

**TURKISH
AVIATION
ACADEMY**



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Airline Network Strategies

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Network, Fleet and Schedule
Strategic Planning
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Lecture Outline

- **Review: Evolving Network Strategies**
- **US Airline Network Developments**
 - Impacts of Recent US Mergers
 - International vs. Domestic Network Growth
- **Global Network Expansion: Emerging Carriers**
 - Rapid Growth of Competing Hubs
- **Airline Cooperation and Consolidation**
 - Alliances and Code-sharing
 - Joint Ventures
 - Mergers and Acquisitions

Review: Evolving Network Strategies

- **From linear – to hub construction – to hub-to-hub flying**
- **From national dominance – to a regional footprint – to a global focus**
- **Domestic networks supporting international growth**
 - International expansion contributes to improved on board revenue for the domestic operation

The Evolution of Networks

COMPETITION

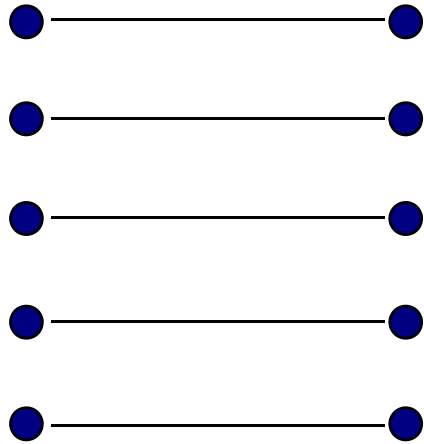
Pre-Deregulation
Route vs. Route

1980s-1990s
Hub vs. Hub

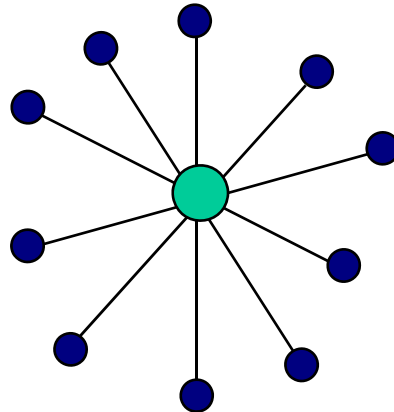
21st Century
Network vs. Network

STRUCTURE

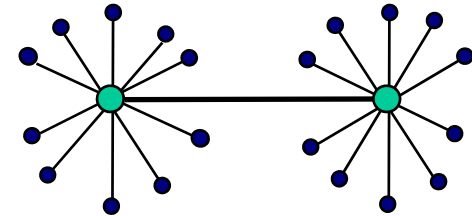
Point-to-Point
5 City Pairs



Hub Operation
55 City Pairs



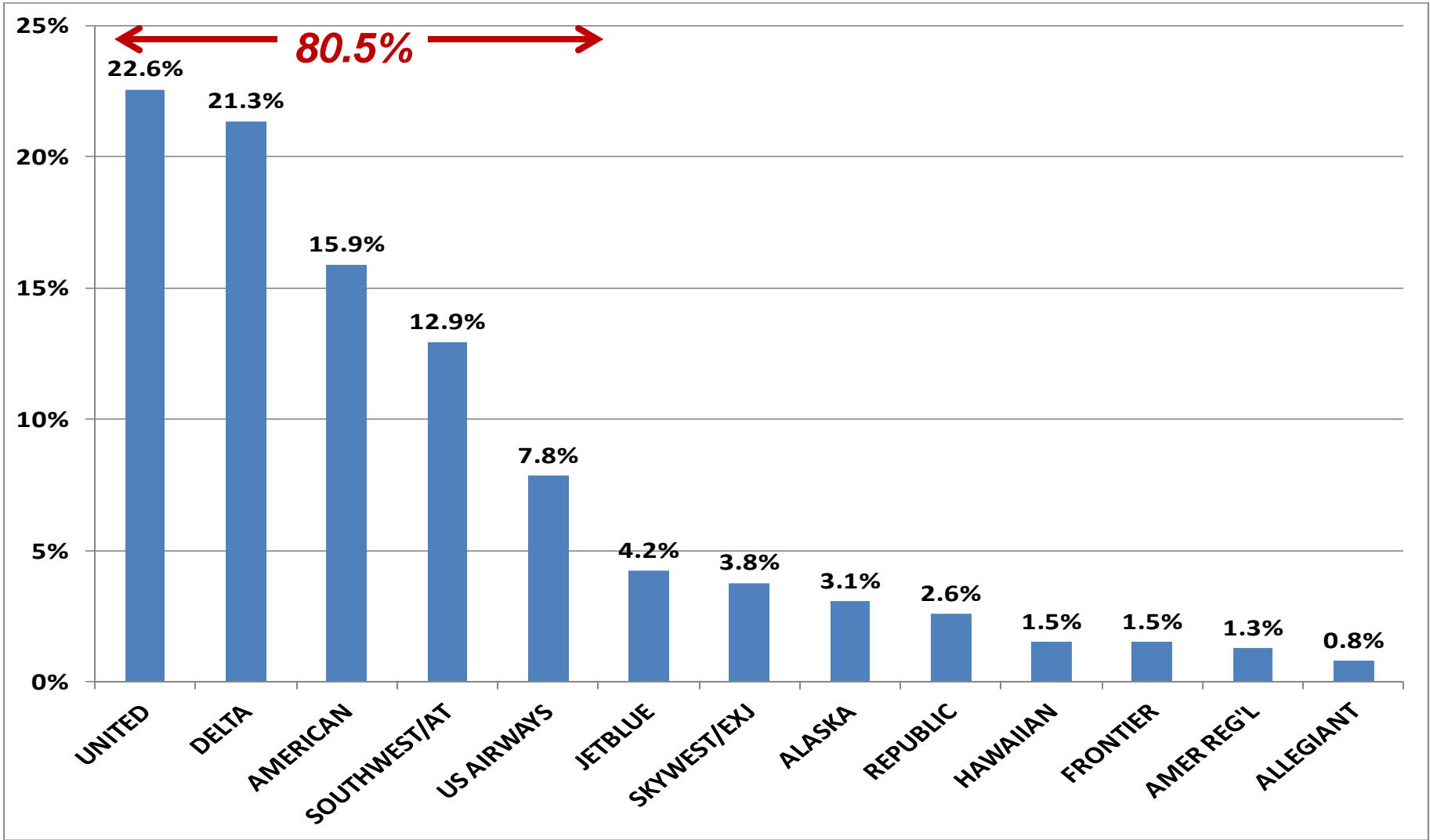
Network Operation
231 City Pairs



US Airline Network Developments

- **Industry consolidation through mergers**
 - US Airways and America West in 2005 [US Airways]
 - Delta and Northwest in 2008 [Delta]
 - United and Continental in 2010 [United]
 - Southwest and AirTran in 2012 [Southwest]
 - American and US Airways in 2014 [American]
- **International vs. Domestic Network Growth**
 - Domestic Capacity Cuts and Shifts to Regional Partners
 - International Network Expansion

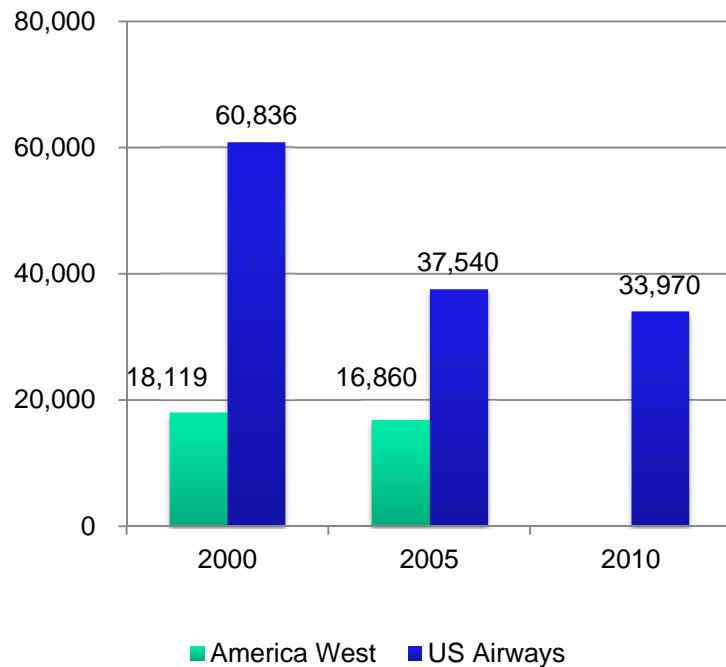
US Carrier System RPM Traffic Share 12 Months 2012



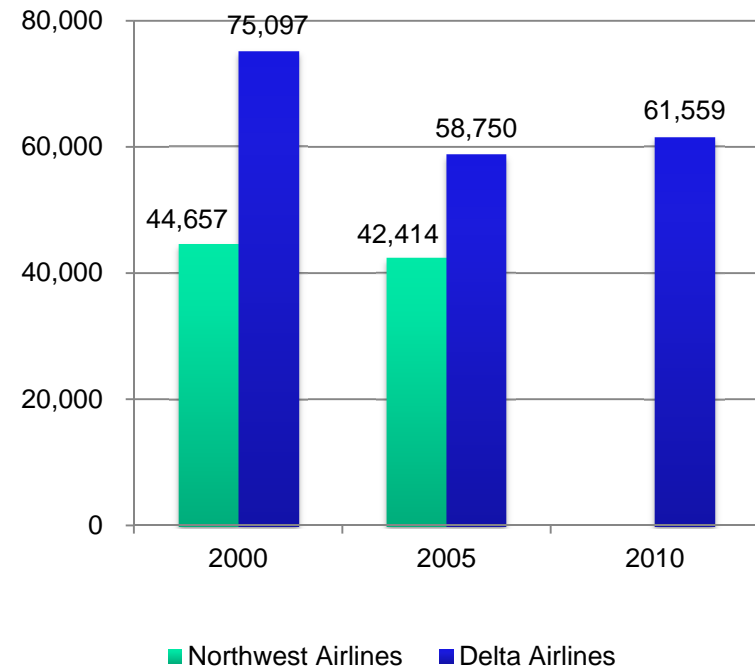
Source: Aviation Daily, 1/21/2013

Impacts of Mergers on Flight Volumes

US Airways Total Flight Volume

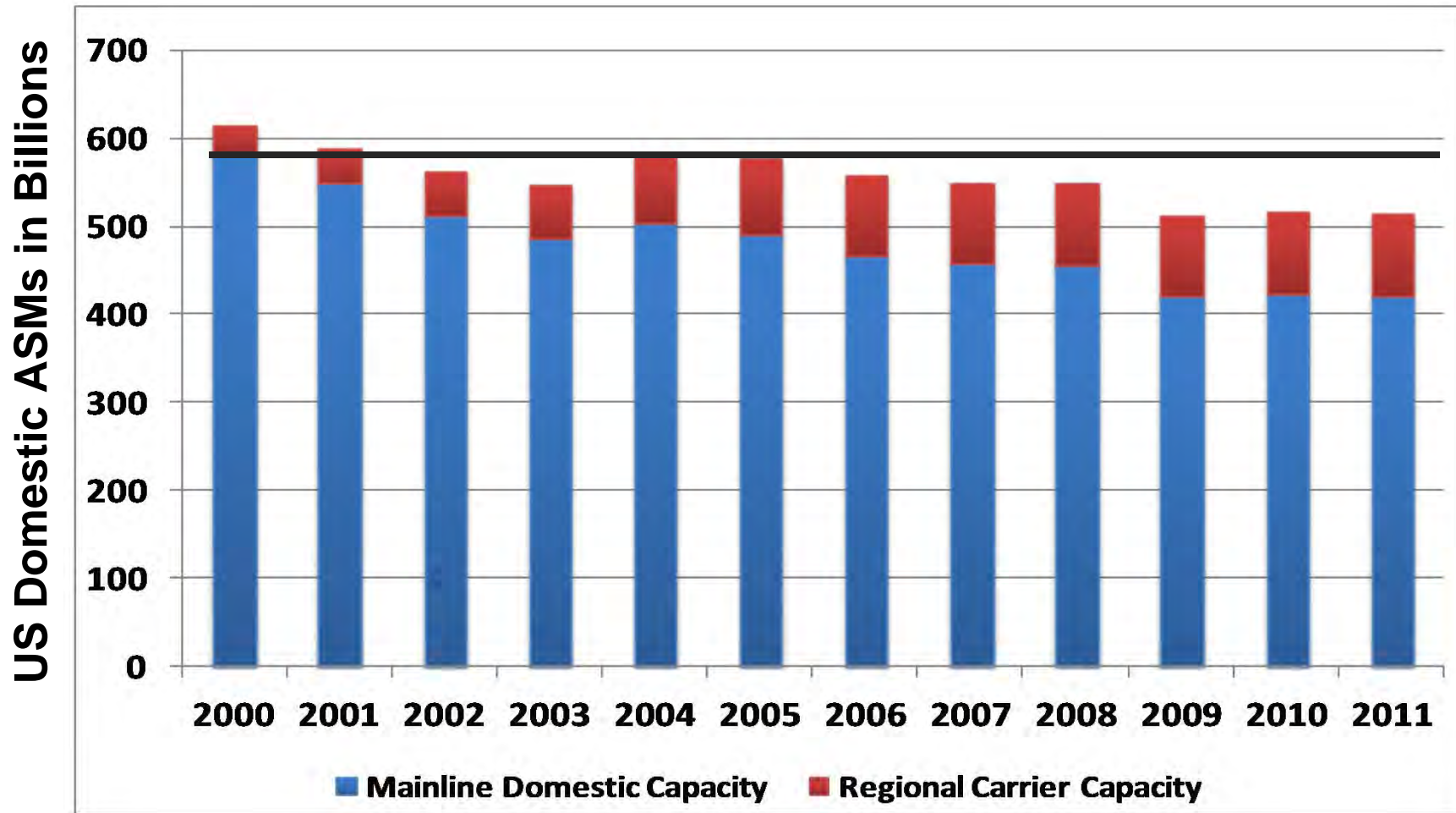


Delta Airlines Total Flight Volume



- **US Airways and Delta Airlines effectively absorbed flight volumes of America West and Northwest, respectively, with little to no change in total mainline flight volumes**

Drop in US Domestic Capacity – Shift to Regional Partners



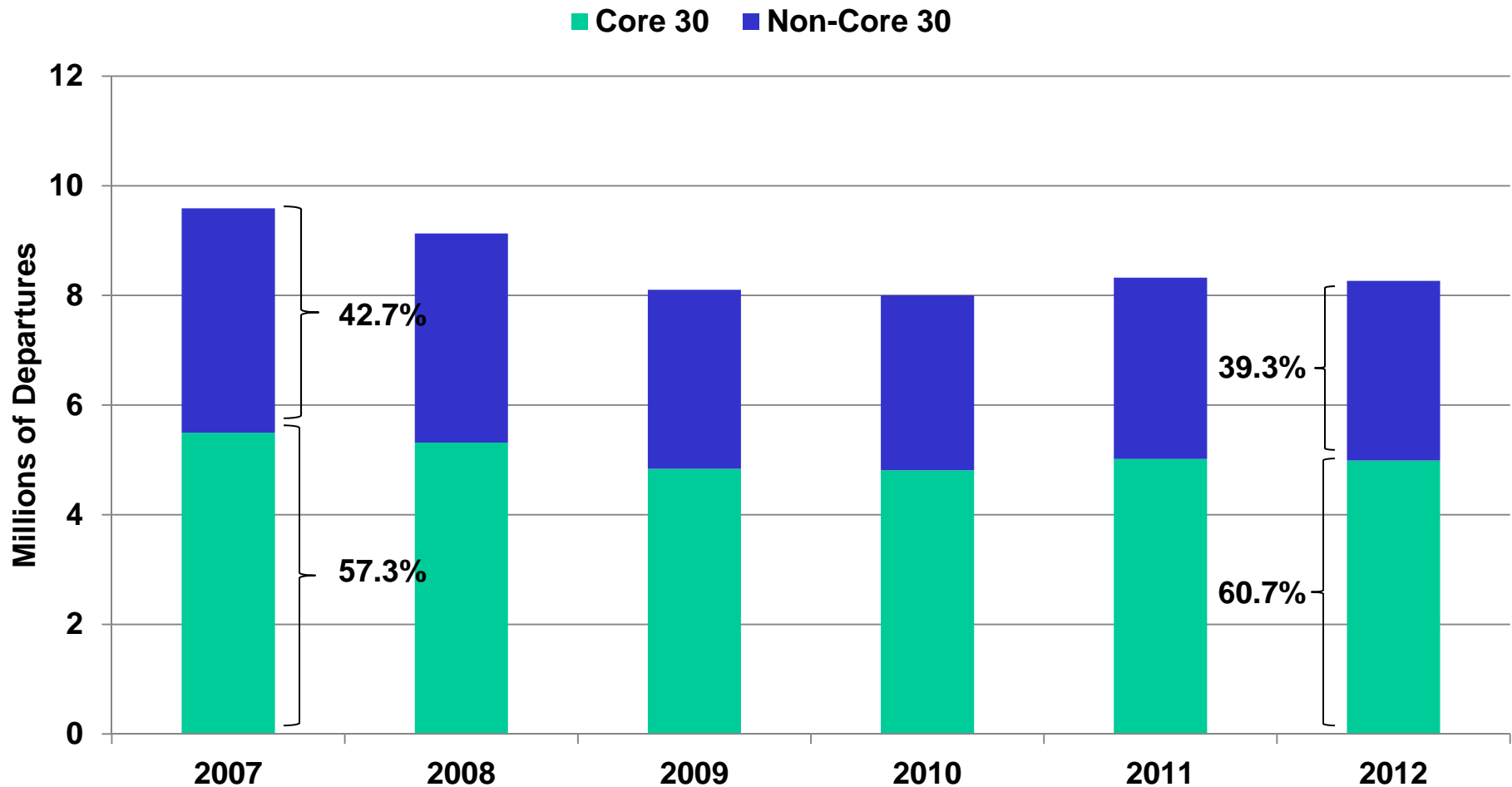
Source: ATA

International v. Domestic Network Growth

- **Inter-continental growth has proven successful in conjunction with alliance partners**
 - Presence of low cost carriers make domestic profitability difficult
 - Low cost carrier operations primarily focus on largest origin and destination markets which makes profitable flying more difficult
- **Important to diversify route portfolio between international and domestic flying**
 - Domestic networks sized primarily to feed international flights can benefit from carrying international connecting passengers
 - Higher yield international traffic helps to compensate for higher cost structures of more mature carriers in the market

Domestic Departures from U.S. Airports

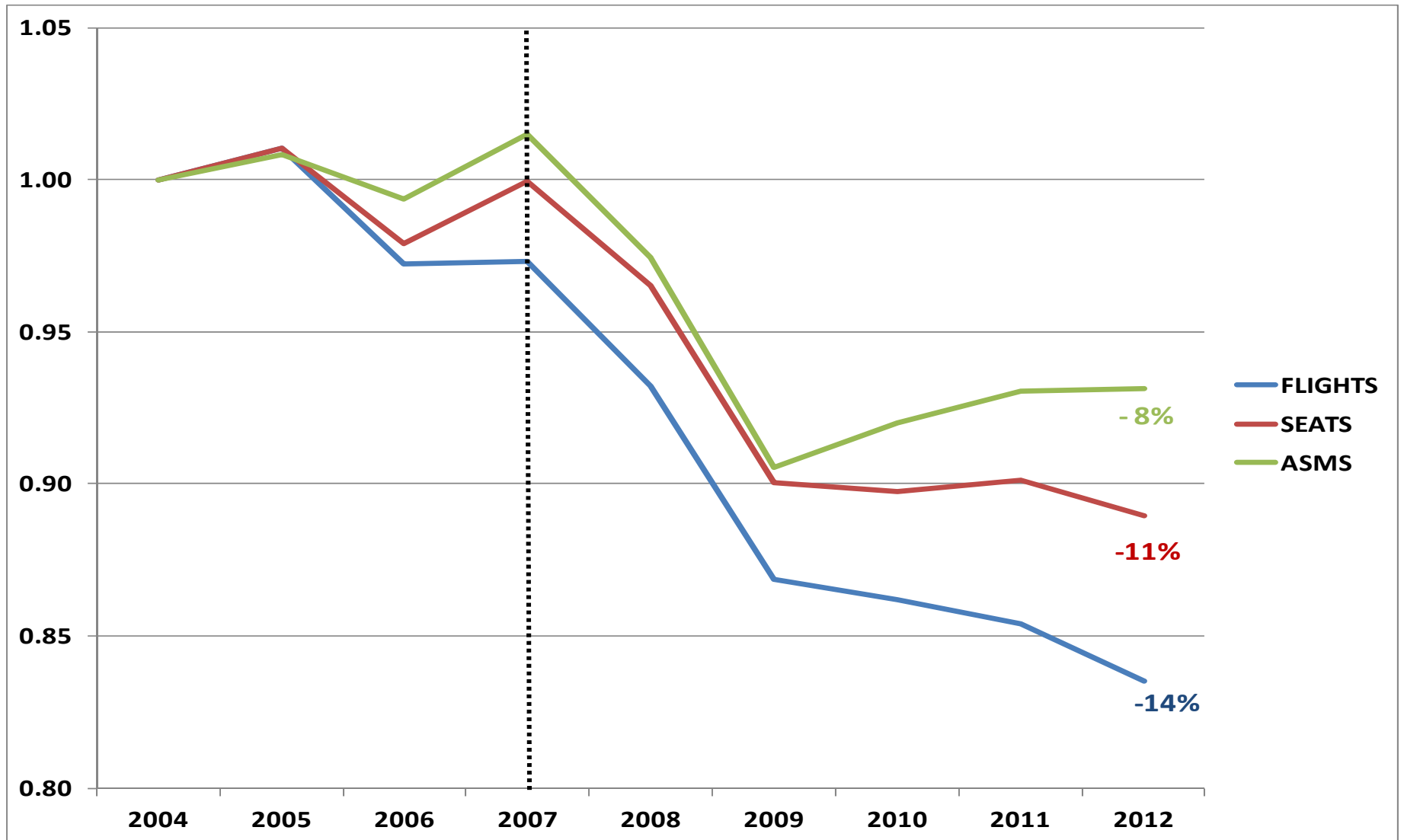
- Drop of 1.3 million departures/year since 2007.



Source: Diio Mi Schedule Data

Total US Domestic Capacity Index

Flights Down 14%; ASMs Down 8% Since 2007

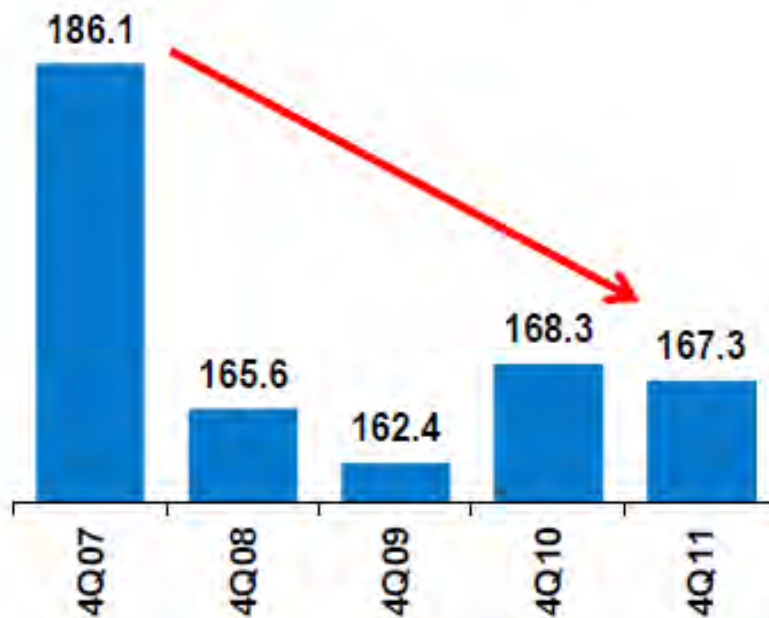


Source: Diio Mi Schedule Data

Capacity Shift from U.S. Domestic to International Routes

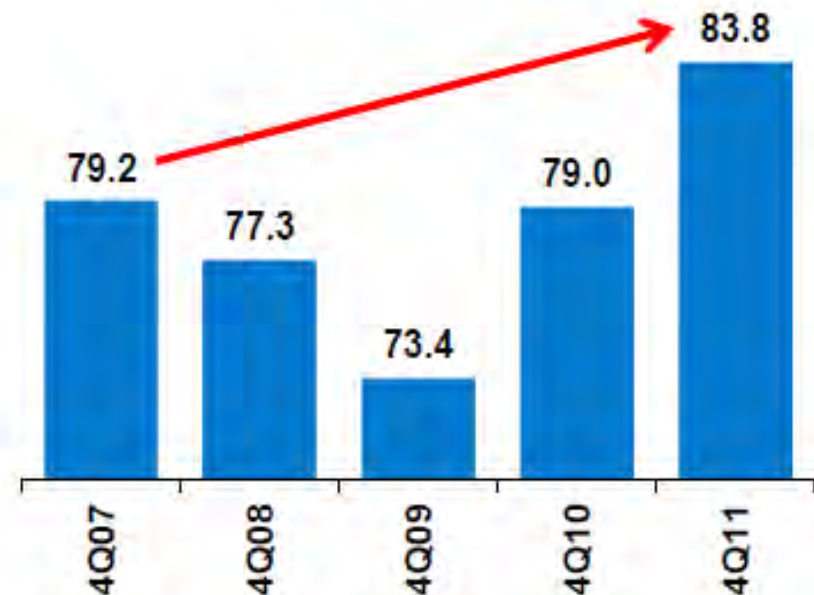
Billion Domestic ASMs

Down 10.1% from 2007 to 2011



Billion International* ASMs

Up 5.8% from 2007 to 2011

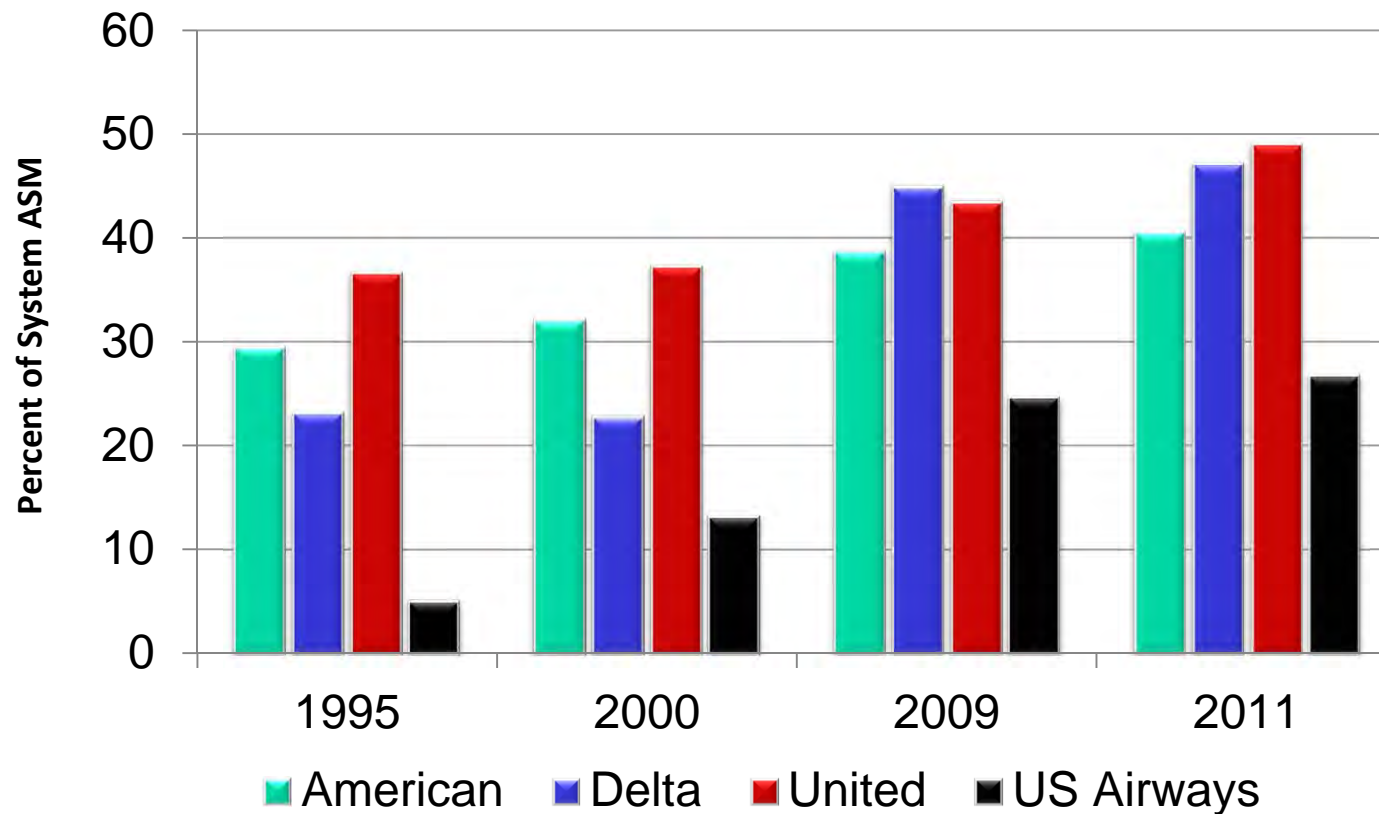


* Scheduled U.S. and non-U.S.-airline flights departing U.S. airports for non-U.S. destinations; an ASM is one seat flown one mile

Source: Innovata (via Diio Mi) published schedules as of Aug. 29, 2011

Diversification of the Route Portfolio Critical to Improved Profitability

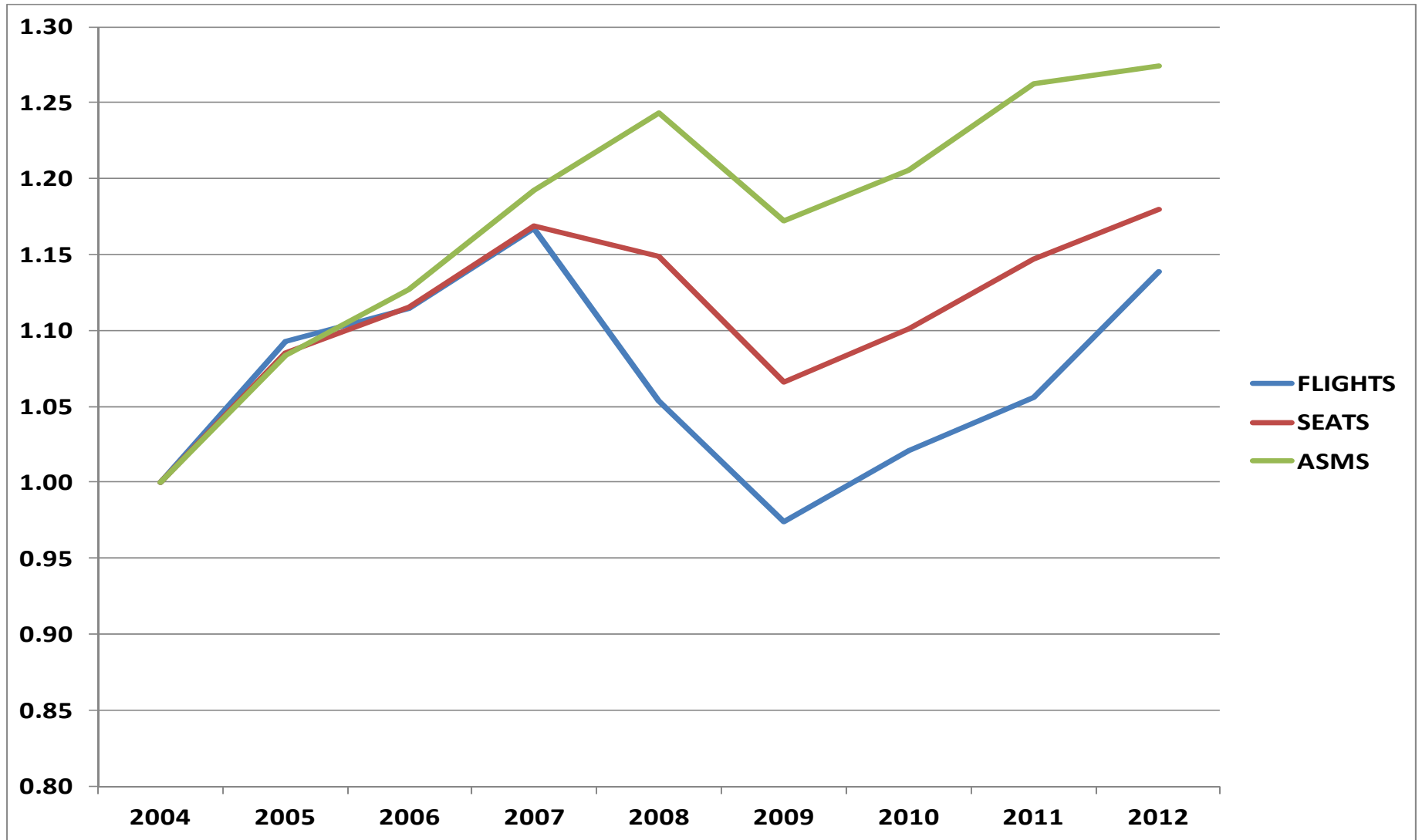
Percent of Capacity in International Markets



Source: MIT Airline Data Project

US Airline International Service Index

Larger Aircraft and Longer Flights Since 2004

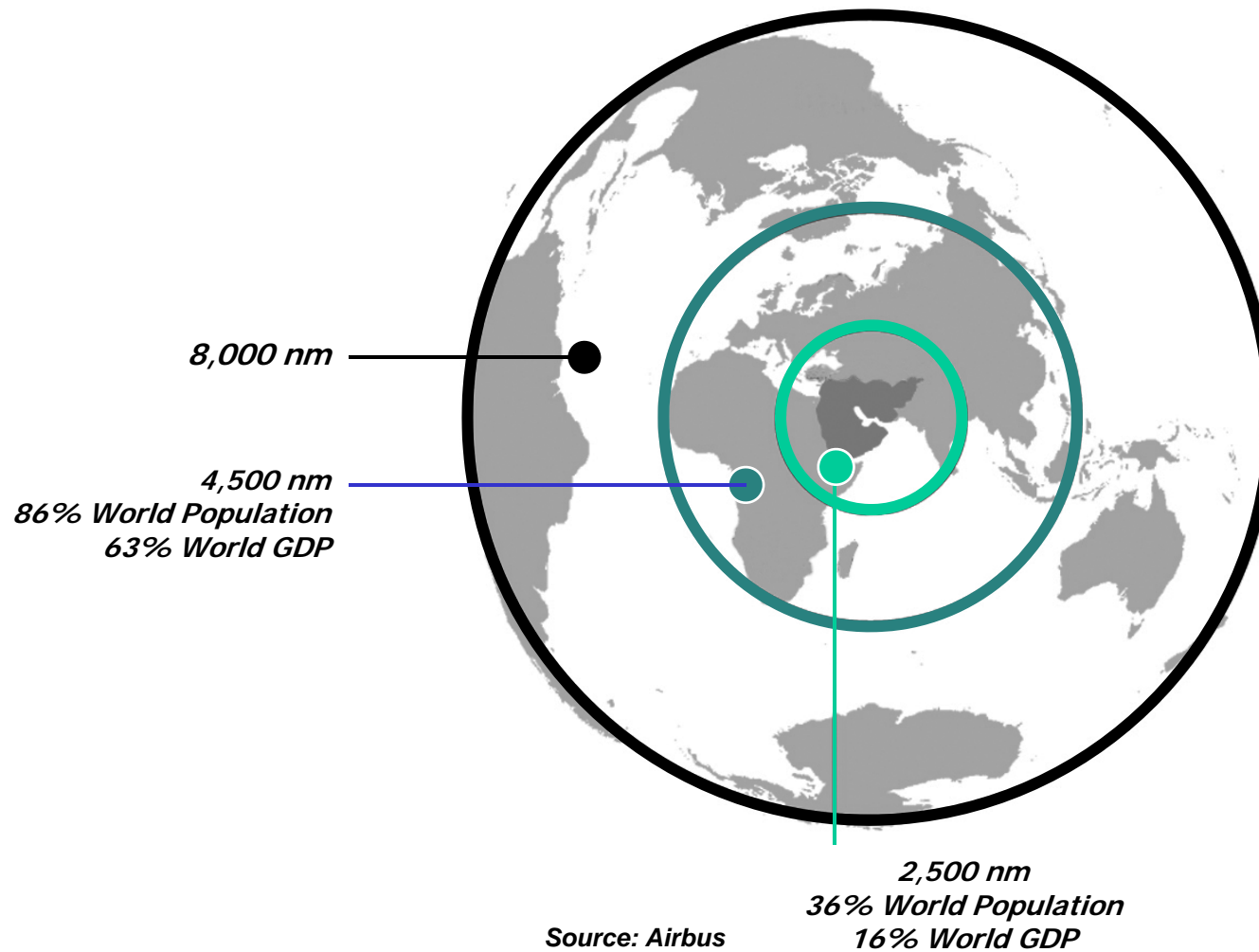


Source: Diio Mi Schedule Data

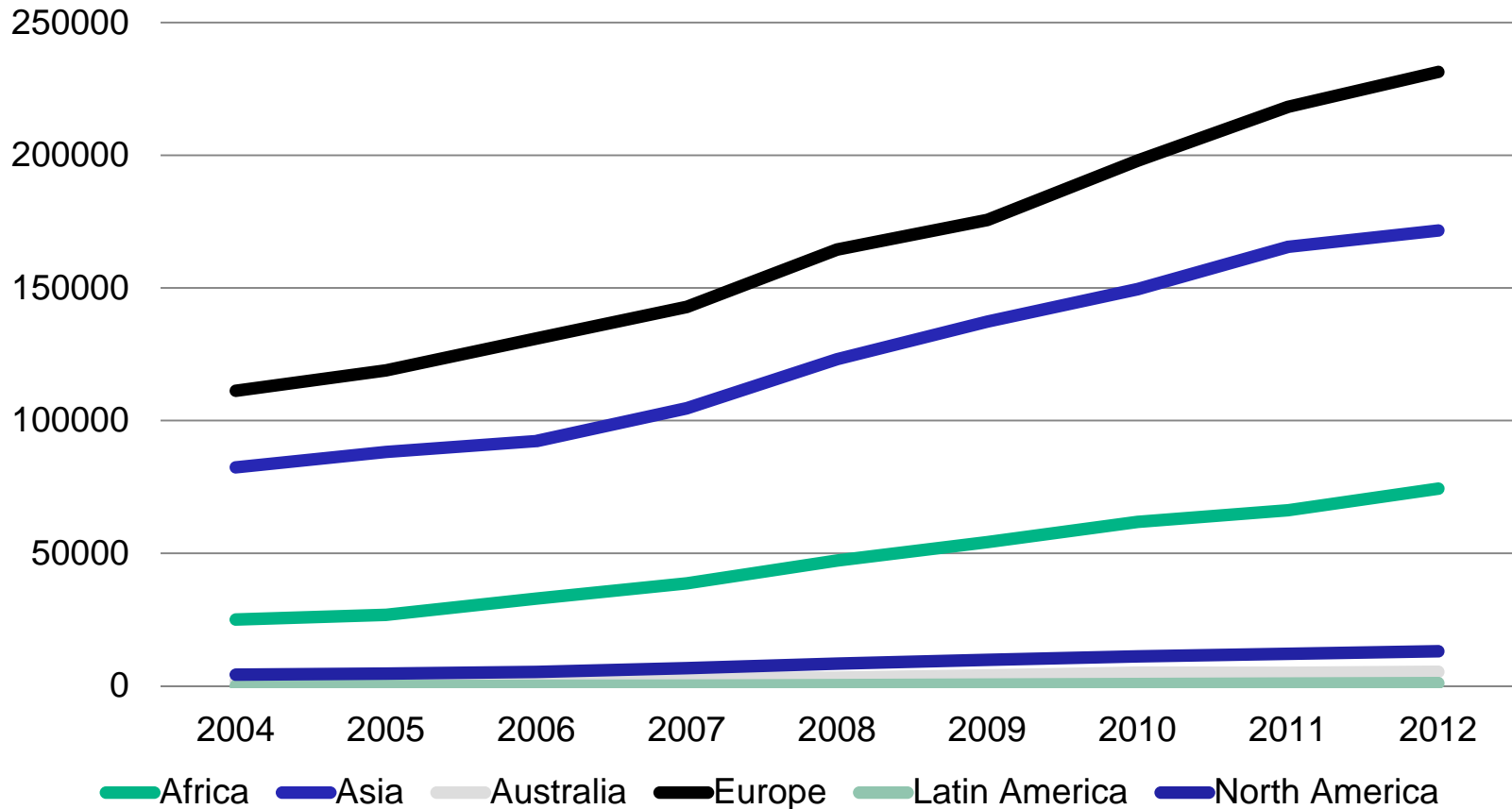
Global Network Expansion: Emerging Global Carriers

- **Continued rapid growth of these airlines will affect global traffic flows**
 - Emirates (Dubai), Etihad (Abu Dhabi), Qatar (Doha) and Turkish (Istanbul) building large hubs that depend on connecting traffic
 - Future success is highly dependent on negotiating new bilateral rights to further expand their hub networks
- **Implications for airports**
 - Emerging carriers looking for new spoke cities to feed their connecting global hubs with 6th freedom international traffic
 - Operations involve long-haul, wide-body (and A380) aircraft and full-service products (premium classes, lounges)
 - Competition among airports to attract these new services – at BOS, Turkish will start May 2014 and Emirates in March 2014

Geographical Advantage to Access the Emerging Market Traffic Flows

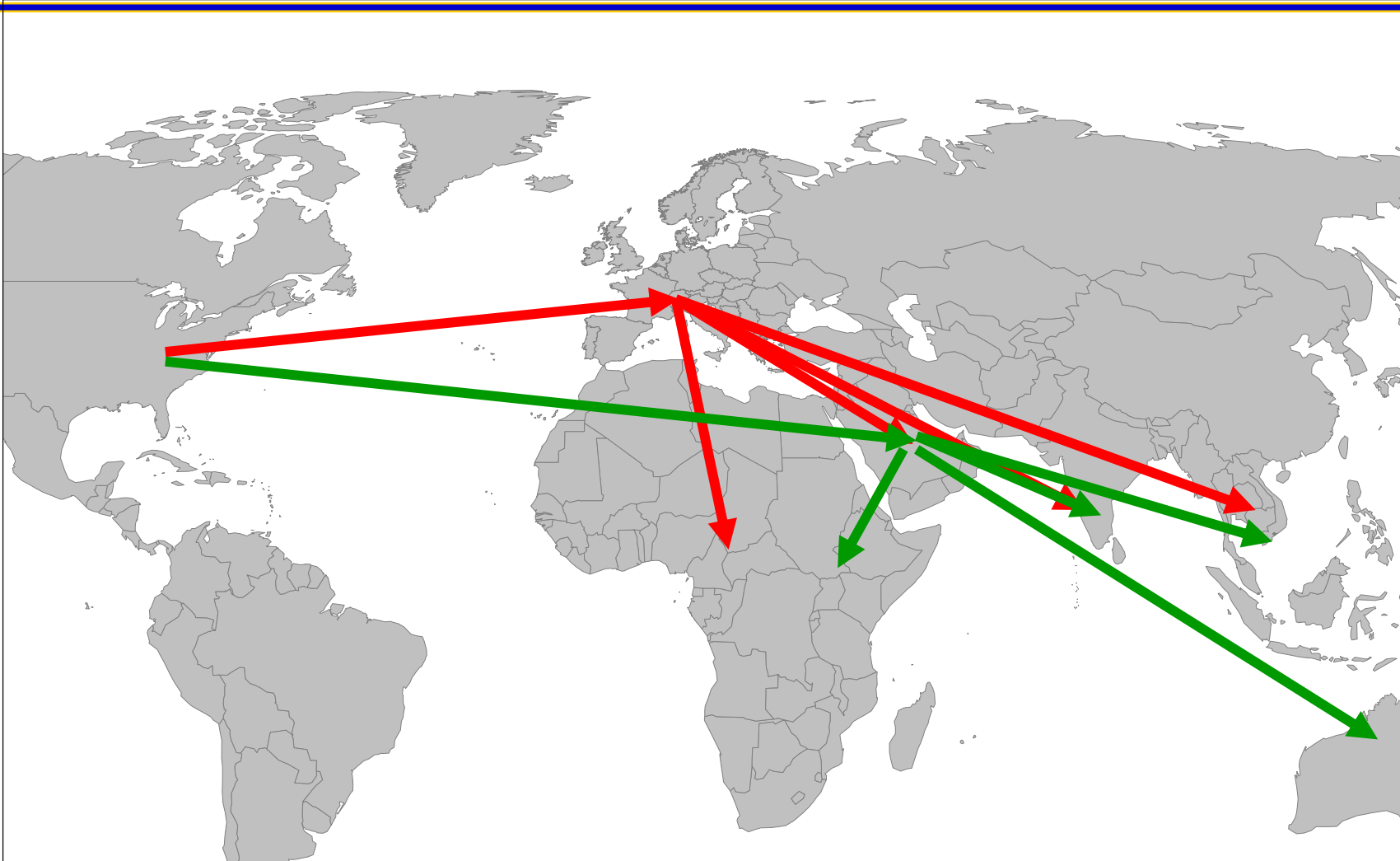


Flights from Emerging Carrier hubs have more than doubled since 2004



- **Flights to all regions have increased rapidly over the past 8 years**
- **Nearly 50% of flights are destined to Europe**

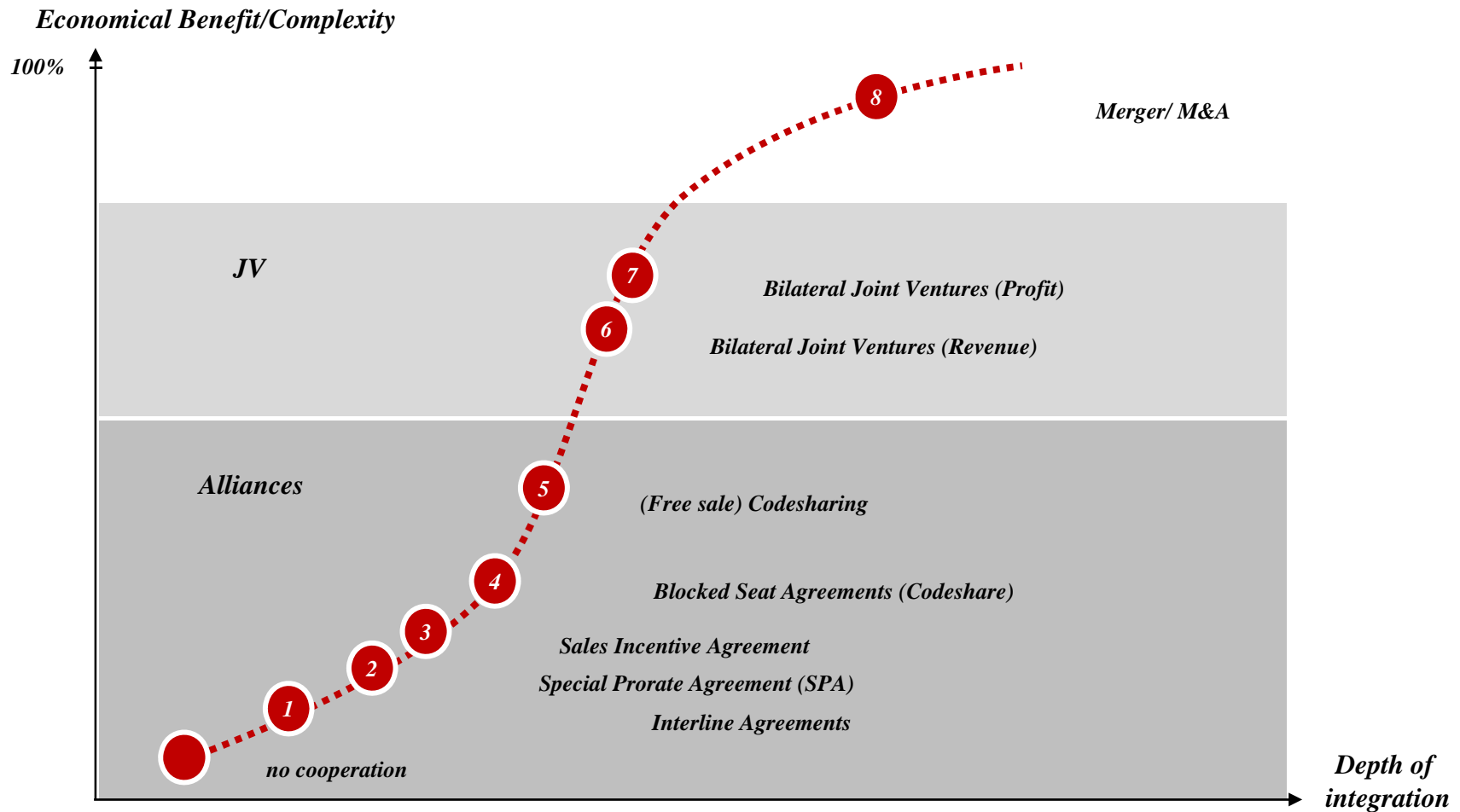
Competition with European Hubs



Airline Cooperation and Consolidation

- **Regulatory hurdles block the type of cross-border consolidation that has occurred in other industries.**
 - International flight operations still regulated by bilateral agreements
 - Limits on foreign ownership of airlines in many countries
 - Influence of political and union forces against such consolidation
 - Anti-trust laws can constrain mergers and cooperation even within same country
- **Many forms of cooperation possible:**
 - Code-sharing agreements between two airlines
 - Membership in global airline alliances
 - Joint ventures to share both revenues and costs
 - Mergers and acquisitions

The Synergies of Airline Cooperation are Determined by the Level of Integration



Code-Sharing

- **Under a “code-share” arrangement, partner airline places its own code on an alliance flight:**
 - Partner markets and sells its own tickets for the flight
 - Flight is actually operated by another alliance airline
 - Flight is listed twice (or more) in airline schedules and computer reservations systems (CRS)
- **Code sharing increases consumers’ perceptions of network coverage in CRS displays:**

EXAMPLE:

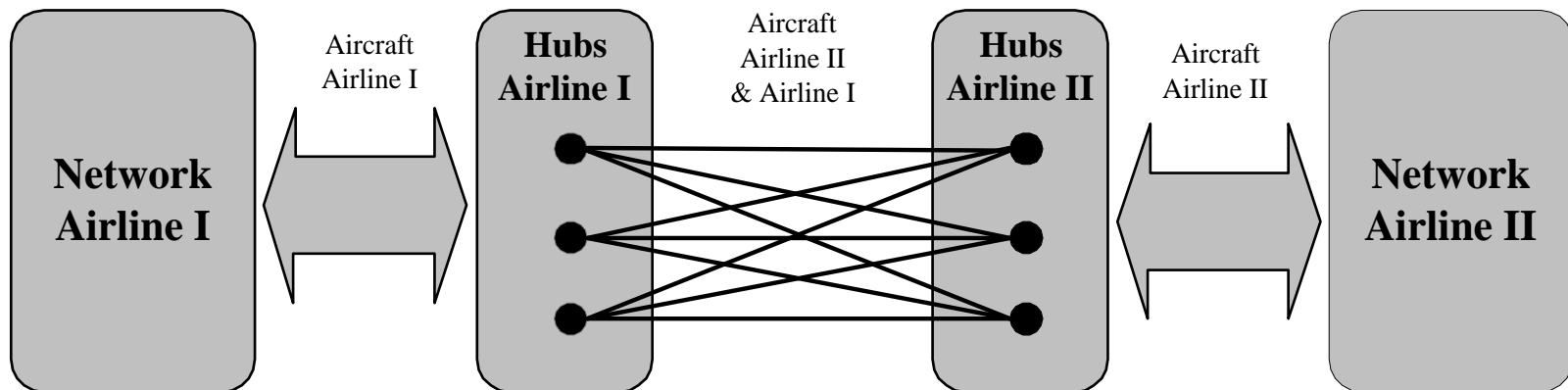
	TK 012	JFK-IST
also listed as	US* 5003	JFK-IST

Airline Alliances and Network Coverage

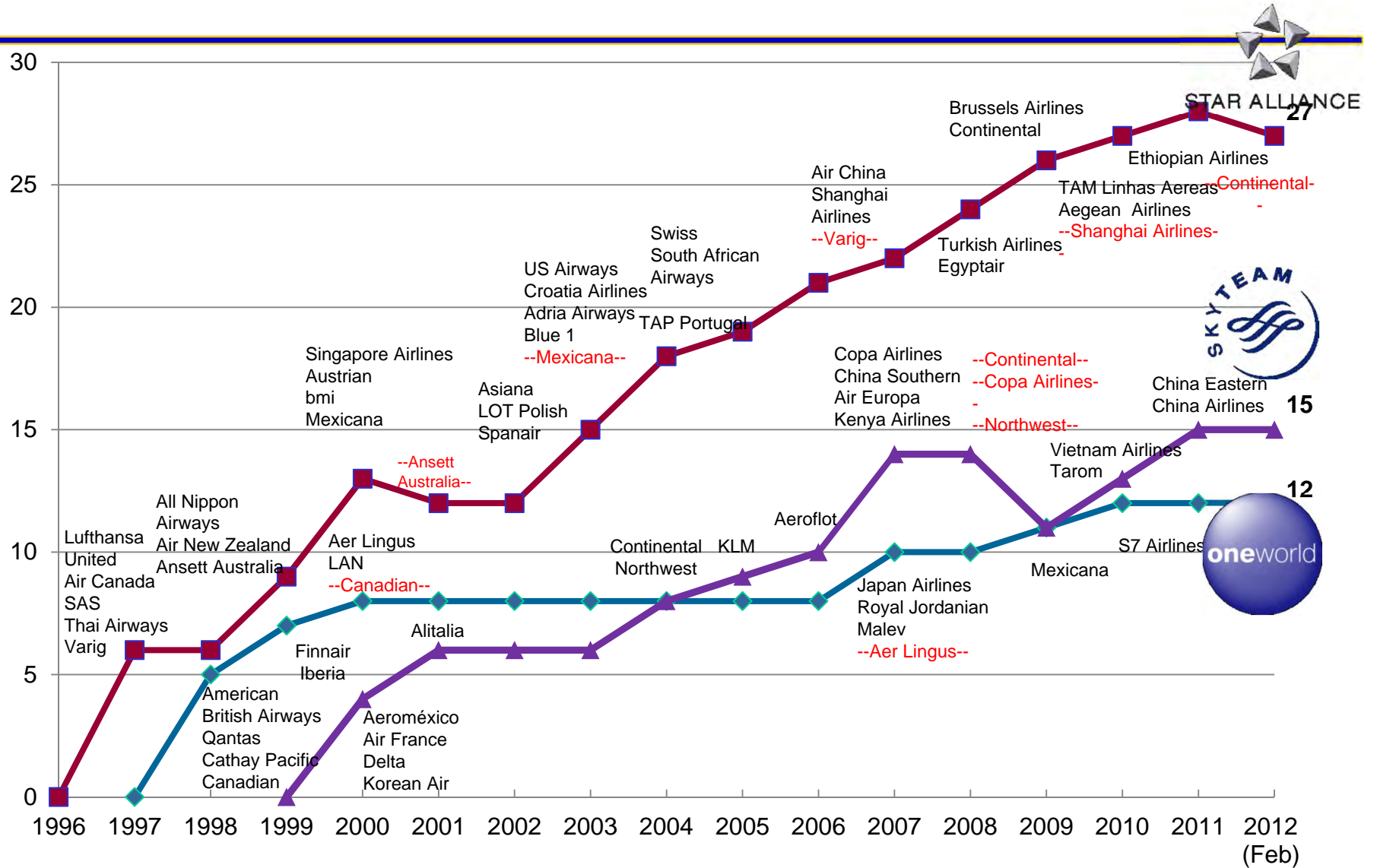
- **“Strategic alliances” between two airlines take the economic logic of hub networks one step further:**
 - Partner airlines can expand their network coverage without increasing their own flights and operating costs
 - Leads to further consolidation of loads, as two or more airlines now contribute passengers to a single “alliance flight”
 - Marketing power of larger networks is reinforced--more destinations, seamless connections, frequent flyer benefits
 - Additional cost savings are possible in alliance airlines due to combined flights, airport check-in and club operations, integrated purchasing and information systems

International Alliance Networks

- International alliances link their networks through hub-to-hub flights
- Global Strategic Alliance -- Strongly connected domestic networks linked together through high-density flights between international hubs






Growth of Global Alliances

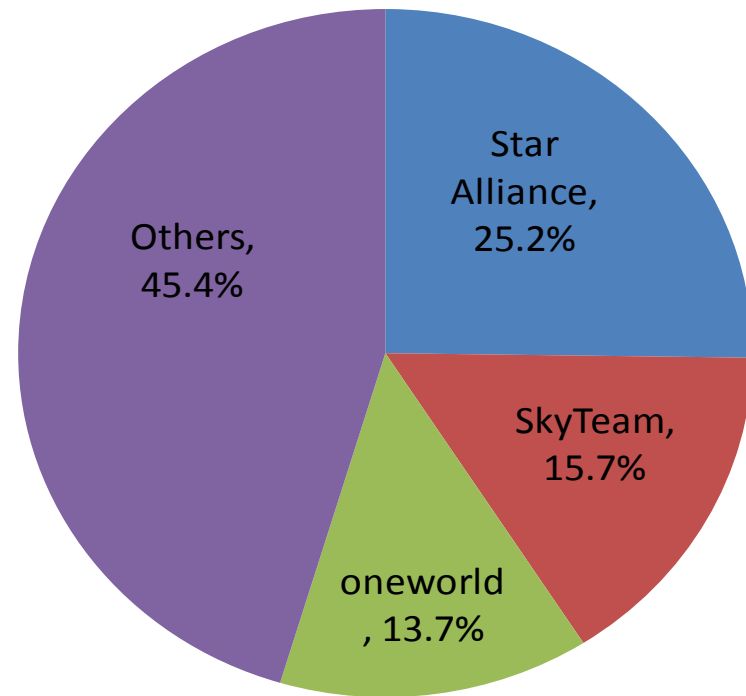


Source: Tugores, T. (2011) MIT SM Thesis

Global Airline Alliances

			
Year of Formation	1997	2000	1999
Member Airlines	27	15	12
Annual Revenues	\$174 B	\$112 B	\$92 B
World RPK Share	30%	19%	19%
Destinations Served	1135	832	712
Countries Served	181	169	145

Available Seat Kilometres



Source: Tugores, T. (2011) MIT SM Thesis

Advantages of Airline Alliances

- **Airlines can strengthen networks and market position against competing alliances:**
 - Expand network coverage with little risk or increased operating costs, and no new capital required (aircraft or facilities)
 - Access to new O-D markets and incremental revenues
 - Increased market shares in existing markets due to greater presence, meaning increased traffic, revenues, and profit
- **For consumers, a “seamless” travel experience:**
 - World-wide service with single check-in, consistent passenger service standards, club rooms and FFP benefits

Disadvantages of Airline Alliances

- **Potential for disagreements among airline partners:**
 - Can be difficult and costly to completely standardize customer service standards and procedures
 - Cost savings might not be as great as anticipated
 - Conflicting network and revenue sharing objectives
 - Possible for one partner to actually lose revenue as dominant airline exerts market and RM strengths
 - Alliance relationships are not permanent, as airlines switch partners and alliances
- **For consumers, confusion about code-sharing, operating carriers and potentially anti-competitive impacts.**

Consolidation Activity Around the Globe




Selected M&A and/or Cross-Border Investment: 2005-Present

USA	Non-USA
Republic/Shuttle America	Air France/KLM
US Airways/America West	Copa/AeroRepública
SkyWest/Atlantic Southeast	Lufthansa/Swiss
Pinnacle/Colgan	Air China/Cathay Pacific*
Lufthansa/JetBlue*	Cathay Pacific/Dragonair
Delta/Northwest	Lufthansa/Brussels*/BMI/Austrian
Republic/Midwest/Frontier	Avianca/TACA
United/Continental	British Airways/Iberia
Pinnacle/Mesaba	LAN/TAM
SkyWest-ASA/ExpressJet	LAN/Aires
Southwest/AirTran	TAM/TRIP*

Source: ATA and Deutsche Bank Global Research

* Strategic investment but not full ownership or control

Different Models of M&A Integration

	<i>One Brand</i>	<i>Co-Brand</i>	<i>Multi-Brand</i>
<i>Examples</i>			
<i>Characteristics</i>	<p><i>Full integration</i></p> <p><i>One management</i></p> <p><i>One brand</i></p>	<p><i>Very high integration</i></p> <p><i>Integrated management</i></p> <p><i>Two brands</i></p>	<p><i>High integration</i></p> <p><i>Management teams</i></p> <p><i>Multi-brand</i></p>
<i>Advantages</i>	<p><i>Maximum of synergies</i></p> <p><i>Fast decision processes</i></p>	<p><i>Higher synergies</i></p> <p><i>Maintain (national) brands</i></p>	<p><i>Profit center orientation</i></p> <p><i>Maintain (national) brands</i></p> <p><i>Flexibility in growth</i></p>
<i>Disadvantages</i>	<p><i>Loss of a potentially well known brand</i></p>	<p><i>Higher complexity</i></p>	<p><i>Higher complexity</i></p>

Source: Lufthansa Presentation to MIT (2010)

Factors Affecting Future Networks

- **Network Structure**
 - No evidence of shift away from large hub and spoke networks
 - Even LCCs have been developing “focus cities” for connections
- **Industry Consolidation**
 - Recent (and future) mergers could eliminate smaller hubs
 - Alliances and joint ventures reinforce largest international hubs
- **Availability of New Aircraft Options**
 - 787 delivery delays, A350 still years away
 - Replacement alternatives for smaller narrow-body fleet?