CE657 - CONSTRUCTION ECONOMICS & INFRASTRUCTURE FINANCING

FINAL PROJECT REPORT

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REPORT PART 2

QUESTION 1

Delhi airport hikes user development fee for international passengers

Recently, the Airports Economic Regulatory Authority (AERA) has approved a significant hike in the User Development Fee (UDF) for international passengers at Indira Gandhi International Airport, effective **April 16, 2025**.

Under the revised rates:

- **Economy-class international UDF** rises from **₹129** to **₹650** (a ~**404%** increase).
- **Business-class international UDF** increases to **₹810**.

AERA justified the differential UDF rates for economy and business-class international passengers, citing the "user pays" principle and the enhanced facilities available to premium travelers.

Financial Impact on the Project:

- The UDF contributes directly to aeronautical revenues.
- Given that UDF is collected per embarking passenger, the immediate impact is a **sharp rise in cash inflows** from international traffic, particularly because **international passengers** typically yield **higher per capita revenues** than **domestic passengers**.

Formula to Estimate New Revenue from UDF:

Incremental Revenue=International Passengers per year×(New UDF−Old UDF)

Assuming 5 million international departing passengers per year (based on typical IGI traffic estimates from previous reports):

Incremental Revenue = 5,000,000 × (650−129) = 5,000,000×521 = ₹260.5 crore/year.
Thus, purely from UDF, DIAL could earn an **additional ₹260–270 crore annually** !!

Increment in Project's IRR and NPV:

Using Sensitivity Analysis,

- For UDF = **₹129**, IRR = 10% , NPV = ₹**10,575.95.**
- For UDF = **₹650**, IRR = 16%, NPV = **₹16,452.95.**

The hike strengthens DIAL's ability to service debt (especially Phase 3A expansion loans) and improves return on equity for sponsors like GMR.

It can decrease dependency on aggressive non-aeronautical monetization (commercial real estate leasing, parking revenues etc.), since aeronautical revenue stream itself is now enhanced.

However, user sensitivity to fee hikes must be monitored — extremely high UDF charges may over time impact passenger choice, especially if competition from upcoming airports (like Jewar) intensifies.

QUESTION 2

The construction work of the **DIAL** project, particularly the development of Terminal 3 (T3) and associated infrastructure, was completed within a ***rushed* schedule** of 37 months, which was **significantly faster than comparable global projects**. The project was deliberately targeted to be operational well before the **2010 Commonwealth Games**, and despite complexities, the **timelines were achieved**. According to the **Final Technical Audit Report**, the objective was to **prioritize time over cost** to ensure airport readiness, in line with strict performance obligations under the **Operation, Management, and Development Agreement (OMDA).**

However, this aggressive timeline came at the expense of cost control. The total project cost **escalated** from the original estimate of **₹8,975 crore** at financial closure in 2007 to **₹12,718 crore** by the time of final audit submission to AERA in 2010 — representing an approximate **42% increase**. Multiple factors contributed to the cost overrun:

- Scope expansion such as **increased terminal area** beyond **Major Development Plan (MDP)** specifications to accommodate greater meeters-and-greeters area, substation integration within the terminal, and additional facilities.
- **Design changes** during construction, such as shifting foundation design from **pile to raft** due to groundwater conditions.

- Ineffective cost monitoring mechanisms; the **PMC (Parsons Brinckerhoff)** focused primarily on engineering and schedule adherence, without adequately tracking or controlling project costs.

Thus, while construction was completed within the targeted time frame, the **impact on the project returns** was **significant**. The capital cost base on which user tariffs and aeronautical charges were computed increased, requiring **regulatory scrutiny by AERA** to protect users from excessive tariff hikes. Higher project cost also meant DIAL needed to **optimize non-aeronautical revenues aggressively** (e.g., through commercial leasing, advertising) to maintain viable returns for equity investors and lenders.

The design-build approach with an uncapped cost model, though enabling speed, diluted financial discipline compared to a lump-sum or guaranteed-maximum-price model.

In conclusion, the project showcases an impressive achievement of schedule adherence under global benchmarking but at the cost of financial overruns, necessitating careful regulatory intervention to align returns and user interests.

QUESTION 3

Impact of Jewar Airport on Future Traffic at IGIA

The Noida International Airport (Jewar Airport), expected to start operations by **May 2025**, is likely to affect Delhi's IGI Airport. Since Jewar is located much closer to Noida and Greater Noida — just **40–60 km away** compared to IGIA's **90 km** — passengers from these areas might prefer flying from Jewar.

Connectivity is also improving fast, with the **Yamuna Expressway**, proposed **Metro extension**, and the upcoming **Rapid Rail system** linking Jewar directly to major NCR cities. This will make Jewar even more accessible.

Because of this, IGIA might see:

- Some **domestic and low-cost international traffic** shifted to Jewar.
- **Airlines are moving** a few operations to benefit from lower costs at Jewar.
- Possible **cargo operations** shifting too, since Jewar plans a logistics hub.

In the long run, while IGIA will stay strong for major international flights, Jewar could capture a lot of the growing domestic and short-haul market. DIAL might need to improve services and manage pricing smartly to stay competitive.

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