Issues shaping the next 20 years of air transport

Brian Pearce
Chief Economist
www.iata.org/economics
April 2014

To represent, lead and serve the airline industry
From $0.7 to $2.5 trillion in 20 years

Global GDP in nominal terms and global spend on air transport

Source: ICAO, IATA, IHS Global Insight
World spends 0.9% of GDP on air transport

Spending on air transport as a % of nominal GDP

Source: ICAO, IATA, Datastream
Yet it’s one of the fastest growing industries

Worldwide GDP, RPKs and FTKs

Indexed to equal 100 in 1994


Source: ICAO, IATA
Possible in past because costs halved

Yield and unit cost, adjusted for inflation

Source: ICAO, IATA, Datastream
Fuel prices may now help continue that trend

Price of crude oil, adjusted for inflation

Peak oil view
Consensus forecast
Economists' view

Source: Datastream, IHS Global Insight, IATA
Very large growth potential in East

Chart 20: Global middle class in 2009 and prediction for 2030

Sources: OECD, Standard Chartered Research

IATA Economics www.iata.org/economics
Supported by the growth of large cities

Seats/year/capita today

Urban Popn. 2015

Source: UN, SRS Analyser
The consensus is that the past will repeat

Worldwide GDP, RPKs and FTKs

Indexed to equal 100 in 1994

RPKs 94-14
FTKs 12-32
RPKs 12-32 2.7x
FTKs 94-14

Source: ICAO, IATA, Boeing, Airbus
But will pause in globalization continue?

International trade volumes relative to domestic industrial output (WT/IP)

Globalization / off-shoring

On-shoring / protectionism?

Source: IATA, Datastream
And will modal shift continue?

Air freight share of world trade (FTK/WT ratio)

Trend FTK growth ~2% p.a. < world trade growth

High point of world industrial output cycle

Low point of world industrial output cycle

Source: IATA, Datastream
**CO₂ up despite strong efficiency gains**

*Worldwide RTKs, CO₂ and fuel efficiency*

Indexed to equal 100 in 1994

- RTKs: 2.7x
- CO₂: 1.5x
- Fuel use/RTK: 0.4x

Source: IATA, Datastream
Further cost-effective CO₂ cuts possible

Source: McKinsey, IATA
But carbon neutral growth policy will be key

Global vs aviation CO₂ emissions

Aviation CO₂ after pillar 1-3 measures, inc. 12% biofuels +2.5% p.a.

Current climate policies +1.4% pa

New policies +0.7% pa

450ppm scenario -1.7% pa

Source: IEA 2013 World Energy Outlook, IATA Aviation Carbon Model
Substantial wider economic value

Unique city-pair connections and real transport costs

Source: Boeing, SRS Analyser, ICAO, IATA
But unable to provide value to shareholders

Return on capital invested in airlines and their cost of capital

Cost of capital (WACC)

Inadequate returns

Return on capital (ROIC)

Source: McKinsey, IATA
To summarise

- $2.5 trillion air transport spend by 2034
- Fuel prices likely to decline
- Air transport should get even cheaper
- A-P middle classes & cities drivers
- Air travel 3x next 20 years
- Model shift/pause in globalization threats
- Further cost-effective CO$_2$ cuts possible
- But CNG will be key
- Substantial wider economic value connecting cities
- But is industry financially sustainable?