



Changing Airline Industry

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Airline Industry Reconfiguration

- What kind of airlines will our airports serve?
- How will they differ from ones we know?
- Three lines of Dynamic Evolution:
 1. Rise of Low Cost Carriers – and Consequences
 2. Point-to-Point Challenges to Hub Model
 3. E-commerce and Integrated Freight Carriers

1. Rise of Low Cost Carriers

- **Low Cost Carriers become dominant**
- **Challenge “legacy” Carriers**
 - Take traffic, cut revenues...
 - Force operational changes
- **Reorganization of “legacy” Carriers**
 - Bankruptcies
 - Mergers
- **Convergence of Low Cost, “Legacies”**
 - JetBlue (and Azul) as possible role models?

Impact of Low Cost Carriers

Phases of Competition with Legacy Carriers:

- Low operational costs, thus of fares
- LCCs develop markets, gain market share
- LCCs dominate National, Regional Markets
- Legacy airlines struggle to compete
 - Withdraw from short-haul markets, focus on long-haul
 - Lose Money; Financial Stress; Many Bankruptcies
- Legacy Airlines simplify operations, cut costs

**CONVERGENCE TOWARD A FUTURE MODEL
OF OPERATIONS, COSTS, AND SERVICE**

Change: Rise of LCCs

- **Low-Cost Carriers**

- “Low Cost” due to their economical way of operating (any airline can have low-prices, to meet competition)

- **Innovative Operations**

- 30 minute turn-around times (more time in air, working)
- Common aircraft – easier maintenance, training
- No-frills – no meals, eliminate kitchens and catering
- Flexible adjustment of prices... Paperless ticketing...

- **Flexible Labor Arrangements**

- New Employees, lower pay scales
- Cross training for many jobs
- Flight attendants clean aircraft, etc.

Major Examples of LCCs

- **Southwest – the role model for world**
 - Established 1967, only in Texas, then all US from 1978
- **WestJet (Canada) – modeled on Southwest**
- **jetBlue (US), later Azul (Brazil)**
 - Developed by Neeleman, also a founder of Westjet
- **Ryanair (Ireland)**
 - Modeled on Southwest, but focus on low cost, not service
- **Norwegian (Europe)**
 - Proposes transatlantic, intercontinental
- **AirAsia (Southeast Asia)**
 - Transnational Model (AirAsia X, AirAsia India, etc.)











Southwest LCC Dominates Domestic Competitors

Airline	Passengers	
	Millions	% of Total
Southwest	118	20
American + US Air	99	17
Delta	96	16
United	58	10
Total USA	584	100

Source: US DoT, BTS, Air Carrier Domestic Market 2014

**Southwest has been top carrier for
US domestic market for about 10 years**

Ryanair dominates in Europe

Country (Cap m)*	No. 1	No. 2	No. 3	Share
UK (117)	easyjet	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	BA	16%
Germany (112)	Luft	Air Berlin	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	4%
Spain (105)	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	Vueling	Iberia	18%
Italy (85)	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	Alitalia	easyJet	25%
France (72)	AF- KLM	easyJet	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	7%
Portugal (19)	TAP	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	easyJet	17%
Belgium (15)	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	SN Brussels	Jetairfly	25%
Ireland (15)	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	Aer Lingus	BA	46%
Poland (15)	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	LOT	Wizz	26%
Morocco (12)	RAM	 RYANAIR <small>LOW FARES. MORE COMFL.</small>	easyJet	12%

*Cap Stats Departing Seats 2014

Effects on Legacy Airlines

- **Legacy Airlines lose market share to LCCs**
 - LCCs attracted passengers from Legacy airlines
 - This forced Legacy airlines to cut fares, lose revenue
- **Legacy Airlines reconfigure their markets**
 - Left, downgraded some markets, especially short haul
 - Focused attention on transcontinental, business flights
- **Legacy Airlines reconfigure their operations**
 - Struggles to develop new work rules, pay scales for employees – strikes, bad morale, customer revolts
- **Attempt to set up subsidiary low costs airlines**
 - Lufthansa – Germanwings; Air France – Transavia; United – Ted; Singapore – Silk, Scoot, Tiger!

Bankruptcies of National Airlines

- **Some Disappear**

- Pan American, TWA (US)
- Varig (Brazil)
- Sabena (Belgium)
- Malev (Hungary)
- Olympic (Greece)

- **Some Recover**

- Air Canada
- American Airlines
- Continental (US) bankrupt two times!!
- Delta (US)
- Swissair – became Swiss
- United (US)

Consolidation of Legacy Airlines

● Mergers in US, Europe, Worldwide

- Delta + Northwest;
- United + Continental
- American + (US Air + American West) + TWA
- Air France + Air Inter + KLM
- British + Iberia + Aer Lingus + Vueling (under holding company “International Airline Group”)
- Lufthansa + Swiss + Austrian
- TAP + Portugalia
- Japan Airlines + JAS;
- Air India + Indian
- Gol + Varig

Meanwhile, LCCs evolve too

- **As LCCs gain market share, they have had to broaden their appeal to passengers**
- **They have upgraded services**
 - “extra leg room” seats
 - Connecting services (AirAsia)
- **They have also had to raise salaries**
 - Staff age, insist upon salary increments
 - competition for pilots increases
- **And deal with higher operating costs**
 - As they move into congested primary airports
 - Southwest to Philadelphia, Chicago/Midway

Convergence of Airlines

- **We are in a process of “convergence”**
- **Legacy carriers adopt many of the practices of the LCCs**
 - But of course not all!
 - Still maintain a focus on Business travel
- **While LCCs adopt many characteristics of the remaining Legacy carriers!**
- **What might a fully converged airline look like? Would it resemble JetBlue?**

Jet Blue Concept

Co-founded by David Neeleman

Also a founder of

- **Westjet, Morris Air, and**
- **Azul latest, in Brazil**



“New York-based JetBlue Airways puts the highest value on customer satisfaction, service and style. The company has already received a number of awards for its customer service. The airline is also well-known, and popular, because of its low fares.”

JetBlue Market Position

- **Special position: low cost – but elegant!**
- **Examples**
 - Leather seats
 - free individual in-flight TV, etc.
- **Very distinct from easyJet, Ryanair**
- **Collaboration with Legacy carriers**
 - Partnership with Lufthansa (which at one point has 15% of shares)
 - [Lufthansa needed cash and sold these shares...]
 - Codeshares with many Legacy carriers

JetBlue Codeshare

- **Many Major Airlines**
 - British, Lufthansa, Iberia, Japan
 - Cathay Pacific, Hainan, Hawaiian, Korean, Emirates, Etihad, Qatar, Egyptair, Royal Air Maroc
 - Air India, El Al, Singapore, South African
 - Turkish
- **Many others (43 all in January 2017)**
 - Air China, China Airlines, ANA, Asiana, Hainan,
 - Aer Lingus, Aeroflot, Brussels, Icelandair, Lot, Sata
 - Aeroflot, Condor, Eva, Jet, Cape Air, Porter,
 - Avianca, Azul, Lan, Liat, Seaborne, Sata, Silver, Tam

JetBlue Operations

Commitment to technology and innovation, such as:

- Individual TV screens
- No carts, easier for passengers
- ipads for attendants



JetBlue announced it will provide each inflight crewmember with an iPad mini for use as a point of sale and document management device. ... every inflight crewmember will have device for onboard use.

JetBlue Terminal Concept

Revolutionary: designed to serve 20 million passengers year at a high level of service yet is small

Value Proposition: It's an industrial building. Much equipment is simply on top of the roof to save on space and facilities. Sky-lights are all vertical.

JetBlue rejected architectural elements that did not create value in the transport. The questions were:

- Does this create value for the customers (would they be willing to pay extra for it on their trip?)
- Does this reduce life-cycle costs to operator?

**No “starchitech” roof line
No Calatrava, Foster, Pelli or Rodgers**

JetBlue Internal Operations

Terminal designed around efficiency of the functions.

**Check-in a radical change: a “flow-through” system.
Customer controls of much of the process.**

Great efficiency gains: faster process; shorter travel paths (less space); less Labor cost, as passenger substitutes his efforts (otherwise unused) for that of airline staff (putting bags on belts, etc.)

[Alaska Airlines has similar processes]

Space is used efficiently. Although the volume of building is small, the passenger is not crowded.

**Building designed for conventional level of service C
[contrast to designs for Ryanair, some other LCCs]**

JetBlue Project Management

Management of project directed by the airline – JetBlue is the client and makes the major decisions.

Contrast with standard where airport makes decisions. [Airline direction of the design of terminals is frequent in the United States.]

Airline focus on terminal as a processing facility delivering value almost unique. US airlines have seen terminals as big advertisements for their brand, and have wanted to make architectural statements.

Yet Airline had to meet airport constraints. It had to show that it could reconfigure gates for larger aircraft.

2. Point-to-point challenge to hubs

- **Newest aircraft range of ~ 16,000 km and economical size ~ 250 pax**
- **Enable flights that avoid traditional hubs**
 - **US mid-continent to Europe (Dallas-Madrid)**
 - **Perth to London (Qantas 2018)**
- **Increased traffic volumes**
- **Enable more flights between “secondary” points, previously requiring connections**
 - **Boston to Lisbon**

Effect on Hubs

- These shifts

1. Reinforce reach of some hubs

- Dubai (Emirates) to anywhere in US -- Boston, Chicago, Dallas, Houston, Los Angeles, Miami, New York, Orlando, San Francisco, Seattle, Washington – and anywhere in World

2. But “over flights” detract from traditional hubs, gateways

- London, Frankfurt, New York...

Consider Singapore Case

- **Transfer traffic under stress**
- **“Growth and Assistance Incentive programme ... Changi Airport Group provides ...landing fee rebates for long-haul flights and incentives for airlines to grow transfer traffic through Changi ... to strengthen the Singapore air hub ... as much as S\$50 million” (Straits Times,14 Sept 2014)**
- **“Five years ago, travellers who used Changi Airport to transfer flights made up about a third of total traffic. Today, they account for 24%” (Straits Times,18 July 2012)**

3. E-commerce and Freight

- Integrated freight carriers have become most profitable, most valuable airlines
- Just look at the Statistics!

Airline Ranking: Tonne-miles carried

Rank ↕	Airline ↕	2015 ^[8] ↕	2014 ^[13] ↕	2013 ^[14] ↕
1	 FedEx Express	15,799	16,020	16,127
2	 Emirates SkyCargo	12,157	11,240	10,459
3	 UPS Airlines	10,807	10,936	10,584
4	 Cathay Pacific Cargo	9,935	9,464	8,241
5	 Korean Air Cargo	7,761	8,079	7,666
6	 Qatar Airways Cargo	7,660	5,997	4,972
7	 Lufthansa Cargo	6,888	7,054	7,218
8	 Cargolux	6,309	5,753	5,225
9	 Singapore Airlines Cargo	6,083	6,019	6,240
10	 Air China Cargo	5,718		
	 China Airlines Cargo		5,266	4,813

**Fedex, UPS
top list of
cargo airlines
(along with
Emirates)**

Airline Ranking: Sample Market Capitalizations

Airline	Market Cap	Airline Type
UPS	99	Integrated Freight
Fedex	50	Integrated Freight
Delta	38	
United	23	
Ryanair	21	Low Cost
Southwest	19	Low Cost
Emirates	18	
American	14	
British IA Group	13	
China Eastern	12	
China Southern	9	
Singapore	8	
Lufthansa	6	
<u>easyjet</u>	5	Low Cost
Air France +KLM	5	

“ Market Cap”
= value of company
= (no. shares) x (share price)

Integrated Freight Airlines are Most Valuable In World

Source: Bloomberg quotes January 2017

What are these airlines?

- **Integrated freight carriers very different from traditional “air cargo”**
- **Traditional air cargo**
 - ➔ Many links to transport chain – freight forwarders, insurers, customs agents...
 - ➔ Often bulk, special destinations
 - ➔ Smaller shipments handled secondary to pax
- **Integrated Freight by contrast**
 - ➔ Single supplier door-to-door
 - ➔ Primary client
 - ➔ Tracking, reliable, profitable rates (\$/kg)

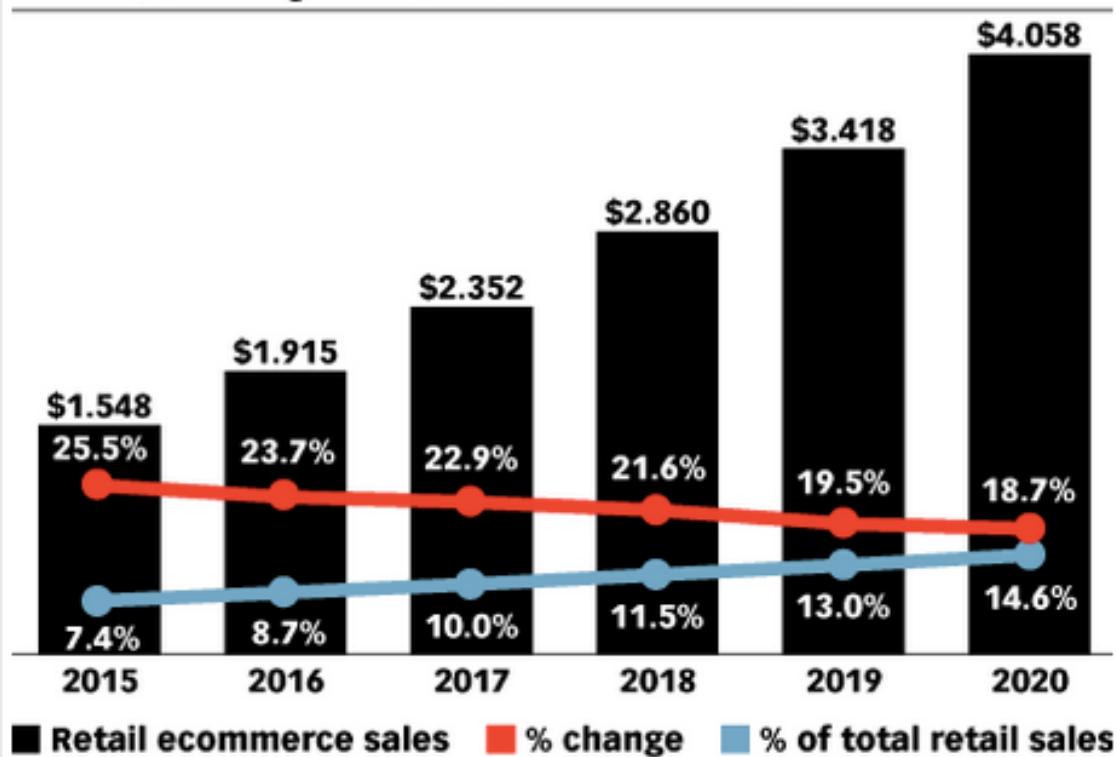
Why the growth?

- Integrated air cargo is “cheaper” for sellers despite the high cost of transport
- Why cheaper? Because internet sales avoid many expensive costs
 - Stores, inventories in expensive locations,
 - Sales staff, which cannot be redeployed
 - Inventories in wrong places
- ...and because sellers can have staff and inventory in low-cost, efficient locations
 - Such as hub cargo airports (Memphis, Louisville, Los Angeles/Ontario,...)

E-commerce booming

Retail Ecommerce Sales Worldwide, 2015-2020

trillions, % change and % of total retail sales



Note: includes products or services ordered using the internet via any device, regardless of the method of payment or fulfillment; excludes travel and event tickets

Source: eMarketer, Aug 2016

This is the
Industry
to watch

Integrated
Freight
Carriers
should be
Recruited!

Take-aways

- The Airline/Airport Industry keeps changing
 - We cannot expect that current structure of airline industry will continue into future
1. We can anticipate, based on US experience that **airlines will converge in practices** (JetBlue may be a prototype!)
 2. Hubs will shift away from many traditional centers, more point-to-point services
 3. E-commerce, Integrated Freight booming