



## One Route, One Fare: India's Experiment in Aviation Accessibility

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**Abstract** – One Route One Fare of India is an ambitious project of democratizing the aviation industry. It keeps prices of airfares constant, whether you book early or late as well as the demand fluctuations. Introduced as part of the UDAN regional connectivity program and operated primarily by Alliance Air, which is majority-owned by the government, the program aims to attract first-time passengers and formerly under-served areas by eliminating the price fluctuation associated with dynamic pricing models. Passengers travelling on the routes connecting smaller cities to major hubs are charged the same fare—traditionally ₹2,500—regardless of whether they make their reservations many months before boarding a flight or just hours before the flight. This is a non-traditional model of the industry, yet it addresses actual barriers to accessibility. Initial statistics indicate that 30–40 percent of the voyagers are new fliers and this is an indication of market growth over and above the current customers. However, the project requires the government subsidies in order to sustain it. The per-passenger support varies between ₹500 to ₹3,000 remunerations depending on the route performance. The critical inquiries are on the way to select the most optimal routes, the distribution of benefits throughout the income groups, and whether the program is financially sustainable in the long-term perspective. This discussion examines the economic reasoning, operation issues, and policy impacts of the initiative. It provides evidence-based suggestions to policymakers interested in expanding the program, airline managers who face fixed-price considerations, and international observers who may want to imitate the program. Even though the ultimate success is unpredictable, the experiment in India offers a number of insights on the aviation accessibility policy. It demonstrates that other ways of pricing that are more dynamic should also be taken seriously, although this might entail subsidies and further complications in the operations.

**Keywords:** Aviation accessibility, Fixed-fare pricing, Regional connectivity, UDAN scheme, Airline subsidies, Dynamic pricing alternatives, First-time flyers, Transport equity.

### 1. OBJECTIVE

This paper analyzes the One Route, One Fare program by India in an effort to determine the success of its aviation accessibility attempt by using fixed-price tickets. The idea is to examine the economic rationale of the program, its implementation process, and its results in terms of accessibility, and assess the effect of financial sustainability and equity also. The synthesis of evidence on passenger reaction, subsidy demands, and route functioning provides the research with evidence based policy recommendations to policy makers regarding expansion, airline managers striving to make the most of limited pricing resources, and others observing international systems seeking to replicate the research. The study will extend the knowledge on aviation accessibility policy by recording the insights of India, which was the first to experiment with alternative pricing models.

### 2. INTRODUCTION

The One Route, One Fare program in India is a radical departure sort of aviation economy. With a launch in the UDAN (Ude Desh ka Aam Naagrik) regional connectivity scheme, airfares will be fixed at a specific level

irrespective of the time of booking, availability of seat, or changes in demand. In some routes like Delhi – Bareilly or Ahmedabad –Diu, passengers are charged a fixed fee of ₹2500 rupees regardless of whether they have booked it three months ahead of time or even a few hours before their flight.

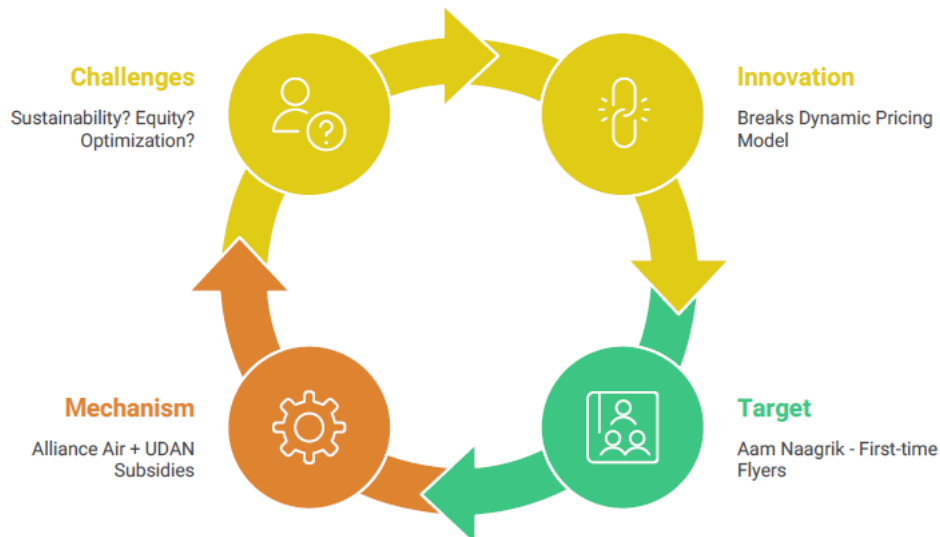


Fig -1: Fixed Fare Model Cycle

This pricing scheme goes against the decades of airline industry practice. Dynamic pricing has been the trend since the deregulations of the 1980s. The continuous fluctuation of fares by airlines is based on the demand, against the airlines competitors and capacity that maximizes the revenue but poses a hindrance to the price-sensitive passengers who cannot pay the high fares, or who might be at risk of paying high fares unpredictably. The question of the experiment in India is can aviation be democratized by making the process of pricing simpler. The program is aimed at the first time flyers, smaller towns, and middle income families when traveling is a dream not an everyday practice. Fixed fares will be more accessible than dynamic pricing since they will remove price uncertainty and the complexity of complex booking plans.

Nevertheless, the program has serious limitations. Alliance Air, the only carrier that currently uses a fixed fare route, has to be supported by government subsidies to continue in operation. Load factors differ significantly by route with some flights emptying half way long other planes always full. Issues of financial sustainability, considering the best route choice, and whether the benefits are provided to the targeted people or only subsidize those passengers already in the air continue to be asked. This paper looks into the design of the initiative, challenges in its implementation and the policy implications. It makes recommendations based on the first years of evidence of the program and offers advice to the policy makers who might be considering expansion, airline management that may be dealing with various operations and international observers that may be planning on replication.

### 3. METHODOLOGY

This paper will infer a multi-method qualitative research design comparing INDIA One Route, One Fare initiative by synthesizing policy documents, secondary data, and conducting a comparative case study.

#### Data Collection



- **Policy and program documents:** Government publications such as UDAN scheme guidelines, reports of the Ministry of Civil Aviation, and the operations statements of Alliance Air, and proceedings of parliamentary committees lay down the parameters of design and regulatory framework.
- **Secondary data sources:** The data on the load factors of routes, passenger volumes, and subsidies received were collected based on disclosures made publicly, reports on the industry, and scholarly literature. The research recognizes the lack of quantitative evidence and generalizes the information at hand.
- **Comparative case studies:** International aviation accessibility schemes. The U.S. Essential Air Service, the Norwegian regional subsidies, Brazilian connectivity experiments and EU Public Service Obligation regulations were analyzed to find out the typical problems and context-based solutions.
- **Literature review:** Literature on the theoretical basis of aviation economics, dynamic pricing theory, transport accessibility, and regional development policy. Publications in the industry and reports to the consultancy provide operational insights into regional carrier economics.

## Analytical Framework

In the analysis, policy evaluation framework has been deployed on four dimensions, including economic efficiency (cost-effectiveness of subsidies), equity (disparity in distribution of benefits between income groups and regions), feasibility in operations (airline implementation issues), and political sustainability (support of stakeholders and financial sustainability). A stakeholder perspective analysis investigates the ways in which policymakers, airline managers, passengers and international observers can experience and rate the program as it acknowledges that different constituencies have varying measures of success. Contextual analysis places the initiative in the larger aviation development curve, infrastructure investments and socioeconomic priorities of India, recognizing the dependencies of the path and institutional constraints of implementation.

## Limitations

Quantitative analysis is limited by serious data constraints. Passenger demographics and routes specific financial performance and overall subsidies are mostly undocumented. The research is based on incomplete statistics, industry assumptions, and comparisons to similar foreign programs where no direct evidence is offered. The recent implementation of the program does not allow a longitudinal analysis of sustainability and long-term effects, and therefore, the conclusion is tentative and can be changed with the advent of new data. Program implementation did not have an experimental design, and as a result, rigorous causal attribution is not possible observed outcomes can be due to confounding variables, as program implementation leads to increased infrastructure investment in aviation in general or macroeconomic changes in general and not to fixed pricing.

## Approach to Recommendations

Recommendations are syntheses of the available evidence in the context of uncertainty. Instead of prescriptive directives, they provide contingent guidance that is flexible to changing situations and constraints that are situation specific. The analysis focuses on the creation of evaluation frames and adaptive management systems, instead of adhering to blueprints of implementation, as innovative policy interventions need learning, instead of solutions.

#### 4. THE ECONOMIC LOGIC OF FIXED PRICING

Dynamic pricing guides airlines towards the achievement of definite business objectives. The airlines have to meet big fixed costs such as aircraft, crews, maintenance, and every additional passenger only brings on a small marginal cost. After booking a flight, it does not cost much to sell a seat consequently, any revenue that exceeds the marginal cost will be important. Revenue-management systems forecast demand and are used to decrease fares to occupy seats that would otherwise be vacant to maximize revenue.

This plan is effective to carriers but detrimental to access. It is a nightmare to the passengers with extreme price fluctuations, a seat may be ₹3,000 on Tuesday and ₹8,000 on Friday at the same flight. Flexible schedule and ability to book an adventure gives the benefit to travelers. The rest either pay more or do not travel at all. The complexity particularly disfavor the infrequent flyers who are not conversant with the best booking strategies.

Accessibility and certainty are sacrificed to fixed pricing at the expense of revenue maximization. Alliance Air is not able to generate premium fares during high-demand durations or due to passengers who are ready to pay more. A business traveler who last minute buys the tickets spends the same as a leisure traveler who had booked the tickets several months before. Commercially, this is a missed income in the accessibility perspective, this is in the form of democratic equality.

Airline Ticket Pricing Comparison

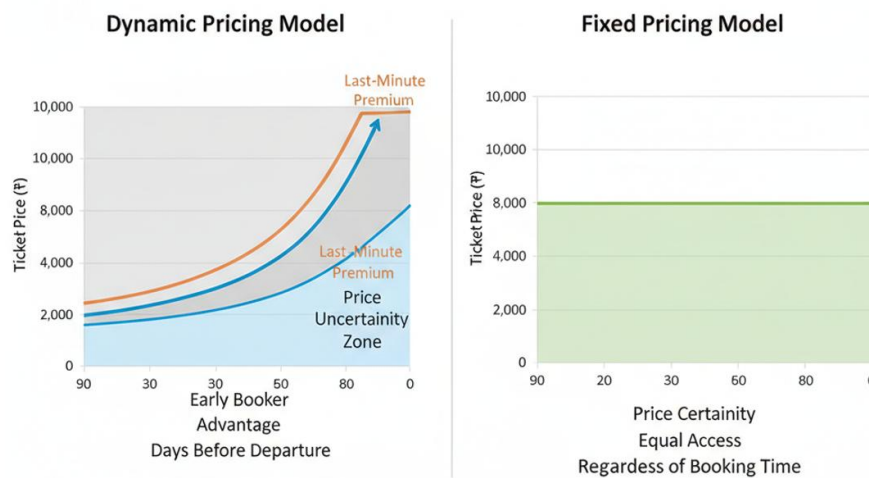


Fig -2: Dynamic vs. Fixed Pricing Comparison

This trade-off can only be utilized with subsidies. The lost revenue due to fixed pricing is compensated by government funding, the level of which is determined by the demand and distance of the route and the costs of operation. Demand-sensitive routes should have smaller per-passenger subsidies than routes should have larger subsidies. The subsidy system actually spreads the accessibility cost to the masses, instead of charging every traveler varying market prices.

The model presupposes that market failures are the reasons to intervene. When the private carriers will not service the routes at a price that they find profitable, but the social benefits of the service, such as economic development and connectivity of families and access to education, is greater than the costs, a government

subsidy can correct the failure. The issue is whether the fixed-fare subsidies are more socially effective than other alternatives like road upgrades or transfer payments.

#### 4.1 Implementation Alliance Air's Operational Reality

Alliance Air became the implementing carrier through default. Being a state-owned subsidiary of Air India, it is free to implement non-commercial pricing without objections of shareholders. Its fleet consists of a mixture of ATR turboprops and smaller planes that can operate at secondary airports with short runways typical of UDAN destinations.

The route choice is subjective as well as political in nature. Priority routes are used to connect underserved areas with major hubs, particularly in the states of the north and northeastern regions. The distances are 200 up to 800 kilometers - a distance in which surface transportation is present but a significant time saving is maintained. The cities served are usually those with population of 100,000–500,000- not large enough to attract large carriers but large enough to create some demand.



Fig -3: Revenue Maximization vs. Accessibility Trade-off

Operational issues are realized in a short period of time. Since fixed pricing does not allow revenue management, utilization of aircraft has to be maximized. The reliability of the schedules is very important passengers who are paying a certain sum of money expect to be sure about the service. Any delays or cancellations that can be absorbed by dynamic-priced carriers are expensive to dissatisfied passengers who selected the fixed-fare option, which comes with its reliability specifically.

The management is preoccupied with cost control. Profitability depends on the expenses with the revenue per passenger given. Alliance Air needs to maximise on fuel, down time, streamline ground operations and maintain low overheads. It will be a cultural difference with the traditional model of the government enterprise whereby the focus has been on increasing revenue rather than focusing on cost discipline.

The load factors differ widely amongst routes. Smaller routes serving between business centres have 70–80 percent of load which would be close to commercial viability. At times, experimental routes to remote locations operate at 30–40 percent capacity, which requires a significant subsidy. This inconsistency begs the question of the most appropriate combination of routes and whether routes that are not performing well should be scrapped to concentrate resources on the good ones.

Crew and aircraft scheduling are special issues. Regional operations distribute aircraft and crew member in numerous locations unlike hub-and-spoke networks where aircrafts go back home at night. Small city overnights make it more expensive and complicated. The accessibility of maintenance is also more difficult when the aircraft is flying distant hubs that have not been fully serviced.

#### 4.2 Passenger Response and Market Development

The initial results suggest that the initiative appeals to first-time flyers, but detailed statistics are not available. A high proportion of 30 -40 percent of passengers on these routes is flying first and was a significant improvement on the 5 -10 percent observed on established routes. The new flyers refer to the price assurance and affordability as the primary driving forces.

Equity however is an issue with passenger composition. A large percentage of the first-time flyers have a middle-class (educated and urban) background as opposed to low-income rural society. A Bareilly college graduate who is flying to Delhi on her first flight to attend a job interview is an example of program success, although the goals of the initiative of benefitting aam nagrik (common citizens) imply that there are higher aspirations than increasing the size of the privileged middle class.

Fixed-Fare vs. Traditional Routes

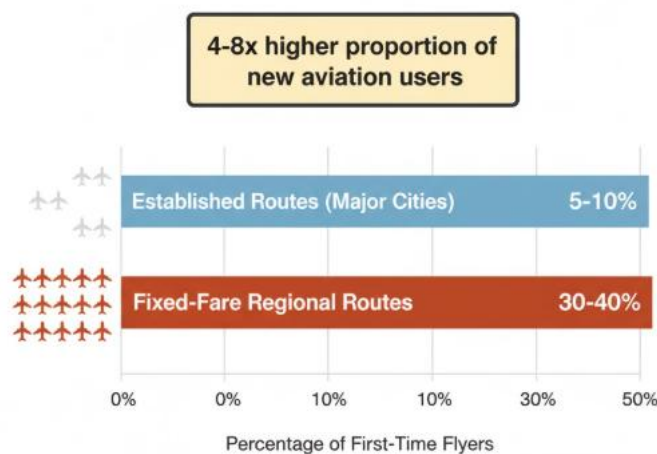


Fig -4: First-Time Flyer Composition Comparison

Purpose of traveling depends on the route. Highway connections between metros and smaller cities are heavy traffic with business and education - students, entrepreneurs, professionals. Leisure travellers are drawn in more by routes to religious locations or tourist destinations. This diversity implies that various accessibility objectives are met by different paths and it is challenging to evaluate them in one evaluation.

The patterns of booking are different than the dynamic-priced routes. In the absence of incentives offered by early-booking, passengers reserve nearer to the travel dates eliminating the visibility of advance demand and making it difficult to plan operations. Early booking is a common practice that airlines use to predict demand and to modify capacity; fixed pricing kills this data stream.

The repeated use means the first satisfaction. Along the existing paths, there are numerous customers who book the journey again, indicating that the initial experience is positive. The word-of-mouth assists in ensuring new fliers in small cities where the aviation marketing was not so extensive. This network effect may help spur the growth of the market because initial users will introduce friends and relatives.



Sensitivity of price is still apparent. In case of dismays or changes in schedules, passengers will transfer to the alternative means of transport instead of rescheduling. This demonstrates that fixed-fare travellers do not match with business travellers who consider convenience rather than the price.

### 4.3 Financial Sustainability and Subsidy Economics

The gap between the cost and the fixed-fare revenue is addressed by the government subsidies. The amount of subsidies is ambiguous, and they are not disclosed by route but are included in the construction of the Alliance Air working budget, which is not easily evaluated regarding cost-effectiveness, and casts doubt on the efficiency of operations.

There are varied levels of subsidies depending on the routes. The amount of per-passenger subsidies, at least in fairly successful routes, is estimated at 500–1000, and on thin routes at 2–3000. To illustrate, a ₹ 2,000 subsidy on a ₹2,500 ticket implies that the government will be paying 80 percent with passengers paying 20 percent of the ticket price. The extent to which this is a good value would be determined on how social benefits would be compared to other ways that the public fund can be used.

Long-term sustainability presupposes increasing revenue, reducing expenses or tolerating long-term subsidies. Fixed pricing allows the company to experience a low growth in revenue unless the volume of passengers increases at a significant rate. The prices of fuel, labour contracts, and aircraft economics are restrictive to cost cuts. Permanent subsidies, therefore, seem to be an option and this begs the question as to whether they can be political sustainability considering budgetary constraints.

Good examples are European regional aviation subsidies. Norway heavily subsidises remote aviation with thin routes never becoming commercial. France has equivalent schemes to Corsica and overseas territories. These precedents indicate that permanent subsidies are politically sustainable in terms of being infrastructure, more than a corporate welfare initiative.

Counterfactuals ultimately become the issue of the subsidy debate. In the case that fixed-fare aviation is a catalyst to economic growth, education or family connectivity otherwise inaccessible to alternative investment, subsidies can be appropriate. Subsidies become an inefficient redistribution in the event that mainly the travellers who would have flown anyway on commercial carriers at higher prices benefit. Such a strict consideration that separates these situations is yet to be made.

Subsidy other mechanisms are worth trying. Instead of having subsidies that are general to Alliance Air, competitive auctions whereby the carriers compete against each other by bidding to serve a route at given fixed prices would be even better in terms of efficiency. Fiscal discipline would be in place with route-specific subsidy limits that have automatic termination in case of cost above limits. Demand growth can be encouraged by performance-based subsidies that would decrease with route maturity.

### 4.4 Infrastructure and Complementary Investments

The project is connected to the larger-scale UDAN infrastructure renewal in smaller airports. Most of the destinations to which fixed-fare service is being offered are airports that have been refurbished or constructed recently due to the need to serve the region. Operating subsidies are made possible by capital investments in runways, terminals, and navigation equipment.

Airport quality influences the passenger experience, particularly those who are first time flyers. Misleading and fear-inducing airports send away the idea of embracing aviation at any cost. The key to designing success is vernacular signage, friendly staff, basic processes and kid-friendly amenities instead of fine-tuned lounges and luxurious shopping.



The ground transport integration dictates whether the aviation accessibility transforms into the real connectivity. When the passengers find it easy to access the airport but expensive or inaccessible taxis to the last destination location, then the advantage is lost. This can be enhanced by aligning with state transport authorities to provide bus connectivity, control taxi fare or subsidize transport to the airport, increasing the effect of fixed-fare flights.

The accessibility is affected by technology infrastructure. A large number of target passengers do not have online booking or smartphone experience. Though they can be aided by the travel agents, online accessibility will determine the success of the initiative in serving tech-savvy urban youth or in less-digitally connected groups. Reach is increased by investment in vernacular-language booking systems, simplified interfaces and offline booking capabilities.

The questions of complementary investment are not limited to aviation, but also to the development of the region in general. Does connectivity alone spur economic development or does it have to be accompanied with education, health and business infrastructure? Aviation is possibly but not necessarily a condition of the transformation of regional economies, which implies the coordination in the various policy areas.

#### **4.5 Comparative Perspectives: Global Experiments**

The project of India becomes a part of the world collection of aviation accessibility experiments, each of which is adjusted to the local conditions. The subsidy program in the U.S. Essential Air Service program makes the small community carriers, but this is a dynamic pricing program as opposed to a fixed fare program. In the cases of the routes, subsidies are given after a competitive bidding, whereby carriers can give levels of service and support required. This market-based practice contrasts to the direct government functioning of India but has similar accessibility objectives.

The subsidies in the aviation sector of Norway are aimed at providing wide coverage to remote areas in the coastlines and the Arctic. The government is fine with the fact that these paths will never become a commercially viable option, but considers connectivity as a crucial factor to ensure national harmony and regional growth. There are elements of fixed prices, but less comprehensive than those of India. The experience of Norway indicates that permanent subsidies may be politically sustainable when put in the context of infrastructure and not welfare.

Brazil had tried regional aviation development but had an implementation issue. Whenever the subsidy was found inadequate, private carriers that had been given subsidies lowered the quality of their services or suspended routes altogether. This underlines difficulties in entering into contract with individual carriers as opposed to direct government operation. The case of Brazil highlights that proper regulatory control is required where providers offer subsidised services.

The regulations of the European Union regarding Public Service Obligation enables the member states to give way to route and price conditions of the carriers and they compensate the resultant losses. This model facilitates accessibility interventions and maintenance of the private sector operation. This has drawbacks of being complex and high administrative overheads, so it is used on islands and remote areas, rather than whole systems.

Such comparisons have no ubiquitous best practice. Effective solutions are responsive to institutional capacity, structure of airline industry and political economy. The system of government-run fixed-fare routes used in India is appropriate to the situation in India, where government-owned carriers operated and where regulation over the business of privately owned airlines was very limited. Various situations demand various designs.



## 5. RECOMMENDATIONS FOR POLICY AND PRACTICE

**For Policymakers:** Put in place comprehensive evaluation structures that are not limited to mere load factors. Monitor percentages of the first-time flyers, geographical equity in distributing benefits, economic consequences on the related regions, and cost-efficiency in relation to other interventions. Strict assessment will give evidence of whether to go on with the program or modify it.

Develop open rule-based subsidy systems rather than secret budgetary allocations. Post the subsidy rate per route, apply automatic adjustment formula based on performance, and have sunset clauses which have to be re-authorized regularly. The transparency will create the confidence of the people and will stimulate the discussion of the value of the program in the democratic way.

Create hybrid pricing strategies in established routes to maintain access and still generate some demand-based revenues. A two-tier system, assured seats at a certain price and dynamically-priced remaining inventory may enhance financial sustainability without giving up on accessibility objectives. Be careful with testing, pay attention to the reaction of passengers and never undermine the main goals.

Enhance counter investments around the airport infrastructure, ground transport and digital access. The barrier of pricing is not the only one the holistic approach that covers several constraints will have more impact. Align interagency coordination to develop integrated travel frameworks and not aviation intervention vacuums.

Insure against political capture Supply independent route-selection agencies, which use transparent criteria. Although accountability is important, strictly political allocation is detrimental to the effectiveness of the program as well as credibility. Establish institutions that have democratic contributions and technical skills.

**For Airline Management:** Focus on reduction of cost rather than maximization of revenue. Profitability is determined by cost management since the revenue per passenger is non-variable. Implement advanced cost-management systems, replicate with efficient regional airlines around the globe and instill operational excellence.

Create an image of the accessibility rather than traditional airline qualities. Position Market Alliance Air as the carrier that renders aviation affordable to everyone and focuses on the ability to guarantee prices, reliability, and quality to first-time flyers. True, brand-driven mission can be differentiated against commercial airlines.

Implement a systematic passenger feedback mechanism and a rapid response mechanism. This requires constant learning on the basis of the passenger experience in order to have an experimental program that targets new populations. Win trust and loyalty by conducting social media monitoring, survey all passengers, conducting listening tours of the community, and demonstrating responsiveness.

Formal scenario-planning exercises prepare you with several different scenarios. The future of the initiative is unclear- the initiative could either grow bigger, smaller, develop or be challenged. Prepare contingencies on every scenario to establish organizational agility irrespective of the future that will emerge.

**For Scaling the Initiative:** Perform intensive pilot test prior to significant expansion. Causal effects should be isolated by use of randomized controlled trials where possible and by comparing fixed-priced routes to similar dynamic-priced routes. Extensive assessment eliminates scaled interventions, which do not perform as desired.



Add routes focusing on quality and not quantity. Political pressures can encourage numerous paths at a short rate, but systematic, step-by-step growth that entails the consolidation of learning is more beneficial to service quality and produces superior long-term results. Launch space missions so that there is time to stabilize operations between additions.

After the maturity of the program, diversify the Alliance Air monopoly. Implement competitive route auctions whereby the carriers can bid to provide subsidies to serve the routes at a given price. Competition may enhance efficiency, but maintain accessibility objectives; inculcate transitions cautiously not to cause service-interruptions.

Use technology in a strategic manner to improve accessibility and efficiency. Create mobile-based booking apps in local languages that are optimized to work with low band. Implement customer-service chatbots and make sure it is accessible by humans. Operational optimization and evidence-based decision making Use data analytics.

**In case of International Replication:** Evaluate case-specific conditions prior to trying to replicate. The project needs the presence of current aviation facilities, the government bargaining power over airline companies, a fiscal ability to maintain long-term subsidies, administrative excellence, and a threshold market base, and political consistency. The countries that do not have these conditions should solve the underlying problems.

Indianize, but not mechanically. Depend on scale to population size and geography, price in relation to local population incomes, operate within local airline industry models, and assimilate local cultural standards. The fundamental point, which is, price simplicity makes access possible, is generalizable, however the context should be specific.

Pilots that are carefully selected should be introduced first as opposed to national roll-outs. Use routes with high probability of success, present initiatives as time-constrained experiments, incorporate evaluation as a design attribute at the outset, and invest in open learning, even sincere reporting of failure.

Form regional or international alliances to exchange knowledge, resource pooling and policies. Small countries can be more influential when united than when separated. The aviation accessibility may be facilitated by international development institutions by concessional financing and technical support.

## 6. FUTURE RESEARCH DIRECTIONS

### 6.1 Rigorous Impact Evaluation

The project should urgently undergo an in-depth impact assessment based on experimental or quasi-experimental approaches. Future studies ought to undertake randomized controlled trials where feasible, and place permanent pricing on randomly selected routes whilst keeping dynamic pricing on similar routes as controls. In this design, causal effects of fixed pricing on passenger composition, frequency of travel, and economic results are identified, and attribution issues in observational data are overcome.

Alternatively, the researchers might apply difference-in-difference or synthetic control designs by making comparisons between cities with fixed-fare connectivity versus other cities with no fixed-fare connectivity. The socioeconomic effects apparent in other areas than the number of passengers would be measured by longitudinal monitoring of business establishment, school attendance, employment, and family cohesion. An evidence-based decision regarding the continuation and expansion of a program would be informed by the full cost-benefit analysis, including these kind of wider impacts compared to fiscal costs.



Some of the critical research questions are: What proportion of passengers is on a truly new route or mode versus a replacement. What is the distribution of benefits within income quintiles and geographic localities. What are the viable subsidy rates in comparison to other regional development investments. Is opening the door to aviation a long-term behavioral change or a one-time experiment. These questions demand multi-year panel designs that include comparison groups and highly rigorous causal identification designs which are otherwise lacking in program evaluation.

## 6.2 Passenger Behavior and Decision-Making

It takes time and specific behavioral research to understand the way behavior is perceived and then reacted to within the target populations when it comes to fixed pricing. Psychological barriers and enablers not only due to pure economics will be revealed through qualitative research interviews and focus groups of first-time flyers, potential passengers who have not travelled yet, and communities served by a fixed-fare route.

**Investigative questions must be in the form of:** In what ways does price certainty influence travel planning and willingness to fly by households that are risk-averse and constrained by low budgets. Which other complementary variables, such as airport intimidation, cultural unfamiliarity, information gaps have a comparative interaction with pricing, to decide accessibility. What are the effects of social networks and word-of-mouth in aviation adoption in low-flight experience communities. What is the impact of trust on a government controlled carrier in relation to a privately owned airline?

Messaging strategies, booking interface designs, and service changes, to maximize accessibility, would be tested by behavioral experiments. As an illustration, randomized experiments that contrast the various types of price presentation (absolute versus equivalents with such as the cost of two movie tickets) would determine the most effective methods of communication that may lead to a high understanding and acceptance of various target groups. Knowing how to make decisions will help design a better program than to assume rational economic actors will act in a mechanical way by responding to price signals.

## 6.3 Comparative International Studies

A cross-country comparison of systematic comparisons conducted among nations who apply aviation accessibility interventions would produce transferable knowledge beyond the India-specific results. The structured research into the subsidies of Norway, the US Essential Air Service, European PSO routes and the emergent programs in Indonesia, Philippines, and African countries would help determine the universal principles and the context-specific aspects.

**It should be compared to investigate:** Which institutional setups - government agency, market contracting, competitive bidding - deliver the most accessibility at minimal fiscal cost in different governance settings. What is the effect of subsidy systems on carrier behaviour and service quality. What are the passenger make-up patterns at various income levels and aviation market maturity. What complementary policies, such as infrastructure and regulation, consumer protection, are essential and optional?

Evidence quality would be enhanced by a meta-analysis that would collect the outcomes of various experiments of different countries. Research cooperation on an international basis may set up similar measurement schemes of cross-national comparison with reference to cultural distinctions. This would be a learning network in the world that would soar policy innovation more than domestic trials as it would benefit the hundreds of millions of people around the world who experience barriers to aviation accessibility.



#### **6.4 Technology and Innovation Pathways**

New technologies can have a paradigm shift in the economics of the regional aviation industry, such that the value of subsidized fixed pricing may no longer be needed and new accessibility models can be introduced. There is need to research ways electric aircraft, autonomous systems, and digital platforms will transform accessibility economics.

Small electric planes and electric vertical takeoff and landing (eVTOL) aircraft are expected to have very low operating costs compared to conventional aircraft, and may be profitably serving thin routes at affordable prices in the absence of subsidies. The representation of the regional connectivity using emerging aircraft technologies might help identify a timeframe in which technological change could be used instead of pricing interventions.

Innovations in digital platform innovations in the areas of booking, payment and passenger service can help reduce the cost of transactions and provide access to digitally connected populations. The blockchain-based systems could allow the transparent management of the subsidies and avoid the fraud. Through the use of artificial intelligence, routing and scheduling would be more efficient than existing methods. The evaluation of research should be done towards what technologies actually improve accessibility and how many are simply advantageous to already-connected people.

Nevertheless, there has to be equity analysis to technology optimism. When innovations are being promoted to the urban and educated, digitally literate groups bypassing rural or low-income or elderly citizens, this can increase the disparities of access. An analysis of distributional effects among the various demographic groups based on a critical assessment of technology should be used to make investment priorities and focus on innovations that may be made to facilitate their accessibility and exclusion should not be developed.

#### **6.5 Long-Term Sustainability Models**

The sustainability of the initiative is determined by the sustainability of financing other than limitless general budget subsidies. Studies must examine other sources of revenue and mixed models between access and fiscal realism.

Possible alternatives include: special transportation taxes (fuel levies, luxury taxes) to be used to finance accessibility subsidies cross-subsidy whereby profitable routes subsidize thin routes in integrated networks; joint cost-sharing and risk-sharing in public-private partnerships; congestion charging at big airports to raise revenue on regional connectivity; development of real-estate around smaller airports to capture land-value gains.

These alternatives have their fiscal implications, political feasibility, and equity impacts that should be an example of research. An example is fuel taxes, which are retrogressive and put a heavy burden on the low-income families, but luxury tax is imposed on those who can afford it. Cross-subsidization relies on profitability maintenance on high-density routes despite competition. Both models involve tradeoffs that have to be analyzed.

Hypothecated taxes and value-capture financing give precedents, which are flexible in aviation accessibility, with international experience of trust funds as transportation funds and experience. Fiscal analysis comparing funding arrangements that are politically sustainable in the governance frameworks of different systems and understanding models of diverse countries would inform sustainable institutional design instead of today's improvised forms of funding reliant on annual budgetary bargains.



## 7. CONCLUSION

### 7.1 An Ongoing Experiment

The One Route, One Fare initiative in India is not a finished project and its final assessment would be made after several years. Preliminary data indicates that it appeals to first time flyers and provides passengers with certainty in prices. But there are still concerns regarding its financial sustainability, distributive benefits and optimal design. The primary value of the initiative might be not so much in the details but rather in demonstrating that alternative pricing models should be given some serious consideration. Dynamic pricing has long been viewed as the future and the best fit to aviation. According to the experiment in India, it is possible to focus on accessibility rather than revenue maximization, but requires subsidies and has difficulties in operations.

The success of the program would be based on our definition of the program. Assuming success means that it would be commercially viable without subsidies, then it is a far-fetched idea. The future would be improved in case success is based on demonstrating that the subsidized fixed prices can expand aviation accessibility among excluded segments at an affordable rate. Our judgment is determined by the evaluation framework that we adopt. No matter which results could be gained at the end, the experiment conducted in India gives a few precious lessons to the global aviation policy. It demonstrates how to use accessibility-oriented pricing, how other countries will struggle to operate, and offers the example of how passengers respond to an easier pricing. Although such changes may be required in the model, the lessons are useful to policymakers across the world that handle aviation accessibility.

The project also exposes the strains in terms of opening-up technologies that have been historically biased towards the elites. The cost system, infrastructure requirements and safety imperatives in aviation present affordability impediments that cannot be washed away by the markets. The question of whether or not government intervention using pricing controls and subsidies is appropriate depends on the question of accessibility benefits versus fiscal costs, as well as other investment opportunities. In the course of the experiment, being dedicated to strict assessment, open reporting, and adaptable administration, the experiment will not only become more efficient, but it will also help acquire new knowledge on a global scale. The world has hundreds of millions of potential beneficiaries of aviation and cannot access the market due to the market barriers. The willingness of India to be one of the first to take radical action and document its victories and failures is a worthy contribution to development on a global level that goes beyond the aviation front.

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