Low-Cost Carriers

Martin Dresner

R.H. Smith School of Business

University of Maryland

Tokyo, Japan, January 8, 2013

Background

- Nine years ago, in 2004, I was invited to Tokyo to discuss the U.S. air transport system with applications to Asia and Japan.
- In particular, I was asked to discuss the following …

Low-Cost Carriers: U.S. Experience and Lessons for Asia

Martin Dresner
University of Maryland
R.H. Smith School of Business

Concluding Remarks - 2004

- At the end of my presentation, I offered some predictions as to the future of LCCs in both the US and Asia.

Future For Network Carriers in the US

- Most observers believe that low-cost carrier market share will continue to grow - reaching 50% or more of US domestic RPMs.
- If this is the case, there will need to be consolidation among the network carriers - with one or more going out of business.

Future For Network Carriers in the US

- In the future, network carriers will have a more limited role in the US domestic market:
  - Serve smaller communities
  - Operate lower frequencies between larger airports
  - Use smaller aircraft

Should Network Carriers in Asia Be Concerned About LCC Competition?

- Obvious differences between the US domestic market and the Asian market:
  - Stage length
  - Domestic vs. international
  - Airport congestion and capacity constraints
  - Government regulation over prices and route entry
  - Support for flag carriers

Low-Cost Carrier Potential in Asia

- Don’t underestimate the desire of consumers to pay less money for air travel!
- If Asian network carriers do not deliver air travel at low prices to meet consumer demand, then there is a potential market for low-cost carriers.
- One only needs to look to Europe to see that the LCC model is transferable from the U.S. to other parts of the world.

UNIVERSITY OF MARYLAND
ROBERT H. SMITH SCHOOL OF BUSINESS

Before Looking at my Predictions …

- Before I examine my predictions, I would like to review some general information and research results on low-cost carriers.

Defining Low-Cost Carriers

JetBlue vs. United Airlines

Oakland

Washington - IAD

Source: Wall Street Journal

JetBlue vs. United Airlines

- On May 1st, 2002, JetBlue initiated service between Washington Dulles and Oakland
- United, the hub carrier at Dulles, offered service between Washington Dulles and San Francisco
- Seeking to defend its position in the Washington - San Francisco Bay Area market, United launched IAD-OAK service on May 8

		
Plane Model	Airbus A320	Airbus A320
Crew Size	2 Pilots, 4 Flight Attendants	2 Pilots, 4 Flight Attendants
Seats per Plane	162	138
Flights per Day	2 Roundtrips	2 Roundtrips
One-way Ticket Price	$129-$307.50	$129 - $1951 (first class)
In-Flight Service	Snacks, Satellite TV	Hot Meal, Movie, Audio
One-Way Cost	**$14,546**	**$23,690**

JetBlue vs. United Airlines

- Wall Street Journal estimated that United was losing $6500 per flight operating this route PLUS it was diverting traffic from its IAD-SFO route.
- JetBlue, on the other hand, was earning a profit on the route.

Why Did JetBlue Make Money on the Route and not United?

- At Dulles, United leased 39 gates, had 3 Red Carpet Clubs, and 2,200 ground employees.
- Of United's 600 customer service agents, 40% were earning the top rate of $24.59 per hour.
- JetBlue operated just 2 gates, had a total staff of 59 workers and paid its customer service agents $10 per hour.

Why Did JetBlue Make Money on the Route and not United?

- United's labor costs were 47% of revenue compared to 25% for JetBlue
- The captain of a United flight earned $16,350 - $18,000 per month compared to $6,800 per month for a captain at JetBlue
- United flight attendants earned $41,000 annually compared to $16,800-$27,000 annually at JetBlue

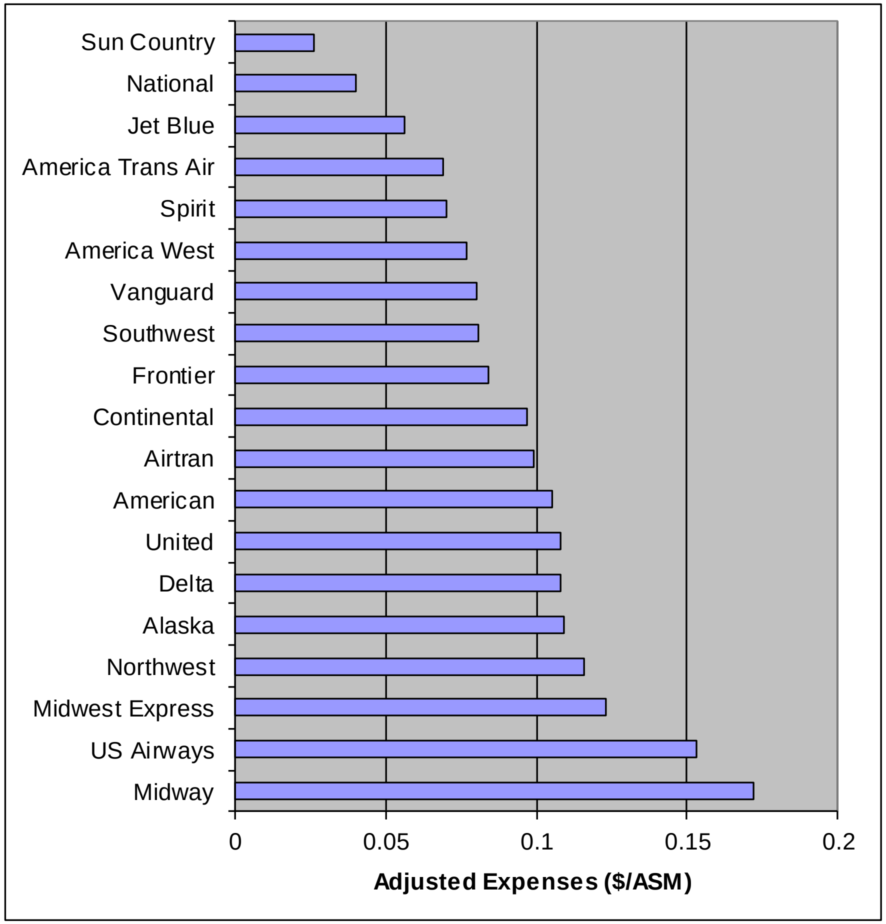
The Bottom Line ...

- A network carrier is at a great disadvantage competing head-to-head with a low-cost carrier *that is well-financed and well-operated*.
- As a result, network carriers, such as United, have had to enter bankruptcy.

What Is A Low-Cost Carrier?

- Simple answer - a carrier with low-costs!
- Low-costs allow carriers to charge, on average, lower prices than their higher-cost competitors.

Carrier Cost Comparison - 2002 Data (Data Adjusted for Stage Length)



How Large is the Cost Differential Between Low-Cost Carrier and Network Carriers?

- Some commentators have placed the network carrier disadvantage at 40-50% of available seat-mile.
- Suffice to say, the difference is *real* and it is *large*.

University of Maryland
Robert H. Smith School of Business

Operating Cost Strategies of LCCs

- Why do low-cost carriers have lower costs than network carriers?

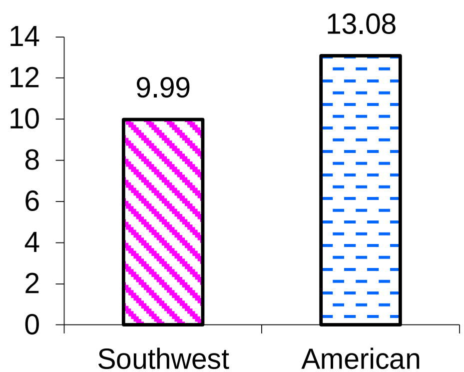
1. Limited Number of Aircraft Types

- Southwest Airlines uses B737s
- JetBlue flies A320s
- WestJet (Canada) flies B737s

- On average, low-cost carriers have a much more standardized aircraft fleet than network carriers.

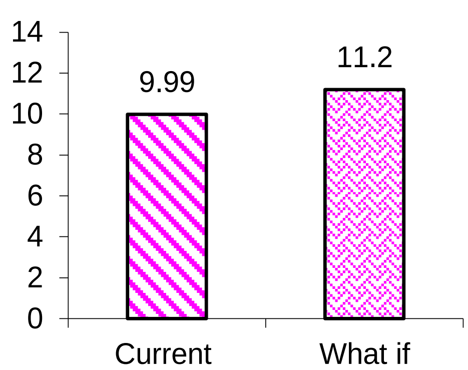
Unit Cost Simulation for Southwest and American Airlines

(A) The actual unit cost comparison between Southwest and AA



Cost gap: 3.09 cents

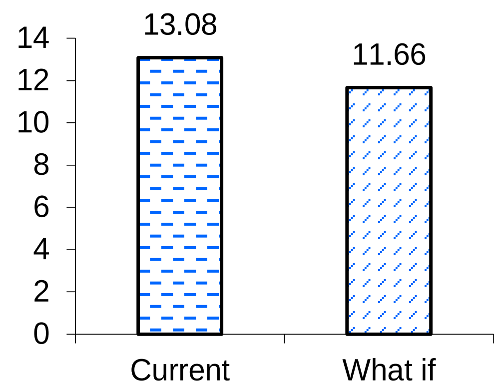
(B) Southwest had the same fleet standardization as AA.



Cost increase for Southwest: 1.21 cents (12.1% ↑)

Cost gap: 1.88 cents (39% ↓)

(C) AA had the same fleet standardization as Southwest.



Cost decrease for American: 1.42 cents (10.9% ↓)

Cost gap: 1.67 cents (46%↓)

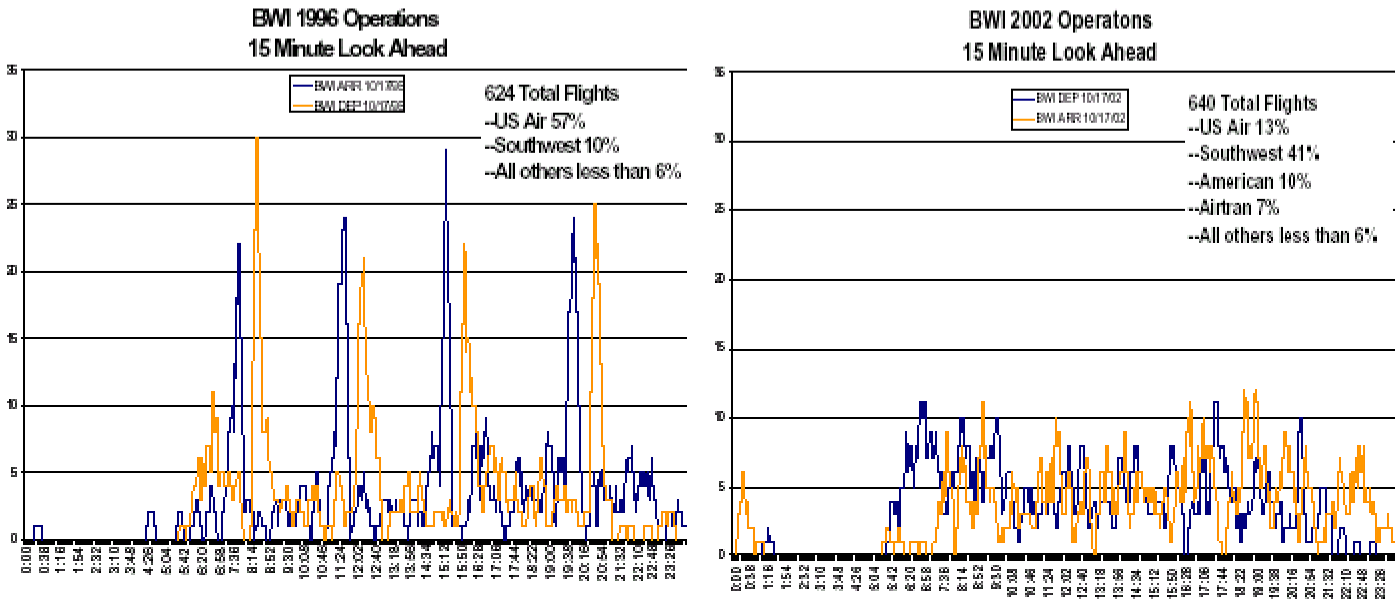
Source: Zou, Yu and Dresner, 2012.

2. Point-to-Point Operations

- Some leading low-cost carriers operate a point-to-point system rather than a hub-and-spoke system.
- Point-to-point operations simplify pricing decisions, reduce baggage handling costs, reduce gate requirements, reduce staffing needs, etc.

BWI with Network Carrier vs. Southwest Airlines

Figure 7: Banking operations at BWI before and after Southwest became the dominant carrier



Source: Berry, Bhadra, Gentry and Nelson (2004)

3. Quick Turns

Average Time in Minutes for Turns at Albany, NY, June 15, 2001

Airline	Taxi-in	Gate	Taxi-out	Total
American	4.0	79.5	26.0	109.5
Delta	5.3	87.7	13.7	106.7
United	3.5	80.5	10.5	94.5
US Air	3.4	47.7	15.9	67.0
Northwest	4.7	38.3	14.0	57.0
Southwest	2.7	35.4	7.9	46.0

Source: Gillen and Lall (2004)

Value of Quick Turns

- Use fewer gates
- Require fewer aircraft
- Maximize value of air crew - Southwest had the lowest cost per block hour of major US carriers. The average Southwest pilot produced 800 block hours in 2000. The average United pilot produced only 54% as many block hours.

Source: Gillen and Lall (2004)

4. Use Uncongested/Secondary Airports

- Low-cost carriers often use secondary airports in metropolitan locations - reduces taxi time; fewer gate holds; lower gate costs; facilitates quick turns, etc.

5. Use of Lower Cost Workers

- Some low-cost carriers employ non-union personnel - increase flexibility of operations.
- In addition, since many LCCs are start-ups or are growing quickly, their employees have less seniority than the employees at the network carriers and are, therefore, paid at a lower wage rate.

6. Concentrate on Short-Haul Markets

- Some LCCs have concentrated on short-haul markets. These are the best markets to take advantage of quick turns, high density seating, etc.

Other Low-Cost Carrier Strategies

- No pre-assigned seating - facilitates quick turns.
- Limited or no participation in computer reservations systems - saves distribution costs.
- No or limited interlining - simplifies pricing.
- Limited or simplified frequent flier programs.
- One-way ticket pricing with no Saturday stay requirements for lower fares.
- One-class service.

Market Positioning of Low-Cost Carriers

- Do low-cost carriers provide lousy service?
- Not according to their passengers! Low-cost carriers are regularly rated very high on service by their customers.

Customer Complaints - 2011

RANK	AIRLINE	COMPLAINTS PER 100,000 ENPLANEMENTS
1	**SOUTHWEST AIRLINES**	**0.32**
2	ALASKA AIRLINES	0.48
3	MESA AIRLINES	0.62
4	HAWAIIAN AIRLINES	0.70
5	AIRTRAN AIRWAYS	0.72
6	SKYWEST AIRLINES	0.73
7	FRONTIER AIRLINES	0.76
8	ATLANTIC SOUTHEAST AIRLINES	0.88
9	EXPRESSJET AIRLINES	1.04
10	JETBLUE AIRWAYS	1.08
11	DELTA AIR LINES	1.23
12	AMERICAN EAGLE AIRLINES	1.45
13	**AMERICAN AIRLINES**	**1.46**
14	**CONTINENTAL AIRLINES**	**1.81**
15	**US AIRWAYS**	**1.91**
16	**UNITED AIRLINES**	**2.21**

Source: http://airconsumer.dot.gov/reports/2012/February/2012FebruaryATCR.PDF

Market Positioning of Low-Cost Carriers

- “The LCC service is *focused*, not poor. In most cases, the LCC product is highly reliable and convenient for passengers; in the case of secondary airports in large US cities, the LCC product can, in fact, even be more convenient than that of network carriers who force their clients into congested off-site mega-airports.”

Source: Franke (2004)

Which Carrier Would You Choose?

Low-Cost Carrier

- Free or low-cost parking at airport.
- Non-stop point-to-point flight.
- Low walk-up fare.
- Ability to change flights at low cost.

Network Carrier

- Expensive parking.
- Make connection at hub.
- High walk-up fare.
- High charge for changing flights.

Low-Cost Carrier Research Results

1. Route Entry by Low-Cost Carriers

- What is the impact of low-cost carrier entry on market yields and passenger traffic?
- Are the lower yields and traffic increases sustained beyond an initial promotional period?

Source: Windle and Dresner, 1995.

Data and Results

- Data were collected on all new entries onto the top 200 US domestic O&D routes from 1991-1994.
- Found that when Southwest Airlines entered a market, prices for all carriers on that route fell, on average, by $70, or about 51% of the pre-entry price.
- Other low-cost carrier entries reduced prices by smaller amounts ($20-$40).
- Network carrier entry had no significant effect on yields.

More Results

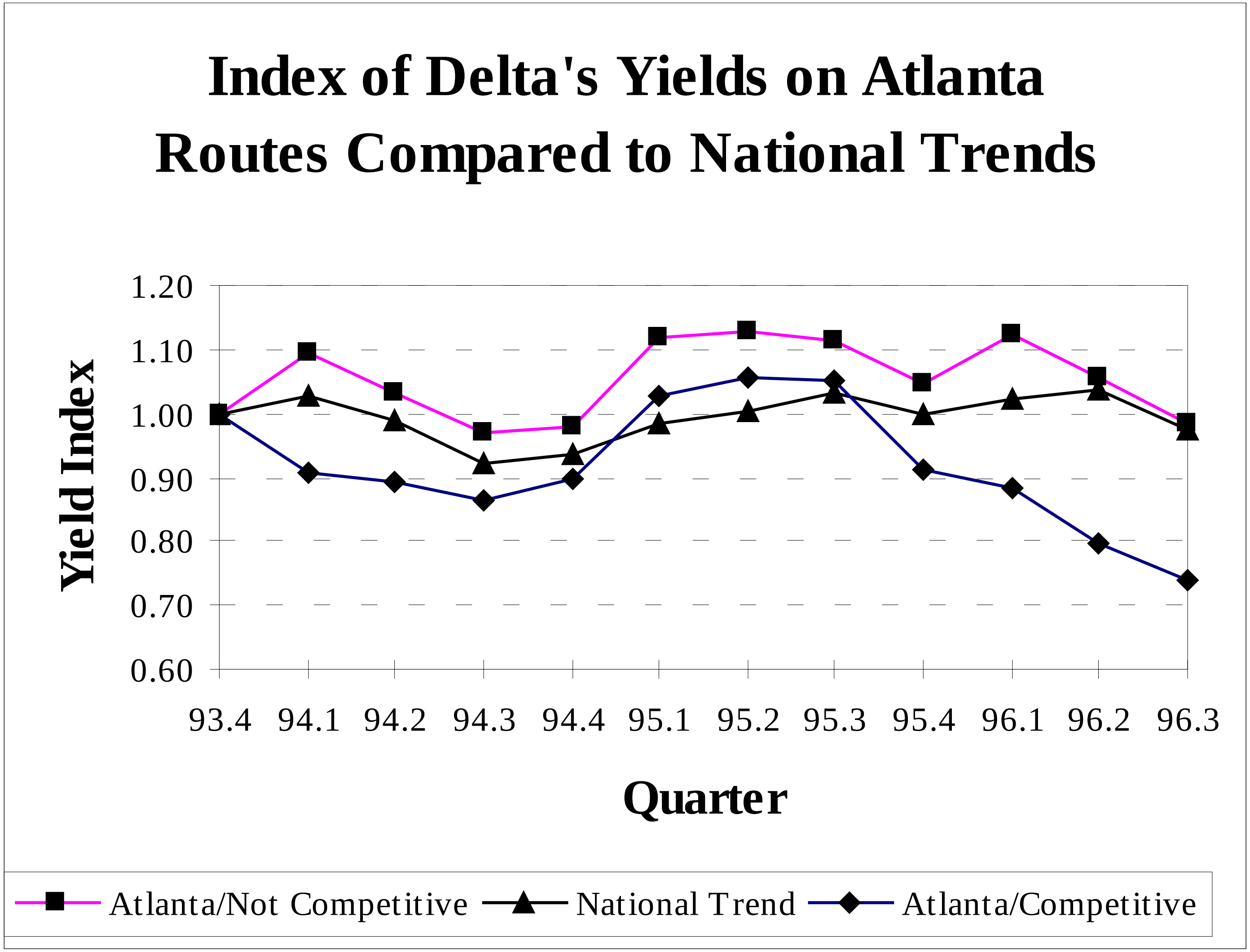
- O&D passenger traffic, on average, increased 200% on a route when Southwest entered; 82% for other low-cost carrier entries; and only 17% for entry by the network carriers.
- Passenger traffic and prices were tracked for 1 year following entry. The data showed that both price decreases and traffic increases were sustained when Southwest entered a route.

2. Competitive Responses to Low-Cost Carrier Entry

- How do network carriers respond to low-cost entry at their hubs?
- Collected data for the years 1993-1996 on all routes flowing through Atlanta (458 in total) and terminating in Atlanta (119 in total) where Delta Airlines competed with an LCC (ValuJet).

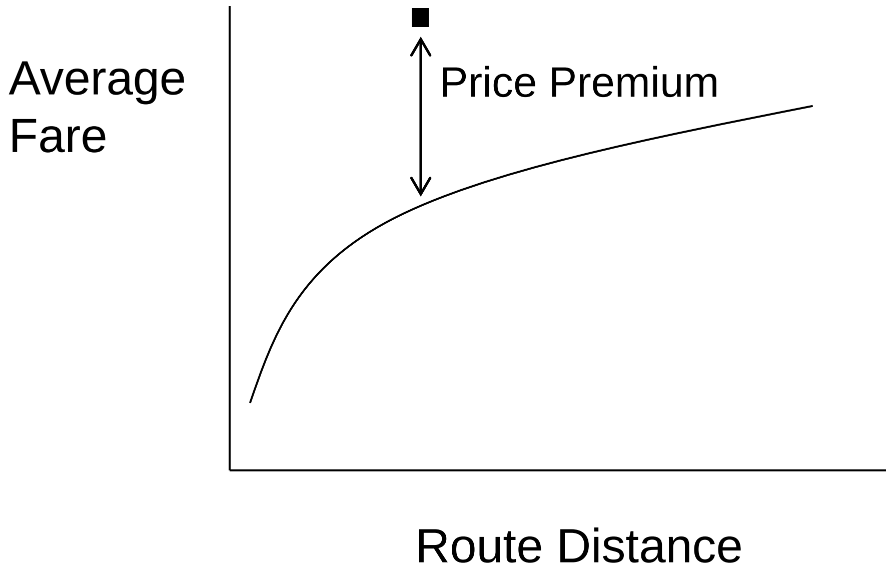
Source: Windle and Dresner, 1999.

Delta's Yields on Routes Terminating in Atlanta



3. Effect of Low-Cost Carriers on Hub Premiums

- Price premiums are defined as prices higher than expected.



LCCs and Price Premiums

- Researchers have found that a dominant carrier at its hub can earn “premiums” over expected fares up to 70%.
- Price premiums may be attributed to market concentration and market dominance both at airports and on specific routes.
- Given the rise in low-cost carriers, are hub premiums still being earned?

ROBERT H. SMITH SCHOOL OF BUSINESS, UNIVERSITY OF MARYLAND

Hub Premiums

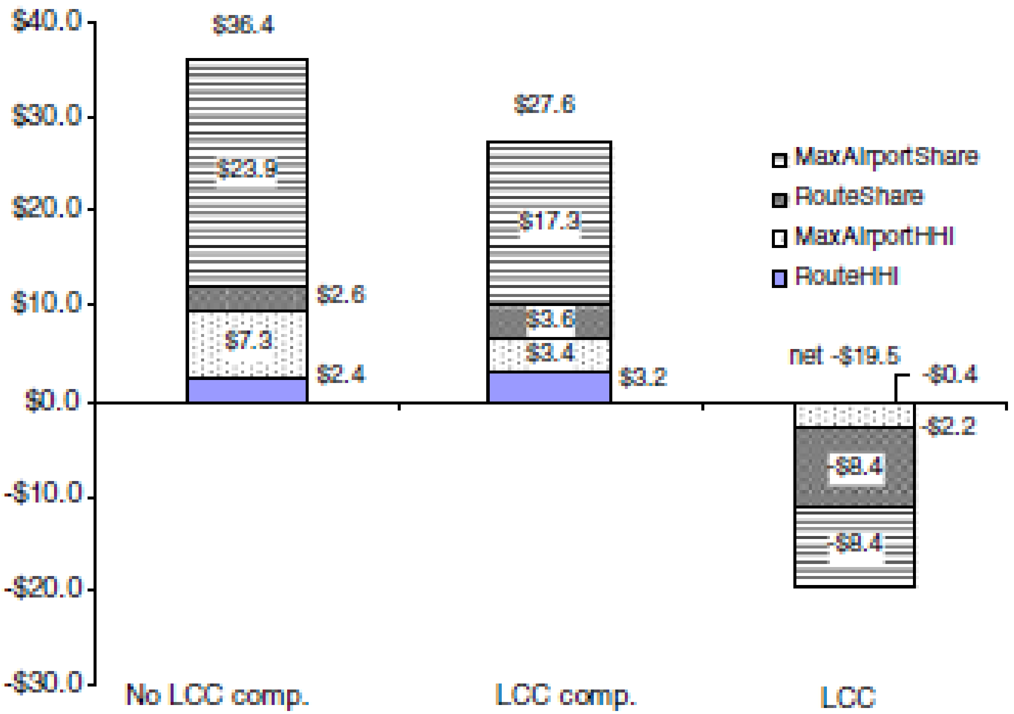


Fig. 3. Price premium estimates – 2002.

Source: Hofer, Windle and Dresner, 2008

Return To 2004 Predictions

- Now that I have defined the operational strategies of LCCs and showed research results on how they reduce costs, I would like to return to some of the predictions I made 9 years ago.

Prediction 1

- Most observers believe that low-cost carrier market share will continue to grow - reaching 50% or more of US domestic RPMs.
- If this is the case, there will need to be consolidation among the network carriers - with one or more going out of business.

What Has Occurred in the US Since 2004

- US domestic LCC traffic has grown, but market share is closer to 25% of passenger traffic than it is to 50%.

- Why have the network carriers been able to survive?

1. Through Consolidation

- There has been consolidation among U.S. network carriers – America West/US Airways, Delta/Northwest and United/Continental, with possible further consolidation (US Airways/American).
- Consolidation reduces competition, allowing the network carriers more leeway to charge higher fares.

2. Through Cost Reductions

- The network carriers have managed to reduce their costs in order to be more competitive with the LCCs. These cost reductions have been accomplished in a number of ways:
  - By shedding costs through US bankruptcy provisions.
  - Through concessions from unions.
  - By increasingly relying on lower-cost commuter affiliates to operate routes on a contractual basis, often with 70-seat and larger aircraft (rather than 50- seat RJs) or with turbo-prop aircraft.
  - By paying close attention to fleet expenses. For example, by purchasing low-cost older aircraft (Delta).
  - Through innovative strategies (e.g., Delta purchasing an oil refinery).

3. By Chasing Extra Revenue

- Another strategy used by network carriers has been to "unbundle" services.
- This strategy allows the network carriers to charge ancillary fees for checked baggage, food, seat selection, and flight changes, among other services.
- In 2011, the top three network carriers reportedly generated the following ancillary fee revenues:
  – United Continental: $5.2 billion
  – Delta: $2.5 billion
  – American: $2.1 billion

Source: http://www.nbcnews.com/travel/global-airlines-gross-22-6-billion-ancillary-revenues-904458

4. Through Alliances

- Network carriers have been able to generate traffic feed from their international alliances onto their domestic systems (and vice versa).
- U.S. anti-trust approval of some of the airline relationships has facilitated the operation of the alliances.

5. By Emphasizing International Traffic

The network carriers have emphasized international traffic growth over domestic traffic growth, given the higher percentage of business/premium traffic on international routes and the higher yields.

Traffic Change 2010 to 2011

Airline	Domestic Growth (%)	International Growth (%)	Total Growth (%)
Delta	+3.1	-1.0	+2.3
American	**-0.7**	**+1.9**	**-0.1**
United	**-8.7**	**+1.6**	**-6.7**
Continental	**+1.9**	**+8.8**	**+3.8**

Source: http://www.bts.gov/press_releases/2012/bts014_12/html/bts014_12.html

6. By Appealing to Frequent Fliers

- The network carriers have emphasized their loyalty programs and made it increasingly attractive for frequent fliers to maintain loyalty to a single carrier; for example, by avoiding baggage fees, through access to "economy plus" seating, and through priority boarding.
- Loyal frequent fliers will not "price shop", thus allowing the network carriers to avoid excessive price cutting.
- Loyal frequent fliers are also more likely to book tickets on the airline's own website, thus allowing carriers to avoid paying distribution (GDS) fees.

UNIVERSITY OF MARYLAND
ROBERT H. SMITH SCHOOL OF BUSINESS

7. By Improving Service

On-Time Flights (Percent of Total Flights)

Airline	2009	2010	2011	1987-2011
American	77.2	79.6	77.8	78.0
Delta	78.6	77.4	82.3	77.6
Continental	78.8	81.4	77.1	78.3
United	**81.0**	**85.2**	**80.2**	**76.2**

United Airlines, especially, has been able to improve on-time performance.

Source: http://airconsumer.ost.dot.gov/reports/index.htm

LCC Strategies – Southwest Airlines

- LCCs, have not stood still. Southwest Airlines, the dominant LCC in the U.S., now carries more domestic passengers per day than any other airline.
- What has been Southwest's strategy?
  - Provide *superior* service to the network carriers; e.g., by allowing passengers to check 2 free bags and by achieving a high on-time arrivals rate.
  - Consolidation – bought AirTran. This has allowed Southwest access to the Atlanta airport as well as to slots at Washington Reagan National, among other airports.
  - Fly international routes. The acquisition of AirTran has allowed Southwest, for the first time, to fly on international routes. Southwest is currently building a new terminal at Houston Hobby Airport for international passenger traffic.
  - Offer more in-flight services on a pay-bases (e.g., TV and movies).
  - Keep the policy of no pre-assigned seat selection, but allow passengers to pay for the right to board early.
  - Maintain a standardized fleet at the "family" level but increasingly diversify at the "model" level. Southwest sold the B717s that it acquired along with AirTran. However, it has expanded the number of B737 models that it flies, including B737-700s and B737-800s.
  - Increasingly offer passenger the opportunity to connect at Southwest's "focus" airports

Network Carriers vs. Southwest

Network Carriers

- Expand international routes
- Appeal to business travelers
- Generate extra revenues through ancillary services
- Reduce operating costs
- Connect passengers at hub airports
- Consolidate through mergers
- Serve major airports
- Improve operations

Southwest

- Expand international routes
- Appeal to business travelers
- Generate extra revenues through ancillary services
- Keep operating costs low
- Connect passengers at focus airports
- Consolidate through mergers
- Serve major airports (e.g., LGA)
- Maintain high quality operations

Along many dimensions, the network carriers and Southwest Airlines are now offering very similar services. There has been a *blurring* of service offerings of Southwest and the network carriers.

Still Some Differences

Network Carriers

- Two/three class service- most flights
- Pre-assigned seating
- Commuter affiliates provide feed
- Pay for checked bags (except elite fliers)
- Members of major alliances

Southwest Airlines

- One class service
- No pre-assigned seating
- No commuter affiliates
- Two free checked bags
- Has not joined an alliance but does code-share with Volaris, a low-cost Mexican carrier

Other U.S.-Based LCCs

- Other U.S.-based LCCs have emerged with different strategies:
  - Spirit Airlines is mimicking the Ryanair strategy by offering a very low posted fare but then charging extra for everything, including booking fees, in-flight bags, checked bags, etc.
  - Allegiant Airlines is a tour operator that has entered the airline business. It earns its revenues by booking hotel rooms, rental cars and other extras for its passengers. It specializes in flying from very small communities to large tourist destinations (e.g., Northwest Arkansas to Las Vegas) on an infrequent basis (e.g., weekly service).
  - JetBlue – partners with Lufthansa and other foreign carriers to serve U.S. and foreign (Caribbean and Latin American) destinations. Main hub is JFK. Offers free TV for inflight service.
  - Virgin America – Dual class service on mainly transcontinental routes.

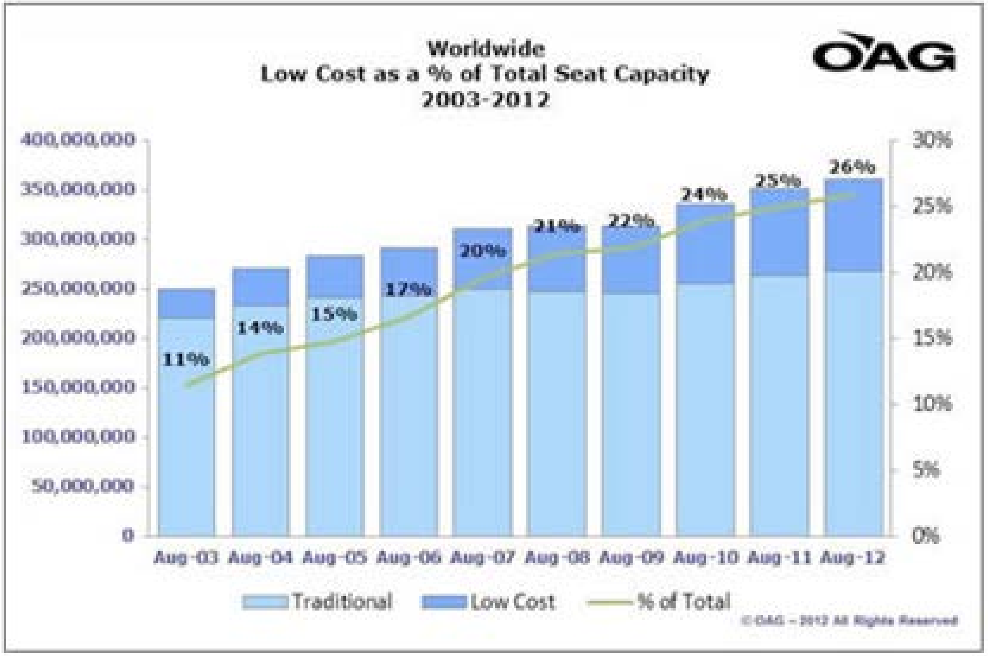
Summary of Developments

- The network carriers have worked hard to lower costs and enhance revenues. Their focus is increasingly international routes.
- Southwest has followed a similar strategy, although with differences (international routes focused on Latin America and the Caribbean, no alliance membership, one-class service, free checked baggage).
- Other U.S.-based LCCs have followed very diverse strategies from enhanced service (JetBlue and Virgin America) to barebones service (Spirit) to serving very small centers (Allegiant).

Prediction 2

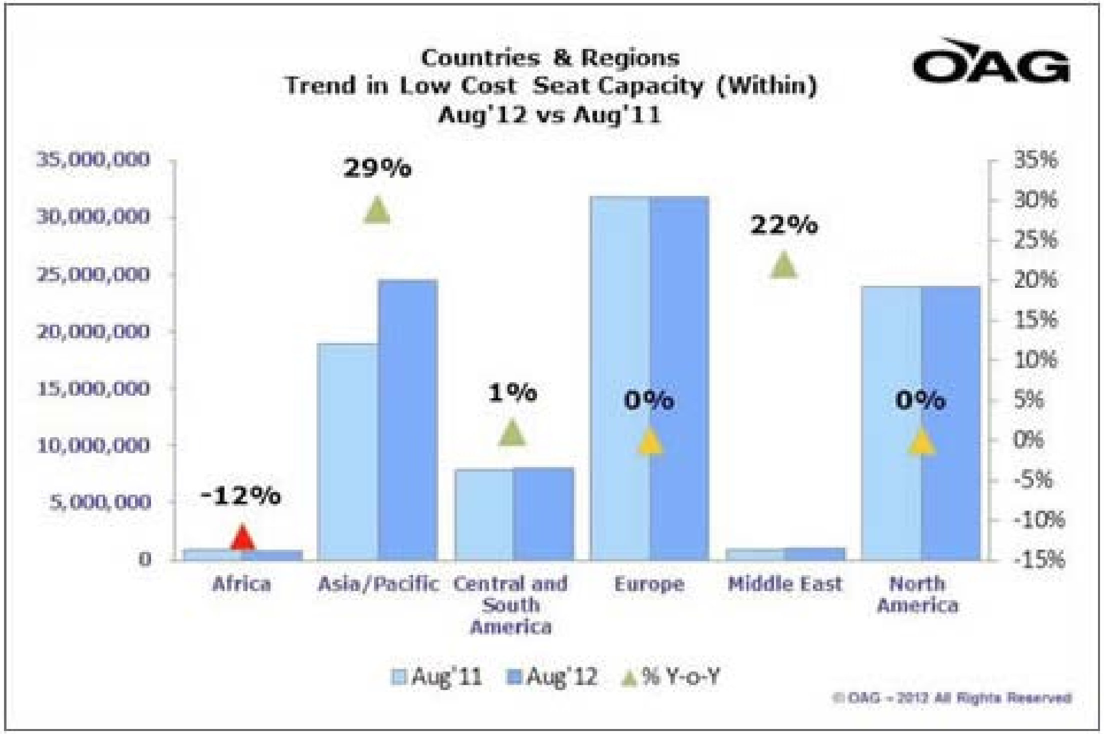
- Don’t underestimate the desire of consumers to pay less money for air travel!
- If Asian network carriers do not deliver air travel at low prices to meet consumer demand, then there is a potential market for low-cost carriers.
- One only needs to look to Europe to see that the LCC model is transferable from the U.S. to other parts of the world.

Low-Cost Carrier Market Share - Worldwide



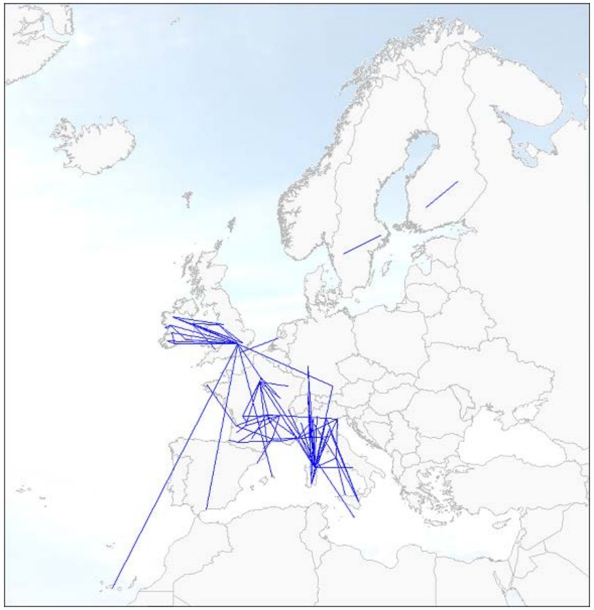
Source: http://www.oagaviation.com/OAG-FACTS/2012/August-Executive-Summary/

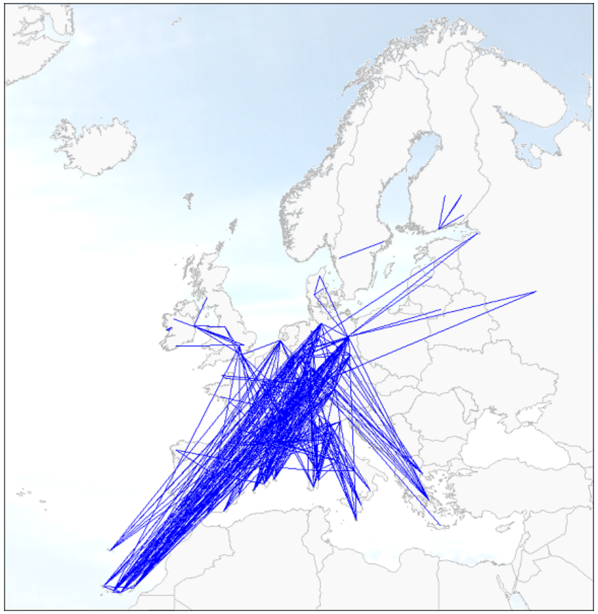
LCC Market Share by Region

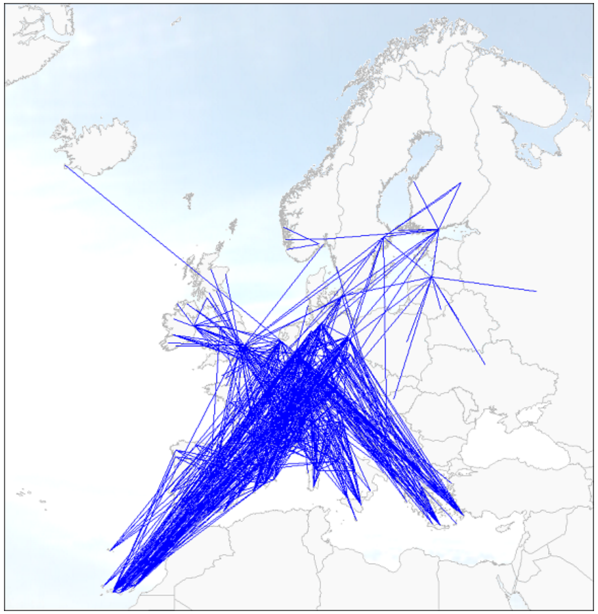


Source: http://www.oagaviation.com/OAG-FACTS/2012/August-Executive-Summary/

LCC Development in Europe





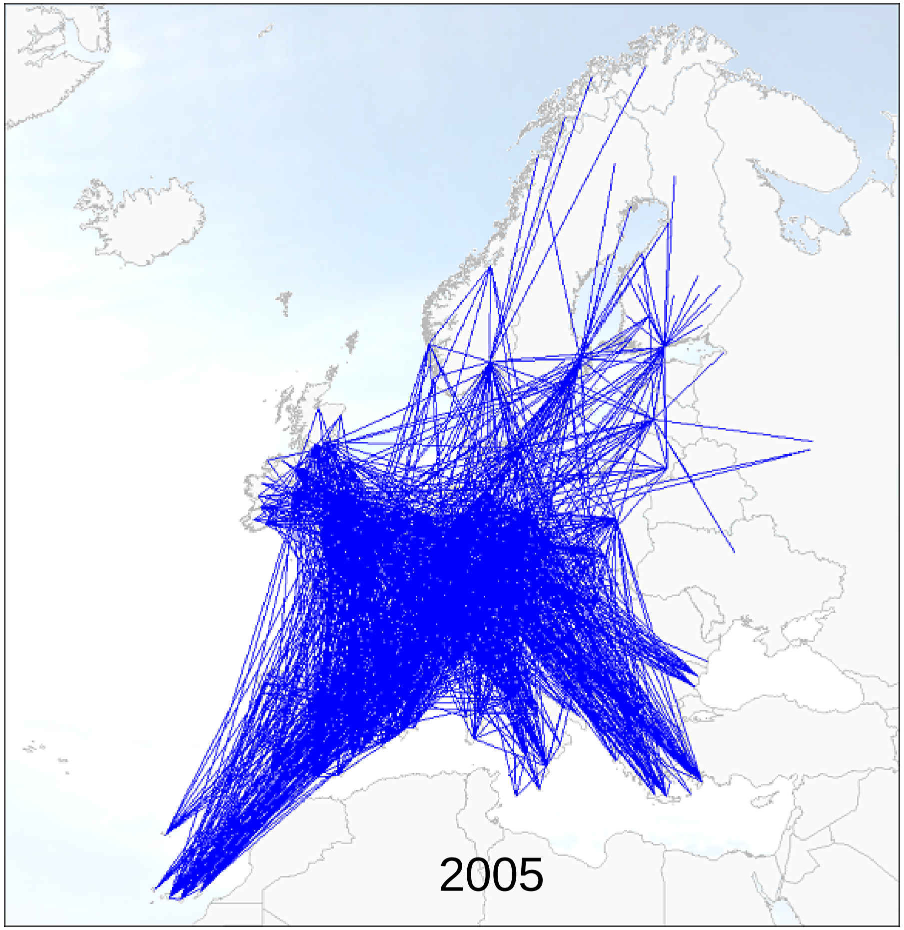


1990 1995 1999

Source: http://www.jvdz.net/index2.html?/net-intro.html&frameMain Accessed 11/24/09

63

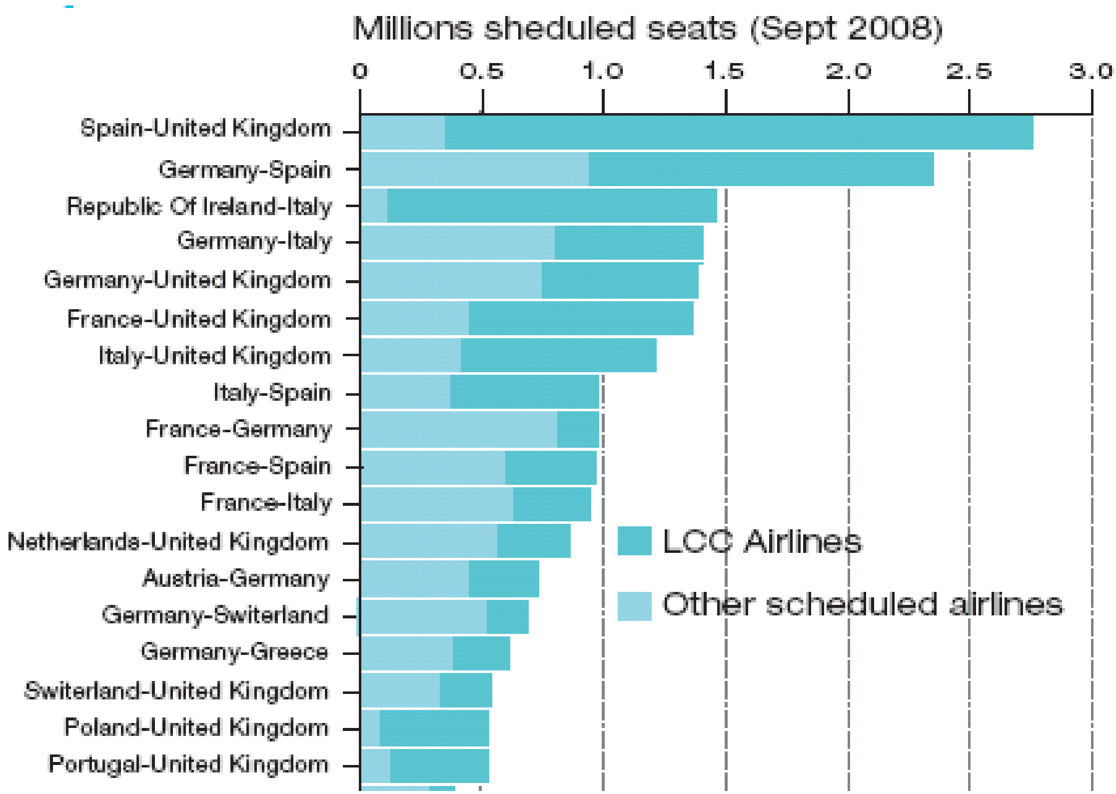
LCC Development in Europe (Continued)



Source: http://www.jvdz.net/index2.html?/net-intro.html&frameMain Accessed 11/24/09

64

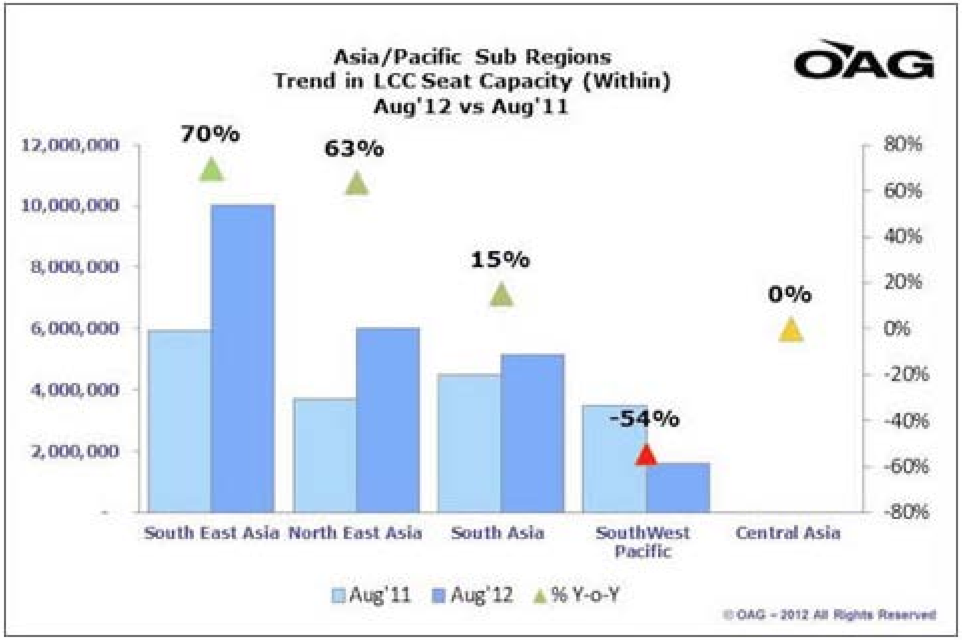
LCC Market Share



LCC market share exceeds 50% in many European markets

Source: Airbus – Global Market Forecast 2009-2028

LCC Market Share Growth Within Asian Sub-Regions



Source: http://www.oagaviation.com/OAG-FACTS/2012/August-Executive-Summary/

Will LCCs be Successful in Japan?

Yes!!! As long as the government allows these carriers to operate. This does not mean that all LCCs will be successful. Only that there is likely a large market of Japanese who would like to fly on LCCs.

Picture Source: http://travel.cnn.com/explorations/life/asias-budget-air-travel-boom-how-low-cost-carriers-are-changing-industry-region

Can Network Carriers Compete?

- There is room for both network carriers and LCCs in the marketplace.
- However, network carriers need to be intelligent in how they compete with the LCCs. Market segmentation is key.
- In addition, the network carriers need to be very persistent in reducing their costs, since, even in the best of times, airlines (even LCCs) are not very profitable.

Thank You!

ありがとう。