&M expenses of KIA (Airport Operator) have been segregated into the following:

- **Aeronautical expenses:** Expenses which are incurred for operation and maintenance of Aeronautical assets have been categorised as Aeronautical expenses.
- **Non-aeronautical expenses:** Expenses which are incurred for operation and maintenance of Non-aeronautical assets have been categorized as Non-aeronautical expenses.
- **Common expenses:** Expenses for which the benefits or use cannot be exclusively linked to either Aeronautical or Non-aeronautical activities have been segregated as Common expenses. Expenses primarily incurred for provision of Aeronautical services but are also used for provision of Non-aeronautical services are segregated as Common Expenses. Expenses which are used for general corporate purposes including legal, administration, and management affairs are treated as Common Expenses.

Common expenses have further been allocated to Aeronautical activities based on an appropriate ratio, considering the nature and purpose of the services for which these expenses are incurred. However, in the absence of any specific information regarding the purpose of expense, a reasonable ratio is determined based on discussions with AO and review of other records of the Airport.

5.2. Allocation of O&M expenses as per AO's submission

5.2.1. It was observed that AO in its submission of True up for the period up to March 31, 2023, has considered the Terminal Building ratio of 94.5:5.5 (Aeronautical: Non-Aeronautical area) for apportionment of common assets within the Terminal Building. This ratio has been derived on the basis of Total Area of 96.139.65 Sq. m. which includes Passenger Area & Aero Functions Area of 71,363.49 Sq. m., the Common / Aero Area of 19,482.09 Sq. m. and Non-Aeronautical Area of 5,294.07 Sq. m.

5.2.2. The following ratios have been adopted by AO for allocation of Common expenses to Aeronautical and Non-aeronautical expenses:

Table 27: Allocation ratios of Common O&M expenses as per AO's submission

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022- 23
Employee Head Count ratio (Aeronautical: Non-aeronautical)	98.4: 1.6	96.6:3.4	95:5	94.8: 5.2	93.3:6.7
Terminal Building ratio (Aeronautical: Non-aeronautical)	94.5: 5.5	94.5: 5.5	94.5: 5.5	94.5: 5.5	94.5: 5.5

5.2.3. The classification of O&M expenses as Aeronautical, Non-aeronautical and Common along with the basis of allocation of Common O&M expenses to Aeronautical and Non-aeronautical expenses, as submitted by AO, has been presented in the table below:

Table 28: Allocation of O&M expenses as per AO's submission

Expense Category	Expense Sub-Category / Description	Expense classification	Allocation
Employee cost	Salary, wages & bonus; Contribution to provident fund; Staff welfare expenses;	Common	Employee Head Count ratio of the respective FY
Administration and General costs	Administrative Expenses, Employee Training expenses, Miscellaneous Expenses, Postage & Courier Charges, Printing & Stationery Charges, Legal & Professional Fees, Recruitment Expenses, Travelling Expenses, Vehicle running & maintenance, Other operational expenses	Common	Employee Head Count ratio of the respective FY
	Consultancy Charges, CSR Expenditure, Insurance-operations	Aeronautical	-
	Rent	Common	Terminal Building ratio (94.5:5.5)
Utility expenses	Power & fuel	Aeronautical	100% net of recovery considered
	Other utility expenses i.e., water	Common	Terminal Building ratio (94.5:5.5)
Repairs & Maintenance	Housekeeping charges	Common	Terminal Building ratio (94.5:5.5)
	Other Repairs & Maintenance expenses	Common	Terminal Building ratio (94.5:5.5)
Security expenses	Security expenses	Common	Employee Head Count ratio of the respective FY
Other Operating Expenses	Customs Cost Recovery Charges, Aviation Meteorological Support Services, Communication, Navigation and Surveillance and Air Traffic Management Services, CISF Induction Fee, Trolley Retrieval Services	Aeronautical	-
	Insurance (on assets & equipment)	Common	Terminal Building ratio (94.5:5.5)
Cargo expenses	Cargo handling and other cargo related expenses	Aeronautical	-
ORAT and Airport Inauguration Expenditure	ORAT, Airport Inauguration Expenses	Aeronautical	-

5.3. Allocation of O&M expenses as per Study

5.3.1. As part of this Study report, the description, nature and purpose of various expense and expense categories, as well as basis for their segregation into Aeronautical, Non-aeronautical and Common expenses has been reviewed.

5.3.2. Further, the expenses classified as Common, are segregated between Aeronautical and Non-aeronautical expenses based on a suitable ratio. This ratio has been determined based on the underlying proportion of their expected utilisation for Aeronautical and Non-aeronautical services and activities at the Airport.

5.4. Assessment of allocation ratios for Common expenses

The following ratios have been computed and considered in this Study report for the appropriate segregation of Common assets between Aeronautical and Non-aeronautical assets for the period from FY 2018-19 to FY 2022-23.

5.4.1. Terminal Building ratio

It was observed that AO, in its True up submission for the First Control Period has considered 5.50% of total Terminal building area to be non-aeronautical area based on actual usage.

However, as per para 4.3 of the *Asset Allocation Study report*, the Terminal Building ratio has been considered as 92:8 for the First Control Period, which is also in line with the recommendations of IMG norms (as detailed in para **Error! Reference source not found.** *Asset Allocation Study report*) and the ratio considered by AERA in the past for other similar airports. Accordingly, it is proposed to consider the Terminal Building ratio of 92:8 (Aeronautical: Non-aeronautical) for allocation of O&M expenses of the First Control Period.

5.4.2. Gross Fixed Assets ratio

Based on the adjustments required in the Fixed Asset Register of KIA, identified in the *Asset Allocation Study and as per Table 14 of Asset Allocation Study*, the ratio of gross fixed assets have been considered as follows:

Table 29: Gross Fixed Assets ratio for KIA as identified in the Asset Allocation Study

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Gross Fixed Assets ratio (Aeronautical: Non-aeronautical)	94.61:5.39	94.78:5.22	94.83: 5.17	94.82 : 5.18	94.82 : 5.18

5.4.3. Employee Head Count ratio

5.4.3.1. As explained in para 4.2.1.2 and Table 20 in Chapter 4, the Employee Head Count and the corresponding ratio for all the five tariff years has been revised and the same is shown below:

Table 30: Employee Head Count and Ratio submitted by AO vs Revised by the Study

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Employee Details submitted by AO					
Total Head Count	172	166	163	165	152
Total Number of Aero Employees (after allocation of common employees)	169	160	155	156	142
Total Number of Non-Aero Employees (after allocation of common employees)	3	6	8	9	10
Employee Head Count ratio of KIA (Aeronautical: Non-aeronautical) = (A)	98.39%	96.61%	95.00%	94.78%	93.33%
Employee Details Revised by the Study					
Total Head Count	172	166	163	150	138

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Total Number of Aero Employees (after allocation of common employees)	169	160	154	141	128
Total Number of Non-Aero Employees (after allocation of common employees)	3	6	9	9	10
Employee Head Count ratio revised by the Study (Aeronautical: Non-aeronautical) = (B)	98.28%	96.40%	94.69%	94.44%	93.00%

5.4.4. Based on the review of submissions made by AO, the expenses have been analysed on a case-to-case basis and in case of any discrepancies identified in allocation, appropriate reclassification has been made for such expenses:

Table 31: Allocation of O&M expenses as per Study

Expense Category	Expense Sub-Category / Description	Expense classification by AO	Allocation as per AO	Expense classification as per the Study	Allocation as per the Study
Employee cost	Salary, wages & bonus; Contribution to provident fund; Staff welfare expenses;	Common	Employee Head Count ratio of the respective FY	Common	Amount considered by the Study (refer Table 26 of Chapter 4)
Administration and General costs	Administrative Expenses, Employee Training expenses, Miscellaneous Expenses, Postage & Courier Charges, Printing & Stationery Charges, Recruitment Expenses, Travelling Expenses, Vehicle Maintenance Expenses	Common	Employee Head Count ratio of the respective FY	Common	Revised Employee Head Count ratio of the respective FY
	Miscellaneous Expenses (meeting expenses, entertainment & refreshment, forex loss / gain etc) and Other Operational expenses (Kerala State Electricity Board inspection fees, Project site development expenses, staff uniform expenses, etc)	Aeronautical	-	Common	Terminal Building Ratio (92:8)
	Rent	Common	Terminal Building Ratio (94.5:5.5)	Common	Terminal Building Ratio (92:8)
	Consultancy Charges, Insurance-operations (includes insurance on vehicles, etc)	Aeronautical	-	Common	Gross Fixed Assets ratio
	Legal & Professional Fees	Common	Employee Head Count ratio of the respective FY	Common	Gross Fixed Assets ratio

Expense Category	Expense Sub-Category / Description	Expense classification by AO	Allocation as per AO	Expense classification as per the Study	Allocation as per the Study
Utility Expenses	Power, fuel & water expenses	Common	Terminal Building Ratio (94.5:5.5)	Common	Amount considered by the Study (refer Table 26 of Chapter 4)
Repairs & Maintenance	Other Repairs & Maintenance	Common	Terminal Building Ratio (94.5:5.5)	Common	Amount considered by the Study (refer Table 26 of Chapter 4)
	Housekeeping charges	Common	Terminal Building Ratio (94.5:5.5)	Common	Terminal Building Ratio (92:8)
Security	Security expenses	Common	Employee Head Count ratio of the respective FY	Common	Gross Fixed Assets ratio
Other Operating Expenses*	Insurance (on assets)	Common	Terminal Building Ratio (94.5:5.5)	Common	Gross Fixed Asset Ratio
	Customs Cost Recovery Charges, Aviation Meteorological Support Services, Trolley Retrieval Services	Aeronautical	-	Aeronautical	-
Cargo Related Expenditure	Cargo Handling Charges and Other Cargo related Expenditure	Aeronautical	-	Aeronautical	-
ORAT and Airport Inauguration Expenditure	ORAT	Aeronautical	-	Aeronautical	-
	Airport Inauguration Expenditure	Aeronautical	-		Amount considered by the Study (refer Table 26 of Chapter 4)

*The expenses towards CISF induction fee / CSR expenses / CNS-ATM charges have not been considered for reallocation since the same have not been considered for the purposes of this Study report as already mentioned in para 3.4.8 and 3.4.9 of Chapter 3.

5.5. Reallocation of Common O&M expenses of KIA as per Study

AO's allocation of Common O&M expenses along with basis of such allocation had been reviewed and accordingly, the following reclassification have been proposed:

5.5.1. Expenses Not Proposed for Further Reallocation

The following expenses have already been rationalised and hence not proposed for further re-allocation (refer para 4.3.4 of Chapter 4 and Table 26 for further details)

- i. Employee Cost
- ii. Power, Fuel & Water Expenses
- iii. Other Repair & Maintenance Expenses (under Repair & Maintenance Expenses)
- iv. Cargo related expenditure
- v. Custom Cost Recovery Expenses (under Other Airport Operating Expenses)
- vi. ORAT and Airport Inauguration Expenses

5.5.2. Administrative and other expenses

5.5.2.1. The submissions by AO have been analysed and it is observed that the Administrative and other expenses include certain expenses such as Consultancy charges, Legal & professional fees, Insurance on vehicles, etc, which directly relate to the Airport premises, certain others such as Employee Training expenses, Printing & Stationery, Vehicle running expenses, Travelling & conveyance, etc. are relatable to employees and rent is relatable to Terminal Building. Therefore, the components of the Administrative and other expenses related to the entire Airport are proposed to be allocated in the Gross Fixed Assets ratio, those relatable to employees in the revised Employee Head Count ratio and rent is proposed to be allocated on Terminal Building ratio of 92:8.

5.5.2.2. As CSR expenses have not been considered for the purposes of true up (refer para 4.3.4) the same have not been considered for reallocation.

5.5.2.3. Based on the above factors, the Aeronautical Administrative and General expenses have been reduced by ₹ 0.38 Crores. The impact on account of the proposed reallocation is summarised below:

Table 32: Impact on Aeronautical Administrative and General Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Aeronautical Administration and other Expenses post rationalisation (refer Table 26) (A)	7.29	3.42	3.69	4.04	5.09	23.53
Revision as per the Study						
Aeronautical Administrative & other Expenses post rationalisation and reallocation (B)	7.02	3.36	3.68	4.02	5.08	23.15
Downward adjustment in Aeronautical Expenses (C=A-B)	0.27	0.06	0.02	0.03	0.01	0.38

5.5.3. Repairs & Maintenance expenses

5.5.3.1. As mentioned in para 4.3.4, the aeronautical Repairs & Maintenance expenses of KIA (excluding housekeeping) have already been rationalised. Therefore, the Study does not propose to further re-allocate the same under this Chapter. However, the housekeeping charges claimed by AO (which is part of total Repairs and Maintenance) have been re-allocated in the Terminal Building ratio of 92:8.

5.5.3.2. Based on the above, the Aeronautical Repairs & Maintenance expense have been reduced by ₹ 1.04 Crores. The impact on account of the proposed reallocation is summarised below:

Table 33: Impact on Aeronautical Repairs & Maintenance Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Aeronautical Repair & Maintenance Expenses post rationalisation (refer Table 23)						
Housekeeping charges (A)	3.13	8.98	8.44	9.08	9.89	39.52
Revision as per the Study						
Housekeeping charges (post re-allocation) (B)	3.05	8.74	8.22	8.84	9.63	38.48
Downward adjustment in Aeronautical Expenses (C=A-B)	0.08	0.24	0.22	0.24	0.26	1.04

5.5.4. Security expenses

5.5.4.1. It is observed that the Security expenses, which directly relate to the Airport premises, have been allocated by AO on Employee ratio whereas it is proposed to reallocate the same on Gross Fixed Assets ratio considering the nature of expenses and in line with allocation for other similar airports. The impact on account of the proposed reallocation is summarised below:

Table 34: Impact on Aeronautical Security Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Aeronautical Security Expenses post rationalisation (refer Table 26) (A)	-	0.44	0.43	0.47	0.75*	2.09
Revision as per the Study						
Aeronautical Security Expenses post rationalisation and reallocation (B)	-	0.43	0.43	0.47	0.71	2.04
Downward / (Upward) adjustment in Aeronautical Expenses (C=A - B)	-	0.01	0.00	(0.00)	0.04	0.05

*Amount considered as per Table 2

5.5.5. Other Operating Expenses

5.5.5.1. As explained in Chapter 4, expenses of Custom Cost Recovery have been rationalised (refer Table 24) and therefore no further re-allocation has been proposed. Further, it is noted that the Other Operating expenses include expenses such as Aviation Meteorological Support Services, Trolley retrieval service charges, which are essential for the operations of the airport and have been considered as 100% Aeronautical by AO. However, it is observed that the Insurance expenses claimed under this head have been incurred towards various assets and hence, related to the entire Airport. Based on the same, Insurance expenses are proposed to be allocated in the Gross Fixed Assets ratio. However, as explained in para 4.3.4 and Table 26, both CISF induction fee and CNS-ATM charges have not been considered for re-allocation.

5.5.5.2. Considering the above factors, the other Operating expenses have increased by ₹0.01 Crores after such re-allocation for the period from FY 2018-19 to FY 2022-23. The impact on account of the proposed reallocations is summarised below:

Table 35: Impact on Aeronautical Other Operating Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Aeronautical Other Airport Operating Expenses Post- Rationalisation (refer Table 24)						
Aviation Meteorological Support Services (A)	0.24	0.98	1.08	1.19	1.37	4.86
Trolley Retrieval Services (B)	0.00	0.50	0.55	0.35	0.58	1.98
Insurance (C)	0.19	0.67	1.00	1.30	1.22	4.38
Total Aeronautical Other Operating Expenses post rationalisation (D= A+B+C)	0.42	2.15	2.63	2.83	3.17	11.22
Revision as per the Study						
Aeronautical Other Operating Expenses post rationalisation and reallocation (B)	0.42	2.15	2.63	2.83	3.18	11.23
Downward adjustment in Aeronautical Expenses (E=D- B)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)

5.6. Impact of reallocation as per Study

5.6.1. The total year-wise downward / (upward) adjustment of KIA's Aeronautical O&M expenses as a result of the proposed reallocation is shown below:

Table 36: Impact of proposed reallocation of KIA's Aeronautical O&M expenses as per Study

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
Employee Cost	-	-	-	-	-	-
Administration Expenses (refer Table 32)	0.27	0.06	0.02	0.03	0.01	0.38
Power, Fuel & Water	-	-	-	-	-	-
R&M Expenses (refer Table 33)	0.08	0.24	0.22	0.24	0.26	1.04
Security expenses (refer Table 34)	-	0.01	0.00	(0.00)	0.04	0.05
Other Operating Expenses (refer Table 35)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
Cargo Related Expenditure	-	-	-	-	-	-
ORAT & Inauguration Expenses	-	-	-	-	-	-
TOTAL	0.35	0.31	0.23	0.26	0.30	1.45

5.6.2. Based on the above re-classification and change in allocation ratio, the revised Aeronautical O&M expenses (post rationalisation and reallocation) for the period FY 2018-19 up to FY 2022-23 have been summarised as follows:

Table 37: Aeronautical O&M expenses post rationalisation and change in allocation ratio for the period from FY 2018-19 to FY 2022-23 as per the Study

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
O&M Expenses post rationalisation as proposed by the study (A) - (refer Table 26)						
Land lease rental	-	-	-	-	-	-
Employee costs	7.32	11.03	10.95	10.35	10.05	49.7
Power, Fuel & Water	3.58	7.37	3.85	4.45	6.09	25.34
Repair & Maintenance	5.83	13.13	13.89	15.94	18.34	67.13
Administration expenses	7.29	3.42	3.69	4.04	5.09	23.53
Marketing Cost	-	-	-	-	-	-
Security	-	0.44	0.43	0.47	0.75	2.09
Stores & Spares	-	-	-	-	-	-
Other Airport Operating Expenses	2.39	8.84	9.44	11.23	13.02	44.92
CISF Induction fee	-	-	-	-	-	-
Cargo related expenses	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	5.86	-	-	-	-	5.86
Aeronautical O&M expenses post rationalisation (A) (refer Table 26)	33.79	44.23	42.25	46.69	53.75	220.71
Impact on reallocation proposed by the study (B)- (Refer Table 36)						
Land lease rental	-	-	-	-	-	-
Employee costs	-	-	-	-	-	-
Power, Fuel & Water	-	-	-	-	-	-
Repair & Maintenance (refer Table 33)	0.08	0.24	0.22	0.24	0.26	1.04

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Administration expenses (refer Table 32)	0.27	0.06	0.02	0.03	0.01	0.38
Marketing Cost						
Security (refer Table 34)	-	0.01	0.00	(0.00)	0.04	0.05
Stores & Spares						
Other Airport Operating Expenses (refer Table 35)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
CISF Induction fee	-	-	-	-	-	-
Cargo related expenses (refer Table 19)						-
ORAT						-
Airport inauguration expenses						-
Total downward/ upward impact of reallocation proposed by the study (B)	0.35	0.31	0.23	0.26	0.30	1.45
O&M Expenses post rationalisation and reallocation as proposed by the Study (C=A-B)						
Land lease rental	-	-	-	-	-	-
Employee costs	7.32	11.03	10.95	10.35	10.05	49.70
Power, Fuel & Water	3.58	7.37	3.85	4.45	6.09	25.34
Repair & Maintenance	5.75	12.89	13.67	15.70	18.08	66.09
Administration expenses (refer Table 15)	7.02	3.36	3.67	4.01	5.08	23.15
Marketing Cost	-	-	-	-	-	-
Security (refer Table 16)	-	0.43	0.43	0.47	0.71	2.04
Stores & Spares	-	-	-	-	-	-
Other Airport Operating Expenses (refer Table 21)	2.39	8.84	9.44	11.23	13.03	44.91
CISF Induction fee	-	-	-	-	-	-
Cargo related expenses (refer Table 19)	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	5.86	-	-	-	-	5.86
Aeronautical O&M expenses post rationalisation & Reallocation = (C= A- B)	33.44	43.92	42.02	46.43	53.45	219.26

5.7. Summary

- 5.7.1. As per the submission of KIA, the Aeronautical O&M expenses for the First Control period, i.e., from FY 2018-19 to FY 2022-23 was ₹ 302.36 Crores (refer Table 2).
- 5.7.2. Based on analysis performed in Chapter 3 and rationalisation in Chapter 4, the Aeronautical O&M expenses have been rationalised to ₹ 220.71 Crores (refer Table 26) and the same were considered for reclassification and reallocation of ratios.
- 5.7.3. It has been observed that, AO has allocated the O&M expenses according to Employee Head Count Ratio and Terminal Building Ratio (refer para 5.2.2). As part of the Study, the O&M expenses have been re-allocated using Terminal Building Ratio of 92:8 (refer para 5.4.1), Employee Head Count Ratio (refer 5.4.3.1) and Gross Fixed Asset ratio (refer 5.4.2) according to the nature of the expenses.
- 5.7.4. Based on the reallocation of the O&M expenses, the total downward adjustment in the Aeronautical O&M expenses for the aforesaid period is ₹ 1.45 Crores (reduced from ₹ 220.71 Crores to ₹ 219.26 Crores (refer Table 36) and the re-allocated Aeronautical O&M expenses (i.e., post rationalization and reallocation) for the period FY 2018-19 to FY 2022-23 has been determined as ₹ 219.26 Crores (refer Table 37).

6. INTERNAL BENCHMARKING

6.1. Background

6.1.1. The Internal Benchmarking of KIA's O&M expenses involves analysis of trends in the Aeronautical O&M expenses:

- a) For the period from FY 2018-19 to FY 2021-22 (CAGR comparison of Major O&M expenses for the first 4 tariff years of the First Control Period from FY 2018-19 to FY 2021-22 based on AO's True up submission and correlation of each of the Major O&M expenses with Passenger traffic and ATM during the same period).
- b) FY 2022-23 has been excluded from this CAGR analysis, as the expenses for this FY are based on unaudited financials.

6.1.2. KIA, being the greenfield Airport commenced its operations in December 2018. The actual data of Internal Benchmarking is available for 5 tariff years which includes the last three tariff years (FY 2020-21, FY 2021-22, FY 2022-23), which were largely impacted by the COVID-19 pandemic. Therefore, a realistic trend analysis may not be drawn for the purpose of Benchmarking. However, based on the available data, a representative analysis has been performed to study the efficiency in the incurrence of O&M expenses.

6.2. Trend analysis of Major Aeronautical O&M expenses as per Study

6.2.1. The Aeronautical O&M expenses which have been analysed as part of this Chapter do not include certain expenses which are non- recurring in nature, such as, ORAT and Airport Inauguration Expenses incurred by AO in the first tariff year, i.e., FY 2018-19.

6.2.2. Further, it is noted that CISF Induction fees, CNS-ATM service charges and CSR expenses claimed by AO have not been considered as part of true up, according to the Study and hence, not considered for analysis under this Chapter.

Table 38: CAGR of Passenger Traffic, ATM and Major O&M expenses

(₹ in Crore)

O&M expenses	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	CAGR (4 years)
Employee Cost	7.33	11.05	10.99	11.45	16.04%
Admin & general Expenditure	7.32	4.27	4.75	5.20	-10.80%
Utility & Other Operating Expenses	6.49	22.86	19.75	22.74	51.85%
Repair & Maintenance Expenditure	5.83	16.04	16.80	18.85	47.83%
Total	26.98	54.22	52.29	58.23	29.24%
Traffic (MPPA)	0.22	1.58	0.48	0.8	53.78%
ATM ('000)	2.05	15.13	6.31	9.81	68.51%
Major O&M expenses per PAX	1,202.72	342.38	1,086.96	728.70	-15.38%
Major O&M expenses per ATM	131.92	40.83	92.91	61.00	-22.67%

6.2.3. The trend analysis of CAGR of Major O&M expenses, namely, Employee Cost, Administrative expenses, Utility & Other Operating expenses and Repairs & Maintenance for the period FY 2018-

19 to 2021-22 in correlation with per PAX and per ATM has been presented in the tables and corresponding charts below:

Figure 7: CAGR of Major O&M expenses for the periods FY 2018-19 to FY 2021-22

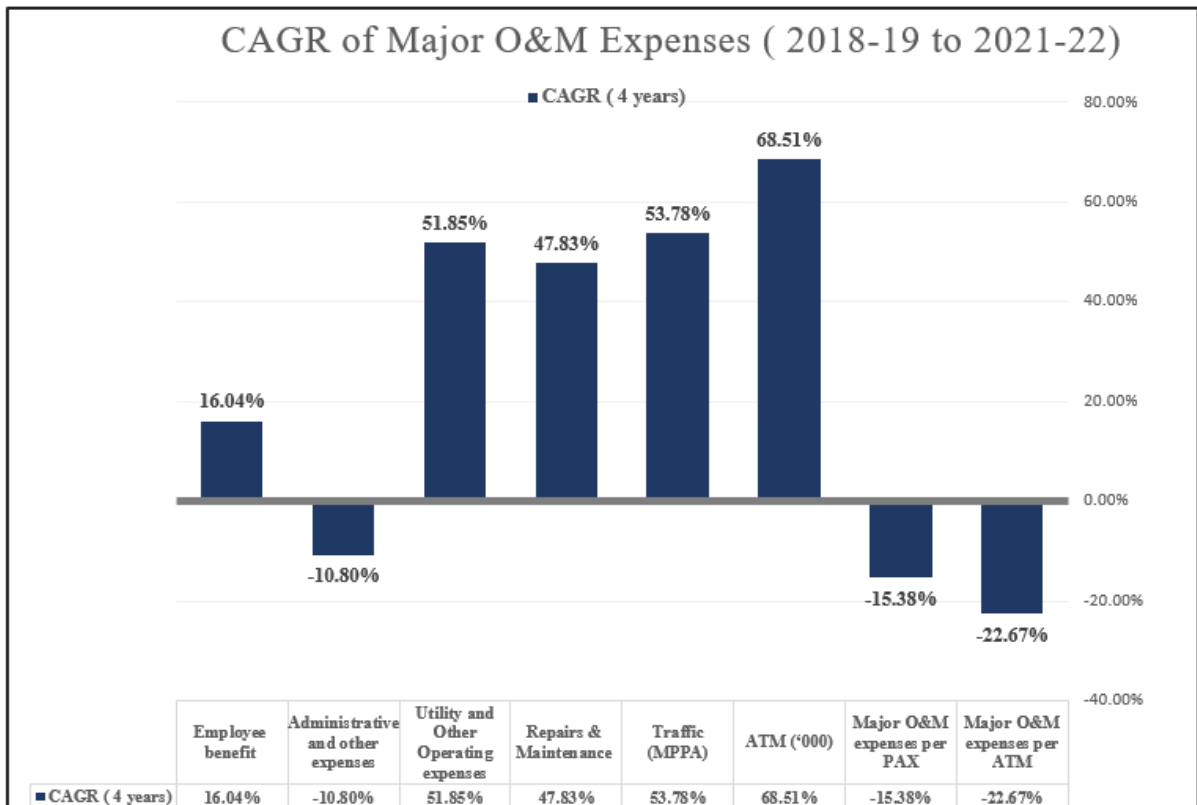


Figure 8: Analysis of Major O&M expenses per PAX FY 2018-19 to FY 2021-22

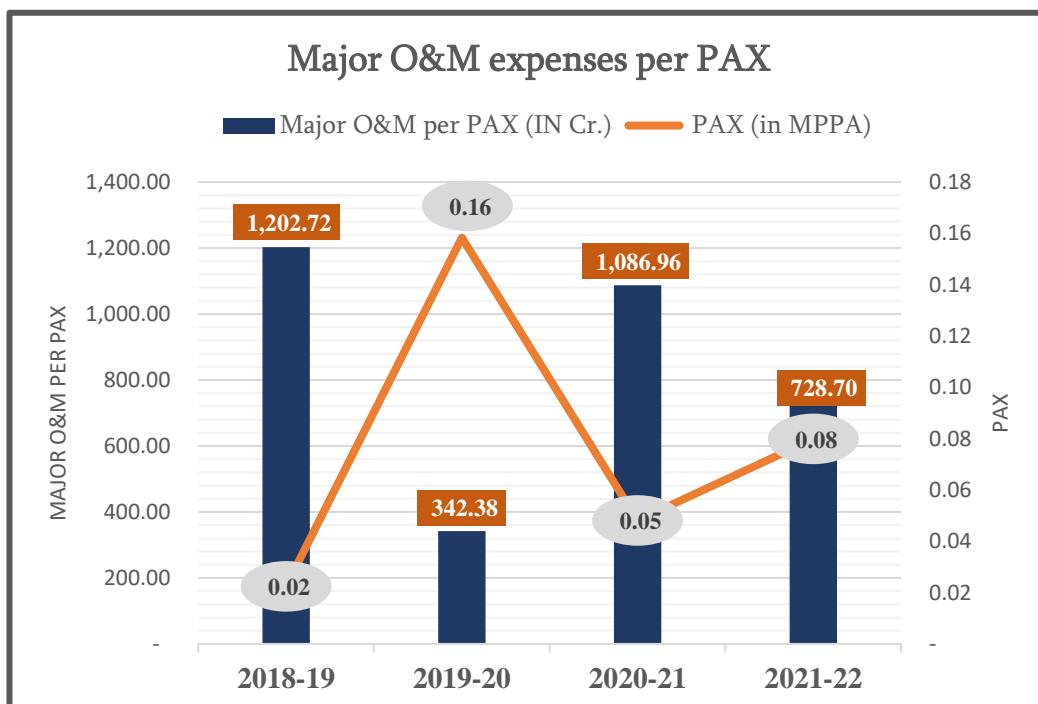
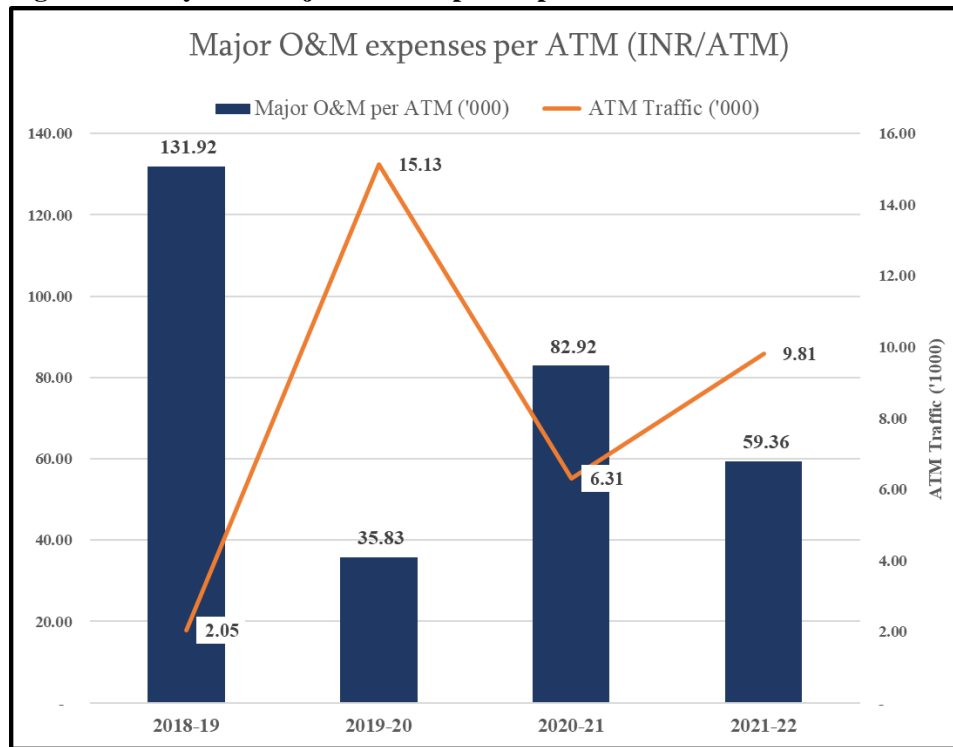


Figure 9: Analysis of Major O&M expenses per ATM FY 2018-19 to FY 2021-22

- 6.2.4. It can be observed from Figure 6, Figure 7 and Figure 8 above that, in general the CAGR of Major O&M expenses grew at a rate lower than the respective growth in Traffic of PAX and ATM, in the first 4 tariff years of the First Control Period.
- 6.2.5. Further it is observed that, during the first 4-year period, O&M expenses per PAX grew at a negative CAGR of -15.38% and at -22.67% per ATM.
- 6.2.6. The O&M expenses per PAX and per ATM display a fluctuating trend i.e., higher in the first tariff year (FY 2018-19) due to minimal traffic as it was the year of commencement of operations and again in the 3rd tariff year (FY 2020-21) due to COVID year as compared to the 2nd tariff year (FY 2019-20) wherein KIA achieved its highest traffic numbers prior to COVID pandemic and the 4th tariff year (FY 2021-22) during which the operations resumed and KIA witnessed a positive growth trend.
- 6.2.7. It is further observed that, the CAGR of Utility & Other Operating expenses and Repairs & Maintenance expenses are higher than the CAGR of the other two expenses i.e., Employee cost and Administrative expenses, mainly because of cost incurred towards Housekeeping and other Operations & maintenance (included in Repairs & Maintenance expenses) and charges incurred by AO towards essential services such as Customs cost recovery, Aviation meteorological services, etc apart from Power and other utility charges (included in Utility & Other Operating expenses) in order to maintain the airport and service the assets / facilities, despite the adverse growth in traffic numbers as a result of the pandemic.
- 6.2.8. However, based on the analysis of overall trend of O&M expenses, the same are considered to be reasonable.

6.3. Inflation-adjusted analysis of Major O&M expenses as per Study

- 6.3.1. The actual CAGR of the major components of Aeronautical O&M expenses, including on a per PAX and per ATM-basis, for the period from FY 2018-19 to FY 2021-22 (as per Table 38) have also been compared with the Wholesale Price Index (WPI)-based inflation adjusted expenses, which is presented in the table below. While FY 2018-19 has been considered as the base year, the actual

expenses for years from FY 2018-19 to FY 2021-22 (as per Table 39) have been adjusted downward by the WPI inflation factor to reflect the real increase in the expenses.

Table 39: Analysis of WPI Inflation-adjusted Major O&M expenses

Major O&M Expenses (₹ in Crores)	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Total	CAGR
WPI*	100	101.67	103.01	116.36		
Employee Cost	7.33	10.87	10.67	9.84	38.71	10.33%
Administrative and other expenses	7.32	4.20	4.61	4.47	20.60	-15.19%
Utility and Other Operating Expenses	6.49	22.48	19.17	19.54	67.69	44.37%
Repairs and Maintenance	5.83	15.78	16.31	16.20	54.12	40.55%
Per PAX						
Employee Cost	326.62	68.66	221.77	123.11	740.17	-27.76%
Administrative and other expenses	326.50	26.50	95.83	55.90	504.73	-44.47%
Utility and Other Operating Expenses	289.48	141.98	398.58	244.50	1,074.54	-5.47%
Repairs and Maintenance	260.12	99.62	339.07	202.72	901.53	-7.97%
Per ATM						
Employee Cost	35,824.93	7,186.00	16,918.95	10,028.63	69,958.50	-34.58%
Administrative and other expenses	35,811.96	2,773.16	7,310.74	4,553.73	50,449.59	-49.71%
Utility and Other Operating Expenses	31,750.96	14,859.78	30,407.51	19,917.28	96,935.52	-14.40%
Repairs and Maintenance	28,530.68	10,425.93	25,867.89	16,513.82	81,338.32	-16.66%

* Source: Office of The Economic Adviser, Government of India (<https://eaindstry.nic.in>)

6.3.2. It is observed from the above table that there has been a significant increase in the inflation-adjusted Utility & Other Operating expenses and Repair & Maintenance expenses of 44.37% and 40.55% respectively over the 4-year period. Further, the inflation-adjusted Utility & Other Operating expenses are showing the highest per PAX and per ATM amount Y-O-Y, when compared to other O&M expenses, which is mainly due to actual Electricity expenses incurred by AO during the period. Based on the same, the Study recommends rationalization of the both the Utility and Repairs & Maintenance expenses.

6.3.3. Further, in respect of higher cost per PAX and per ATM observed for all the expenses incurred during the first tariff year i.e., FY 2018-19, it has been already explained in para 6.2.6 that, the first tariff year of FY 2018-19 was the year of commencement of operations wherein KIA started operations only in December 2018 with minimal traffic numbers and hence, the expenses were incurred only for 4 months of operations (approximately), whereas KIA became fully functional and started incurring expenses towards utilities, housekeeping, operations & maintenance and essential services in a full-fledged manner from the next year, i.e., FY 2019-20 along with growing traffic numbers. Hence, the higher cost per PAX and per ATM for all the expenses incurred during the first tariff year i.e., FY 2018-19 as well as higher CAGR for both Utility and Repairs & Maintenance expenses.

6.3.4. Considering all the above, the Study finds the inflation-adjusted Employee cost and Administrative expenses to be reasonable whereas it is recommended to rationalise the Utility expenses and Repairs & Maintenance expenses (refer Chapter 4 for rationalisation on both the expenses).

6.4. Proportion of Domestic and International Passenger Traffic

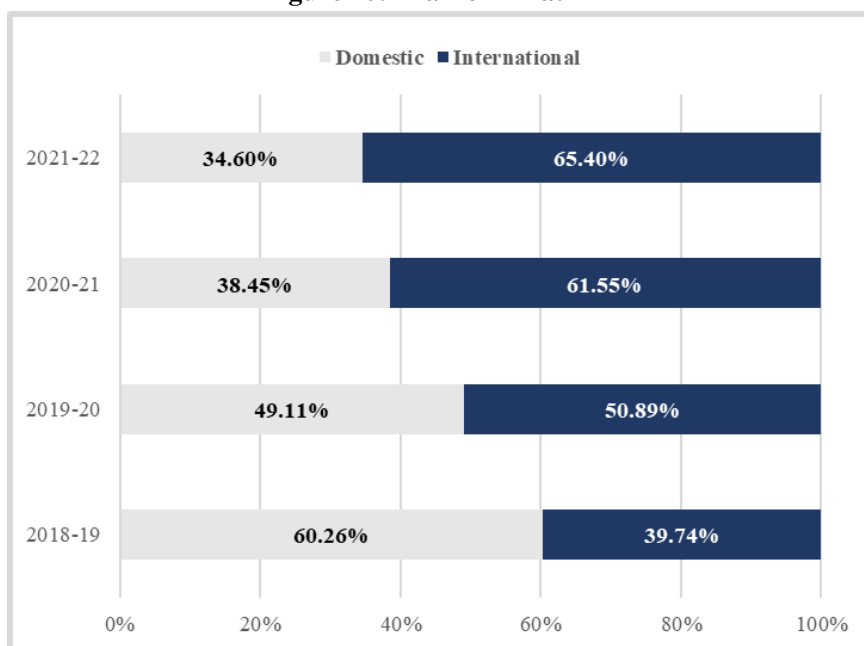
6.4.1. The profile of passenger traffic at KIA was also analysed as part of Internal Benchmarking exercise. The O&M expenses related to Domestic passenger movement such as Utilities and Repairs & Maintenance costs, are generally lower, on account of lesser time spent at terminal building and passenger hold area, and higher gate utilisation. Comparatively, the international passenger movement involves relatively higher cost on account of longer time spent in terminal building and passenger hold area and lower gate capacity utilisation. Therefore, it is expected that the proportion of Domestic and International passengers would impact the trend in Operating expenses, which relate to costs of utilities and upkeep of the terminal building.

6.4.2. The proportion of Domestic and International passengers for the period from FY 2018-19 to FY 2021-22, along with the per PAX and per ATM inflation-adjusted Operating expenses are summarised in the table below:

Table 40: Proportion of Domestic and International passengers along with the per PAX and per ATM Aeronautical Operating expenses of KIA

Passenger Profile	2018-19	2019-20	2020-21	2021-22
Domestic	60.26%	49.11%	38.45%	34.60%
International	39.74%	50.89%	61.55%	65.40%
Utility and Other Operating Expenses / PAX (₹, inflation-adjusted)	289.48	141.98	398.58	244.50
Utility and Other Operating Expenses / ATM (₹, inflation adjusted)	31,750.96	14,859.78	30,407.51	19,197.28

Figure 10: Traffic Mix at KIA



6.4.3. It is observed that proportion of Domestic passengers has been on the higher side for FY 2018-19 but has reduced marginally thereafter i.e., from 60.26% in FY 2018-19 to 34.60% in FY 2021-22. In comparison, the inflation-adjusted Utility & Other Operating expenses are showing the highest per PAX and per ATM amount when compared to other O&M expenses (refer Table 38). Further, the Study observes from Table 39, the Utility & Other Operating expenses are displaying a fluctuating trend, wherein both are higher in the 1st and 3rd tariff years and lower in the 2nd and 4th tariff years which is on account of the commencement of airport operations in the first year followed by the adverse impact of the pandemic within one year of starting operations and subsequent recovery. However, considering the overall trend during the 4-year period, the Study finds the Utility & Other Operating expenses to be significantly high and proposes to rationalize the same.

6.5. Summary of Internal Benchmarking

- 6.5.1. The four major components of O&M expenses, namely, Employee cost, Administrative expenses, Utility & Other Operating expenses and Repairs & Maintenance expenses have grown at a lower CAGR than that of PAX and ATM traffic during the period FY 2018-19 to FY 2021-22.
- 6.5.2. It has not considered certain expenses such as ORAT and Airport Inauguration expenses for the Internal Benchmarking analysis as these expenses are incurred only in FY 2018-19 towards commencement of airport operations and not recurring in nature. Further, the it has not included CNS-ATM charges, CISF induction fee and CSR expenses since the same have not been allowed as explained in Chapter 3 of the Study.
- 6.5.3. It is also observed from the inflation-adjusted analysis of O&M expenses that there has been a significant increase in the inflation-adjusted Utility & Operating expenses and Repair & Maintenance Expenses of 44.37% and 40.55% respectively over the 4-year period mainly due to increase in expenses of Housekeeping, Operational & Maintenance expenses and Power & Fuel Expenses and Other Operating expenses which are essential for the operation of the airport.
- 6.5.4. Further, the inflation-adjusted Utility & Other Operating expenses are showing the highest per PAX and per ATM amount Y-O-Y, when compared to other O&M expenses, which is mainly due to actual Electricity expenses incurred by AO during the period. Based on the same, it is recommended rationalization of both the Utility and Repairs & Maintenance expenses (refer to Chapter 4 for rationalisation performed).

7. EXTERNAL BENCHMARKING

7.1. Background

7.1.1. The benchmarking of O&M expenses with similar airport or airports has been done to ascertain the reasonableness of the O&M expenses of KIA (Kannur Airport). It must be noted that, in general, benchmarking is a complex exercise on account of the variances in each airport caused by the following factors:

- Passenger traffic
- Passenger profile (i.e., Domestic vs. International; tourist, business and industrial visitors)
- Private sector ownership vs. Airports Authority of India (AAI) operated
- Extent of outsourcing of activities, such as ground, fuel and baggage handling
- Local labour conditions impacting minimum wages
- Age of the airport, and extent of automation and investment in IT systems
- Physical size of the airport, proximate city infrastructure, and availability of surplus land for Non- aeronautical activities
- Air-side infrastructure such as apron design and availability of aerobridges
- Weather conditions that can impact extent of air-conditioning and heating
- Usage of facilities by Defence forces and VIP movements

7.1.2. It has been determined that based on parameters such as passenger traffic, terminal building area, passenger mix, weather patterns and climate-induced operational parameters, Mangaluru International Airport (Mangaluru Airport), Cochin International Airport (Cochin Airport) and Calicut International Airport (Calicut Airport) are comparable to KIA (Kannur Airport). Hence, the O&M expenses of KIA have been benchmarked against all the above-mentioned airports.

7.1.3. The benchmarking exercise has been performed only in respect of comparable O&M expenses incurred during the period from FY 2018-19 to FY 2021-22, such as Employee Cost, Administration & General expenses, Repairs & Maintenance expenses and Utility & Other Operating expenses. However, certain other expenses, such as ORAT and Airport inauguration expenses, which are unique to KIA and incurred in the first tariff year, i.e., FY 2018-19 during which KIA commenced its commercial operations, have not been considered for the benchmarking exercise, since the comparable airports had not incurred such expenses during the same period.

7.1.4. Further, the expense relating to CISF Induction Fees, CNS-ATM charges and CSR claimed by AO, have not been considered in the external benchmarking exercise since the same have not been considered as part of the Study (refer Chapter 3).

7.1.5. The O&M expenses have been compared only for the first 4 tariff years, i.e., from FY 2018-19 to FY 2021-22 since the last year, i.e. FY 2022-23 is based on projections made by AO and hence, not included for analysis under this Chapter.

7.1.6. The O&M Costs of all the comparable airports for the first tariff year i.e., FY 2018–19 have been considered proportionately for 113 days since KIA commenced commercial operations only on December 9, 2018 and incurred various O&M expenses during the year starting from the date of commencement of operations up to March 31, 2019 (i.e. 113 days).

7.1.7. The following assumptions have been considered while carrying out External Benchmarking:

- Only comparable Aeronautical O&M expenses have been considered for benchmarking and certain others which are unique to KIA and not incurred by other comparable airports, have not been considered for the benchmarking exercise.
- For the other comparable airports, the actual Aeronautical O&M expenses approved by AERA’s Tariff Order No. 38/2022-23 (Mangaluru Airport), Order no. 39/2021-22 (Calicut Airport), Order no. 08/21-22 (Cochin Airport) respectively for the period from FY 2018-19 to FY 2022-23 have been considered.
- Similar expenses have been grouped under the same O&M expense heads in order to make these airports comparable.

7.1.8. The metrics used for External Benchmarking are total PAX, ATM, Terminal Building Area, Aeronautical revenues and Average RAB.

7.2. Analysis of Aeronautical O&M expenses as per Study

7.2.1. Passenger traffic and traffic mix

7.2.1.1. The passenger traffic for the period from FY 2018-19 to FY 2021-22 for the comparable set of airports considered in this Study is summarised in the table below:

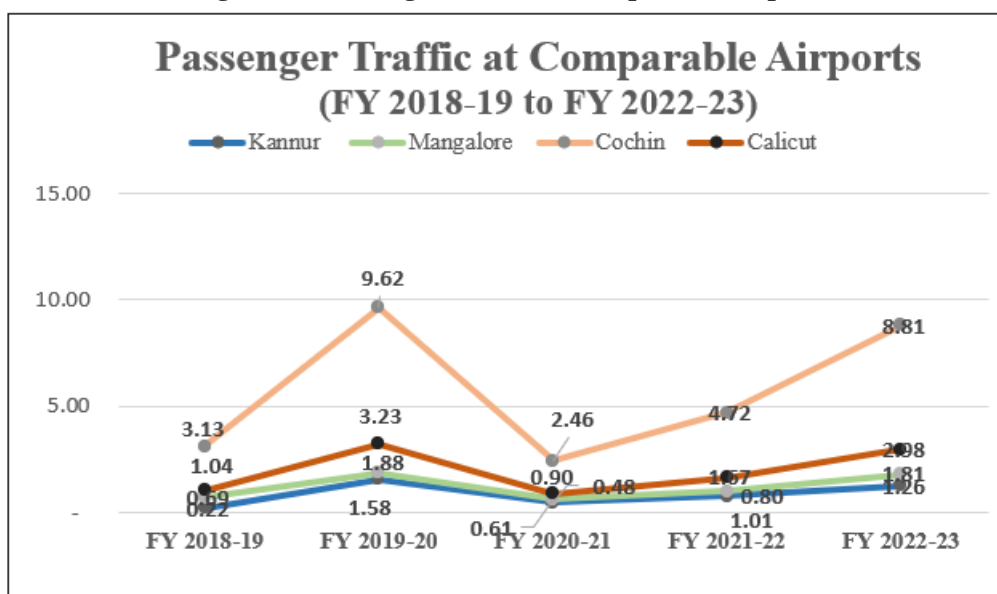
Table 41: Total Passenger traffic at comparable airports in India

(In Crores)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total	CAGR (5 years)
Kannur	0.22	1.58	0.48	0.80	1.26	4.35	53.86%
Mangaluru	0.69	1.88	0.61	1.01	1.81	6.01	27.08%
Cochin	3.13	9.62	2.46	4.72	8.81	28.75	29.50%
Calicut	1.04	3.23	0.90	1.67	2.98	9.82	30.12%

Source: <https://www.aai.aero/en/business-opportunities/aai-traffic-news>

Figure 11: Passenger Traffic at Comparable Airports

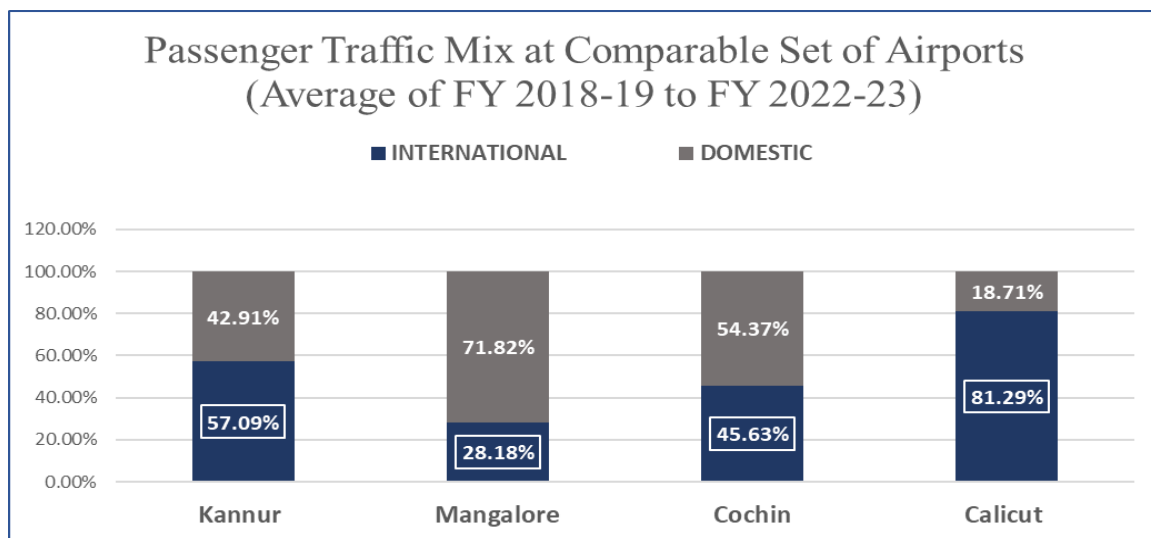


From the above data, it is observed that the passenger traffic of Kannur Airport is more comparable to Mangaluru Airport and Calicut Airport, while the traffic of Cochin Airport is much higher.

7.2.1.2. It is further observed that Kannur Airport has recorded higher CAGR on PAX growth than all the other comparable airports. However, in terms of absolute number of PAX, it is lower than that of all the other airports, mainly on account of lesser international traffic, which is attributed to the adverse impact of the COVID-19 pandemic. AO has explained in the MYTP that, as a result of this significant interruption, Kannur Airport only remained open for a year before airline operations were halted. This had a significant impact on the passenger and airline traffic at Kannur, as well as the income and financial flow that followed. The impact of COVID-19 on Kannur airport was more severe when compared to other established airports since it had just begun its operations only in the latter part of FY 2018-19. Many of the routes with strong demand potential witnessed a sharp drop in passenger traffic before the route stabilised and became mature. However, post-COVID, Kannur Airport has been showing a positive growth trend in the traffic figures i.e., in FY 2021-22 which has resulted in the higher CAGR.

7.2.1.3. It is observed from the average Domestic and International passenger mix for the comparable airports that Kannur airport’s passenger mix is similar to that of Calicut Airport wherein the international PAX % is higher than the percentage of domestic PAX. The details of the same are shown below:

Figure 12: Passenger traffic mix at Comparable airports



7.2.2. ATM traffic and mix

7.2.2.1. The ATM traffic for the period FY 2018-19 to FY 2021-22 for the comparable set of airports considered in this Study is summarised in the table below:

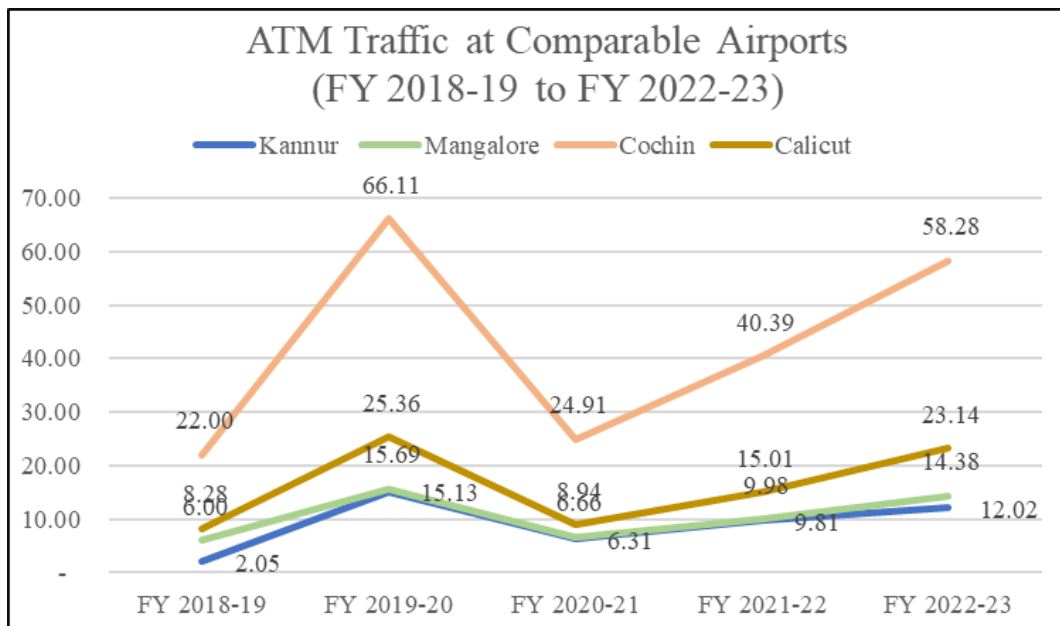
Table 42: ATM traffic at comparable airports in India

(‘000)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total (5 Years)	CAGR %
Kannur	2.05	15.13	6.31	9.81	12.02	45.32	55.72%
Mangaluru	6.00	15.69	6.66	9.98	14.38	52.71	24.45%
Cochin	22.00	66.11	24.91	40.39	58.28	211.68	27.58%
Calicut	8.28	25.36	8.94	15.01	23.14	80.72	29.31%

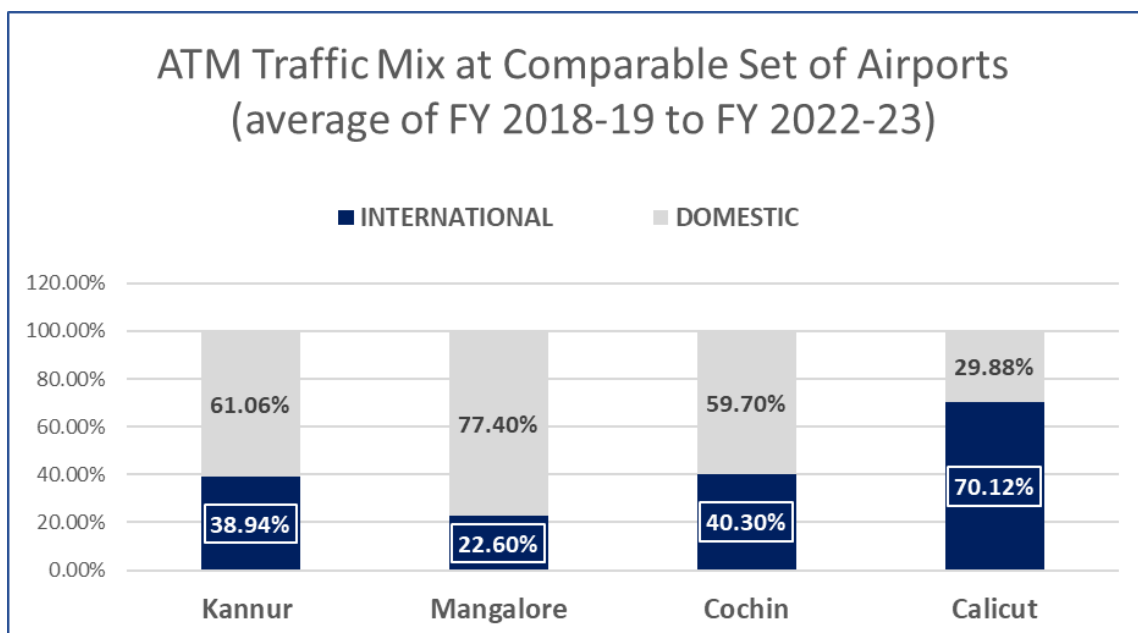
Source: <https://www.aai.aero/en/business-opportunities/aai-traffic-news>

Figure 13: ATM Traffic at Comparable Airport



- 7.2.2.2. From the above data, it is observed that the ATM traffic of Kannur Airport is comparable to Mangaluru and Calicut, while Cochin Airport has much higher ATM traffic.
- 7.2.2.3. Further, it is observed that Kannur Airport has recorded highest CAGR in ATM traffic among all the comparable Airports though it is much lesser in terms of absolute number and as already explained in para 7.2.1.2, the same is due to the adverse impact of the pandemic, which occurred within a year of commencement of operations at Kannur Airport.
- 7.2.2.4. The Study observes from the average Domestic and International ATM mix of comparable airports that, Kannur airport’s ATM mix is similar to Mangaluru Airport and Cochin Airport, wherein the domestic ATM the % is higher than that of international ATM traffic percentage. The details of the same are shown below:

Figure 14: ATM Traffic Mix at Comparable Set of Airports



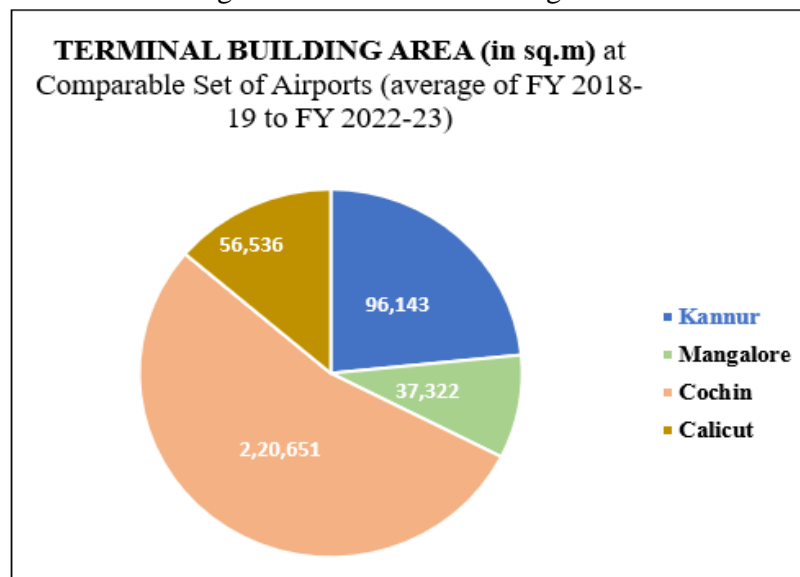
7.2.3. The details of other parameters such as, Terminal Building Area, Aeronautical Revenues and Average RAB of the comparable airports considered for the analysis are shown in the tables below:

Table 43: Terminal Building Area per PAX

(in Sq.m./ PAX in MPPA)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Kannur	4,28,631.93	60,711.67	1,99,846.60	1,20,310.79	76,480.85	8,85,981.84
Mangalore	53,802.52	19,891.34	60,701.48	36,826.57	26,233.84	1,97,455.75
Cochin	70,428.32	22,926.37	89,751.79	46,770.12	25,038.32	2,54,914.92
Calicut	54,336.39	17,503.89	62,677.66	33,952.60	18,953.50	1,87,424.04

Figure 15 : Terminal Building Area

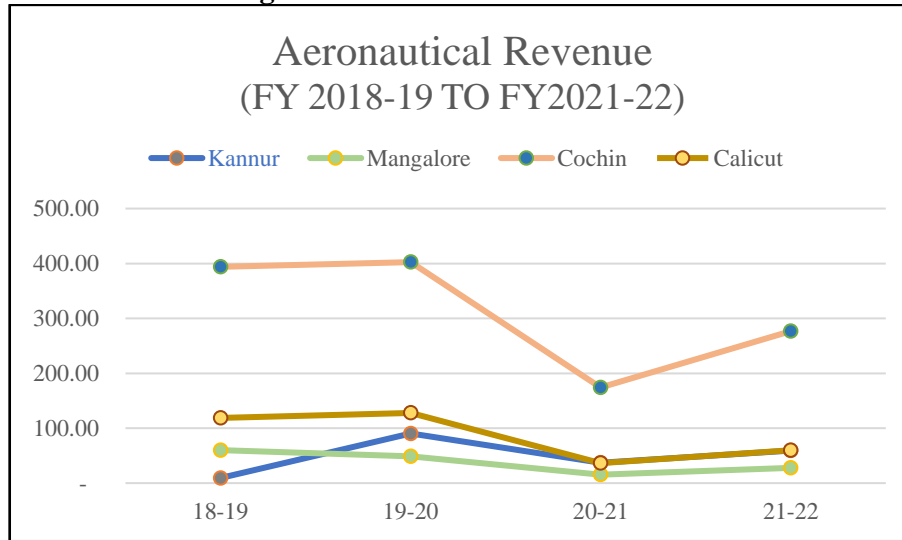


7.2.3.1. From the above it can be seen that Kannur Airport has the largest area in terms of PAX than any other comparable Airport. Hence the other airports are not exactly comparable to Kannur Airport, in terms of terminal building area

Table 44: Aeronautical Revenue

(₹ in Crores)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	9.40	90.40	36.90	59.00
Mangaluru	60.08	48.85	15.42	27.91
Cochin	393.93	402.46	174.16	276.51
Calicut	118.75	127.79	36.46	60.10

Figure 16: Aeronautical Revenue

7.2.4. It is observed from the above table and chart that, the Comparative airport in terms of Aeronautical Revenue is Mangaluru Airport, whereas both Cochin and Calicut have much higher Aeronautical Revenues.

7.2.5. The O&M expenses of the comparable set of airports for the period from FY 2018-19 to FY 2021-22, are analysed in the following section.

7.2.5.1. Employee Cost

- a) The comparable benchmarking data of Employee Cost per PAX, per ATM, per Sq.m. of Terminal Building area, as % of Revenue and as % of RAB are provided in the tables below:

Table 45: Employee Cost /PAX for comparable set of airports*(₹ per PAX)*

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	326.62	69.81	228.44	143.25
Mangaluru	26.80	105.53	365.46	286.25
Cochin	23.46	78.06	307.39	171.35
Calicut	32.15	125.58	328.82	257.70

Table 46: Employee Cost /ATM for comparable set of airports*(₹ per ATM)*

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	35,824.93	7,306.00	17,427.36	11,669.37
Mangaluru	3,101.49	12,623.53	33,718.49	29,068.14
Cochin	3,341.75	11,365.08	30,334.78	20,016.84
Calicut	4,040.94	15,996.84	33,184.16	28,591.42

Table 47: Employee Cost/Sq. m. of terminal building area for comparable set of airports

(₹ per Sq. m.)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	762.01	1,149.82	1,143.06	1,190.69
Mangaluru	1,609.25	5,305.18	6,020.58	7,772.90
Cochin	1,076.16	3,404.92	3,424.87	3,663.70
Calicut	1,911.11	7,174.19	5,246.21	7,589.85

Table 48: Employee Cost as % Revenue for comparable set of airports

(% of Revenue)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	77.94%	12.23%	29.78%	19.40%
Mangaluru	10.00%	40.53%	145.72%	103.94%
Cochin	6.03%	18.67%	43.39%	29.24%
Calicut	9.10%	31.74%	81.35%	71.40%

- b) From the above tables, it is observed that the Employee Cost of KIA is generally lower than the cost of comparable airports on all the parameters as well as in terms of absolute number. Accordingly, the Employee Cost of KIA is considered to be reasonable.

7.2.5.2. Administrative & General Expenses

- a) The benchmarking for Administrative & General Expenses on per PAX, per ATM, per Sq.m. of Terminal Building area, as % of Revenue and as % of RAB are provided in the tables below:

Table 49: Administrative & General Expenses /PAX for comparable set of airports

(₹ per PAX)

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	326.50	26.94	98.71	65.05
Mangaluru	12.38	105.53	365.46	286.25
Cochin	13.56	52.24	123.00	72.03
Calicut	20.51	99.10	275.16	155.84

Table 50: Administrative & General Expenses /ATM for comparable set of airports

(₹ per ATM)

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	35,811.96	2,819.47	7,530.43	5,298.75
Mangaluru	1,432.44	12,623.53	33,718.49	29,068.14
Cochin	1,931.42	7,605.97	12,138.73	8,413.81
Calicut	2,578.56	12,624.73	27,769.08	17,290.78

Table 51: Administrative & General Expenses /Sq. m. of terminal building area for comparable set of airports*(₹ per Sq.m.)*

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	761.73	443.73	493.92	540.66
Mangaluru	743.24	5,305.18	6,020.58	7,772.90
Cochin	621.98	2,278.71	1,370.49	1,539.99
Calicut	1,219.50	5,661.88	4,390.12	4,590.00

Table 52: Administrative & General Expenses/as % Revenue for comparable set of airports*(% of Revenue)*

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	77.91%	4.72%	12.87%	8.81%
Mangaluru	4.62%	40.53%	145.72%	103.94%
Cochin	3.48%	12.49%	17.36%	12.29%
Calicut	5.81%	25.05%	68.07%	43.18%

- b) From the above tables, it is observed that the Administrative & General expenses of KIA is generally lower than the cost of comparable airports on all the parameters as well as in terms of absolute number. Accordingly, the Administrative expenses are considered to be reasonable.

7.2.5.3. Repairs & Maintenance Expenses

- a) The benchmarking for Repairs & Maintenance Expenses has been undertaken as per PAX, per ATM, per Sq.m. of Terminal Building area, as % of Revenue and as % of RAB is provided in the tables below:

Table 53: Repairs & Maintenance Expenses/PAX for comparable set of airports*(₹ per PAX)*

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	260.12	101.28	349.26	235.89
Mangaluru	7.96	71.42	124.91	73.22
Cochin	6.71	26.94	96.28	56.47
Calicut	7.34	46.44	154.88	98.49

Table 54: Repairs & Maintenance Expenses/ATM for comparable set of airports*(₹ per ATM)*

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	28,530.68	10,600.04	26,645.22	19,215.58
Mangaluru	920.85	8,543.19	11,524.61	7,434.87
Cochin	955.47	3,922.49	9,501.45	6,596.35
Calicut	922.82	5,915.99	15,629.89	10,927.51

Table 55: Repairs & Maintenance Expenses/Sq. m. of terminal building area for comparable set of airports

(₹ per Sq. m.)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	606.86	1,668.24	1,747.65	1,960.67
Mangaluru	477.80	3,590.38	2,057.77	1,988.10
Cochin	307.69	1,175.16	1,072.73	1,207.34
Calicut	436.43	2,653.18	2,470.99	2,900.81

Table 56: Repairs & Maintenance Expenses /as % Revenue for comparable set of airports

(% of Revenue)

Airports	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Kannur	62.07%	17.74%	45.54%	31.95%
Mangaluru	2.97%	27.43%	49.81%	26.59%
Cochin	1.72%	6.44%	13.59%	9.63%
Calicut	2.08%	11.74%	38.32%	27.29%

From the above tables, it is observed that the Repairs & Maintenance expenses of KIA

- on a per PAX, ATM basis and as a % of Revenue basis, are higher than all the other comparable airports.
 - on per Sq. m. of terminal building area, are lower than both Mangaluru and Calicut Airports but higher than Cochin Airport.
- a) It has been observed that the Repairs & Maintenance expenses of KIA are higher than the comparable airports, especially Mangaluru and Calicut on many parameters (i.e., in terms of per PAX, per ATM basis and as a % of Revenue) which is not justified, considering that KIA is a new airport which has commenced operations only in FY 2018-19 (i.e., First Control Period) and majority of the assets capitalized / facilities provided at the airport are either newly acquired / created.
 - b) Based on the above factors, the Study recommends that the Repairs & Maintenance expenses of KIA require rationalisation (refer Chapter 4 for the same).
 - c) Further it is recommended that KIA should bring more efficiency in Repairs & Maintenance expenses over a period and also that, AERA may take appropriate view while determining tariff of the Second Control Period For KIA.

7.2.5.4. Utility & Other Operating Expenses

- a) The benchmarking for Operating Expenses has been undertaken as per PAX, per ATM, per Sq.m. of Terminal Building area, as % of Revenue and as % of RAB is provided in the tables below:

Table 57: Utility & Other Operating Expenses /PAX for comparable set of airports

(₹ per PAX)

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	289.48	144.35	410.56	284.51
Mangaluru	16.65	68.70	199.73	152.65
Cochin	12.85	48.76	126.95	84.34

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Calicut	10.11	40.19	91.57	76.57

Table 58: Utility & Other Operating Expenses /ATM for comparable set of airports
(₹ per ATM)

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	31,750.96	15,107.94	31,321.26	23,175.86
Mangaluru	1,926.44	8,218.04	18,427.37	15,501.00
Cochin	1,830.77	7,099.20	12,528.10	9,852.42
Calicut	1,270.17	5,119.31	9,241.44	8,495.47

Table 59: Utility & Other Operating Expenses /Sq. m. of terminal building area for comparable set of airports

(₹ per Sq.m.)

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	675.36	2,377.69	2,054.35	2,364.76
Mangaluru	999.56	3,453.73	3,290.28	4,145.01
Cochin	589.57	2,126.89	1,414.45	1,803.30
Calicut	600.71	2,295.88	1,461.02	2,255.20

Table 60: Utility & Other Operating Expenses /as % Revenue for comparable set of airports

(% of Revenue)

Airports	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Kannur	69.08%	25.29%	53.53%	38.53%
Mangaluru	6.21%	26.39%	79.64%	55.43%
Cochin	3.30%	11.66%	17.92%	14.39%
Calicut	2.86%	10.16%	22.65%	21.21%

b) From the above tables, it is observed that the Utility & Other Operating expenses of KIA

- on a per PAX and per ATM basis are higher than all the other comparable airports.
- on per Sq. m. of terminal building area basis is lower than Mangaluru Airport, comparable to Calicut Airport and higher than Cochin Airport.
- as a % of revenue is higher than all the comparable airports.

c) As per the Study, the Utility & Other Operating expenses of KIA are generally higher than the comparable airports on most of the parameters (except as a % of Average RAB) as well as in absolute numbers when compared to both Mangaluru and Calicut Airports and the main reason for the same is the actual Power, fuel & water charges incurred by AO during the period. Based on the same, the Study observes that there is a need for rationalising the same (refer Chapter 4 for rationalisation of the expenses).

7.2.5.5. Considering all the above, it is observed that the certain expenses of KIA are comparable to some of the airports but varying widely with the other comparable airports. In this respect, it is important to note that the variation in the expense numbers for each airport, signals that all these operational expenses at the airport are a function of various factors such as the size of the airport infrastructure, profile of passengers, existing capacity and traffic, weather conditions, age of the

airport assets, etc. Hence, comparison of O&M expenses between distinct airports may not be exactly suitable to regulate the expenses.

7.3. Summary of External Benchmarking

- i. The Study has determined that largely, the Employee costs and Administrative expenses of KIA are either lower or in line with the expenses of comparable airports whereas Utility & Other Operating expenses and Repairs, require rationalisation, in order to determine the efficient O&M expenses (refer Chapter 4 for rationalisation).

8. OVERALL SUMMARY OF THE STUDY

- 8.1. Kannur International Airport (KIA) was incorporated as a Public Limited Company on December 3, 2009 with the objective of building, owning and operating the Kannur International Airport.
- 8.2. KIA commenced airport operations on December 9, 2018 and has submitted true up of O&M expenses relating to the First Control Period i.e., FY 2018-19 to FY 2022-23, which has been analysed as part of this Study.
- 8.3. The total passenger traffic grew at a CAGR of 52.73% and the CAGR of air traffic movement was 68.65% for the period FY 2018-19 – FY 2021-22.

Assessment of Reasonableness of O&M expenses (Tariff Order Projections vs Actuals)

- 8.4. Aeronautical O&M expenses amounting to ₹ 225.47 Crores was approved by the Authority in the Tariff Order of the First Control Period.
- 8.5. Aeronautical O&M expenses as per AO's True up submission for the First Control Period aggregates to ₹ 302.36 Crores, wherein AO had claimed audited actuals of ₹ 232.05 Crores up to FY 2021-22 and unaudited figures of ₹ 70.30 Crores for the last tariff year, i.e., FY 2022-23.
- 8.6. There is a deviation of 34.10% between the actual O&M expenses of KIA, as compared to that approved in the Tariff Order for the First Control Period.
- 8.7. It is observed that the major reasons for the deviation are the increase in actual expenses relating to Power, fuel & water, as compared to the amount approved in the Tariff Order and the claim for certain unapproved expenses such as Customs cost recovery charges, Aviation Meteorological service charges, CNS-ATM service charges, CISF induction fee, ORAT & Inauguration expenses.
- 8.8. The Employee costs were noted to be higher as compared to traffic growth and the global benchmarks and therefore, the same has been rationalised. (refer Chapter 4). Similarly, Power, fuel & water expenses, Repairs & Maintenance expenses, and Airport inauguration expenses have also been rationalised.
- 8.9. CISF Induction fee, CSR expenses and CNS-ATM service charges have not been considered as part of the Study for true up of the First Control Period.

Rationalization of O&M expenses

- 8.10. Based on the observations made in Chapters 3 and 4, certain O&M expenses have been rationalised and the allowable Aeronautical O&M expenses have been determined as ₹ 220.71 Crores prior to reclassification and reallocation of ratios.

Segregation of costs (ratio reallocation)

- 8.11. AO has submitted its O&M expenses under five major expense heads and the segregation of all such expenses into Aeronautical, Non-aeronautical, and Common is based on the nature of the expense head. The Common costs have been further segregated into Aeronautical and Non-aeronautical using an appropriate allocation ratio, i.e., Terminal Building ratio and Employee Head Count ratio.
- 8.12. The Common costs has been re-allocated using revised Terminal Building ratio, revised Employee Head Count ratio and Gross Fixed Assets ratio for certain expenses based on their nature / utilisation.
- 8.13. The impact of reallocation and the resultant reallocated Aeronautical O&M expenses of KIA as per the Study are given in Table 36 and Table 37 respectively. The total downward adjustment in the Aeronautical expenses pursuant to such re-allocation is ₹ 1.45 Crores and the reallocated Aeronautical O&M expenses for the period FY 2018-19 to FY 2022-23 has been determined as ₹ 219.26 Crores. for the purposes of true up.

Internal and External Benchmarking

- 8.14. Internal Benchmarking is performed by analysing the CAGR trend of the Aeronautical O&M expenses (grouped under four major heads), in comparison with the growth of PAX and ATM traffic over the period FY 2018-19 to FY 2021-22 (i.e., First Control Period excluding FY 2022-23).
- 8.15. The O&M expenses of KIA namely, Employee Cost, Administration & General expenses, Utility & Operating expenses and Repairs & Maintenance expenses have grown at a lower CAGR than that of PAX and ATM traffic during the period.
- 8.16. The Study has not considered certain expenses such as ORAT and Airport Inauguration expenses for the Internal Benchmarking analysis as these expenses are incurred only in FY 2018-19 towards commencement of airport operations and not recurring in nature. Further, the Study has not included CNS-ATM charges, CISF induction fee and CSR expenses since the same have not been allowed as explained in Chapter 3.
- 8.17. It is observed from the inflation-adjusted analysis of O&M expenses that there has been a significant increase in the inflation-adjusted Utility & Other Operating expenses and Repair & Maintenance Expenses of 44.37% and 40.55% respectively over the 4-year period mainly due to increase in expenses of Housekeeping, Operational & Maintenance expenses and Power & Fuel Expenses and Other Operating expenses which are essential for the operation of the airport.
- 8.18. Based on the above analysis, it has been determined that there is a need to rationalise the Utility & Operating expenses (especially, Power costs) so as to determine the efficient O&M expenses.
- 8.19. In respect of inflation-adjusted Repair & Maintenance Expenses, the Study refers to para 3.3.3(iv) above wherein the same were found to be within 6% of opening RAB and hence found to be reasonable.
- 8.20. External benchmarking is performed for the period FY 2018-19 to FY 2021-22 (i.e., for the First Control period excluding FY 2022-23) by comparing the major O&M expenses of KIA with other comparable airports using various parameters (Passenger traffic, ATM, Terminal Building area, % of Revenue and % of Average RAB).
- 8.21. It is observed that out of all the comparable airports identified by the Study, Calicut and Mangaluru Airports are more comparable to Kannur Airport than Cochin Airport on most of the parameters.
- 8.22. The external benchmarking analysis has determined that largely, the O&M expenses of KIA are either lower or in line with the expenses of comparable airports except for Utility & Other Operating expenses, wherein it is proposed to rationalise the same, in order to determine the efficient O&M expenses. Based on the same, the Study recommends rationalization of both the Utility and Repairs & Maintenance expenses (refer Chapter 4).

Conclusion

- 8.23. Based on the above factors, the Study proposes to consider the Aeronautical O&M expenses after rationalisation and re-allocation as per Table 37 for the purposes of true up of the First Control Period.
- 8.24. The year-wise summary of the reclassification and other adjustments to O&M expenses is provided in the table below :

Table 61: Year-wise summary of reclassification and other adjustments to O&M expenses*(₹ in Crores)*

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
O&M Expenses as per true ap submission of KIA (refer Table 2) (A)	51.64	61.79	58.59	60.05	70.30	302.36
O&M Expenses post rationalisation and reallocation as proposed by the study (refer Table 37)						
Employee costs	7.32	11.03	10.95	10.35	10.05	49.70
Power, Fuel & Water	3.58	7.37	3.85	4.45	6.09	25.34
Repair & Maintenance	5.75	12.89	13.67	15.70	18.08	66.09
Administration expenses	7.02	3.36	3.67	4.01	5.08	23.15
Security	-	0.43	0.43	0.47	0.71	2.04
Other Airport Operating Expenses	2.39	8.84	9.44	11.23	13.02	44.91
Cargo related expenses	-	-	-	0.21	0.41	0.62
ORAT	1.52	-	-	-	-	1.52
Airport inauguration expenses	5.86	-	-	-	-	5.86
Total Aero O&M expenses considered by the Study (refer Table 37) (B)	33.44	43.92	42.02	46.43	53.45	219.26
Impact (A-B)	18.20	17.86	16.57	13.61	16.85	83.10

- 8.25. AO has claimed Aeronautical O&M expenses of ₹ 302.36 Crores for the First Control period i.e., from FY 2018-19 to FY 2022-23 as part of their True up submission.
- 8.26. The Study proposes ₹ 219.26 Crores as the Aeronautical O&M expenses For KIA for the period from FY 2018-19 to FY 2022-23, thus, resulting in a downward adjustment of ₹ 83.10 Crores in the Aeronautical O&M expenses. The Aeronautical O&M expenses for the period from FY 2018-19 to FY 2022-23 is reduced by 27.5%.
- 8.27. The Study has taken cognisance of the fact that the actual passenger throughput vis-à-vis the designed capacity (9.34 MPPA) of the Airport does not complement each other. Therefore, the Airport operator should keep in mind the current utilization while planning the expenses because the Operating expenses are indirectly proportionate to the Airport's capacity. Therefore, the situation of over-capacity will lead to higher operating expenses and eventually burden the Airport users.

ANNEXURE - I

KIAL - REALLOCATION OF O&M EXPENSES (FY 2018-19 TO FY 2022-23)

Administration Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
KIAL's Submission						
Aeronautical Administration and other Expenses after Rationalisation before reallocation (A)	7.29	3.42	3.69	4.04	5.09	23.53
Revision as per the Study						
Aeronautical Administrative & other Expenses (B)	7.02	3.36	3.67	4.01	5.08	23.15
Downward adjustment in Aeronautical Expenses (C=A-B)	0.27	0.06	0.02	0.03	0.01	0.38

FY 2018-19

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Vehicle Running & Maintenance expenses	-	98.39%	-	98.28%	-	Employee Head Count Ratio
Administrative Expenses	0.38	98.39%	0.38	98.28%	0.38	Employee Head Count Ratio
Consultancy Charges	3.89	100.00%	3.89	94.62%	3.68	Gross Fixed Asset Ratio
CSR Expenditure	0.37	100.00%	-	0.00%	-	Amount not allowed as per study
Employee Training expenses	0.31	98.39%	0.31	98.28%	0.31	Employee Head Count Ratio
Insurance-operations	-	100.00%	-	94.62%	-	Gross Fixed Asset Ratio
Other operational expenses	0.15	98.39%	0.15	98.28%	0.15	Employee Head Count Ratio
Miscellaneous Expenses	0.16	98.39%	0.16	98.28%	0.16	Employee Head Count Ratio
Postage & Courier Charges	0.18	98.39%	0.17	98.28%	0.17	Employee Head Count Ratio
Printing & Stationery Charges	0.21	98.39%	0.21	98.28%	0.21	Employee Head Count Ratio
Legal & Professional Fees	1.31	98.39%	1.29	94.62%	1.24	Gross Fixed Asset Ratio

Recruitment Expenses	0.15	98.39%	0.15	98.28%	0.15	Employee Head Count Ratio
Rent	0.18	94.50%	0.17	92.00%	0.16	Terminal Building Ratio
Rates & Taxes	0.92	0.00%	-	0.00%	-	Non Aeronautical
Travelling Expenses	0.42	98.39%	0.42	98.28%	0.42	Employee Head Count Ratio
TOTAL	8.63		7.28		7.02	

FY 2019-20

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Vehicle Running & Maintenance expenses	-	96.61%	-	96.40%	-	Employee Head Count Ratio
Administrative Expenses	0.17	96.61%	0.17	96.40%	0.16	Employee Head Count Ratio
Consultancy Charges	0.72	100.00%	0.72	94.78%	0.68	Gross Fixed Asset Ratio
CSR Expenditure	0.78	100.00%	-	0.00%	-	Amount not allowed as per study
Employee Training expenses	0.13	96.61%	0.12	96.40%	0.12	Employee Head Count Ratio
Insurance-operations	0.16	100.00%	0.16	94.78%	0.15	Gross Fixed Asset Ratio
Other operational expenses	0.11	96.61%	0.10	96.40%	0.10	Employee Head Count Ratio
Miscellaneous Expenses	0.13	96.61%	0.12	96.40%	0.12	Employee Head Count Ratio
Postage & Courier Charges	0.04	96.61%	0.04	96.40%	0.04	Employee Head Count Ratio
Printing & Stationery Charges	0.08	96.61%	0.08	96.40%	0.08	Employee Head Count Ratio
Legal & Professional Fees	0.81	96.61%	0.79	94.78%	0.77	Gross Fixed Asset Ratio
Recruitment Expenses	0.33	96.61%	0.32	96.40%	0.32	Employee Head Count Ratio
Rent	0.03	94.50%	0.03	92.00%	0.03	Terminal Building Ratio
Rates & Taxes	1.33	0.00%	-	0.00%	-	Non Aeronautical
Travelling Expenses	0.80	96.61%	0.77	96.40%	0.77	Employee Head Count Ratio
TOTAL	5.62		3.42		3.36	

FY 2020-21

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Vehicle Running & Maintenance expenses	-	95.00%	-	94.69%	-	Employee Head Count Ratio
Administrative Expenses	0.09	95.00%	0.08	94.69%	0.08	Employee Head Count Ratio
Consultancy Charges	-	100.00%	-	94.83%	-	Gross Fixed Asset Ratio
CSR Expenditure	0.08	100.00%	-	92.00%	-	Amount not allowed as per study
Employee Training expenses	0.09	95.00%	0.08	94.69%	0.08	Employee Head Count Ratio
Insurance-operations	0.20	100.00%	0.20	94.83%	0.19	Gross Fixed Asset Ratio
Other operational expenses	0.19	95.00%	0.18	94.69%	0.18	Employee Head Count Ratio
Miscellaneous Expenses	0.38	95.00%	0.36	94.69%	0.36	Employee Head Count Ratio
Postage & Courier Charges	0.00	95.00%	0.00	94.69%	0.00	Employee Head Count Ratio
Printing & Stationery Charges	0.05	95.00%	0.05	94.69%	0.05	Employee Head Count Ratio
Legal & Professional Fees	2.22	95.00%	2.11	94.83%	2.10	Gross Fixed Asset Ratio
Recruitment Expenses	0.04	95.00%	0.03	94.69%	0.03	Employee Head Count Ratio
Rent	0.04	94.50%	0.03	92.00%	0.03	Terminal Building Ratio
Rates & Taxes	3.95	0.00%	-	0.00%	-	Non Aeronautical
Travelling Expenses	0.59	95.00%	0.56	94.69%	0.56	Employee Head Count Ratio
TOTAL	7.90		3.69		3.67	

FY 2021-22

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Vehicle Running & Maintenance expenses	-	94.78%	-	94.44%	-	Employee Head Count Ratio
Administrative Expenses	0.13	94.78%	0.12	94.44%	0.12	Employee Head Count Ratio
Consultancy Charges	-	100.00%	-	94.82%	-	Gross Fixed Asset Ratio

CSR Expenditure	-	0.00%	-	0.00%	-	-
Employee Training expenses	0.16	94.78%	0.15	94.44%	0.15	Employee Head Count Ratio
Insurance-operations	0.33	100.00%	0.33	94.82%	0.31	Gross Fixed Asset Ratio
Other operational expenses	0.30	94.78%	0.28	94.44%	0.28	Employee Head Count Ratio
Miscellaneous Expenses	0.88	94.78%	0.84	94.44%	0.83	Employee Head Count Ratio
Postage & Courier Charges	0.05	94.78%	0.05	94.44%	0.05	Employee Head Count Ratio
Printing & Stationery Charges	0.16	94.78%	0.15	94.44%	0.15	Employee Head Count Ratio
Legal & Professional Fees	1.29	94.78%	1.22	94.82%	1.23	Gross Fixed Asset Ratio
Recruitment Expenses	0.04	94.78%	0.03	94.44%	0.03	Employee Head Count Ratio
Rent	0.04	94.50%	0.03	92.00%	0.03	Terminal Building Ratio
Rates & Taxes	1.05	0.00%	-	0.00%	-	Non Aeronautical
Travelling Expenses	0.88	94.78%	0.83	94.44%	0.83	Employee Head Count Ratio
TOTAL	5.30		4.04		4.01	

FY 2022-23

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL*	AERO Ratios as per Study	Aero Cost as per the Study*	Allocation basis as per the Study
Vehicle Running & Maintenance expenses	-	0.00%	-	93.00%	-	Employee Head Count Ratio
Administrative Expenses	0.20	93.33%	0.19	93.00%	0.19	Employee Head Count Ratio
Consultancy Charges		100.00%	-	94.82%	-	Gross Fixed Asset Ratio
CSR Expenditure	-	0.00%	-	0.00%	-	-
Employee Training expenses	0.14	93.33%	0.13	93.00%	0.13	Employee Head Count Ratio
Insurance-operations	0.52	100.00%	0.52	94.82%	0.50	Gross Fixed Asset Ratio
Other operational expenses	0.20	93.33%	0.19	93.00%	0.19	Employee Head Count Ratio
Miscellaneous Expenses	0.07	93.33%	0.07	93.00%	0.07	Employee Head Count Ratio
Postage & Courier Charges	0.09	93.33%	0.08	93.00%	0.08	Employee Head Count Ratio

Printing & Stationery Charges	0.19	93.33%	0.18	93.00%	0.17	Employee Head Count Ratio
Legal & Professional Fees	2.63	93.33%	2.45	94.82%	2.49	Gross Fixed Asset Ratio
Recruitment Expenses	0.04	93.33%	0.04	93.00%	0.04	Employee Head Count Ratio
Rent	0.01	94.50%	0.01	0.00%	-	Terminal Building Ratio
Rates & Taxes	0.75	0.00%	-	0.00%	-	Non Aeronautical
Travelling Expenses	1.33	93.33%	1.24	93.00%	1.23	Employee Head Count Ratio
TOTAL	6.16		5.09		5.08	

KIAL - REALLOCATION OF O&M EXPENSES (FY 2018-19 TO FY 2022-23)

Security Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	Total
KIAL's Submission						
Aeronautical Administration and other Expenses (A)	-	0.44	0.43	0.47	0.75	2.09
Revision as per the Study						
Aeronautical Administrative & other Expenses (B)	-	0.43	0.43	0.47	0.71	2.04
Downward / (Upward) adjustment in Aeronautical Expenses (C=A-B)	-	0.01	0.00	(0.00)	0.04	0.05

FY 2018-19

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Security	-	0.00%	-	94.62%	-	-

FY 2019-20

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Security	0.45	96.61%	0.44	94.78%	0.43	Gross Fixed Asset Ratio

FY 2020-21

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Security	0.45	95.00%	0.43	94.83%	0.43	Gross Fixed Asset Ratio

FY 2021-22

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Security	0.50	94.78%	0.47	94.82%	0.47	Gross Fixed Asset Ratio

FY 2022-23

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
Security	0.55	93.33%	0.72	94.82%	0.71	Gross Fixed Asset Ratio applied on the Amount derived as per Study (refer Table 26)

KIAL - REALLOCATION OF O&M EXPENSES (FY 2018-19 TO FY 2022-23)

Repairs & Maintenance Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
Housekeeping charges	3.31	9.50	8.93	9.61	9.89	41.25
Total Repair & Maintenance Expenses	3.31	9.50	8.93	9.61	9.89	41.25
KIAL's Submission						
Housekeeping charges	3.13	8.98	8.44	9.08	9.89	39.52
Aeronautical Repair & Maintenance Expenses (A)	3.13	8.98	8.44	9.08	9.89	39.52
Revision as per the Study						
Housekeeping charges	3.05	8.74	8.22	8.84	9.63	38.48
Aeronautical Repair & Maintenance Expenses (B)	3.05	8.74	8.22	8.84	9.63	38.48
Downward adjustment in Aeronautical Expenses (C=A-B)	0.08	0.24	0.22	0.24	0.26	1.04

* **NOTE -** The Study has already rationalised and restricted Aero 'Other R&M' expenses from ₹ 39.35 Crores to ₹ 27.62 Crores as per Chapter 4.

Hence, only housekeeping charges have been reallocated to derive the revised total Aero R&M expenses

FY 2018-19

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
House keeping	3.31	94.50%	3.13	92.00%	3.05	Terminal Building Ratio
TOTAL	3.31		3.13		3.05	

FY 2019-20

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
House keeping	9.50	94.50%	8.98	92.00%	8.74	Terminal Building Ratio
TOTAL	9.50		8.98		8.74	

FY 2020-21

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
House keeping	8.93	94.50%	8.44	92.00%	8.22	Terminal Building Ratio
TOTAL	8.93		8.44		8.22	

FY 2021-22

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
House keeping	9.61	94.50%	9.08	92.00%	8.84	Terminal Building Ratio
TOTAL	9.61		9.08		8.84	

FY 2022-23

Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
House keeping	10.47	94.50%	9.89	92.00%	9.63	Terminal Building Ratio
TOTAL	10.47		9.89		9.63	

KIAL - REALLOCATION OF O&M EXPENSES (FY 2018-19 TO FY 2022-23)

Other Airport Operating Expenses

(₹ in Crores)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	TOTAL
KIAL's Submission						
Aeronautical Other Operating Expenses (A)	0.43	2.15	2.63	2.84	3.17	11.22
Revision as per the Study						
Aeronautical Other Operating Expenses (B)	0.42	2.15	2.63	2.84	3.18	11.23
Downward adjustment in Aeronautical Expenses (C=A-B)	0.01	(0.00)	(0.00)	0.00	(0.01)	(0.01)

FY 2018-19

S.No.	Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
	Aviation Meteorological Support Services	0.24	100.00%	0.24	100.00%	0.24	Aeronautical
	Communication, Navigation and Surveillance and Air Traffic Management Services *	1.26	0%	-	0%	-	Not allowed by the Study
	Trolley Retrieval Services	-	100.00%	-	100.00%	-	Aeronautical
	Insurance	0.20	94.50%	0.186	94.62%	0.19	Gross Fixed Asset Ratio
	CISF Induction Fee *	9.80	0%	-	0%	-	Not allowed by the Study
	TOTAL	11.49		0.42		0.42	

FY 2019-20

S.No.	Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
1	Aviation Meteorological Support Services	0.98	100.00%	0.98	100.00%	0.98	Aeronautical
2	Communication, Navigation and Surveillance and Air Traffic Management Services *	6.78	0%	-	0%	-	Not allowed by the Study
3	Trolley Retrieval Services	0.50	100.00%	0.50	100.00%	0.50	Aeronautical
4	Insurance	0.71	94.50%	0.67	94.78%	0.67	Gross Fixed Asset Ratio
	TOTAL	8.97		2.15		2.15	

FY 2020-21

S.No.	Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
1	Aviation Meteorological Support Services	1.08	100.00%	1.08	100.00%	1.08	Aeronautical
2	Communication, Navigation and Surveillance and Air Traffic Management Services *	6.22	0%	-	0%	-	Not allowed by the Study
3	Trolley Retrieval Services	0.55	100.00%	0.55	100.00%	0.55	Aeronautical
4	Insurance	1.06	94.50%	1.00	94.83%	1.01	Gross Fixed Asset Ratio
TOTAL		8.91		2.63		2.63	

FY 2021-22

S.No.	Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
1	Aviation Meteorological Support Services	1.19	100.00%	1.19	100.00%	1.19	Aeronautical
2	Communication, Navigation and Surveillance and Air Traffic Management Services *	1.81	0%	-	0%	-	Not allowed by the Study
3	Trolley Retrieval Services	0.35	100.00%	0.35	100.00%	0.35	Aeronautical
4	Insurance	1.37	94.50%	1.30	94.82%	1.30	Gross Fixed Asset Ratio
TOTAL		4.72		2.83		2.84	

FY 2022-23

S.No.	Description	Total expense	AERO Ratios as per KIAL	AERO Cost as per KIAL	AERO Ratios as per Study	Aero Cost as per the Study	Allocation basis as per the Study
1	Aviation Meteorological Support Services	1.37	100.00%	1.37	100.00%	1.37	Aeronautical
2	Communication, Navigation and Surveillance and Air Traffic Management Services *		0%	-	0%	-	Not allowed by the Study
3	Trolley Retrieval Services	0.58	100.00%	0.58	100.00%	0.58	Aeronautical
4	Insurance	1.29	94.50%	1.22	94.82%	1.22	Gross Fixed Asset Ratio
TOTAL		3.23		3.16		3.17	

* NOTE - Since the Study has already rationalised and not allowed both CISF induction fee and CNS-ATM charges (refer Table 26 and para 4.3.3 of Chapter 4 of the Study), it is not considered for further reallocation here.