

Evaluation of Civil Aviation's Economic Contribution (Local and National Economies)

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Civil Aviation

- Airports
- Aviation Industry (producers and buyers)
- Energy Industry (Petrol and Electricity)
- Tourism Services (Hotel, Agencies and Restaurants)
- Food and Beverage Industry
- Alternative Transport Systems (Bus and Railways)

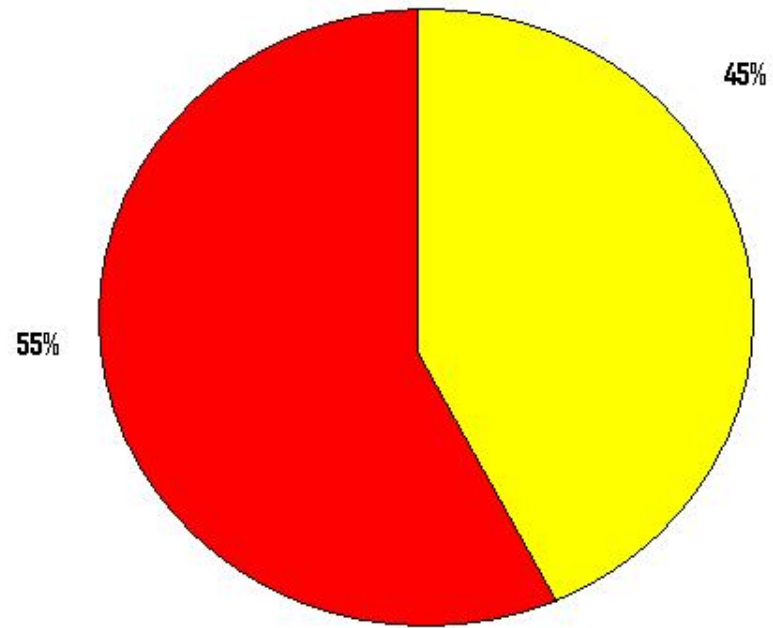
Basic Issues in the Civil Aviation

- Airlines Services: Tickets and Promotions
- Passengers: Facilities
- Cargo: Effective Logistic System
- Aircraft Services
- Multi Services (Banking, Health Care and Shops)
- Food, beverage and Entertainment
- Oil and Petrol Companies
- Complementary Transportation Services (Rental Cars, Taxis, Trains and Buses)

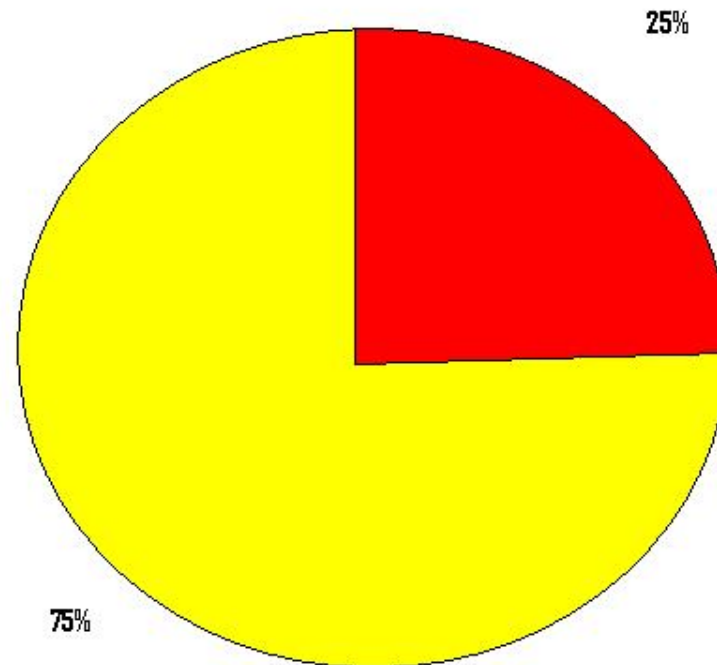
Contributions of Airports on the Economy

- Impact on the GDP (Service Sector)
- Employment (intensive uses of Labor and Capital) for Private and Public Sector
- Developed Countries (L,K) = (2:5)
- Developing Countries (L,K) = (3:2)
- Less Developed Countries (L,K) = (5:2)
- High demand of technologies (aircraft and ICT)
- Complementary services (security and maintenance)
- Income tax
- High demand of labor with High Academic Qualification (language and administrative skills)

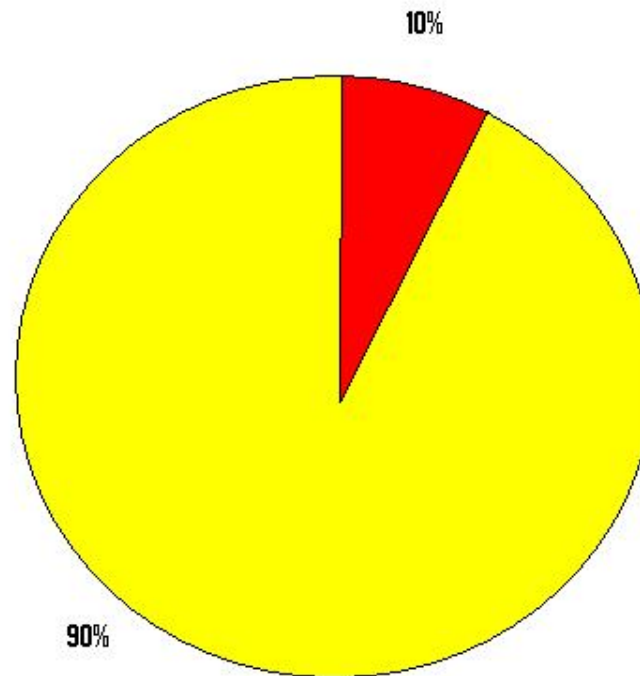
Participation of Civil Aviation in Developed Country on the GDP (Service Sector)



Participation of Civil Aviation in Developing Countries on the GDP(Services Sector)



Participation of Civil Aviation in LDC's on the GDP(Services Sector)



Negative Factors can Affect The Civil Aviation

- Inflation
- Oil and Petrol Prices
- Reduction of the PPP
- Climate and Weather Changes
- Poor Regulation Framework
- Security
- Reduction of the Tourism and Immigration
- Financial Crisis (Domestic and International): Banking and Stock Market
- Exchange Rate

Basic Conditions to Generate a Competitive Civil Aviation

- Size of the country
- Income per capita
- Education level
- Security
- Infrastructure
- Technologies (soft = Human Capital and hard = Machines)
- Economic Growth and Development
- Geographical Location
- Facilities and Promotions (Domestic and International)
- Airlines Business Intelligence

Civil Aviation Indices

Intensity of Flights:

$$FI = [\alpha(\text{number of airplanes}) * X_i (\text{Flights per day}) / 1440_{\text{min}}] * 365 \text{ Days}$$

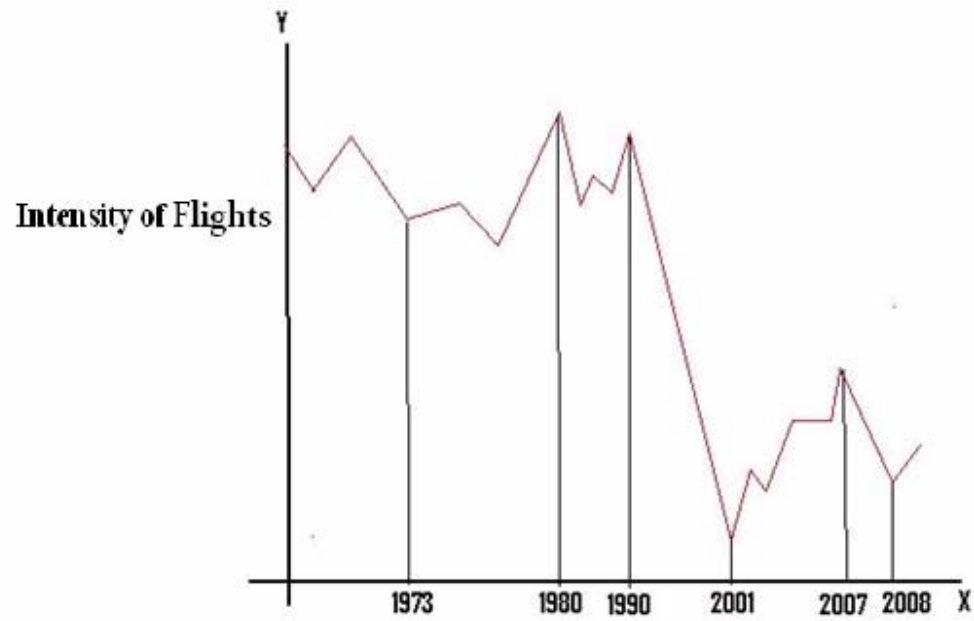
Efficiency of Flight Routes:

$$EFR = \Delta IS : \Delta IR : \Delta T$$

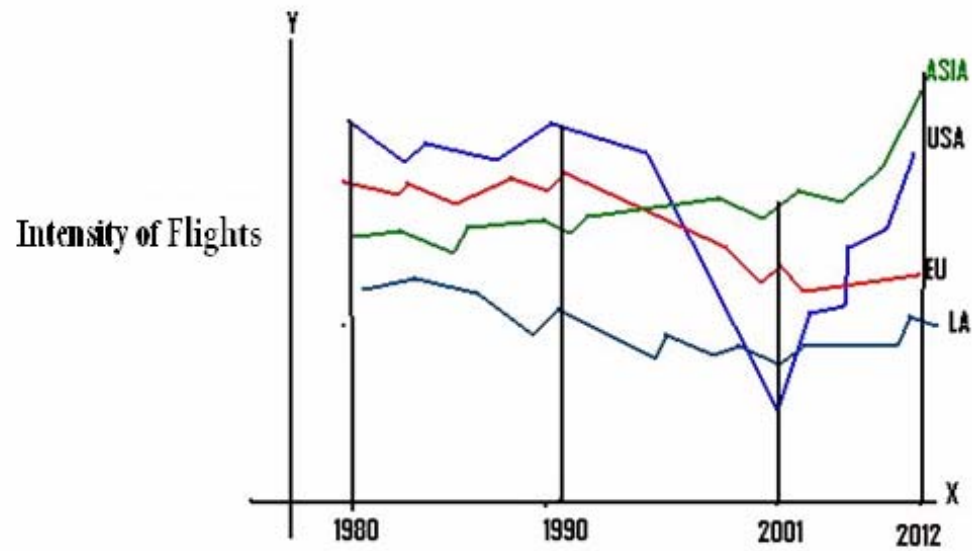
Intra-States **D**aily Flights Growth Rate (ΔIS), Intra-Regional **D**aily Flights Growth Rate (ΔIR) and Transatlantic **D**aily Flights Growth Rate (ΔT)

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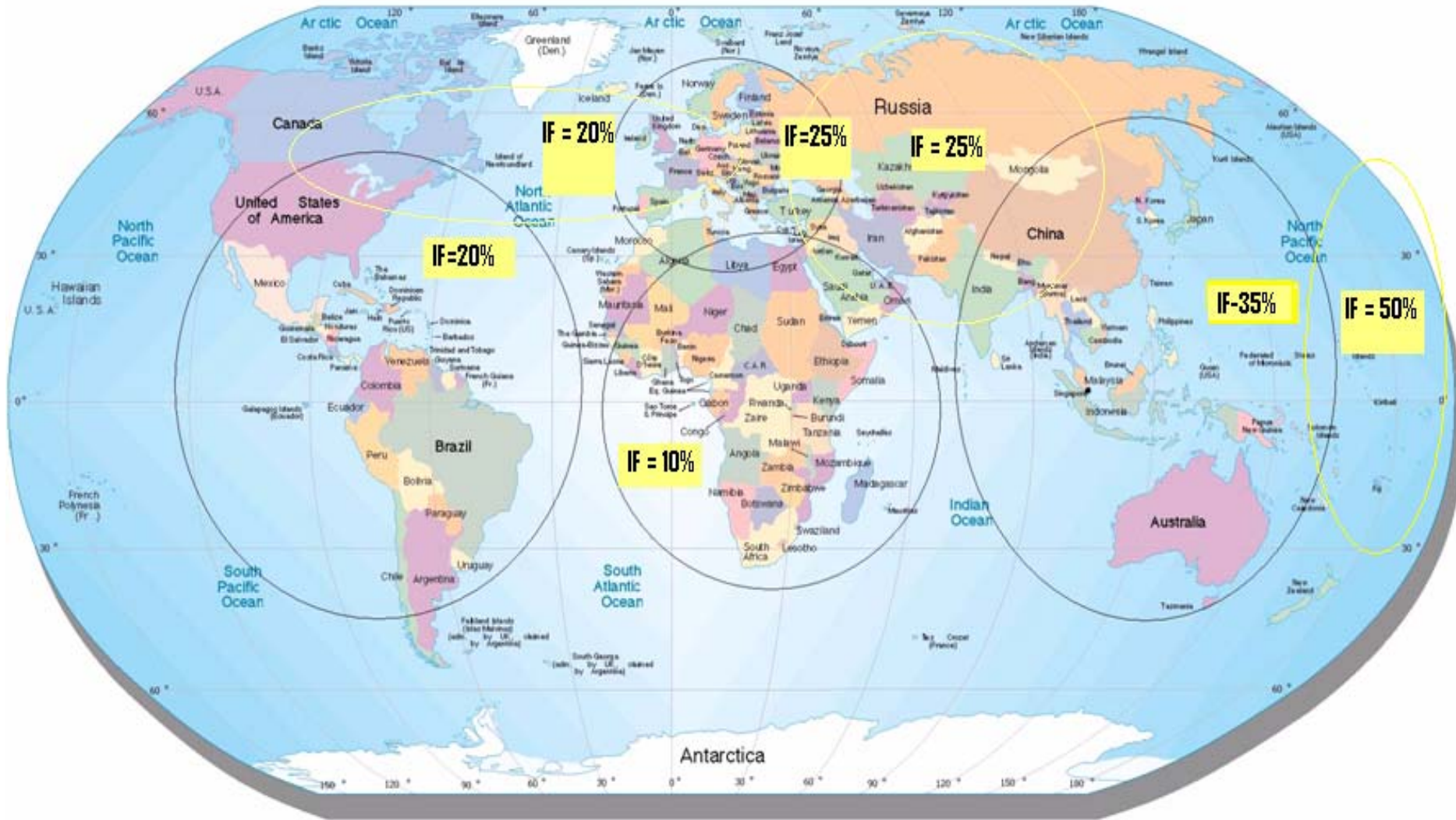
Trend of Civil Aviation (USA)



Trend of Civil Aviation Worldwide



Intensity of Flights (IF) by Region 2020

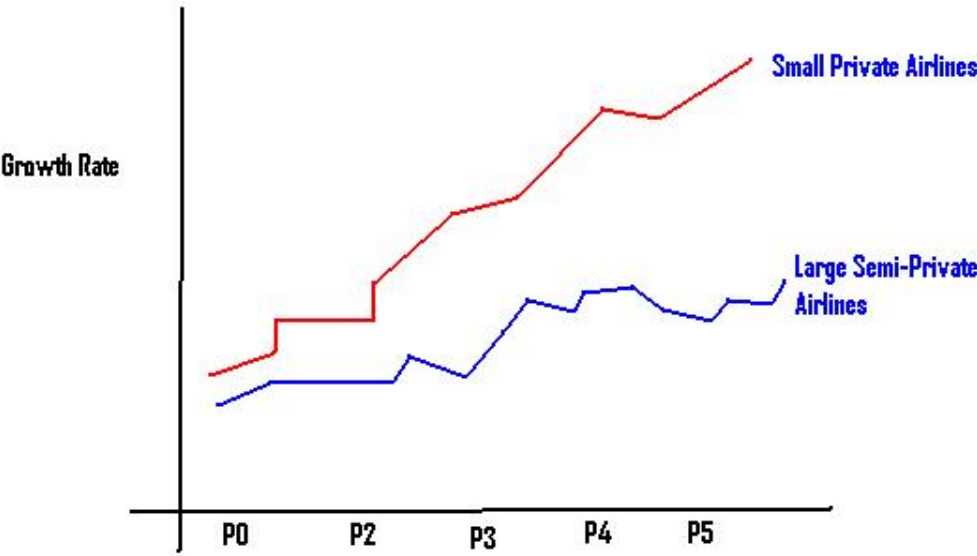


Intensity of Flights (IF)

Intensity of Flights (IF) Depend on:

- The Trade and Investment Dependency Exist among Nations or Trade Blocs.
- The Expansion of Cargo Services
- Business Facilitation
- Tourism Attractions
- Security
- Environment and Health Services
- Geo-political and Geo-economic Location

Future Market between Small Private Airlines and Large Semi-Private Airlines



Efficiency of Flight Routes EFR:

	EFR	ΔIS	ΔIR	ΔIR	ΔT
CHINA	0.17	0.25	0.10	0.20	
USA	0.30	0.45	0.20	0.45	
EAST ASIA	0.22	0.30	0.15	0.35	
SOUTH EAST ASIA	0.23	0.25	0.15	0.30	
EU	0.34	0.35	0.30	0.30	

Efficiency of Flight Routes:

$$EFR = \Delta IS : \Delta NC : \Delta IR : \Delta IB : \Delta T$$

Intra-States Daily Flights Growth Rate (ΔIS), Intra-Regional Daily Flights Growth Rate (ΔIR), and Transatlantic Daily Flights Growth Rate (ΔT)

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