



## Thinking Logistics

# Trends and Developments in Inter-Urban Passenger Transport: International Air Transport in the Future

(Prof) David Gillen  
YVR Professor of Transportation Policy & Management  
Director, Centre for Transportation Studies  
Sauder School of Business  
University of British Columbia, Vancouver, Canada

OECD  
Madrid, Spain November 16-18, 2009

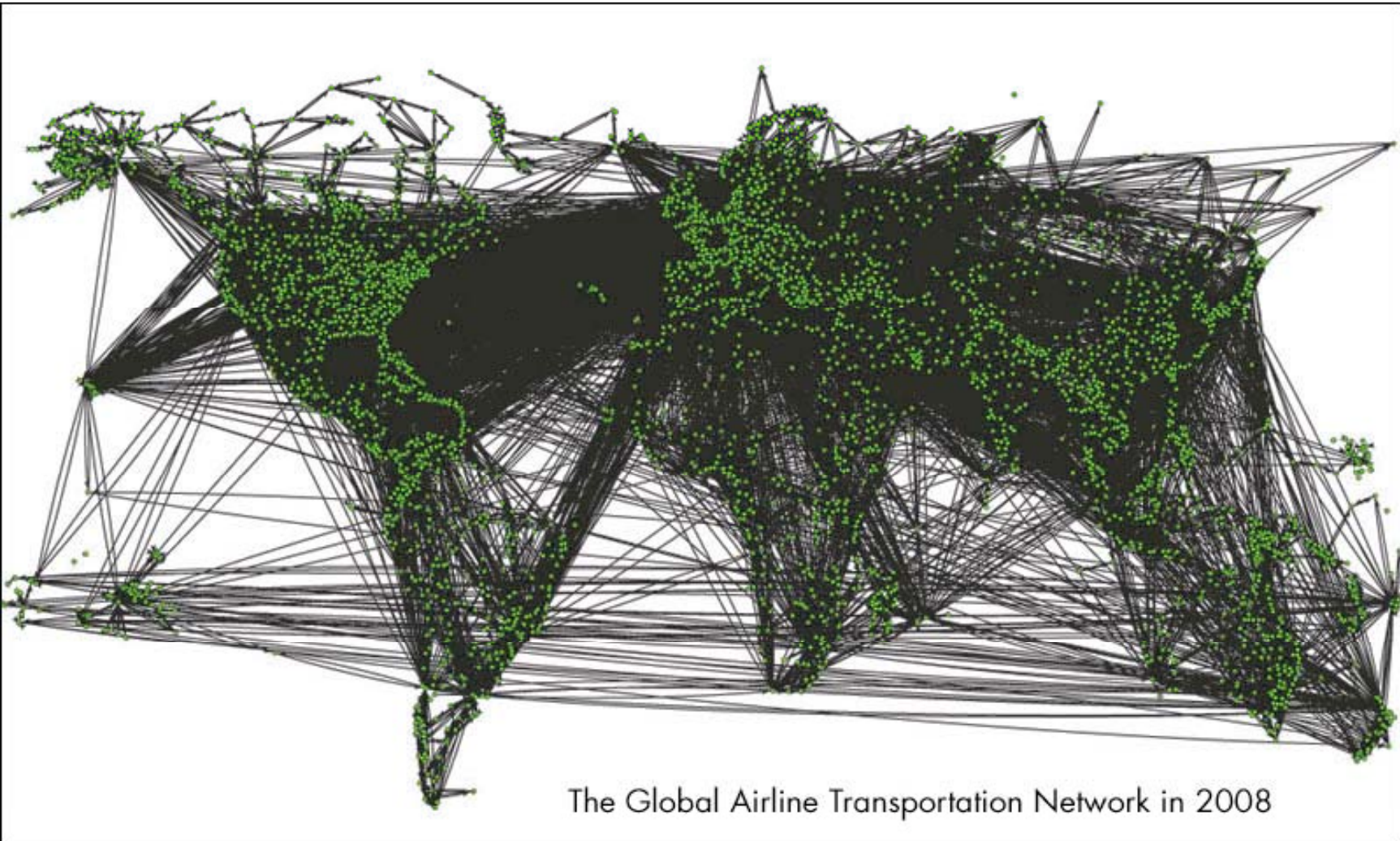
## Objective and Questions

### Objective

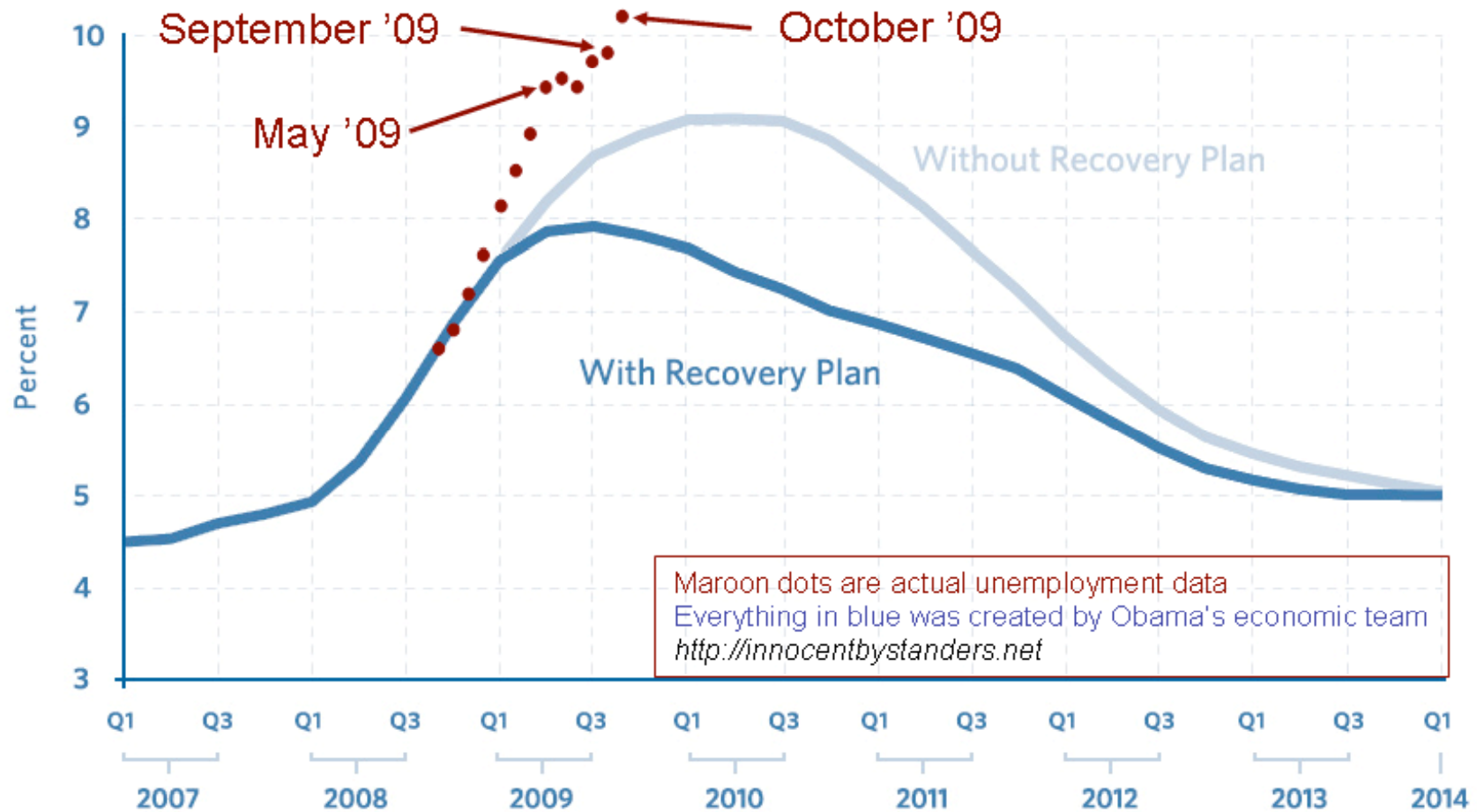
Understanding“what will international air passenger travel will look like in five, ten or fifteen years and why does it look this way?

### Arriving at the Answer:

- 1. what will be principal determinant of the growth in international air travel
- 2. what impact will they have on the growth rate?



### Unemployment Rate With and Without the Recovery Plan



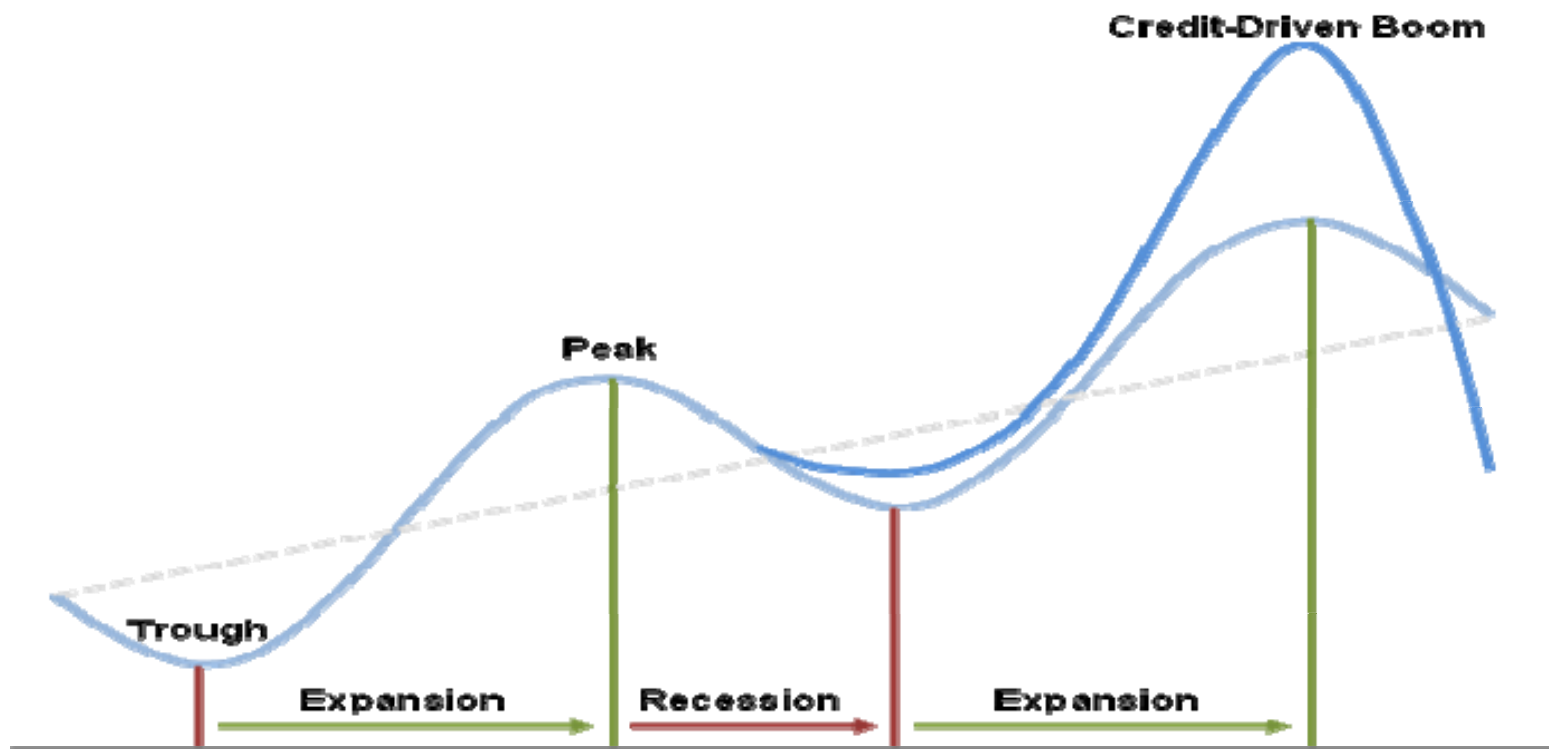
## Themes

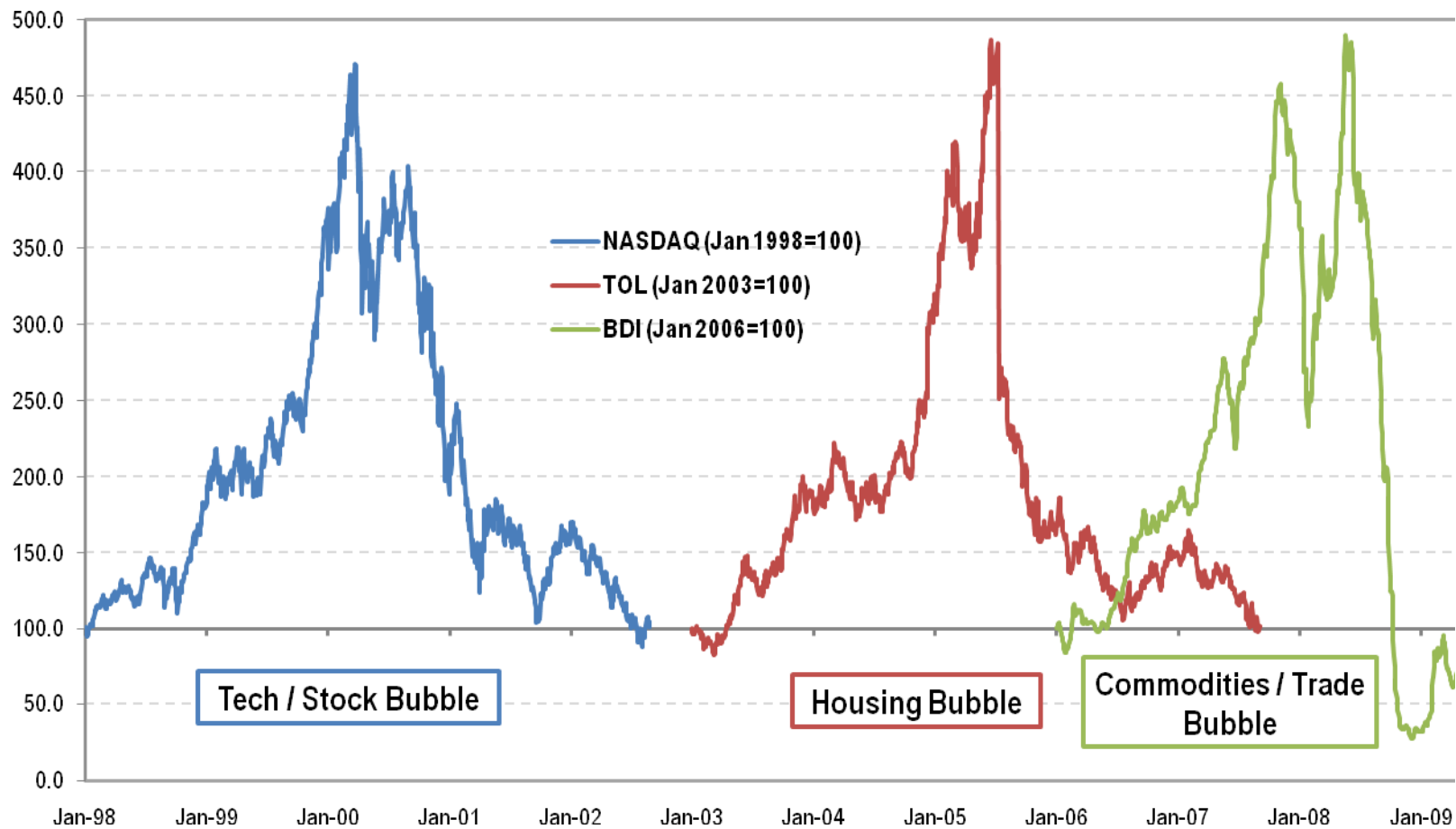
- What factors effect international air travel
- What do we observe – now
- What will the world look like
- Guesstimates

## What Factors Affect Air Travel-Three groups

- Traditional sets of variables
  - GDP growth, trade growth, Direct Investment, market structure and behaviour (fares, route development, network), liberalization and alliances
- New Economy – Evolution or Revolution?
  - What if the new macroeconomic reality is different?
  - US savings rate up, China spending rate up
- New factors we have not seen
  - Carbon strategies – tax and cap & trade
  - Technologies – fuel, aircraft, ATC
  - Industry and network restructuring

## Trends in GDP Growth and Swings about the Trend







- What is so striking is to compare the numbers in 'Projected 2009' with previous economic downturns.

- The 2009 values are orders of magnitude larger for every category

**Global Recessions: Selected Indicators of Economic Activity**  
(Percent change, unless otherwise indicated)

Variable	1975	1982	1991	Projected 2009	Average (1975, 1982, 1991)
<b>Output</b>					
Per capita output (PPP <sup>1</sup> weighted)	-0.13	-0.89	-0.18	-2.50	-0.40
Per capita output (market weighted)	-0.33	-1.08	-1.45	-3.68	-0.95
<b>Other macroeconomic indicators</b>					
Industrial production	-1.60	-4.33	-0.09	-6.23	-2.01
Total trade	-1.87	-0.69	4.01	-11.75	0.48
Capital flows <sup>2</sup>	0.56	-0.76	-2.07	-6.18	-0.76
Oil consumption	-0.90	-2.87	0.01	-1.50	-1.25
Unemployment <sup>3</sup>	1.19	1.61	0.72	2.56	1.18
<b>Components of output</b>					
Per capita					
consumption	0.41	-0.18	0.62	-1.11	0.28
Per capita investment	-2.04	-4.72	-0.15	-8.74	-2.30

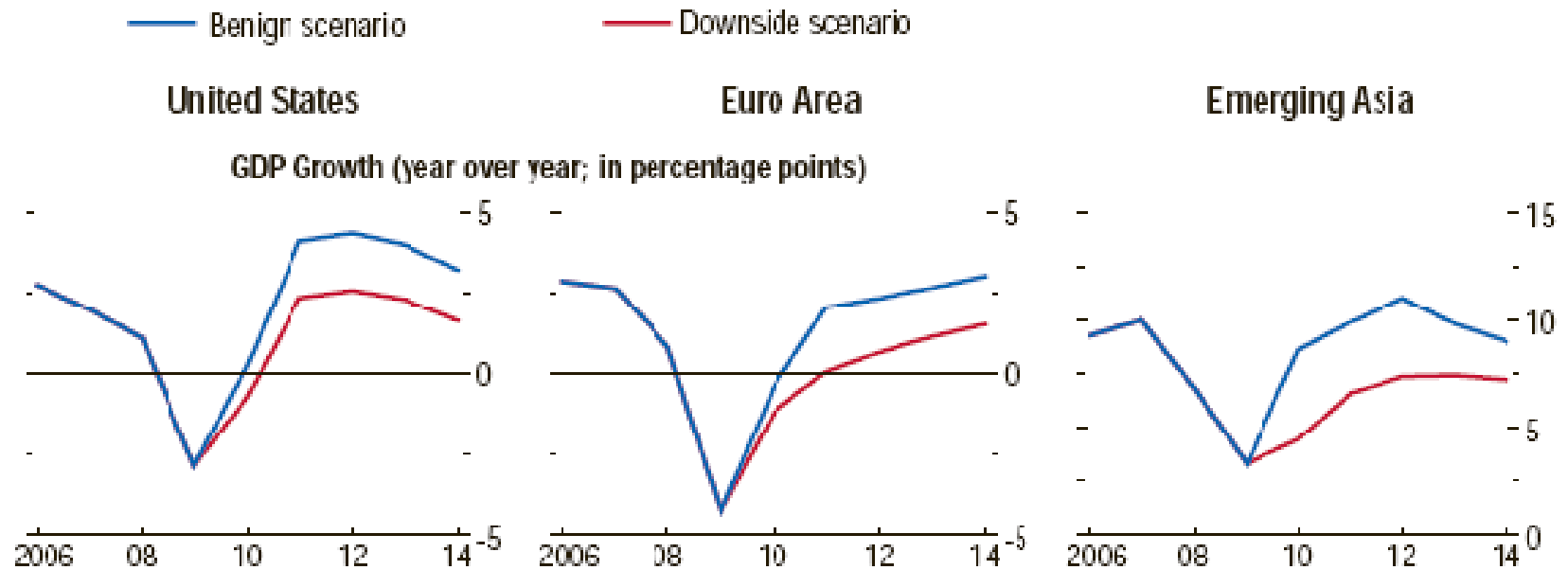
Note: The 1991 recession lasted until 1993, using market weights; all other recessions lasted one year.

<sup>1</sup>PPP = purchasing power parity.

<sup>2</sup>Refers to change in the two-year rolling window average of the ratio of inflows plus outflows to GDP.

<sup>3</sup>Refers to percentage point change in the rate of unemployment.

## How the IMF (2009) sees Economies Changing



## What Should we look at?

### Other estimates

- GDP elasticity: 1.54\*
- Fuel price elas. -0.06
- SARS, and 9/11 variables were significant
  - SARS -0.98
  - 9/11 -0.067

### Gillen Model

- GDP elasticity: 0.06
- Trade elasticity: 0.83
- FDI elasticity 0.13
- Connectivity elas. 0.22
- Jet Fuel elasticity -0.27

\* recognize not all GDP influence

## Guesstimates

- Big question is any economic recovery involving a structural change for a new macroeconomics
- Best guess in medium term
  - FDI down 30% in 2010 – traffic down 3-4 %
  - Trade down – 11 %  $\approx$  decrease of 1.0 %
  - Connectivity index growth of 8 % has led to 1.6 & traffic growth (If Route development down  $\approx$  - .7 %
  - Cost (fuel and environmental taxes) – 1%
  - Best guess and worst case future growth 85% of past
    - Boeing says 5%, my guess around 1-2 % on average

## Summary

- ‘Old’ variables are still important but they differ from domestic market growth
- New factors will have small effect, depending on carbon pricing
- Future growth will be moderated as economies adjust and new markets will be in Africa and Brazil not just SE Asia
- Air service agreements and industry restructuring are key factors

## Thank you / Muchas Gracias



February 12 to 28, 2010  
March 12 to 21, 2010