Introduction: Airline Industry Overview

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Lecture Outline

- **Course Syllabus and Requirements**
- **Airline Terminology and Measures**
  - Historical Trends in Industry Growth
- **Global Deregulation and Liberalization**
  - Impacts on Airline Competition
  - Evolution of LCC Business Models
- **Overview of World Airlines**
  - Largest Global Airlines

Airline Terminology and Measures

- **Airline Demand**

  RPK = Revenue Passenger Kilometer
  - → One paying passenger transported 1 kilometer

  Yield = Revenue per RPK
  - → Average fare paid by passengers, per kilometer flown

- **Airline Supply**

  ASK = Available Seat Kilometer
  - → One aircraft seat flown 1 kilometer

  Unit Cost = Operating Expense per ASK (“CASK”)
  - → Average operating cost per unit of output

- **Load Factor = RPK / ASK**

- **Unit Revenue = Revenue/ASK (“RASK”)**

Example: Airline Measures

- **A 200-seat aircraft flies 1000 kilometers, with 140 passengers:**

  RPK = 140 passengers X 1000 kilometers = 140,000
  ASK = 200 seats X 1000 kilometers = 200,000

- **Assume total revenue = $16,000; total operating expense = $15,000:**

  Yield = $16,000 / 140,000 RPK = $0.114 per RPK
  Unit Cost = $15,000 / 200,000 ASK = $0.075 per ASK
  Unit Revenue = $16,000 / 200,000 ASK = $0.080 per ASK

- **Load Factor = RPK / ASK**

  LF = 140,000 / 200,000 = 70.0%
  - → For single flight, also defined as passengers / seats

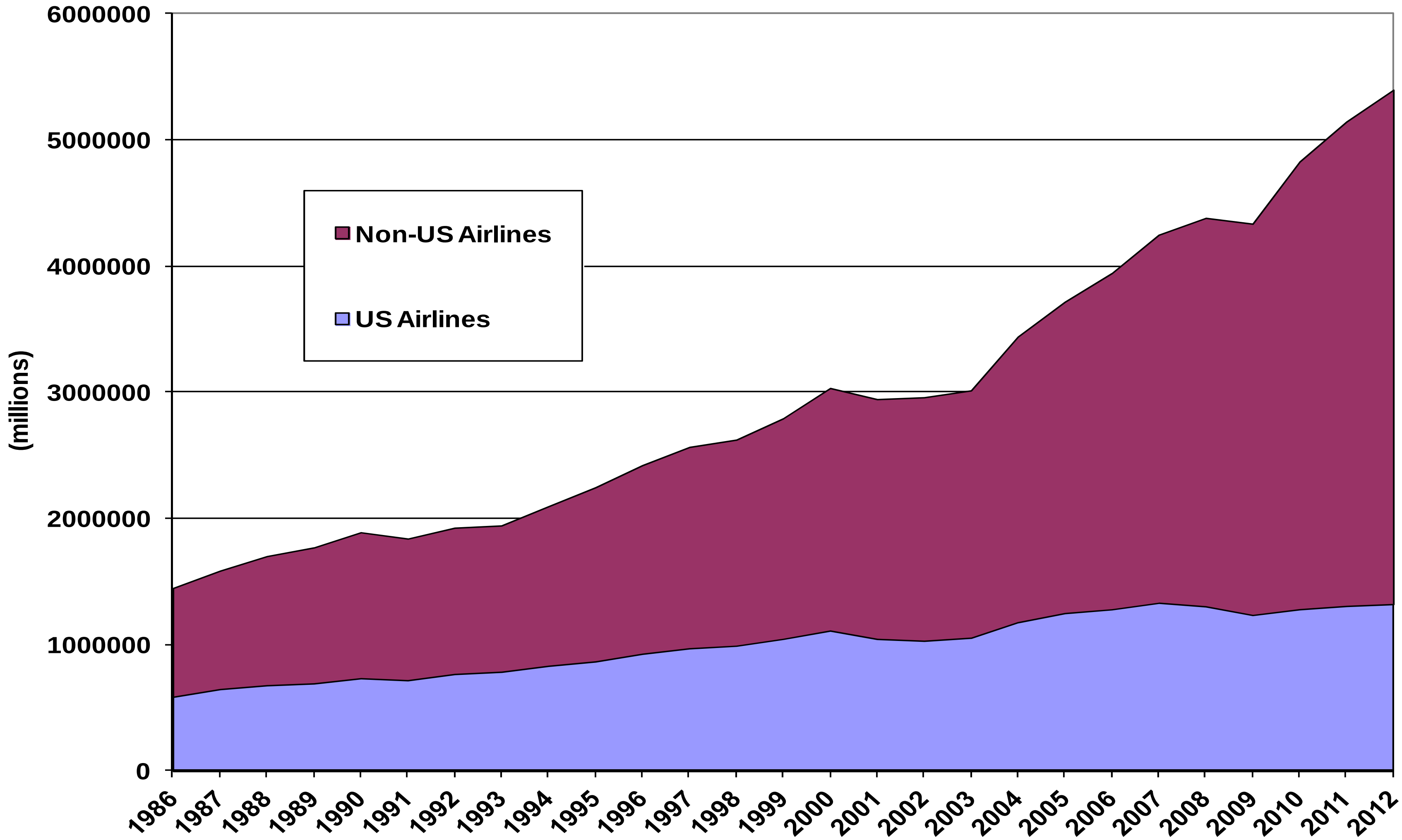
Additional Measures for Air Cargo

- ***Freight Tonne Kilometer (FTK)***
  Measure of freight traffic carried
  = freight tonnes carried X kilometers flown

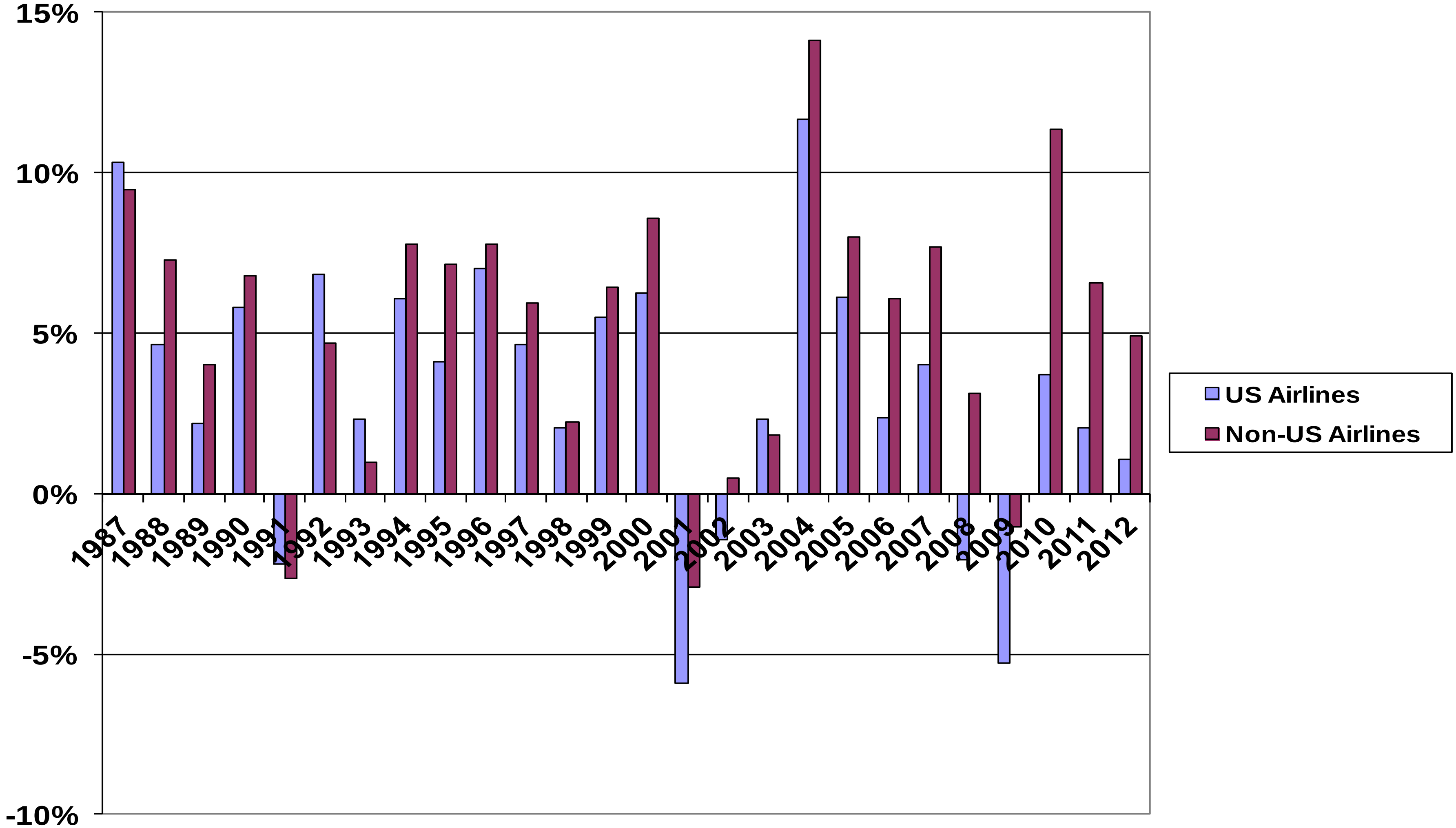
- ***Available Tonne Kilometer (ATK)***
  Measure of freight capacity available
  = freight tonne capacity X kilometers flown

- **Cargo Load Factor = FTK / ATK**
  - % of freight capacity utilized

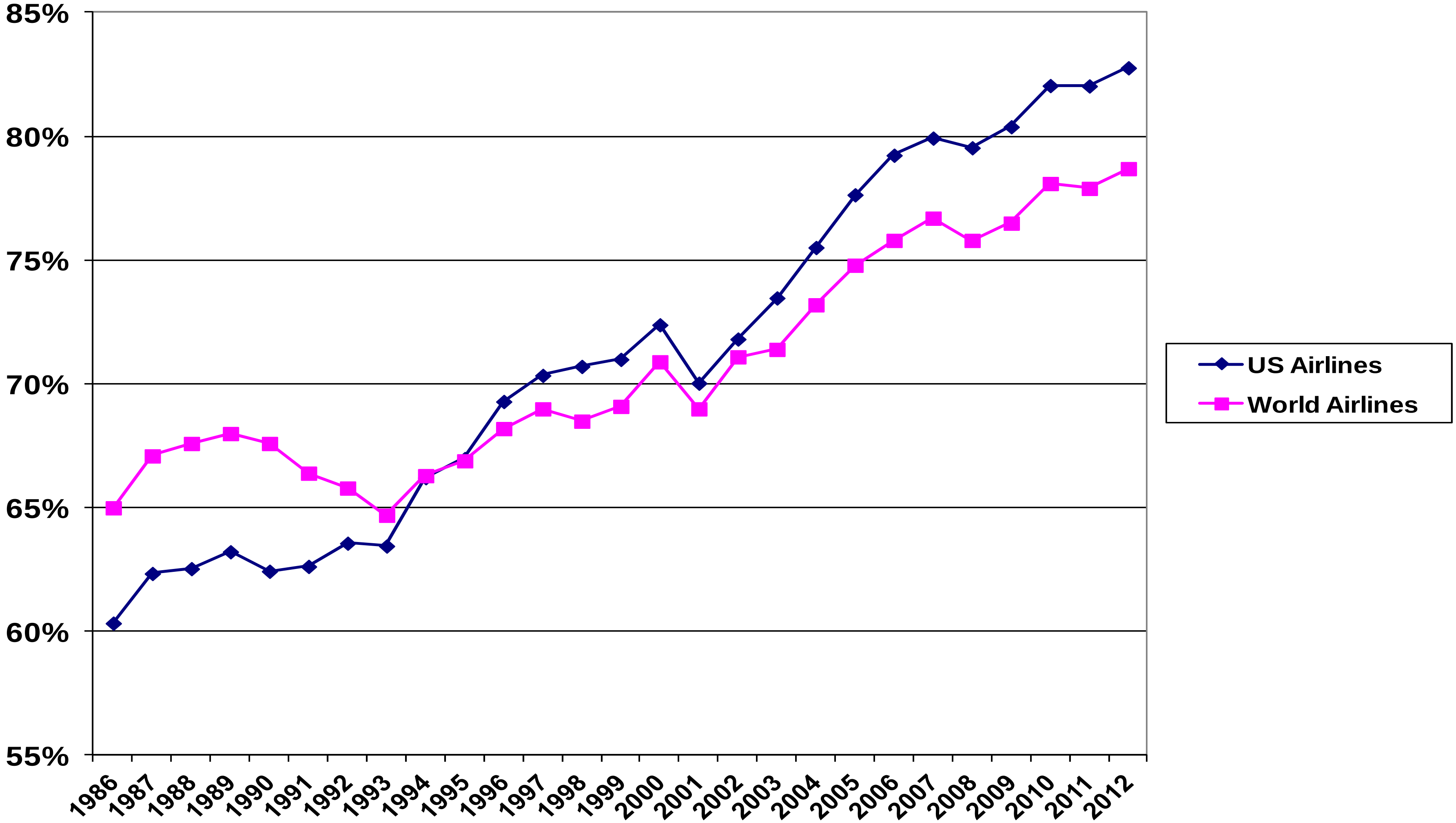
Airline Traffic (RPK) Growth 1986-2012



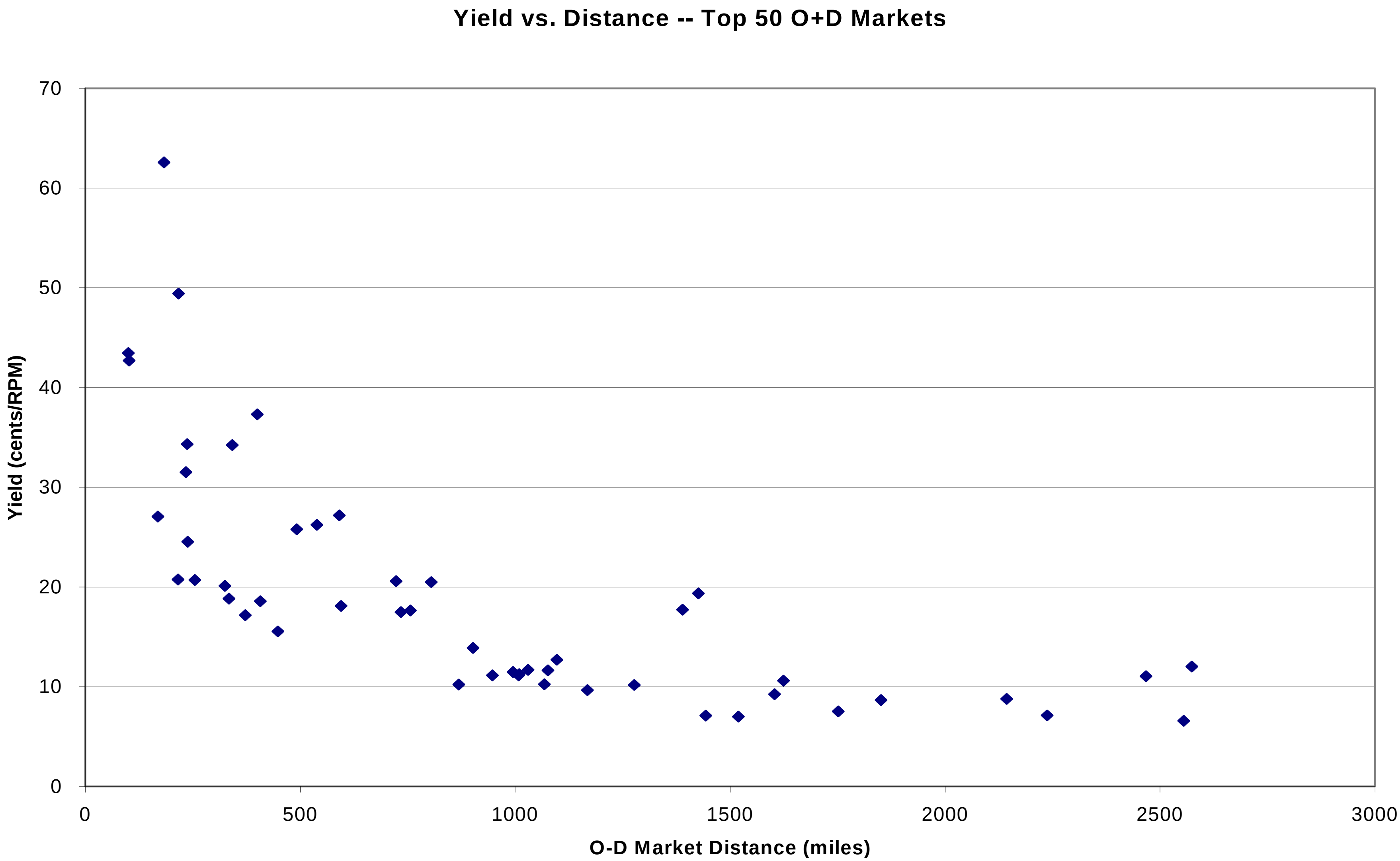
Annual % RPK Growth 1987-2012



Average Load Factors 1986-2012



Yield vs. Distance Relationship



Additional Airline Measures

- **Average Stage Length**
  - Average non-stop flight distance
  - Aircraft Miles Flown / Aircraft Departures
  - Longer average stage lengths associated with lower yields and lower unit costs (in theory)
- **Average Passenger Trip Length**
  - Average distance flown from origin to destination
  - Revenue Passenger Miles (RPMs) / Passengers
  - Typically greater than average stage length, since some proportion of passengers will take more than one flight (connections)
- **Average Number of Seats per Flight Departure**
  - Available Seat Miles / Aircraft Miles Flown
  - Higher average seats per flight associated with lower unit costs (in theory)

Competition Under Deregulation

- **The removal of economic regulations added several new dimensions to airline competitive strategies:**
  - Cost cutting and productivity improvement
  - Economies of scale in operations to reduce unit costs
  - Price competition and revenue management to increase revenues
  - New marketing and distribution programs
  - Increased network coverage and market dominance
- **Airline managers now actually have to make management decisions and trade-offs:**
  - In contrast to regulated times when government control ensured price increases to cover increased operating costs.

The LCC "Business Model"

- **LCCs are assumed to use common strategies designed to reduce unit costs:**
  - Single aircraft type or family of aircraft
  - Point-to-point vs. hub network structure
  - No connecting tickets (only point-to-point) local passengers
  - No labor unions, low wage rates
  - Single cabin service, no "premium" classes on board
  - No seat assignment (in advance and/or at the airport)
  - Reduced "frills" and seating space on board
  - No frequent flyer loyalty programs
  - No distribution through Global Distribution Systems (GDS)
- **With LCC evolution, very few large LCCs actually fit this assumed LCC "business model" today…**

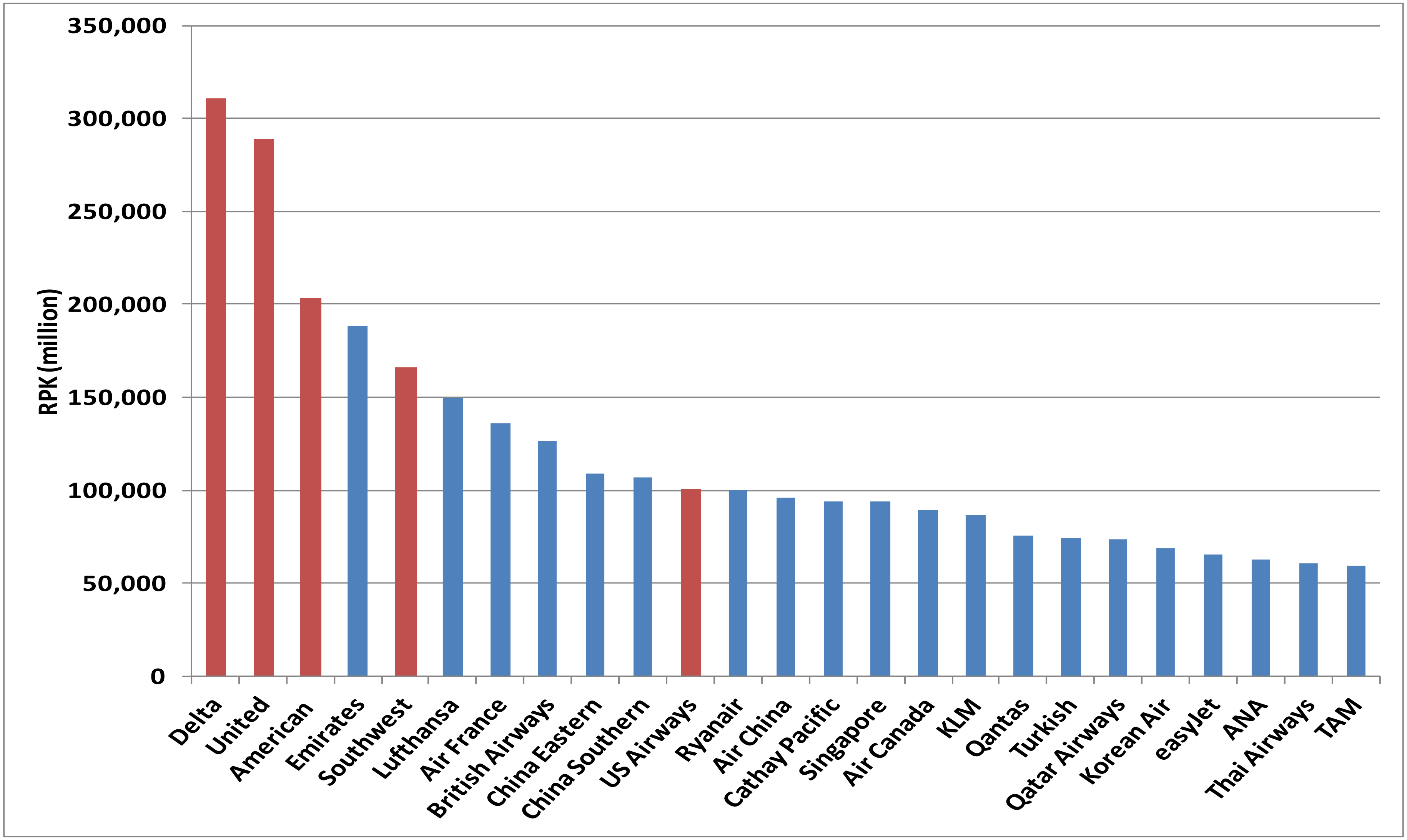
Evolution of LCC Business Models

	Southwest	JetBlue	AirTran	WestJet	EasyJet	RyanAir
Single aircraft type or single family of aircraft	✔	✘	✘	✔	✘	✔
Point-to-point ticketing, no connecting hubs	✘	✘	✘	✘	✔	✔
No labor unions, lower wage rates	✘	✔	✘	✔	✘	✔
Single cabin service, no premium class	✔	✘	✘	✔	✔	✔
No seat assignments	✔	✘	✘	✘	✔	✔
Reduced frills for on-board service (vs. legacy)	✘	✘	✘	✘	✔	✔
No frequent flyer loyalty program	✘	✘	✘	✘	✔	✔
Avoid Global Distribution Systems (GDS)	?	✘	✘	✘	✔	✔

The Global Airline Industry: A Tale of Three Sectors

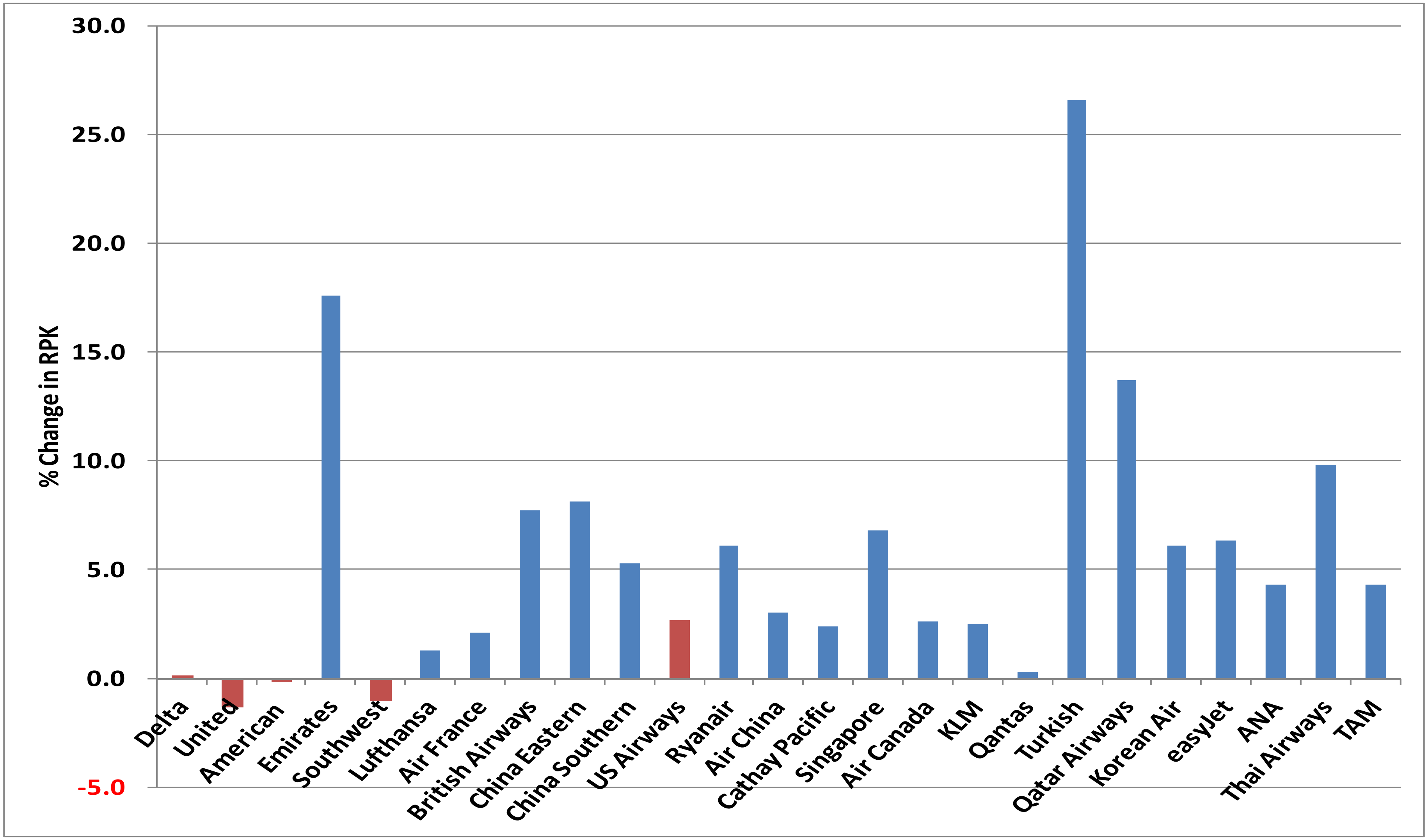
- **Network Legacy Carriers**
  - For some, bankruptcies and consolidation reduced excess capacity, allowed for labor cost and productivity improvements
  - But European legacy carriers still struggling with high costs
- **Low Cost Carriers**
  - LCC share of US domestic passengers has leveled off at 33%
  - LCCs continue to grow rapidly in other world regions
  - But unit cost advantages of new entrants tend to disappear as both aircraft and employees mature
- **Emerging Global Carriers**
  - Large hub networks based in Middle East, South America and Asia
  - Examples: Emirates, Etihad, Qatar, Turkish, LAN/TAM, China Southern, China Eastern

Top 25 World Airlines – Ranked by Passenger Traffic (RPK) 2012



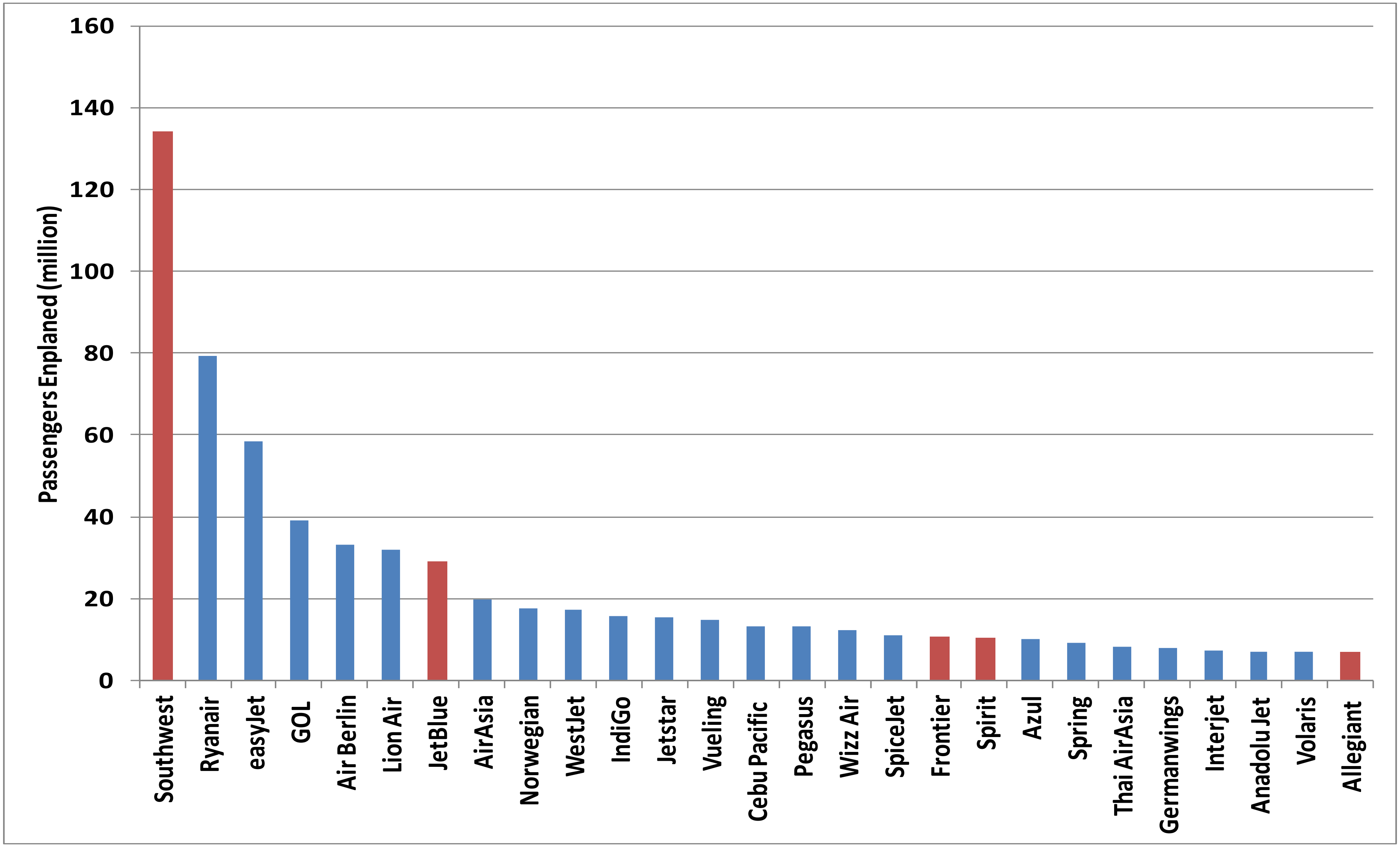
Source: Airline Business Top 200 Airlines Traffic 2012

Top 25 World Airlines – Annual Growth in Passenger Traffic (RPK) 2012



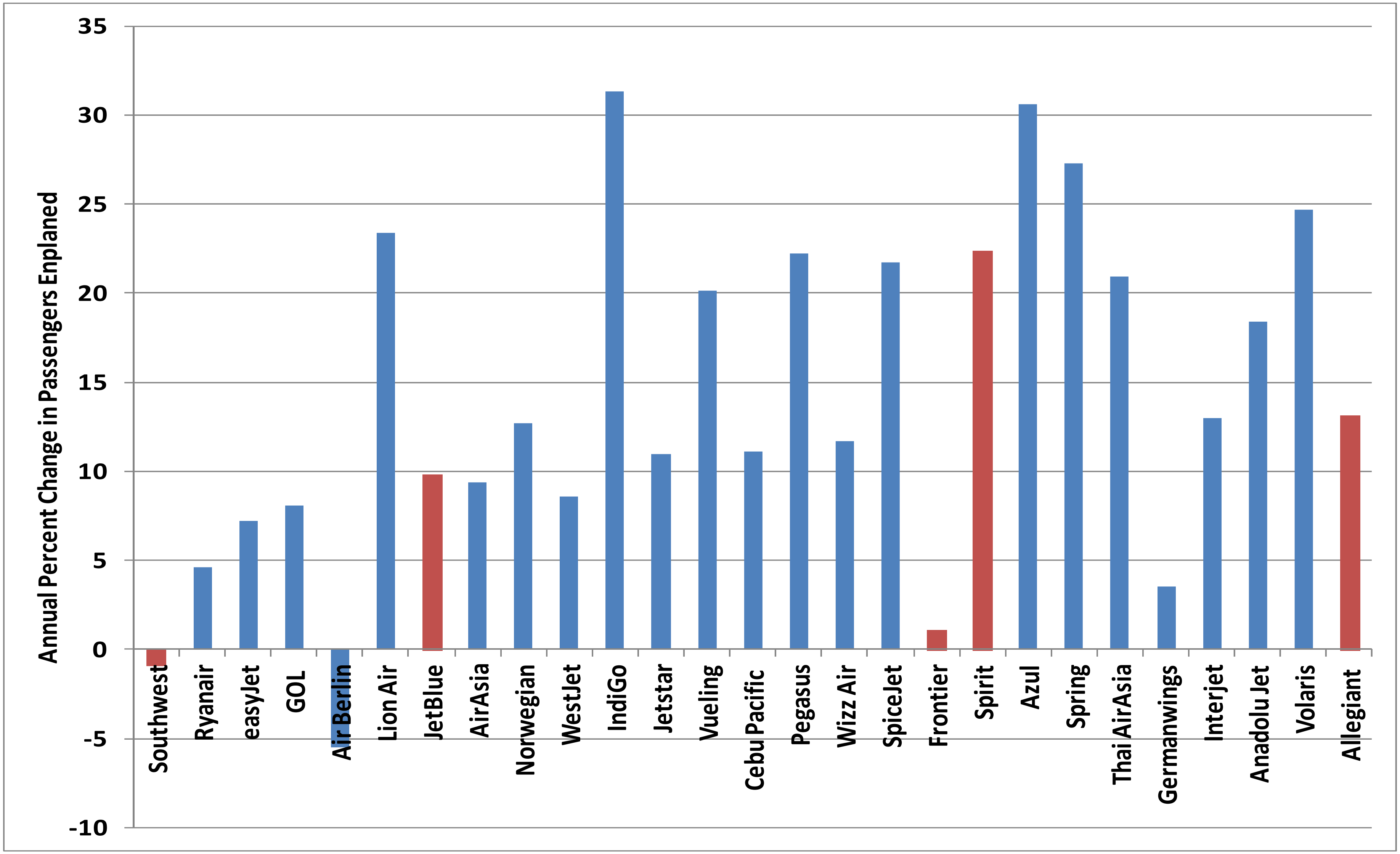
Source: Airline Business Top 200 Airlines Traffic 2012

2012 World LCC Rank by Passengers



Source: Airline Business Top 50 LCCs 2012

2012 LCC Passenger Growth Rates



Source: Airline Business Top 50 LCCs 2012

Emerging Global Carriers

- **A group of 4 airlines based in Turkey and the Middle East that have experienced rapid growth**

		Etihad	Emirates	Qatar	Turkish
2007 - 2012	**Passengers**	16.26%	12.65%	15.83%	13.62%
	ASKs	18.66%	14.19%	20.41%	18.30%
	RPKs	21.84%	14.37%	19.28%	18.20%
	Fleet Size	11.50%	11.68%	16.42%	15.30%

- **Very important customers for both Airbus and Boeing**

- **Fleets composed mostly of wide-body aircraft**

Source: Airline Annual Reports