

Indian Airport Competitiveness and its Efficiency: Key Strategy to Develop a Airport Hub

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Introduction

- **Transportation Hub to Multi-functional aero metropolis**
- **Performance Index**: Airport city serves not only to act as an index of a country's performance in development, but also plays a key role in the growth of national industries and a gateway to economic globalization.
- **International Competitiveness**: Quality of airport infrastructure is one of the determining and stimulating factor directly affects in the country's international competitiveness and the flow of foreign direct investment.
- **Economic Generic**: Airport infrastructure has direct impact on economic activity in generating employment opportunities and also macro economic impact of regional multipliers.
- **Vision for Economic Prosperity**: Airports acts has a potential to transform the accessibility of a region and produce prospect for economic activities to act as key components of business location decisions, which in turn would support the nation to vision for long term economic prosperity.

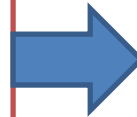
- Airport Competitiveness is considered as a key criterion for appraising the success degree of countries in the political, economical and commercial competition fields
- **World Economic Forum**: Assess the “Global Competitiveness” of the country’s through various parameters.

“Travel and Tourism Competitive Index”, “is one of core sector, which provides significant potential for economic growth and development internationally”.

Travel and Tourism Competitive Index

Three Broad Components

1. **Air Transport Infrastructure**
2. **Ease of Access to and from countries**
3. **Movements to destination within countries or outside**



Quantitative Measurements

- Quality of Air Transport Infrastructure
- Available seats Kilometers
- Number of Departures: Intl & Dom
- Departure per 1000's Population
- Airport Density: Per Capita Seat Availability
- Number of operating airlines

Global Competitive Index: Air Transport Infrastructure

Global Rankings			Asia Pacific Region Rankings		
Country	Ranking	GCI	Country	Ranking	GCI
Canada	1	6.74	Hong Kong	1	5.08
US	2	6.35	Singapore	2	5.03
Australia	3	5.86	Japan	3	4.62
UAE	4	5.81	Thailand	4	4.54
France	5	5.54	China	5	4.21
UK	6	5.52	Malaysia	6	4.19
Germany	7	5.48	India	7	4.17
Norway	8	5.35	Korea Republic	8	3.98
Sweden	9	5.26	Taiwan	9	3.79
Spain	10	5.23	Indonesia	10	3.22
Hong Kong	13	5.08	Philippines	11	2.87
Singapore	15	5.03	Vietnam	12	2.69
Qatar	20	4.74	Sri Lanka	13	2.65
Japan	24	4.62	Pakistan	14	2.49
Thailand	25	4.54	Cambodia	15	2.39
China	34	4.21	Nepal	16	2.30
Malaysia	35	4.19	Bangladesh	17	2.26
India	37	4.17			
Korea Republic	39	3.98			

Source: Global Competitive Index Report, 2010 World Economic Forum

GCI Ranking: India's TTC

Areas Assessed	Ranking	Drawback
Natural Resources	14	Nil
Cultural Resources	24	Nil
Air Transport Network	37	Transition
Ground Transport Infrastructure	49	Transition
Tourism Infrastructure	73	Hotels, Low ATM
Tourism Marketing	53	Average
Policy Environment	108	Time & Cost for starting business, ASA are not assessed as open, Visas

Airport Competitive Index: Hub Strategy

- Airport Index is a new concept in overseeing the performance of airports
- Index is measured through four vital indicators: Economic, Market size and potential, Infrastructure, Tourism and Safety.
- Airports concentrates on different user segments
- Thus no direct competition with each other based on historic factors.
- Recent past many developed, developing and emerging economies are transforming through liberalization, privatization and deregulation in the civil aviation sector. As a result of this we can see a strong competitiveness in the air transport segment, especially in the Indian airport infrastructure industry

To quote few are in the Asia Pacific Region: China & India

- Beijing Capital International Airport
- Shanghai International Airport
- Guangzhou International Airports in China and
- Delhi International Airport
- Mumbai International Airport
- Hyderabad International Airport
- Bangalore International Airport and
- Nagpur airport in India.

1. So this may influence the unknown airports to become **key regional, continental or global hubs in traditional hub-and-spoke systems.**
2. Other possibility is to **concentrate on point-to-point traffic.**

Era of New Business Model in Airlines operations: Low cost airlines has brought new opportunities and challenges to the aviation market. Emerging countries airports are showing a momentous growth in aviation industry, for instance, India, China and Brazil. Many airports have achieved the same or even better results. This happened because they were competitive and prepared.

Asia Pacific Airports Throughput and Global Ranking: 2009

Airports	Country	Pax in Million	World Ranking
Beijing	China	65.37	3
Tokyo, Haneda	Japan	61.90	5
Hong Kong	China	45.59	13
Bangkok	Thailand	40.50	16
Singapore	Singapore	37.20	21
Jakarta	Cambodia	37.14	22
Guangzhou	China	37.05	23
Sydney	Australia	33.45	28
Tokyo, Narita	Japan	32.13	33
Shanghai, Pudong	China	32.10	34
Kula Lumpur	Malaysia	29.68	40
Seoul, Incheon	Republic of Korea	28.67	41
Delhi	India	26.12	44
Shanghai, Hongqiao	China	25.07	47
Mumbai	India	25.76	48
Shenzhen, Bao'an International	China	24.48	49
Chennai	India	10.53	124
Bengaluru	India	9.94	134
Kolkata	India	8.04	171
Hyderabad	India	6.51	192

Source: Airports Council International, 2010

Past Indian Airports Market Demand Trend: 1995-2010

Year	Pax Handled at Airports in Million				Pax Share in %		
	Primary	Secondary	Minor	Total	Primary	Secondary	Minor
1995-96	25.64	5.98	5.39	37.01	69%	16%	15%
1996-97	26.08	5.61	4.81	36.50	71%	15%	13%
1997-98	25.99	5.68	4.96	36.63	71%	16%	14%
1998-99	26.09	5.87	5.03	36.99	71%	16%	14%
1999-00	27.15	6.53	5.35	39.03	70%	17%	14%
2000-01	28.87	7.30	5.86	42.03	69%	17%	14%
2001-02	27.27	7.16	5.54	39.98	68%	18%	14%
2002-03	29.36	8.43	5.94	43.72	67%	19%	14%
2003-04	32.40	9.81	6.57	48.78	66%	20%	13%
2004-05	38.74	12.45	8.09	59.28	65%	21%	14%
2005-06	47.16	16.60	9.58	73.34	64%	23%	13%
2006-07	59.45	23.17	13.78	96.40	62%	24%	14%
2007-08	70.06	29.03	17.80	116.89	60%	25%	15%
2008-09	65.07	26.81	17.00	108.88	60%	25%	16%
2009-10	72.64	30.73	20.36	123.73	59%	25%	16%
CAGR	6.72%	10.77%	8.66%	7.83%			

Source: AAI, 2009-10

Airports Demand Projection: 2010-2015

Year	Airports Traffic Projection in Million				
	Primary	Secondary	Minor	Total	
2009-10	72.64	30.73	20.36	123.73	
2010-11	79.90	34.72	22.60	137.23	
2011-12	87.89	39.24	25.09	152.22	
2012-13	96.68	44.34	27.84	168.87	
2013-14	106.35	50.10	30.91	187.36	
2014-15	116.99	56.62	34.31	207.91	
CAGR	2010-15	10.08%	12.58%	10.83%	10.85%

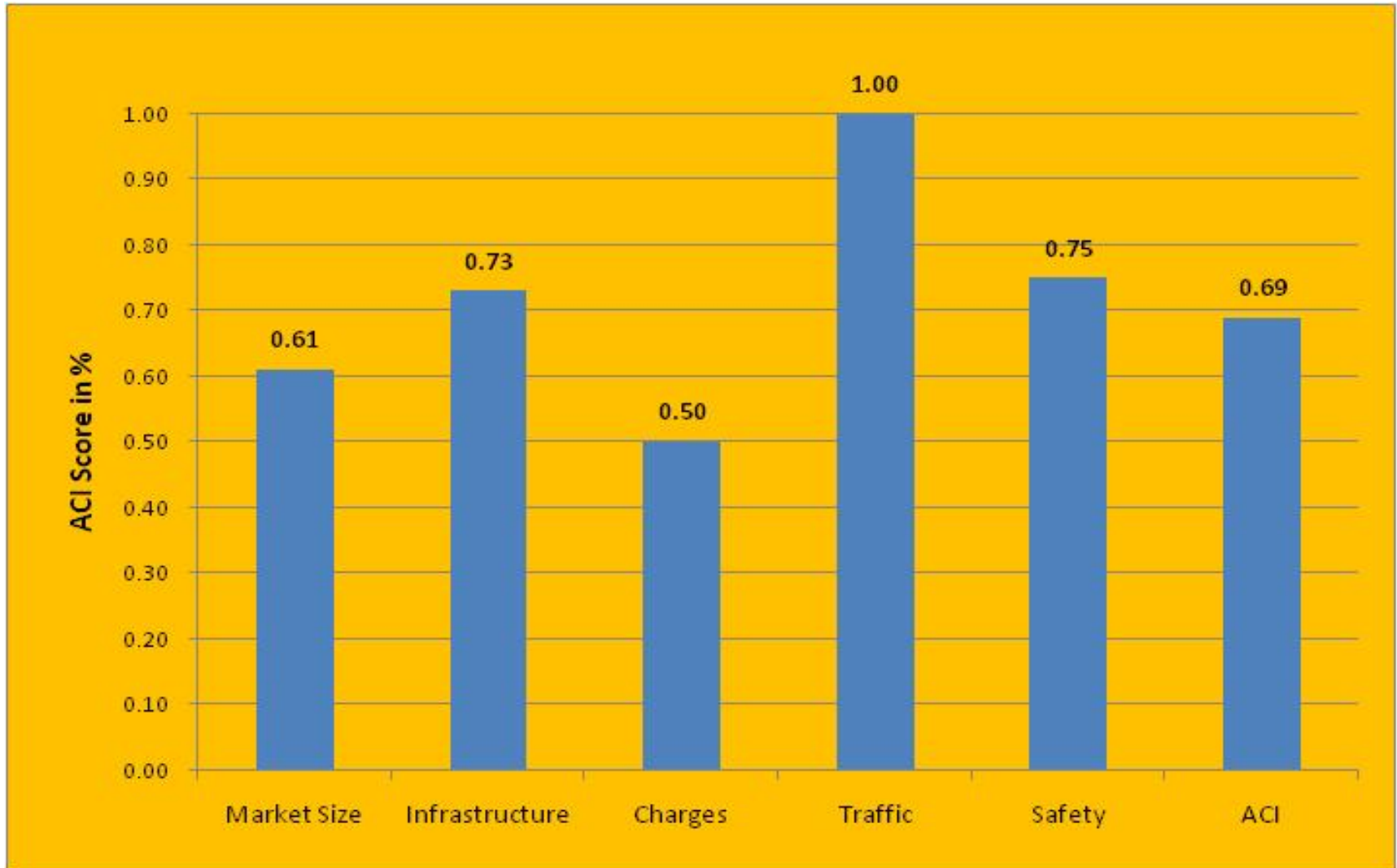
International Airports: Performance

Airports	Operating Destinations	Traffic in Million	Share %
Ahmedabad	10	0.65	2.00%
Amritsar	10	0.47	1.50%
Bangalore	19	1.79	5.60%
Mumbai	45	8.22	25.80%
Calicut	10	1.53	4.80%
Kolkata	14	1.01	3.20%
Coimbatore	2	0.10	0.30%
Cochin	12	1.96	6.20%
Delhi	53	7.93	24.90%
Goa	7	0.19	0.60%
Hyderabad	15	1.46	4.60%
Mangalore	6	0.24	0.70%
Jaipur	3	0.25	0.80%
Lucknow	6	0.22	0.70%
Chennai	22	3.60	11.30%
Nagpur	4	0.04	0.10%
Trivandrum	13	1.56	4.90%
Trichy	6	0.51	1.60%
Varanasi	3	0.02	0.10%
Gaya	3	0.04	0.10%
Srinagar	1	0.00	0.00%
Pune	2	0.04	0.10%

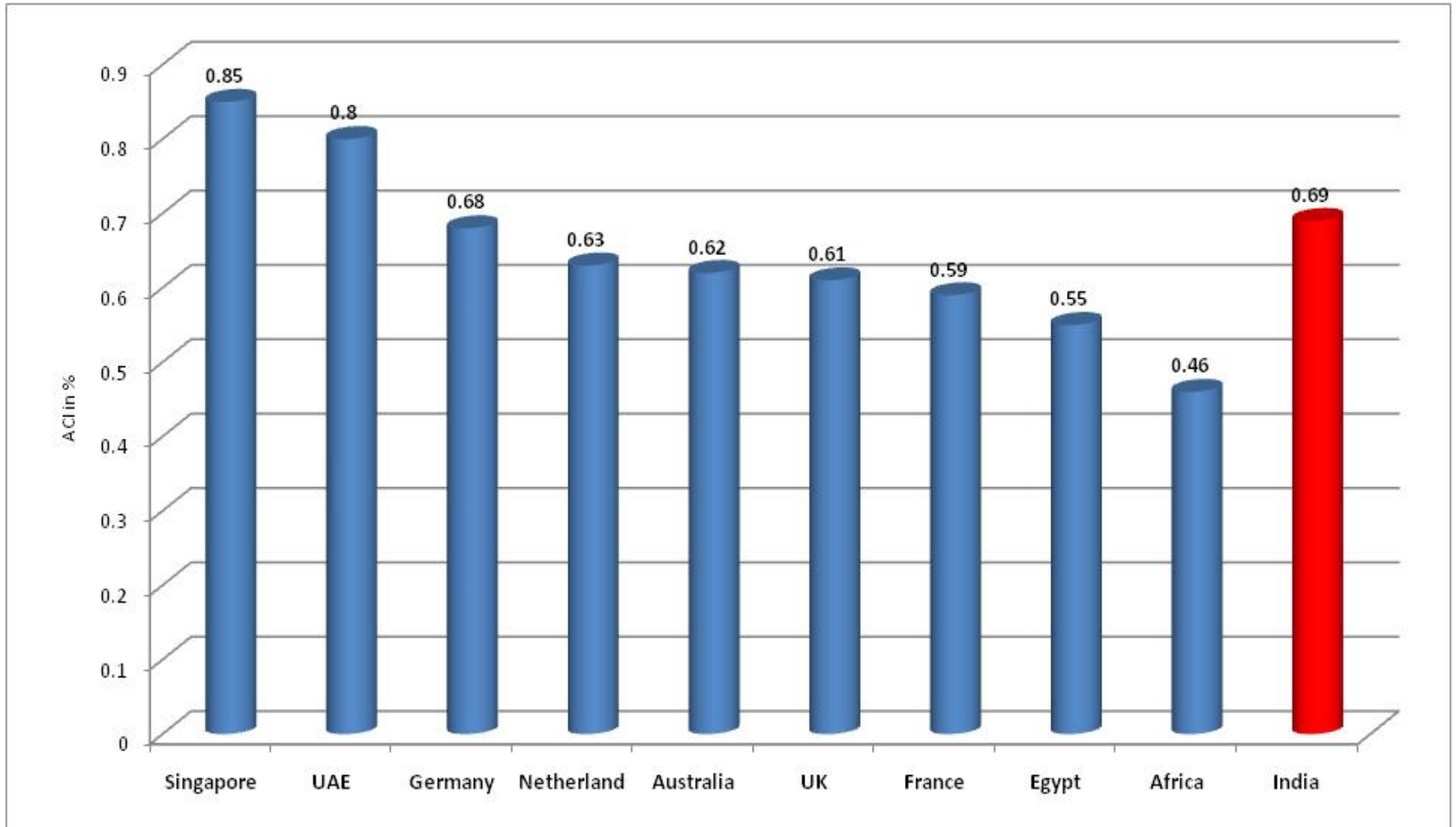
Composing the Airport Competitive Index (ACI)

Airport Index Parameters	Indicators: Sub Index Parameters
Economic	<ul style="list-style-type: none">* Population* Income (Per Capita)* State GDP* Foreign Direct Investment (FDI)
Market Potential	<ul style="list-style-type: none">* Traffic Demand* Net Work & Connectivity* Load Factor* Seat Availability* Hub Network Air Carriers* Number of Operating Airlines
Infrastructure	<ul style="list-style-type: none">* Airport Capacity* Public Transport Accessibility* Airport Charges
Tourism	<ul style="list-style-type: none">* International Tourist Arrivals* Domestic Tourists
Safety	<ul style="list-style-type: none">* Airport Safety & Security

Airport Competitive Index: India



Airport Competitive Index: Global Comparison

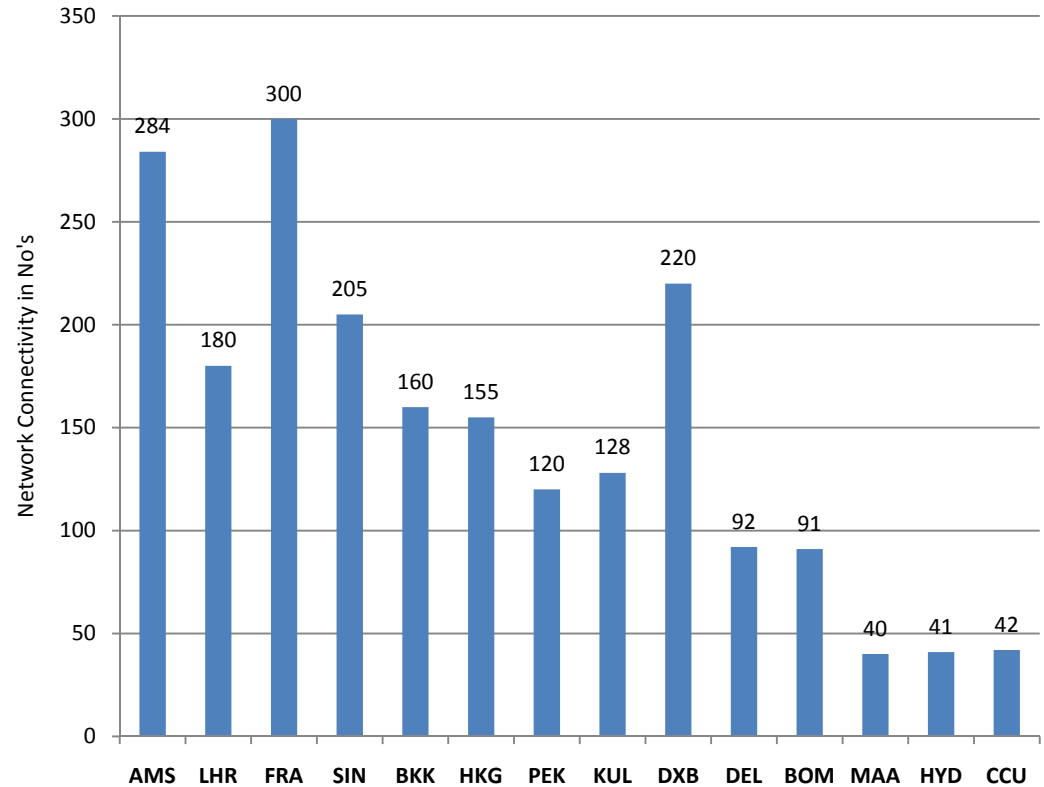


Hub Development: Indian Airport

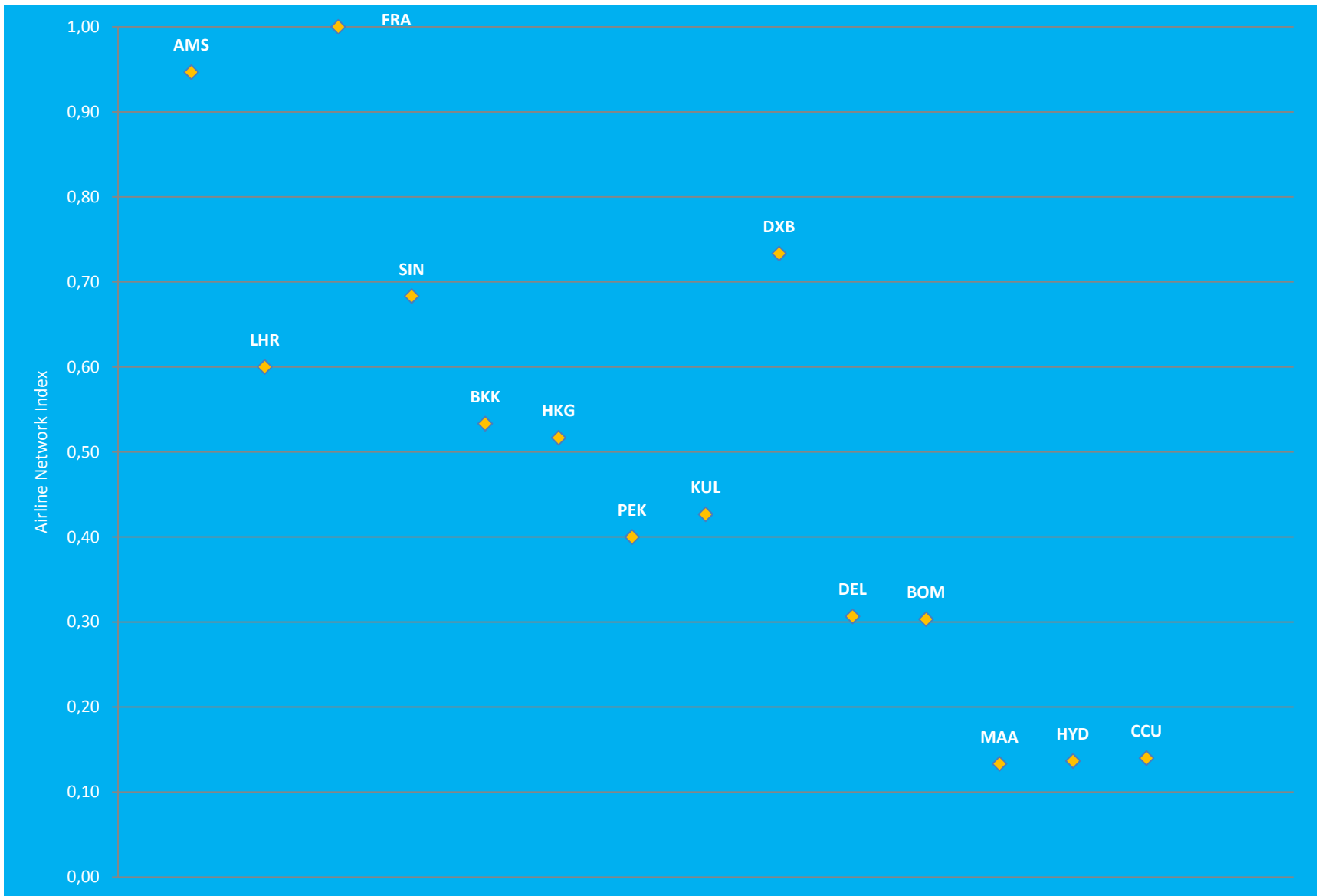
- 1991: Pre Liberalization : 4 Primary (BOM, DEL, MAA & CCU) Major Metro Airports were operated as a Hub
- 90.0% of the International Traffic Concentrated at these 4 International Airports
- Post Liberalization: 7 Domestic Airports were upgraded and given the status of International operations
- Today the International traffic is dispersed through 22 airports in the country
- 2006 – 2 Major Metro airports (BOM, DEL) privatized under PPP
- Delhi Airport is the most busiest and fastest growing airport in the country and its vision to become Hub by 2020
- 26.12 million Pax handled in 2009-10

Airline Network - Key Element in Building Airport Hub: Global Comparison

Airports	Network
Amsterdam	284
London Heathrow	180
Frankfurt	300
Singapore	205
Bangkok	160
Hong Kong	155
Beijing	120
Kuala Lumpur	128
Dubai	220
Delhi	92
Mumbai	91
Chennai	40
Hyderabad	41
Kolkata	42



Airline Network Index: Global Comparison



Why Indian Airports are Transforming towards Hub Concept:

- **Network Rationalization**
- **Cost Containment**
- **Emergence of New Super Jumbos**
- **Changes in Consumption Pattern of Travellers**

Need of the Hour: Building Hub Strategy

- **Strong Anchoring Airline**
- **Encourage in Expanding Air Trade Services: Bilateral Agreements**
- **Route Network Development**
- **Resource Utilization**
- **Pricing Policy**
- **Strengthening of Regional Routes**
- **Promoting Airline Alliance Carriers**
- **Encouraging Transfer Pax Traffic**
- **Encouraging National Carriers**
- **Encouraging LC Carriers**
- **Strategic Alliance with neighboring airports**
- **Capacity Building**
- **Operational Efficiency**
- **Aviation Policies**

Advantages of Hub Development

- Continuous Operations
- Centralizing Control
- High Load Factor
- High Traffic Density
- High Yield
- Maximum Utilization of Resources with minimum costs (Aircraft, Infrastructure and Manpower)
- Economic and Social Advantage
- Competitive Price (Low Fares)
- Multi-connectivity (Point –to-point and beyond)
- Low operating Costs

Hub-and-Spoke Model: Delhi Airport

