AIR TRANSPORTATION

AZARAZ'S NOTES

SPRING TERM 2019

MG4604

CONTENT

1. Manufacturing Industry

- Over $125 billion worth of aircraft are delivered annually
- Sub sectors
    1. Airframe
    2. Engines
    3. Systems – avionics, hydraulics
    4. BFE
- Recent discussion focused on a Boeing New Mid-Market Airplane – need to deliver economics of single aisle but with range\capacity of twin
- 200-270 seats with range of 9250km

Future Aircraft Deliveries

- Over the next 20 years Airbus forecasts 4.5% annual growth and demand for 33,073 new aircraft by 2035 worth $5.2 trillion
- Boeing predict 39,600 aircraft valued at $5.9 trillion

2. MRO

- Sector generates in the region of $60 billion annually
- Highly volatile, subject to rapid & unexpected changes in economic & international business conditions
- Asian markets – hub of activity in future – Singapore, China, Malaysia
- Normally divided into the following;
    1. Heavy Airframe Maintenance
    2. Modifications
    3. Components Maintenance
    4. Engine Overhaul
    5. Line Maintenance
- Key Players –Singapore Technologies Aerospace (ST Aerospace), Lufthansa Technik (LHT), Air France-KLM, Hong Kong Aircraft Co, AAR Corp etc.

3. Airports

- Different business model when compared to airlines
- Must make long term planning decisions to safeguard capacity sometimes 50 years into the future
- Over the last 30 years they have evolved from municipal or government infrastructure provider into sophisticated businesses.
- Only 14% of global airports operate at a loss
- Revenue streams – aeronautical (runway use) & non aeronautical (car parking)
- The environmental impact of aviation is felt most acutely around airports.
- With the benefits they generate as gateways to the global economy spanning far beyond their immediate surrounding areas, airport development remains a prerequisite for a competitive economy

Which airports are the world's busiest?

1. Beijing International
2. Shanghai
3. Chicago O'Hare
4. Los Angeles
5. Hartsfield – Jackson, Atlanta, USA
6. Heathrow
7. Tokyo International
8. Hong Kong
9. Charles de Gaulle
10. Dubai International

Who are the world's largest airlines?

1. Lufthansa
2. Ryanair
3. IAG
4. Air France – KLM
5. EasyJet

4. Financial & Other Aviation Services

- GECAS and Aer Cap are the 2 largest controlling approx. 45% of the market
- More than 40% (11,517) of the world's airliners are operated under various leasing arrangements
- Of this number half (4000) are operated from Ireland
- Why? Favorable tax arrangements, skills base (finance, legal, technical), membership of EU, & English language

What is Air Transport?

- It includes all civil flying performed by airlines and general aviation
- General aviation - noncommercial use for example business aircraft
- We focus on the commercial airline industry.
- Air transport is a major contributor to global economic prosperity
- 4.1 billion passengers 2017

The International Airline Industry

- According to IATA (2017) the global industry consists of 1,402 airlines operating more than 26,065 commercial aircraft to over 3,883 airports.
- That's 41.8 million commercial flights worldwide per year!
- Value of cargo (53.9 million tons) carried in 2017 was $5.6 trillion or $15.3b daily!
- 53% of international tourists travel by air spending $711 billion in 2017.
- However, performance is not even across airlines
- Net margins of 5% in 2017
- Per departing passenger, the industry made just $9.3 last year in net profit.
- Thin margins!
- The industry's economic impact will continue to grow
- By 2030, it is forecast that 82 million jobs and $6.9 trillion in economic activity will have air transport at their root.
- Aviation makes a direct contribution to global GDP greater than most industries, including the pharmaceutical or automotive sectors.
- If aviation were a country, it would rank 21st in the world in terms of gross domestic product (GDP), considerably larger than some members of the G20 (and around the same size as Switzerland).

Economic & Social Benefits

- Air transport is a vital component of modern life and integral to sustainable growth.
- Bedrock behind national and international leisure travel
- Domestic and international business depends on air travel
- The international airline industry supports 62.7 million jobs and $2.7 trillion in economic activity.
    1. Jobs
    2. Wages
    3. Profit
    4. GDP
    5. Tax

Economic & Social Benefits of Air Travel

- **Direct Impact**

1. Airlines
2. Cargo –UPS/Fed Ex

- **Non Direct Impact**

1. Travel Agencies

- **Induced Impact**

1. Speeding power of aviation employees

- **Catalytic Impact**

1. The role played in the tourism sector

Economic & Social Benefits – **Globally**

1. $2.7 trillion in economic impact
2. 62.7 million jobs
3. 11.2 million indirect jobs from supply chain
4. 5.2 million jobs created through induced employee spend

Economic & Social Benefits – **Ireland**

1. €4.1 billion in GDP
2. €1.9 billion directly from aviation
3. €1.3 billion from supply chain
4. €0.9 billion through induced employee spend

What is RPKs?

- RPKs - Revenue Passengers Kilometers
- One fare paying passenger transported one kilometer.
- RPKs are calculated by multiplying the number of fare paying passengers by the distance in kilometers over which they are carried.

CHARACTERISTICS OF THE AIRLINE INDUSTRY

1. The Nature of the Airline Product;

- Its demand is derived from that of other products and services
- Part of a group of heterogeneous (different) products and services
- We travel by air to go on holiday, visit friends, business etc.
- Most airlines offer pretty much the same product type
- It is essentially a homogenous product - all involve transportation from one point to another
- **2 consequences**:

1. Costly efforts to differentiate the product
2. It was relatively easy for new entrants to enter the market

2. Perishability of Product

- Airline product is instantly perishable if not sold
- Unlike other products it cannot be held in storage and sold at a later date

3. Seasonality

- Demand for airline product is not evenly spread
- Peaks?
- Dips?
- What does this mean for an airline?
- Makes planning more difficult. Airlines have learned to keep core resources and lease in to cope with peaks.

4. High Growth Industry

- Averaged approx. 5% pa over the past 30 years
- Twice the annual growth in GDP
- Relatively conservative assumptions regarding economic growth (4-5%) over the next 10-15 years would predict a near doubling of total air travel
- Heavy drop in 2001 was followed by a 13% increase in 2004
- 2004-2008 lower growth rates
- Average from 2000-2008 of 4% which while lower than previous decades the numbers involved represent a much bigger surge in passenger numbers
- IATA predicts that global air passengers will rise to 7.2 billion by 2035

Main Drivers of Growth (Continue)

- Growing global middle class – projected to double over next 20 years from 38% to 55% of total population
- Increased urbanisation with % of population living in cities projected to increase from 54% to 66% by 2050
- Increases in private consumption, business travel and tourism
- Indonesia – international market has grown 28% since 2013 with tourism increasing by 49% mainly from China

5. Marginal Profitability & Declining Yields

- Average real fares in 2017 are half of the 1995 levels
- The industry is cyclical and inherently unstable
- In 2017 airlines made $38 billion net profit on revenues of $754 billion amounting to a 5% margin
- IATA expects the global airline industry to make a net profit in 2018 of $33.8. billion on revenues of $834 billion
- 4.1% net profit margin

6. Changing Balance of Power

- Airlines of Asia - Pacific region have grown more rapidly in recent years
- Why? - export oriented economies generated business travel & exported goods are suitable for air carriage
- Rising incomes stimulated demand for leisure travel,
- Geographic location - Rapid development of tourism infrastructure
- In 1973 Asia-Pacific carried 14% of world scheduled traffic but by 2000 it was 30-32%
- SIA, JAL, Korean and Cathay all among world's top airlines
- USA/EU 75% of international traffic in 1973; today it's down to 51%.

- Focus is now on **Eastern European, Middle East and Africa (EEMEA)** airlines
- Over the last 10 years EEMEA Airlines have grown global market share to 11% from 3%
- Who are the key players in this region? New Age Carriers!
  1. Turkish Airlines
  2. Aeroflot,
  3. Pegasus,
  4. Emirates,
  5. Air
  6. Arabia,
  7. Qatar
  8. Etihad

- **Reasons** for best placed to deliver growth and take further market share given
  (1) solid cost advantage thanks to young fleets and weakening currencies (Turkey, EE, Russia)
  (2) exposure to growing markets.

- By 2015 EEMEA Airlines already accounted for 31% of EMEA capacity.

CHALLENGES FACING THE AIRLINE INDUSTRY

1. Safety
2. Passenger Experience
3. Environmental sustainability
4. Financial sustainability

Source: Tyler CEO IATA (2015)

Safety

- Among the 4 billion passengers that flew (the equivalent of about 50% of the world's population) there were 556 fatalities up from 44 in 2017.
- There is no safer way to get from A to B than by plane
- But accidents happen……
  1. Two Malaysia Airlines incidents
  2. German Wings
- MH 17 brought to light the need for better information for operations over conflict zones
- IATA is working with towards some recommendations on how to track aircraft better
- Auditing will continue to be an important safety tool. But the real advancements in safety will be driven by data.

Passenger Experience

- The quality of airline products provides a huge range of choice from absolute luxury to a very basic seat.
- But the processes around the actual flying experience can be frustrating.
- Need to find a framework on which to share the crucial data among all those involved in the passenger's travel.
- A smarter approach to security that is informed by what we know about the passenger.

Environmental Sustainability

- From 2020 emissions will be capped and growth will be carbon-neutral. By 2050 the aim is to cut net emissions back to half the 2005 levels.
- A key driver will be technology. Modern aircraft entering into airline fleets today bring with them fuel efficiency gains of 20-30% over their predecessors.
- Over 1,500 commercial flights have been fueled by sustainable biofuels.
- Infrastructure – more efficient ATC systems

Financial Sustainability

- Over the last century airlines have just broken even.
- Profits have been made by not evenly
- Net profit margin 4.7% in 2017
- Comparison with dental and legal firms of 15.4%

CONCLUSIONS

Paradox of the international airline industry:

1. For the last 50 years the airline industry has been characterized by continued and rapid growth in demand for services. Yet it has remained only marginally profitable
2. Even in the early years, when as we will see, the industry was highly regulated and largely protected from internal competition it still only made marginal profits

CHAPTER 2 – AIRLINE REGULATIONS

Lecture Objectives

- To understand the difference between economic and non-economic regulation
- To appreciate how the industry was regulated up to 1945
- To appreciate how regulation evolved and developed up to 1978

Introduction

- The first scheduled passenger air service took place on Jan 1st 1914 using a Benoist (flying boat)
- The route was between Tampa and St. Petersburg and lasted 20 minutes
- The pilot was Tony Janus
- The service was terminated due to financial problems four months later….an omen of things to come?
- It was therefore neither sustained nor international

EUROPE – EARLY DEVELOPMENT

- In Europe each country developed a national 'flag carrier' which was owned and supported by the national governments
- On 27 May 1936, Aer Lingus made its maiden voyage from Baldonnel in Dublin to Bristol in the UK. A 6-seater De Havilland Dragon named 'Iolar' (Eagle) carried just five passengers across the Irish Sea.
- The development in the US was linked with the provision of contract air mail

REGULATION

- How the industry is operated and controlled?
- 2 main types of regulation exist;
  1. Non-economic regulation
  2. Economic regulation

Non-Economic Regulation

- Deals with issues such as;
  1. Airworthiness
  2. Maintenance & Overhaul
  3. Personnel
  4. Aircraft Operations
  5. Infrastructure
- Issued by designated regulatory agencies such as the FAA in the USA, and EASA within the EU
- Vary from country to country but are all based on International Civil Aviation Organization (ICAO) standards.

Economic Regulation

- In 1919, the United States, the "British Empire", Brazil, France, Greece, Italy, Japan, Poland, Czechoslovakia and several other countries signed a Convention Relating to the Regulation of Aerial Navigation, also known as the Paris Convention 1919.
- It stated that countries have sovereign rights to the airspace over their territory
- ***5 Freedoms of the Air were developed***

FREEDOMS OF THE AIR 1-5

First Freedom Right

The right to overfly

Second Freedom Right

The right to land for technical reasons – emergency or re-fuel

Third Freedom Right

To carry revenue passengers from Point in Home Country A to Point in Country B.

Fourth Freedom Right

To carry revenue passengers from point in Country B to point in Home Country A.

Fifth Freedom Right

To carry revenue passengers from Point in Home Country A to Point in Country B, set down & pick up passengers to Point in Country C.

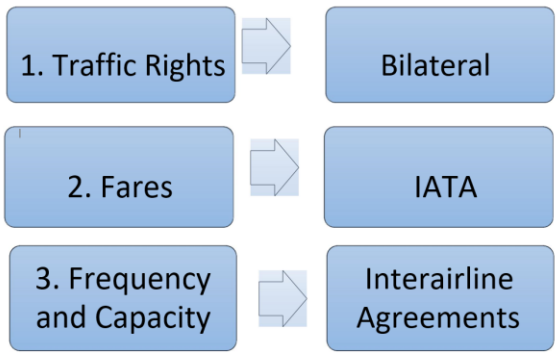
Economic Regulation (Continue)

- England was the first off the mark with their Air Navigation Act 1920
- "The full and absolute sovereignty and rightful jurisdiction of his Majesty extends, and has always extended, over the air...."
- The 1919 Paris Convention had also provided for innocent passage of the aircraft of other jurisdictions in times of peace.
- All aircraft were required to be registered in a single state and thus have a nationality.
- The 1919 Convention prohibited aircraft from carrying explosives or weapons.
- An international dispute resolution bureaucracy was set up called the International Commission for Air Navigation.
- But its first problem was that it lacked notable signatories such as Germany, China and Russia

CHICAGO CONVENTION (1944)

- Sought agreement on
  1. Air traffic rights
  2. Control of fares
  3. Control of frequency and capacity
- There were conflicting approaches
  1. The USA - no control of fares, frequency & capacity, and a maximum exchange of traffic rights
  2. The UK and most of Europe and wanted tight control of fares, frequency & capacity, and limited 5th freedom rights
- The Chicago Convention, 1944, is known throughout the world by its formal title, the Convention on International Civil Aviation.
- It was signed on December 7, 1944 by 52 countries
- Resulted in agreement on the exchange of freedoms 1 & 2 but not 3 & 4
- ICAO was established

REGULATION 1944-1978



1. Exchange of Traffic Rights - Bilaterals

- Since no multilateral agreement had been reached it was left to individual countries to make specific arrangements
- Bilaterals are agreements between 2 countries containing the following information;
  1. Bilateral articles – capacity and fares
  2. Schedule of routes
  3. Memoranda of Understanding

- 2 types of bilaterals
  1. Protectionist
  2. Liberal
- Good example of a liberal bilateral was the one negotiated between the USA and the UK in 1946 – Bermuda 1
- 5th freedoms were widely available, no control of frequency & capacity, fares decided by IATA mechanisms.

2. Inter Airline Pooling Agreements

- Forbidden in the USA due to Anti-Trust legislation
- **Revenue Cost Pool** – 1 airline operates the route on behalf of members of the pool and all costs and revenues are shared equally
- For example, Perth – Tokyo – JAL and Qantas in 1987

- Qantas operated the route and revenues/ costs were shared equally
- All partners have incentive to market and sell the service since they share profits
- **Revenue Sharing Pool** – all revenue is shared in proportion to the capacity provided by each member of the pool
- **Effects**;
  1. Reduced freedom of action for airlines
  2. Reduced competition
- **Interairline Royalty Agreements** - Ability to buy 5th freedom rights for a royalty fee – for e.g. London – Athens route

3. Control of Fares - IATA

- International Air Transport Association (IATA)
  - Havana 1945 – to represent airline interests
- **Finance Committee** – to settle airline accounts – acts as a clearing house
- **Traffic Committee** – standardize aspects of passenger & cargo handling
- **Technical Committee** – reactions to FAA, CAA and ICAO

- Process of setting fares pre 1979 was rigid
- Traffic conferences met 4-6 months in advance and agreed on 200,000 passenger & 100,000 cargo fares
- Decisions had to be unanimous – difficult as airlines could use **veto**

- IATA provided a coherent worldwide structure but there was no price competition – cartel
- Not all airlines joined IATA – SIA & charters which gave them advantages when pricing
- Demands for more flexibility post 1979 so changes were introduced

- **Consequences of Regulations**:
  1. Imposed Constraints on Markets, Outputs & Price
  2. Fares not related to lowest costs
  3. Monopoly Profits

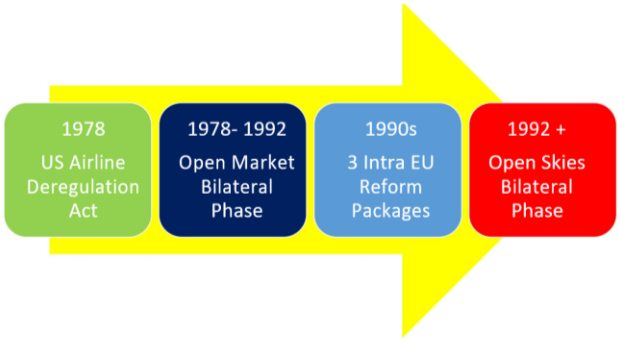
- **In Favor of Regulation**:
  1. Without regulation there would be chaos
  2. Public utility role
  3. Charters would be advantaged

CHAPTER 3 – AIRLINE DEREGULATION-OPEN MARKETS

Learning Objectives

- To provide an overview of how the regulatory system came under pressure from the early 1970s
- To analyses the US Deregulation Act and subsequent change in international aviation policy
- To analyses the outcomes of deregulation on both the North Atlantic and Pacific routes

LIBERALISATION TIMELINE



Why Study deregulation?

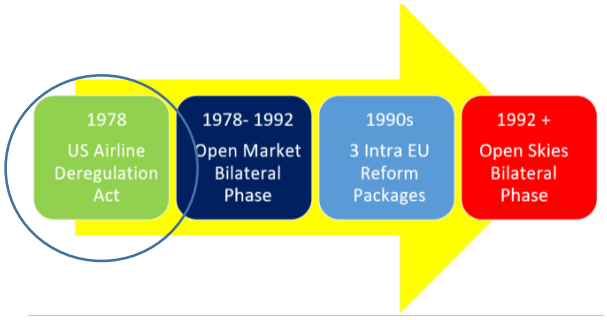
- Any attempt to understand the workings of the international airline industry must start with an appreciation of the changing regulatory environment

A System Under Pressure – 1972+

- The 3 pillars of regulation created an oligopolistic or duopolistic market environments for airlines
- Market access was controlled by governments
- Output was controlled by inter-airline agreements
- Price was fixed and policed by IATA
- A System Under Pressure 1972 +
- Why?
  1. Consumers demanded access to cheaper fares
  2. Advance by nonscheduled airlines
  3. East Asia - airlines like SIA operating outside of IATA offering strong competition

Phases of Change

1. Open Market Phase 1978-1992 Partial Liberalisation – opening up of markets in the period up to 1992
2. Open Skies from 1992 onwards



USA Airline Deregulation Act (1978)

- End of Civil Aeronautics Board (CAB) control of domestic fares and routes by 1985
- Gradual decontrol 1978-1985, making new routes easier to get and unprofitable easier to exit
- CAB could set min and max fares until 1982
- Charter rules were relaxed

Reversal of US International Aviation Policy - 1977

Why the sudden change?

1. **Consumerism** – demand for reduced fares and greater market access
2. **Carter Administration** – belief in benefits of greater competition
3. **Need for US to increase international market share** – 40% on EU – USA and US felt this should be higher

New US International Policy

Objectives

1. More innovative & competitive pricing
2. Liberalization of charter rules
3. End of controls on frequency, capacity & routes
4. Elimination of unfair practices faced by US airlines
5. Multiple designation
6. Cargo
7. More US cities with direct international services

The World View

- Other countries had a different approach
- Many still wanted capacity controls and no MD such as Japan & Italy
- UK & France wanted to reduce US 5th freedoms

New Concepts

- **Multiple Designation** - right of each party to a bilateral to designate as many airlines as it wishes to a route
- **Break of Gauge** - right to change from a larger aircraft to a smaller one in another country on a through service
- **Combination rights** - an airline can carry 2 sets of 3rd & 4th freedom traffic on a single stopping service

- Combination rights – an example
  First 3rd and 4th freedom set
  New York > Paris
  Second 3rd and 4th freedom set
  New York > London

- Combination rights allow an airline to carry both sets of passengers on one aircraft as far as Paris
- Once in Paris passengers can disembark, and the remaining passengers fly on to London
- There are no passengers picked up in Paris as this would be 5th freedom
- Airlines could change to a smaller aircraft in Paris is they wish

- **Country of Origin rules** - gives each country the right to establish conditions of operation for charters originating in their country
- **Double Disapproval** - fare can only be refused if both governments reject it
- These all favor countries with several large airlines which are big traffic generators

ADDITIONAL FREEDOMS OF THE AIR

Sixth Freedom of Air

Combination of 3rd and 4th freedom rights, enabling an airline to carry revenue traffic between two foreign countries via its own state. This was a very important right

(e.g. Emirates: London - Dubai - Singapore)

Seventh Freedom of Air

The right to carry revenue traffic between two foreign countries with no requirements to originate or terminate the service in the carriers' home state

(e.g. Ryanair London Stansted – Stockholm Skavsta)

Eighth Freedom of Air

The right to carry revenue traffic between two locations in a foreign country (cabotage) and then onwards to your home country

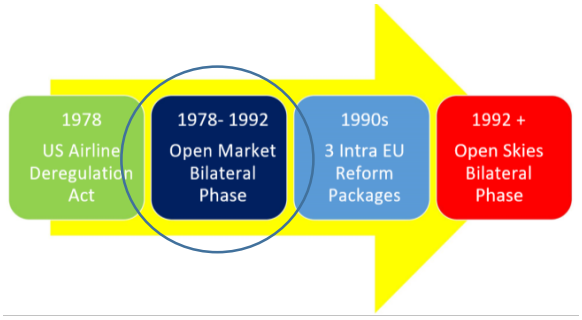
(e.g. Air France flying from two domestic cities in Morocco)

Ninth Freedom of Air

Cabotage but without the requirement to continue onwards to your home country

For example; Shanghai – Beijing by a non-Chinese airline

OPEN MARKET PHASE 1978-1991



The US started to renegotiate its international bilaterals and as UK was the largest transatlantic market that became the starting point

Bermuda 2 1977

- US 5th freedoms through London to Hong Kong reduced
- UK gateways in US increased 9-14
- Combination services and break of gauge extended

US-Dutch Bilateral (1978)

- UK accepted MD on routes over 600,000, but only two airlines from each country were allowed to operate to and from LHR.
- This effectively created a government enforced cartel that inhibited competition
- Wide exchange of cargo rights
- Capacity control through forecasts and scheduling
- Both governments must approve fares
- Fell short of liberalizing the market
- The real trendsetter was the US-Dutch bilateral

Key elements

1. MD accepted, no capacity or frequency controls
2. US airlines - full 5th through Amsterdam and beyond
3. Dutch given access to 5 US gateways, New York, Chicago, Houston, LA + 1 other
4. Unlimited charter rights to any point with COR. US renegotiated - Belgium & Germany
5. US also renegotiated with Singapore, Thailand, Korea etc. in line with the US - Dutch bilateral

UK - Canada (1987)

- Open capacity & route access and increased 5th
- Most conservative – Italy and Japan

POST 1978 OPEN MARKET BILATERALS

	Traditional	New Open Market
1. Market Access	Only to points specified Limited 5th – more in US Bilaterals Charter rights not included	Open access – airlines can fly between any 2 points Extensive 5th in US bilateral but limited in intra EU Unlimited charter rights
2. Designation	Single – some multiple in US	Multiple
3. Capacity	50:50 No capacity/frequency controls in liberal bilaterals but subject to review	No frequency or capacity controls
4. Tariffs	Double approval by both governments IATA mechanisms used	DD & COR

- It's clear that the open market bilaterals offered more to the US than EU
- Only the US could fly from any point in the US (which was the largest traffic generator) & benefit from multiple designation, since, most other countries only had one international airline
- However, US carriers at the time were perceived as weak and not overly aggressive – Pan Am and TWA

OPEN MARKET PHASE OUTCOMES ON NORTH ATLANTIC/PACIFIC

1. New carriers and increased capacity

- Resulted from Multiple Designation and opening up of USA gateways
- North Atlantic in 1977 had 3 big players - Pan Am, TWA & Northwest
- Post 1977 this increased to 12.
- Mergers & collapse of People Express reduced it to 10
- North Pacific in 1978 - 7 carriers. By 1981 there were many newcomers like Thai, SIA & Cathay Pacific
- United was the only big US airline
- By mid 1980s joined by Delta & American

2. Downward Pressure on Yields

Due to;

(A) abandonment of IATA fares, show cause order and Double Disapproval
(B) Use of Apex fares - Pre 1976 11% were apex, by 1986 46% apex
(C) New carriers had incentive to undercut established airlines

3. Collapse of charter traffic

- Unexpected result but it was hard to beat Laker who introduced charter economics to scheduled market
- 1977 - 33%
- 1990 - 10%

4. Increased US market share

Why?

1. Increased gateway points
2. CRS
3. New 5th Freedoms

5. Higher Load factors

- Declined in 1986 to 62.5%, stabilized at 67-70%
- Higher LF became a necessity as yields declined

OPEN MARKET PHASE 1978-1991

SOME CONCLUSIONS ON US RENEGOTIATIONS

- By 1990 the spread of open market bilaterals was patchy, most liberalised was US-Canada
- North Atlantic, no capacity/frequency constraints, fares now more flexible and entry of carriers was easier due to MD
- Pacific routes a similar pattern developed

CHAPTER 4 EU LIBERALISATION

Lecture Learning Objectives

- To understand why the pressure for regulatory reform turned to the EU from the mid-1980s
- To appreciate bilateral changes which were introduced between EU member states
- To appreciate multilateral liberalisation efforts within the EU

Europe – Mid 1980s

Why was pressure for change developing in Europe?

1. Charters offered much lower fares. For example, London - Athens with a charter was 64% cheaper
2. Introduction of wide-bodied aircraft in 1970s forced airlines to find new ways of raising demand
3. The influence of the EU Commission and Parliament

From the mid-1980s onwards moves towards Liberalization in Europe came about through two mechanisms;

1. Bilateral Changes which were negotiated between member states
2. Multilaterally through the legislative reform packages introduced by the EU & European Court of Justice

1. Bilateral Changes within the EU

UK – Netherlands Bilateral (1984/5)

1. Free entry for new carriers
2. No capacity controls
3. Double Disapproval
4. Designated airline access to any point in either country

- Open route access meant that this was more liberal than the US bilaterals

Ireland – UK Bilateral (1985 & 1988)

The first stage of this bilateral was negotiated in 1985, followed by further liberalisation in 1988 to include;

1. Multiple Designation
2. No capacity control
3. Double disapproval
4. Open Route Access

1. EU Open Market Bilaterals

	Traditional pre 1984	New Open Market
Market Access	Only to specified points	Open route access
Designation	Generally single	Multiple
Capacity	50:50	None
Tariffs	Double Approval	DD

- From the previous slide it's clear that EU Open Market bilaterals had changed significantly from their pre 1984 counterparts
- In terms of market access the EU Open Market bilaterals were also more liberal than those on the North Atlantic route where significant restrictions were still in place

2.Multilateral Liberalisation

- First real changes occurred towards the end of 1986
- In 1986 the Nouvelles Frontiers case went before the ECJ and it ruled that the competition rules of the Treaty of Rome did in fact apply to air transport
- 2 important articles effected air transport
- **Article 85** - prohibits & makes unenforceable anti-competitive agreements, decisions & concerted practices which eliminate, reduce or distort competition unless specific exemptions have been granted

Treaty of Rome Competition Articles

- **Article 86** – prohibits an abuse of a dominant position within the EU so as to affect trade between member states
- This effectively meant that any interairline agreements and monopoly positions by airlines were now illegal
- The ECJ decision forced the EU to act by introducing the first package of reforms

1987 EU Liberalisation Package

(Approved Dec 7/87)

- **Fares**; governments are obliged to agree fares if they reflect costs
- Zones of discount fares can be set up **Capacity** - Equal sharing abandoned
- 55% could be provided by 1 airline up to 1988, 60% by 1990

Market Access

- Traffic rights created between regional airports & main even if not covered in bilaterals.
- 5th freedoms on routes between 2 other EU states (max 30%)
- Double designation above certain levels
- Exemptions; under specific conditions– revenue pooling, fare agreements, capacity planning
- Revenue pooling only if the aim was to compensate for flying at unpopular times and if no cost sharing involved

1990 Liberalisation Package

1. More liberal zoning system
2. An airline of a member state with 60% capacity could increase it by 7.5% over each of the following 2 years
3. Increased market access, MD on routes with 140,000+, declining to 100,000+ in 1992

- Increased 5th freedoms (50%)

The Single European Market

- Early multilateral packages had loosened constraints on pricing, capacity & market access
- Liberalisation of air transport was a key objective of the Commission & was achieved on Jan 1 1993, the deadline for the creation of the SEM

The Third Package 1993

- Open market access – abolished restrictions on cabotage (consecutive) and 7th, from April 1st 1997
  - opening up access for carriers throughout the EU to all national and international routes within the EU
- There are no price controls – complete freedom but some safeguards to prevent excessive pricing
- Harmonisation of criteria for granting operating licenses –
- No distinction between scheduled & charter.
- This package went further than the US open skies bilaterals in a number of ways;
  1. Multilateral
  2.Explicitly allowed cross border ownership
- The EU while allowing greater freedoms also started to apply the competition rules more effectively
- Designed to prevent anti-competitive behavior – cartels, monopolies, restrictive agreements, mergers and state aid - applied more strictly
- For example, no more state aid for airlines –

1. Governments can offer support for the operation of services to meet social service needs
2. Mergers which exceed stated threshold must be referred to the EU Commission – Air France and UTA

CONCLUSIONS

- While the EU started the liberalisation process later then the USA by the mid-1990s it had effectively created an open sky across Europe
- In addition, the competition rules were applied more strictly to produce a more competitive and vibrant airline industry

CHAPTER 5: MOVES TOWARDS OPEN SKIES 1992 +

Lecture Objectives

- To fully understand moves towards Open Skies from 1992 onwards and the extent of change realised during the previous decade
- To understand and appreciate the differences between open market and open skies bilaterals and the implications for airlines
- To understand the significance of the EU-US Open Skies deal in 2008
- To understand more recent liberalisation in the Asia Pacific region

Open Skies 1992+

Changing view of the international airline industry!

1. Growing body of **expert opinion** that the airline industry should be allowed to operate as any other
2. The bilateral system though worldwide was inherently **restrictive**
3. The international airline industry had matured during the previous decade –
   (A) Growing concentration in the US – the emergence of the big 3
   (B) Outside of US airlines searched for marketing benefits of large scale operations through alliances
   (C) Ownership – Privatisation – 1987 British Airways
   (D) Emphasis on reducing state aid

USA International Aviation Policy

- Main impetus for change towards a more open skies regime was USA
- Since deregulation in 1978 the USA had continued to renegotiate its bilaterals
- However, US aviation policy was also developed by attacking IATAs role in fare setting
- IATA was essentially a price fixing cartel and under US Anti-Trust Law this was illegal
- However, the US had agreed to exempt all airlines from these clauses
- In June 1978 the US issued the 'show cause order' whereby IATA had to show cause why exemption should remain
- If the US exemption was withdrawn, then no airline flying into the US could be party to IATA fares
- This would have had serious implications for the airline industry
- By 1980 the US agreed to abide by IATA fares but US airlines were forbidden to join in
- As a result, many US airlines left IATA
- This led to a serious undermining of IATA
- The order was abandoned in 1984 and some US airlines crept back into IATA as trade association members with no participation in fare setting
- This marked the beginning of the end of IATAs critical role in fare setting
- By 1992 the USA felt that the open market style bilateral was too restrictive
- US airlines believed that future expansion should be international rather than the mature domestic market
- US felt that they would do better than foreign competitors due to lower costs and domestic feed
- As a result, they started a new wave of bilateral renegotiations

The US – Dutch Bilateral

- September 1992 US – Dutch signed what was effectively the first open skies agreement which contained the following;
- **Open route access** – airlines from either country can fly to any point in the other with full traffic rights
- **Unlimited 5th freedoms**
- **No tariff controls**
- Airlines free to code share or make other commercial agreements
- **Break of gauge** permitted
- Also re-emphasized some older concepts such as
- **MD, open charter access and no frequency & capacity controls**
- After this bilateral there was a lull in terms of further developments

Open Skies

- In 1995 new bilaterals signed with smaller EU members but not UK, France & Germany
- By 1996 an agreement had been reached with Germany
- By 2001 over 50 new open skies agreements had been signed by the US
- Some of these were phased – US – Italy

Bilaterals Compared

	Open Market	Open Skies
Market Access	Named number of points Generally unlimited 5th No Cabotage or 7th	Unlimited Unlimited 5th No Cabotage or 7th
Designation	Multiple	Multiple
Capacity	None	None
Tariffs	DD	Free pricing
Code Sharing	Not part of bilateral	Permitted

Stumbling Blocks for Further Developments

The following issues prevented substantial progress towards a full open skies agreement;

1. **Heathrow** and the lack of available slots for US airlines. This continues to be an issue
2. **Shannon Stop-over** was a restriction placed on airlines on routes between the US and Ireland
3. **Cabotage & 7th** freedoms were not available to EU airlines in the US
4. **Foreign ownership issues**; in the US only 25% of an airline can be owned by non-nationals
5. **Fly America Policy** dictates that all state employees and mail must use US airlines for travel and transportation

Open Skies between the EU and the US March 2008

- Introduced new commercial freedoms for airlines and a framework for regulatory co-operation in transatlantic aviation
- Replaced individual member bilateral agreements

Open Skies Agreement – Key Elements

1. The right to fly between any point in the EU to any point in the US without pricing/capacity restrictions
2. The right to continue flights beyond the US to third countries (5th freedom)
3. The right to operate all cargo flights between the US & a third country with no requirement that service starts or ends in home country
4. 7th freedom rights
5. A number of access points to the Fly America programme
6. More freedom to enter into commercial agreements
7. Antitrust immunity, rights in the area of franchising / branding

Open Skies Agreement between US and EU

- Eliminated Bermuda II updated in 1997. Restricted access to LHR. It only allowed BA, Virgin, United and American Airlines into LHR
- The new Open Skies agreement allows any US carrier to serve any point in Europe unrestricted and this includes service to London Heathrow.
- However, the shortage of landing slots at Heathrow will impede progress.

- However, the US has retained three important restrictions: -

1. It denies foreign airlines cabotage rights in the US market
2. It continues to restrict ownership in US carriers to 25%
3. It retains its 'Fly America Policy'

Open Skies – 2nd Stage 2010

1. Close cooperation on environmental & security matters
2. Further access to US Government financed traffic
3. Mutual recognition of regulatory decisions
4. Commitment to high labour standards

Open Skies in the Asia-Pacific Region

- The Asia-Pacific region has yet to implement full open skies in aviation markets largely due to national interests
- In this regard it follows a similar pattern to the US and EU.
- The aviation market in this region is still developing and while the benefits of open skies outweigh protectionism it may take a while for all airlines/governments to come to that view

Australia

- Australia has implemented open skies by creating a single aviation market with New Zealand.
- It has also eliminated foreign ownership restrictions which allowed Virgin Blue (now Virgin Australia) as a startup.
- However, it denied Singapore rights from Sydney to LA undoubtedly to protect Qantas

India

- A long time highly regulated market has slowly moved to **domestic liberalisation** as the economy has grown.
- This has led to the emergence of several **LCCs**.
- Only recently has the government allowed private Indian carriers to operate internationally and bilaterals still have severe **capacity** restrictions

China

- China is a very attractive market for foreign carriers but has for political reasons been one of the most restrictive.
- While China has opened up its country to foreign ownership (max 49%) **liberalisation has been slow**.
- Recent consolidation domestically of Air China, China Southern and China Eastern has helped them internationally but they are still **government owned**.
- China has liberalised some of their international aviation agreements these are **still restrictive**

ASEAN Open Skies

- The most ambitious liberalisation project in the region is the ASEAN Open Skies policy which came into effect on January 1, 2015
- It's designed to increase regional and domestic connectivity, integrate production networks and enhance regional trade
- Allows airlines from ASEAN member states to fly freely throughout the region via the liberalization of air services under a single, unified air transport market.

Some Conclusions

- Some 30 years after first moves to liberalisation the US has open skies bilaterals with over 100 countries.
- ICAO estimates that 146 nations have 300-400 open skies bilaterals
- Bloc deals gained momentum with the EU and continues with ASEAN
- Less progress on ownership and control

Some Outcomes of Open Skies

- Airlines are able to fly **more routes** which results in **increased competition** resulting in lower average fares
- Open skies enable **new city pairs** (domestic to foreign) to be flown that were previously not possible.
- Consumers receive more **frequency and lower prices** in general
- May lead to **greater fluctuations in airline profitability**. Airline benefits vary depending on market position

Future Developments

- Has the rhetoric changed to a more protectionist stance?
- **Norwegian Air International** issue and lack of progress on changes to ownership rules in the US
- At a multilateral level liberalisation has stalled & there is evidence of ownership & control rules used to block rivals for eg Australia and Hong Kong
- **Rise of the Gulf carriers**…. favoured by geography supportive government policy, foresight and benefits of liberalisation have turned their hubs into 6th freedom crossroads
- Viewed as a huge threat by US (gulf subsidy claims) and EU
- Notion of 'Fair Skies'
- Liberalisation is still very much a work in progress
- Best prospects for future liberalisation from open skies bilaterals and creation/expansion of single aviation markets

CHAPTER 5: AIRLINE PASSENGER DEMAND

- Airline management is all about matching supply with demand to make a profit
- Regulation of fares and pooling arrangements – little airline understanding of how to increase demand
- The essence of airline marketing is to identify & satisfy customer needs

- There are **three** main categories of passengers based on demand.
- Motivation for air travel - We must understand demand
  1. Business- Journey for by employment and is paid for by employer
  2. Leisure- Holiday and visiting friends and relatives (VFR).
     - Fare is paid for by the passenger. Short or long haul
  3. Miscellaneous – Includes all others –
     - Students travelling to and from place of study
     - Travelling for medical reasons
     - Migrant workers
     - Pre 1960s most were business passengers and a few rich leisure
     - Post 1960s - Higher income & lower fares led to more leisure traffic

Motivation for air travel: Some Examples

- Visitors from Poland were more likely to be visiting the UK for business reasons (42.3%) or to visit friends and family (39.5%) than for a holiday (13.6%).
- Among visitors from Ireland to the UK 40.2% of visits were to visit friends and family compared with only 24.8% visiting for a holiday.
- In the US 49.6% business, 24.5 %VRF, 16.6% leisure, 9.2% other personal business
- Higher the disposable income the greater the proportion of holidays -Africa – mainly business
- Rising incomes in Japan – rapid growth of leisure

Length of Trip

- Business fly more often on shorter trips. Brussels to Paris route 66% is business. LHR to LA business - 25%
- Stay for less time than leisure - from LHR 22% of business travel to Europe returned the same day or next whereas 66% of leisure stayed more than 2 weeks

Socio- Economic Characteristics of Travel

- Age, gender, income, occupation, size of family are the main areas
- The more an airline knows about its customers the easier it is to plan

1. Gender

- Business traditionally dominated by males
- Leisure market there is a more even split
- In the UK slightly over 50% of holiday and VFR was female.
- Higher in the US

2. Age

- Leisure is wider and more evenly spread than business peaking at 30 - 49 years.
- Tapers off at 50

US Domestic Market: Leisure

- The average age of leisure travelers is 47.5 years old.
- Mature travelers comprise 36% of leisure travel volume (18% are 65+, 18% are 55-64). Nearly two in ten (19%) are 45-55, 17% are 35-44, 20% are 25-34 and 8% are 18-24 years old.

US Domestic Market: Business

- The average age for business travellers is 45.9 years old. The majority (26%) are aged 45-54; 20% are 55-64; nearly one quarter (24%) are 35-44; 19% 25-34 and four% 18-24 years of age. Only 7% are 65+.

3. Income Those with higher income travel more

- Over the last decade on international routes from LHW and LGW 68% of business and 40% leisure was from top 13% income
- Developing nations international travel limited to top 5-10%
- According to the US Travel Association traveling households earn more than non-traveling households.
- In 2012, the median household income for domestic leisure travelers was $62,500.
- For business travelers, the median household income was $87,500.
- This compares to $52,800 for the general U.S. population

Factors Influencing Demand?

What factors will influence demand on all routes?

What factors might influence demand on particular routes?

1. LEVEL AND DISTRIBUTION OF INCOME

- Much of the growth has come from declining price and increased income
- Leisure is more effected by income than business as the passengers do not pay their own fare
- As income rises more spent on long distance holidays and more spent on air travel
- The relationship between Income (Y) and Demand (D) is called INCOME ELASTICITY (Ye)
- Leisure is more effected by income

2. SUPPLY CONDITIONS

(A) Speed and convenience of air travel

- In the long run it has been the speed and convenience of air travel that has influenced demand

B) Price / Fare Levels

- Huge influence on demand - the lower the price the more people will travel
- Relationship between price and demand is called PRICE ELASTICITY (Pe)
- Price Elasticity of Demand in Selected Markets
    1. France -0.66
    2. Scandinavia -0.27
    3. Germany -0.62
    4. Ireland -0.81
    5. Portugal -0.12
    6. Greece -0.33

3. THE LEVEL OF ECONOMIC ACTIVITY

- World economic climate and the rate of economic growth influence industrial and economic activity
- This in turn influences the level of business travel
- Leisure is directly influenced since less economic activity means less disposable income and less demand for leisure travel

4. POPULATION SIZE AND GROWTH

- The size and distribution of population served by a route can place a severe constraint on potential demand
- Singapore population of only 2 million in 1960. Currently at 5.4 million.
- Japans population of 125 million led to large potential demand due to economic growth
- But rapid population growth can reduce demand - More children so less likely to travel - Morocco and Algeria

5. THE SOCIAL ENVIRONMENT

Social attitudes influence demand for air travel. Recent changes:

1. Air travel is embedded in social life in new ways - events that would have in the past been held locally (e.g. birthdays, anniversaries, hen/stag nights)
2. Tourism increasingly coupled (and masked with VFR and/or business
3. Trophy tourism; increasing performances of touring the world as collectors of places and ticking destinations off a mental list
4. There have been significant changes in levels of public concern about the environment and growing evidence of air travel decisions taken with a 'carbon conscience'

- Growing stigma surrounding the notion of frequent short-haul flying and binge flying

6. COMPETITION FROM OTHER MODES OF TRANSPORT

- Example TGV in France effectively wiped out air travel on that route
- Channel Tunnel also impacted on demand

Factors Affecting Demand on Specific Routes

1. Level of Tourist Attraction

a) Scenic
b) Climatic
c) Historical
d) Price

- Infrastructure – critically important particularly in emerging economies

2.Exchange Rate Fluctuations

- 2015 $ (US) strengthened in value against the Euro. Reverse now happening

3. Travel restrictions

- Eastern Europe 1980s– extent of change
- USA to Cuba
- North Korea

4. Earlier population movements and migration

- For example, strong demand for travel for example France and Morocco, Spain and South America, Ireland and Australia

5. Strong Cultural and Historical links

- Ireland and USA
- UK and Hong Kong, Canada and Australia

6. Migrant Flows

- Ireland to the UK and Germany in the 1980s
- Ireland to Canada and Australia 2008+

7. Level of Economic Activity Administrative Capitals, exploration and development of oil fields or new industrial complexes

- Example Brussels and the EU

Demand Issues to Consider

Factors to consider when embarking on a **new route**

1. Will you create new traffic or divert?
2. What is the long term potential?
3. Do you have the rights to fly the route?
4. Do you have the slots at the airport?
5. Do you have suitable aircraft?
6. Is it seasonal?

Factors to be considered when embarking on an

existing route

1. Who is serving it?
2. How good \ bad is the service?
3. What is the price like and frequency of service?
4. Can you divert from air or surface travel?

Evaluate the following new routes

- AerLingus in summer 2018 season launched its new service to the Pacific Northwest, where the airline schedules Dublin – Seattle route.
- Summer 2019 Aer Lingus is launching a new Dublin – Montreal route
- Ryanair launched its Dublin summer 2019 schedule with 11 new routes including Lourdes, Bordeaux, Split, Thessalonika, and Dubrovnik
- Dublin Airport announced direct flights from Hong Kong to Dublin
- The new year-round service, run by Cathay Pacific, operate four times per week from June, and will be Dublin Airport's first ever direct route to the Asia-Pacific region.

AIRLINE MARKETING

1. Identify markets and market segments that can be served
2. Decide what air services should be offered and their product features
3. Plan & organize the selling of the product
4. Review and monitor product standards and features

MARKET SEGMENTATION

- Identification of different groups of passengers with different growth rates who respond differently to fares or external factors
- Size and characteristics of each segment is essential for forecasting demand and price planning

4-fold classification –

1. Routine business
2. Emergency business,
3. Weekender leisure,
4. Inclusive tour

- Each segment has very distinctive needs in relation to the following factors;
    1. Seat availability on demand
    2. High frequency of service
    3. Ability to cancel or change
    4. The number of stop overs enroute
    5. Inflight standards
    6. Quick Check in
    7. Low Fares

- Other classifications sometimes used focus on psychological makeup. The following was used by BA in the late 1980s

Business

1. Schedule seekers
2. Service seekers
3. Comfort cravers

Leisure

1. Attention seekers
2. Schedule seekers
3. Nervous Nellies

Why do peaks and troughs occur?

1. Institutional- School holidays, Chinese New Year, Bank Holidays
2. Climatic - Summer Mediterranean Winter USA or skiing

- To overcome the problem airlines have leased aircraft for peaks and hired seasonable labour.
- However, it is still a big constraint for planning and marketing!

CHAPTER 6: AIRLINE PRICING

PRICING AND FARE STRUCTURES

- Pricing is the mechanism whereby demand for services is matched with the supply
- The aim is to do this and make a profit - Airlines have different ideas about what a profit is
  1. Adequate rate of return to shareholder
  2. Return on value of assets employed
  3. Enough to buy new aircraft
  4. Temporal issues

- Profitability depends on the interplay of;
  1. Unit costs
  2. Unit revenues
  3. Load Factors

- Airline managers must juggle all 3 bearing in mind the ***short run marginal costs*** and ***instant perishability*** of the product – this leads to **instability of fares**

Short Run Marginal Costs are close to zero:

- ie the cost of carrying an additional passenger on a flight which is due to leave with empty seats is no more than the cost of an additional meal, ground handling, and extra fuel burn
- It makes sense to try and sell these seats to maximize revenue
- The airline needs to careful about slippage and diversion

1. 1st Class, Business and economy

- Pre 1970s just 2, 1st and economy.
- The former was 30- 40% higher.
- Deregulation and/ liberalization led to a complex
- pattern of basic fares

2. Preferential fares

- Available to passengers who meet specific requirements in terms of age, occupation etc
- Examples – student discounts, 50% discount for children under 12 and special offers for spouses to fly with partner
- Aim is partly developmental and partly social

3. Promotional fares

- Various low fares with restrictions on availability which offer passengers significant savings on normal fares
- Normally used where competition from charters was intense
- Originally aimed at stimulating market segments off peak by offering low fares but this involved a risk- Traffic would not meet expectations.
- Higher fare paying passengers could be displaced.

What can an airline do to try and discourage high yield passengers from availing of low fares?

In other words, how can the low fares be made less appealing to those who are able to pay more

To prevent this fences were set up;

Duration limits – Saturday or Wednesday night stay

Departure Time– red eye - Off peak time like 6.00 am

Purchase time – advance reservation and full payment

Routing conditions – return must be booked, no cancellation, or change – aim to reduce flexibility

Pricing Policies – Alternatives

1. Cost Related Pricing.

- Relate fares to the costs incurred in providing the service

2. Demand Related Pricing (Dynamic Pricing)

- Base fares for different categories of service not on costs but on what the customer is willing to pay

In Favour of Cost Related

The strategy was popular for two main reasons;

1. **More equitable** to charge what it costs instead of cross subsidising for example 50% discount for children – it does not cost 50% less to carry them
2. **Economic efficiency**- unless fares are related to cost then inefficient carriers will continue to operate protected by high fares

Against Cost Related

1. **Joint costs problem** – You would have to average for all users rather than separate the costs specific to each sector
2. **Problem routes** – some routes not enough revenue generated to continue operation - Yet if market divided in 2 segments with different elasticities could charge more to one group at no extra cost
3. **Cost variations** – different regions have different cost levels so fares would vary

Demand Related

1. Allows an airline greater pricing freedom to generate sufficient revenues to cover costs ie. Charge more to price inelastic and less to price elastic
2. Does not guarantee profits especially in price competitive markets -
3. Due to Short run MC and instability of fares, demand related fares may reach low levels where not enough to total costs especially if extra capacity is put on

Problem with demand related pricing

1. How to prevent passengers who are willing to pay more from switching to lower fares – fences have to be established

2. How to stop too many seats at low fares being sold and thereby reducing the capacity for higher paying passengers?

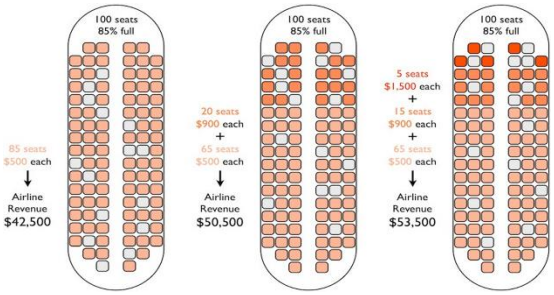
Pricing Exercise

- 100 seat aircraft with single class seating configuration
- Seat priced at €500
- 85% Load Factor
- Revenue €42,500
- Need €50,000
- What can we do?

Yield Management

- Using fences ensured minimum dilution but failed to ensure that revenues were maximised
- Extra capacity to meet demand from lower fares may not cover costs
- Yield Management is an essential marketing tool and involves the manipulation of an airlines reservation control system to max passenger revenue
- It does this by trying to ensure that each seat is sold at the highest possible price
- Max price that a consumer is willing to pay depends on the utility they get from the service.
- The difference between what they are willing to pay and what they actually pay is called a **CONSUMER SURPLUS**
- Day to day monitoring and control of availability in each class to max revenue
- High yield business may be short notice - Danger of airline losing control as seats are sold all over the world
- To overcome this seats are allocated to a booking class and once sold out no more become available
- Forecasts of sales are reviewed up to 1 month before departure and the airline may open/close a booking class
- Yield Management is very difficult and sophisticated task
- US airlines have been able to increase yields by 5- 10% using these techniques

Demand Related Pricing Options



Add in Yield Management

15 seats only X €300 Close Booking Class

20 seats only X €400 Close Booking Class

20 seats only X €600 Close Booking Class

20 seats X only €850 Close Booking Class

5 seats X €1250

5 seats X €1500

Total = €55,250

Yield Management Techniques

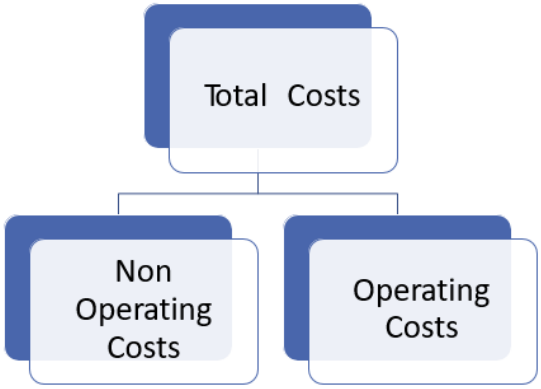
3 GOLDEN RULES OF PRICING

1. Minimise dilution - fences
2. Minimise consumer surplus
3. Exploit elasticities

CHAPTER 7: AIRLINE COST

- Airline Management is concerned with matching supply and demand to make a profit
- As domestic and international markets have been liberalized price competition has increased
- Therefore, airline costs have become increasingly important
- Focus on costs per ASK (CASK) and revenue per ASK (RASK)

Structure of Airline Costs



Types of Airline Costs

Non-Operating Costs

- Costs not directly associated with the operation of an airline

1. Gains/Losses from retiral of property
2. Interest on Loans.
3. Gains/Losses from affiliated companies
4. Gains/Losses from foreign exchange transactions
5. Direct government subsidy/payments

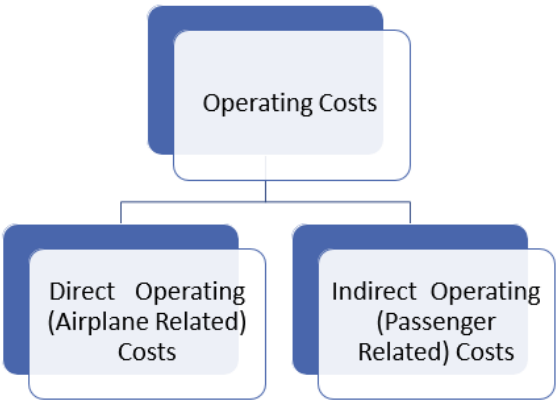
2. Operating Costs

Costs which are associated with the operation of an airline

Direct Operating Costs – Depends on aircraft type

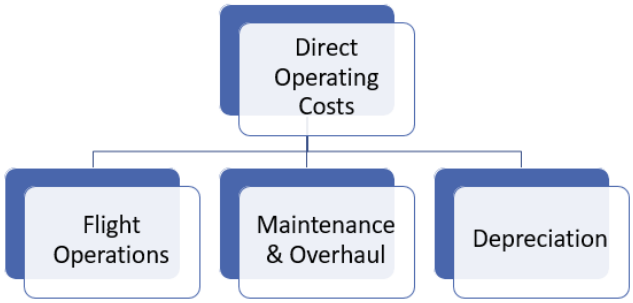
Indirect Operating Costs – not dependent on aircraft type – passenger and administration related.

Types of Airline Costs



<u>Direct Operating Costs (DOC)</u>

Types of DOC



1. FlightOperations

a) **Flight Crew** - Salary & Expenses including allowance, pensions, insurance and any other social welfare payments

b) **Fuel and Oil** – varies by aircraft type depending on size / thrust of engines & type and age of those engines
Consumption depends on weight, wind & cruise altitude etc.

c) Airport and Enroute Charges –
Airport charges: Airlines have to pay airport authorities for the use of runway and terminal facilities

Airport charges have two main elements

1. Landing fee based on take of weight of the aircraft
2. Passenger fee based on the number of passengers boarded at the airport

- Extra for hangarage/parking
- **Enroute charges** – use of navigational aids while flying
    - related to weight and distance flown
- Airlines and passengers paid at least US$92.3 billion for the use of airport and air navigation infrastructure globally in 2011, equivalent to 14.4% of the cost of transport.

(d) Insurance –

- Calculated as a % of purchase price - 1.5 - 3%
- Depends on region, number of aircraft insured and safety record
- Post 9/11 war risk and 3rd party premiums shot up so sharply that governments agreed to provide the cost of additional cover to help airlines

(e) Rental / Lease of flight equipment /crew

- **Operating Lease**: generally for 5 years or less with ownership resting with the lessor
- **Financial Lease**: after 10 years + aircraft ownership is transferred to the airline

2. Maintenance and Overhaul

- Pre Departure Inspections, A, B, C and D checks.
- Labour costs, costs of components/spares
- Administration – sub contract

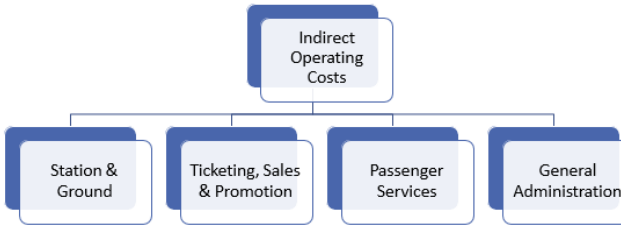
3. Depreciation

- Writing off the cost of an aircraft charge yourself a certain amount each year.
- Used to be 12 years but now 18-20.
- Some airlines charge extra when they make good profits.
- Formula as below:

$$\frac{\text{Price of aircraft \& spares – residual value}}{\text{Depreciation period}}$$

Indirect Operating Costs (IOC)

Types of IOC



1. **Station and Ground Expenses**
   - Costs of providing a service at airport other than landing fees.
   - Staff – salary and expense
   - Handling and servicing of aircraft
   - Passenger, freight and baggage handling
   - Buildings and insurance

2. **Ticketing, Sales & Promotions**
   - Staff, offices, advertising and commission paid to travel agents

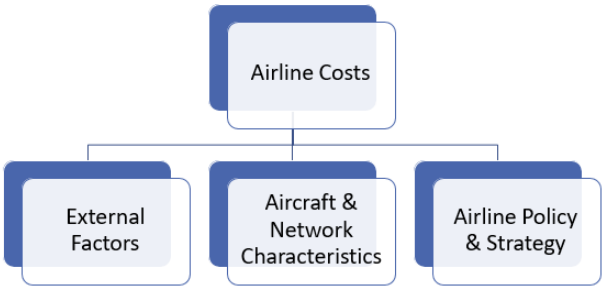
3. **Passenger Services**
   - Cabin crew costs, inflight catering Premiums for passenger insurance - 30 - 35c per RPK

4. **General Administration**
   - Head Office

Determinants of Airline Costs

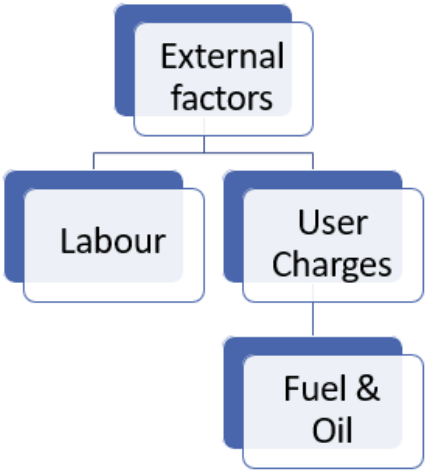
- Overall costs are determined by the level of service provided
- 50% of TOC are escapable through short term cancellation
- The level of cost determines an airlines ability to survive post liberalisation
- Costs per ATK must be kept to a minimum

Types of Airline Costs



Once the level of supply has been decided 3 Broad groups determine costs

(1) EXTERNAL FACTORS



Largely uncontrollable with huge variations between region

(A) **Labour / Wage Levels**

- Traditionally accounts for about 25 - 30% of TOC
- Depends on; Salary levels of the country, productivity & labour market conditions
- Management can influence the cost of labour by; renegotiation, transfer employment

(B) **Fuel**

- Depends on:

1. Oil Company costs & crude oil cost
2. Strategies and government policies on tax and fuel price control
3. Handling, distribution and taxes vary

Description on Fuel (External Factor)

- The global airline industry's fuel bill is estimated to total $180 billion in 2018 (accounting for around 23.5% of operating expenses at $73.0/barrel Brent).
- This is an increase of 20.5% over 2017 and is almost double the $91 billion fuel bill for 2005, which accounted for 22% of operating expenses at $54.5 Brent.
- In 2019 the fuel bill is forecast to be $200 billion, accounting for around 24.2% of operating expenses at $65 per barrel Brent.
- Industry net profits of $35.5 billion are forecast for 2019, following an estimated profit of $32.3 billion in 2018.
- Airlines can do the following to reduce the amount spent on fuel;
  1. Negotiating the price
  2. Fill up at cheaper airports
  3. Reduce consumption
  4. More fuel efficient aircraft

- Problems
  1. Escalation clauses
  2. Exchange rate fluctuations

EXCHANGE RATE FLUCTUATIONS

- The international nature of the aviation industry means that airlines are exposed to currency fluctuation risk.
- Most carriers incur both costs and revenues in a number of currencies, and the fact that some of these cash flows require conversion into a different currency forms the basis of an airline's foreign exchange (FX) risk.
- The strong appreciation of the US dollar in 2015 /16 year was felt widely;
- Many airlines' USD-denominated costs have risen by 10-15% on average in local currency terms.
- The reverse is currently happening.

(C) User Charges

Airport Charges

- Short sectors mean more landings and takeoff and therefore higher airport fee
- Depends on whether the airport is government or privately owned.
- **Enroute** – low in USA.
- Almost two-thirds of the total relates to provision of aeronautical services by airports worldwide, including landing charges and passenger handling fees.
- A further 19% relates to the provision of air navigation services outside of the US.

- The remaining 16% relates to funding of air navigation, airport development and homeland security infrastructure in the United States – the largest aviation market

(2) AIRCRAFT TYPES AND CHARACTERISTICS

(A) Aircraft Size

- General rule – The larger the aircraft the lower its DOC per unit i.e. costs do not increase in proportion to payload
- For example, in 2007;
- ✓ 737-500 114 seats DOC $3,034 Per Block Hour
  Unit cost = 8.25USc
- ✓ 737-300 132 Seats DOC $3,299 Per Block Hour
  Unit cost = 7.5 USc
- ✓ 9% Higher costs for 16% more payload
- Aerodynamic Benefits – larger aircraft has lower drag and more payload per unit of weight, also larger and more efficient engines.
- Economies of size – For example M & O and labour involved
- Lower costs per SKM – yet dearer round trip so the decision should all depend on demand

(B) Aircraft Speed

- The greater the speed the greater the output per hour so lower DOC
- For example
- ✓ B737-200 Airborne Speed 505 km
- ✓ A320 Airborne Speed 590 km
- ✓ Unit costs per SKM; B737 2.72c, A320 1.99c

C) Take Off & Performance Range

- Varies for each aircraft and influences costs
- Reduced payload leads to higher costs since costs are now spread over fewer units of output

(D) Stage Length

- Longer the stage length the lower the unit costs, more time spent in the air, fewer landings, less M & O, less landing fees and lower station and ground costs.
- Savings on tickets and marketing relative to output
- Shorter length – too much time on the ground and more landing fees

(E) % Charter Operation

- Savings on IOC – less on tickets, sales, catering/cabin staff
- DOC – fly at night, better aircraft utilisation, cheaper airports
- Higher seat densities and load factors - 80 - 90 %

(3) AIRLINE POLICIES AND STRATEGIES

- The nature of the product – high quality high cost or low quality – low cost
- Finance – depreciation – long versus short
- Culture and efficiency
- Airline size? No conclusive answer
- **Breakeven load factors – must cover both DOC AND IOC**

CHAPTER 8: LOW COST CARRIERS

Objectives Learnt:

- To provide an overview of the size and scale of the LCC market globally
- To appreciate key differences between the USA and EU markets
- To fully explore the nature and components of the LCC strategy as illustrated by Ryanair
- To understand the source of the LCC model of low costs and how it differs from other strategies as illustrated by Ryanair

Airline Business Models (LCC and Full Service)

Core Concept	LCC	Full Service
Costs / Fares	Low Costs / Low Fares – KISS principle	All fare types including economy and fully bundled business and premium
Airport Usage	Secondary Airports	Primary Airports
Network Characteristics	High Frequency, Short haul , Point to Point Services	Hub and spoke systems, augmented by strategic alliance membership
Fleet	Single Type Fleet	Multiple
Sales and Distribution	Direct Sales and Distribution	Multichannel including airline website, travel agents and tour operators
Ancillary Revenue	High Emphasis	Less Emphasis. Multiple service attributes which are fully bundled
Customer Service	Focus on performance - punctuality, cancellations etc	• Structured approach on a one to one basis • Alliance based FFP

What is Low Cost Carrier?

(1) Product

1. Point to Point
2. No Frills
3. Ancillary Products
4. Single class high density seating

(2) Price

1. Low one way fares, no restrictions
2. Simple price structure

(3) Branding/Advertising

1. Simple Brand
2. High Public Awareness Publicity

(4) Distribution

1. Direct online booking
2. Ticketless sales/check-in

(5) Operations

1. Secondary airports
2. Common fleet
3. Min crew and high aircraft utilization
4. Short haul
5. Outsourcing

EU and USA – Key Differences in LCC market

Traditionally less successful in the EU

1. **Heavy airline traffic congestion and delays,** ATC, many airports have reached capacity
2. **Rail alternatives** – strong competition, UK – France Channel Tunnel, TGV – Paris to Marseilles
3. **Lingering national barriers** – language, culture
4. **High infra structure costs** – airport charges still remain high, account for 20% of Ryanair's costs.
5. **Lower demand for VFR** – still tends to be leisure/business
6. **Use of airports** – restrictions on slots
7. LCC strength in **domestic US market**
8. Role of **Charters** in the EU.

LOW COST CARRIER

LCC Airline Business Model

Core Concept	LCC
Costs / Fares	Low Costs / Low Fares – KISS principle
Airport Usage	Secondary Airports
Network Characteristics	High Frequency, Short haul , Point to Point Services
Fleet	Single Type Fleet
Sales and Distribution	Direct Sales and Distribution
Ancillary Revenue	High Emphasis
Customer Service	Focus on performance - punctuality, cancellations etc

LCC Strategies

1. **Costs / Fares**

- **Adopt the KISS strategy** – Keep it Simple Stupid. No frills/low cost service offering
- Simple product with conservative route development
- Low fares are also offered with a very simple pricing structure, unrestricted
- The price range is stated in advance, with prices increasing nearer to the departure date.
- Traditionally no boarding card/seat allocation – leads to quicker check in & passenger sit down so quick turnaround
- Little or no inflight service –reduced costs, quicker turnaround, fewer required
- Revenue earned by selling simple food and drink
- Simple organizational structure with a focus on costs and efficiency
- Outsourcing of ground handling and maintenance
- No FFP, interlining, transport to and from aircraft

2. Secondary Airports

- Secondary rather than primary airports from which to operate
- Lower charges than primary
- Less congested than principal airports
- Greater chance of obtaining a slot, a quicker turnaround, and less taxi time which translates into shorter block time

3. Short haul- Point to Point Services

- High frequency, short haul services
- Offers the potential for unit cost savings, aircraft utilization, labour productivity etc.
- Low comfort acceptable on short sectors
- Good punctuality

4. Fleet Commonality

- Simple fleet is also used by these low cost startups - commonality leads to increased crew flexibility and cheaper maintenance
- High aircraft utilization

5. Direct Distribution & Sales

- No tickets required for example e-ticketing where only proof of identity is needed
- No CRS - no CRS payment which amounts to $3 per fare and lower IT costs
- Administration costs would be substantially reduced
- Mixture of direct distribution \ sales and CRS
- Maximize the use of Internet booking facilities

6. Ancillary Revenues – Highly emphasised

- Expanding revenue from ancillary activities has become an important part of the LCC strategy

7. Customer Service

- Focus on delivery of best customer service in terms of punctuality, lost baggage and fewer cancellations than rivals
- Traditionally less emphasis on relationship building, customer problem solving and data management

How do Costs differ?

1. Labour

- Cabin and flight crew costs may be lower per seat km since staff achieve higher productivity
- More intense working practices & shorter turn- around mean more flying per duty period
- Cabin Crew - Salaries are lower and less crew members per aircraft B737 3 for LCC but 5 for full service
- Avoid night stopping away from base

2. Aircraft & Fuel

- High aircraft utilisation – easyjet flew its B737s for 10.3 block hours per day whereas BA only achieved 6.9 hours
- New generation aircraft, commonality
- Fuel hedging, use of winglets

3. Distribution, Product and Overhead

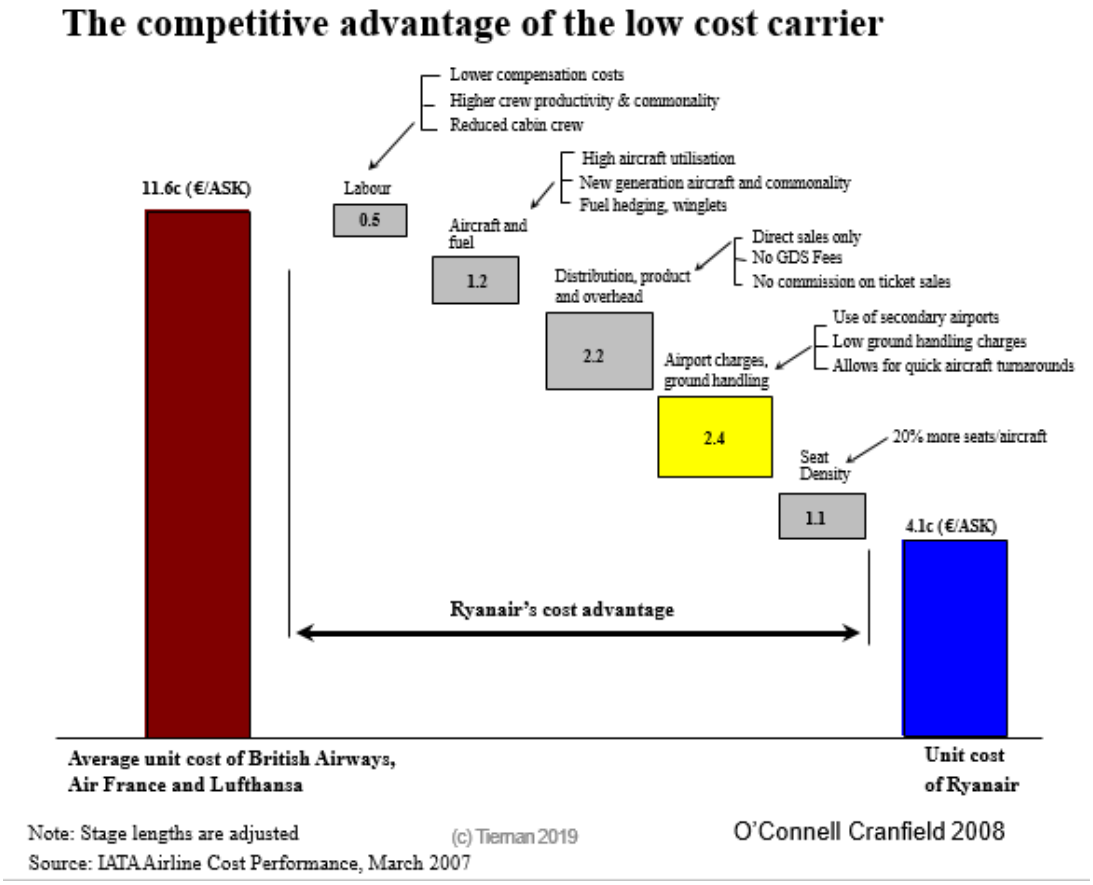
- Direct sales only
- No Global Distribution System fees
- No commission on ticket sales
- Ticketless – savings on printed tickets and boarding passes

4. Airport Charges & Ground handling

- Low cost carriers obtain discounts and use secondary airports
- Passenger handling and station costs – low cost airlinesinvariably outsource this activity
- Low cost carriers do not usually carry cargo, which has the added necessary bonus of keeping turnaround times down

5. Seat Density

- 28 – 29-inch pitch – compared to 31-33
- B737 easyjet has 149 seats – FS competitor had 132
- When the same aircraft were configured for business passengers the 6 seats across were reduced to 5
- Overall cost advantage for easyjet 16-17%



CHAPTER 9: Ryanair the Low Cost Carrier

- Ryanair is one of Europe's largest airlines, the largest low cost carrier, and one of the world's largest airlines as measured by international passengers carried.
- Ryanair carried 129 million passengers in 2017.

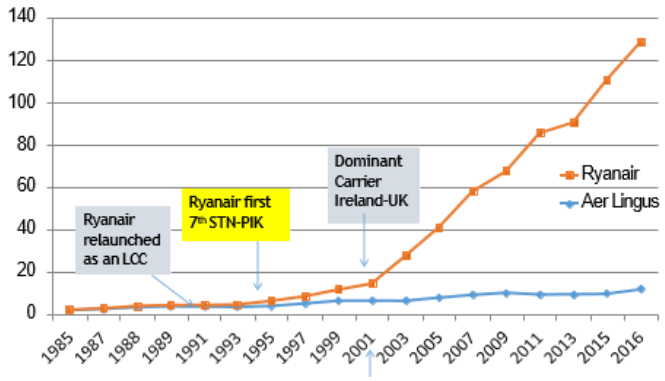
Market Share and Position in Europe

Country	Market Share %	Position	Main Rivals
UK	18	2	EasyJet & BA
Germany	7	3	Lufthansa & *Air Berlin*
Spain	18	1	Vueling & Iberia
CEE	15	1	Wizz & Aegean
Italy	27	1	Alitalia & EasyJet
Greece	15	2	Aegean & EasyJet
Portugal	20	2	TAP & EasyJet
Poland	29	1	Lot & Wizz
Ireland	50	1	Aer Lingus & BA
Belgium	28	1	Brussels & Jetairfly

Development of Ryanair

- Largely the product of liberalisation in the EU
- Started operations in 1985 serving Dublin to Luton and Gatwick
- Within 4 years had lost
- €25 million and was on the verge of bankruptcy
- 1990/1991 – major turning point for Ryanair
- Company was relaunched as low fares airline
- Younger management team appointed
- CEO – Charismatic Michael O'Leary
- Used the South West model
- Eliminated 14 unprofitable routes, standardized aircraft type and fare reduction of 70%
- 1997 – EU Liberalisation allowed Ryanair to develop hubs outside of Ireland such as Stansted to Stockholm, Oslo.
- Further European expansion – Dublin – Paris, Brussels.

Passengers Aer Lingus VS Ryanair 1985-2015



Ryanair Competitive Strategy & Business Model

- Focused on establishing itself as Europe's **biggest scheduled passenger airline** through continued improvements & expanded offerings of its low fares.
- Took the strategy of SWA and blended it with their capabilities and culture to produce a punchy and aggressive EU strategy.

Ryanair Competitive Strategy

Core Principles of the model….

- Ryanair's low fares were designed to
- **stimulate demand**, particularly from fare- conscious leisure and business travelers who might otherwise use alternative forms of transportation or choose not to travel at all.

How? …

- Offer **low fares** that generate increased passenger traffic
- Maximize **Ancillary Revenues**
- Maintaining a continuous focus on cost-**containment and operating efficiencies**

1. Low Costs/ Low Fares – KISS Principle

- **Low Costs / Low frills**;
- Cost containment in key areas (fuel, airport charges etc)
- Simple service coupled with low fares, designed to keep costs at a minimum
- **Basic Cabin**; single class all leather, no reclining seats or seat back pockets
- **No Freebies** on board
- **Pay for all additional extras** including luggage, priority boarding and seating
- No transport to the aircraft / FFP

2. Secondary Airports

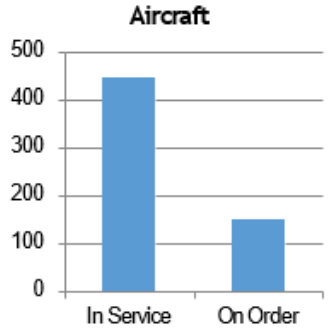
- Ryanair uses secondary airports because they are cheaper and have less delays
- Often monopoly position
- Brussels (Charleroi) Frankfurt (Hahn) and Paris (Beauvais)
- 50-75 miles outside of main city

3. Short haul Point to Point Services

- High frequency short haul, point to point city pair routes.
- No connection or interlining, baggage transfers
- Outsourcing of services – ground handling and maintenance
- Offers the potential for unit cost savings, aircraft utilization labour productivity etc.
- Good punctuality

4. Ryanair Fleet Commonality

- Single aircraft type Boeing 737-800
- Commonality leads to increased crew flexibility and cheaper maintenance
- High aircraft utilization

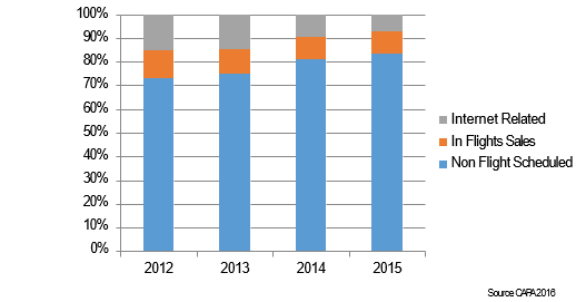


5. Direct Distribution and Sales

- Development of online sales through the original www.ryanair.com and telesales
- No CRS or travel agents
- All leads to lower costs

6. Ancillary Revenues

- Expanding revenue from ancillary activities has become an important part of the Ryanair strategy
- Some commentators believe that in the future Ryanair will offer all flights free of charge and make money from the added extras



7. Customer Services

- Focus on delivery of best customer service in terms of punctuality, lost baggage and fewer cancellations than rivals
- Strong focus on these deliverables in conjunction with secondary airport usage
- Less emphasis on relationship building, customer problem solving and data management

Ryanair Traditional Ultra LCC Business Model/Strategy

Core Concept	Application
Costs/ Fares	Low Costs/ Low Fares – KISS principle
Airport usage	Secondary Airports
Network Characteristics	High Frequency, Short haul, Point to Point Services
Fleet	Single Type Fleet
Sales and Distribution	Direct Sales and Distribution
Ancillary Revenue	High Emphasis
Marketing	In house, designed to promote awareness/controversy
Customer Service	Focus on performance - punctuality, cancellations etc

Ryanair Always Getting Better (AGB) from 2013

- The airline was voted the worst of the 100 biggest brands serving the British market by readers of consumer magazine Which.
- Ryanair promised to transform its "abrupt culture" in a bid to win customers from rivals, admitting that it had a significant problem with customer service.
- From '**Nasty to Nice'**
- Ryanair began implementing a series of strategic initiatives expected to have a significant impact on its customer service offering

Year 1	Year 2	Year 3
• Redesigned Website • Reduced fees • Business Plus • Free 2nd Bag • Allocated Seating	• New Ryanair App • Customer Charter • Ryanair Car Hire • US website • New Interiors • New Uniforms	• My Ryanair • One Flick Purchase • Simplified Bags • Ryanair Rooms • New Leisure Plus • Ryanair Holidays

My Ryanair

- As part of its expanding digital strategy My Ryanair was introduced
- Expected to use the database of customers as an important target for additional revenue

Always Getting Better – A Summary

Drive Retentions and Returns

1. Fix the things pax don't like
2. Improve the travel experience
3. Improve the digital experience
4. Develop the offer
5. Improve brand and marketing

Ryanair Ultra LCC Post AGB Business Model / Strategy

Core Concept	Traditional Model	AGB Main Changes
Cost/Fares	Low costs / low fares – KISS Principle	Develop the Offering – Leisure Plus and Business fares. One Flick Purchase
Airport usage	Secondary Airports	
Network Characteristics	High Frequency Short haul Point to Point Services	
Fleet	Single Type Fleet	
Sales and Distribution	Direct Sales &Distribution	Redesigned web and app
Ancillary Revenue	High Emphasis	Continued Expansion with Ryanair Rooms and Holidays MyRyanair.com
Marketing	In houses, designed to promote awareness/controversy	Brand/Image Revamp through professional TV advertising, new interiors/uniform
Customer Service	Focus on performance – punctuality, cancellations etc.	Customer Charter Fixing things customers don't like; bags, seating etc

2013 Key Decisions

The scene….

- Ryanair was in the middle of its 3rd and final failed bid for Aer Lingus EasyJet was performing well in terms of passengers & profit
- There were 70 m passengers (or 90% of their 2013 volume) travelling Shorthaul point to point European markets mainly to primary airports, paying higher fares but ***not with*** Ryanair

The Key Question

- How to plot an expansion strategy for Ryanair into the future?
- Key challenge was staying profitable while growing

Some realities hitting home

- Before 2013 the plan was to continue to grow Ryanair's ultra-low cost business while using Aer Lingus to reach the segment of market occupied by airlines linking primary airports & offering a friendlier customer service
- But ……by 2013 acquisition of Aer Lingus was less and less likely
- In Ireland opposition from the trade unions & government, and also from EU and UK competition Authorities finally ended that option
- Another roadmap was needed!

Some Options

- **Option No. 1** – launch a new airline with different brand, '*happy clappy'* marketing
- message flying an identical fleet to target the 70 m
- Ruled out due to complexity
- **Option 2**- Re-model Ryanair
- Two crucial events occurred in the summer 2013 which laid the foundations for the new strategy
- Without them it's questionable whether the marketing makeover would have had such success

Critical Moves

1. Negotiation of a New Boeing Deal

- Getting fleet costs right is critical
- Ryanair acquired 175 B737-800s with a list price of $15 billion
- Boeing was launching the new MAX aircraft
- Ryanair used the 'end of line economics' on the current generation jet to secure favourable terms for each aircraft
- **Result of Deal**…. Ryanair has capacity to grow the fleet by 50% without compromising on flight cost per passenger
- Since expanded the order to add 100 MAX with options on another 100
- The extra seats and new efficient engines will cut unit costs even more and further contribute to competitiveness

2. Deal with Stansted Airport in September 2013

- Ryanair a deal to facilitate growth.

Result of Deal…

- This gave Ryanair ultra-low operating costs at its largest base once passenger volume growth was delivered
- Brexit will have impacted this but growth still expected

Ryanair Growth Post Brexit

- Longer term Brexit risks are manageable but it plans to pivot its growth away from UK airports over next 2 years.
- Still expects growth but at slower pace.
- UK still its biggest market accounting for 44.5 m UK passengers per annum about 25% of its international seats in summer 2016.
- 9 new routes from STN announced to include Naples and Copenhagen and points in southern Europe driven by UK tourism demand

Longer Term Options….

- Ryanair could reduce feed at some smaller airports in the UK & not grow as quickly there as otherwise might have done
- Possibility of getting a UK Air Operators Certificate

But….

- Too soon to make any real post Brexit presence decisions
- Growth in Romania and Bulgaria will be higher in 2017 than in the UK
- Indicates a growing focus on central Europe

Core Concept	Traditional Model	AGB Main Changes
Cost/Fares	Low costs / low fares – KISS Principle	Develop the Offering – Leisure Plus and Business fares. One Flick Purchase
Airport usage	Secondary Airports	
Network Characteristics	High Frequency Short haul Point to Point Services	
Fleet	Single Type Fleet	
Sales and Distribution	Direct Sales &Distribution	Redesigned web and app
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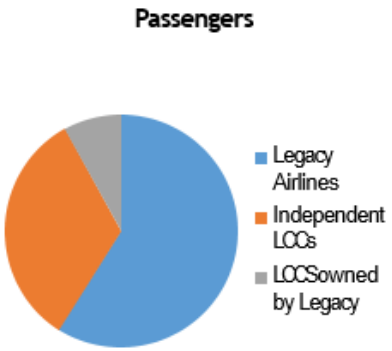
Customer Service	Focus on performance – punctuality, cancellations etc.	Customer Charter Fixing things customers don't like; bags, seating etc

Core Concept	More Recent Announcements
Cost/Fares	
Airport usage	Introduce More Primary Airports
Network Characteristics	Passenger Transfer Feeder Service
Fleet	
Sales and Distribution	
Ancillary Revenue	
Marketing	
Customer Service	



Future Growth Prospects

- Without significant merger / acquisition activity within Europe Ryanair is expected to carry more passengers than any other European airline for the foreseeable future at least

CHAPTER 10: FULL SERVICE CARRIERS

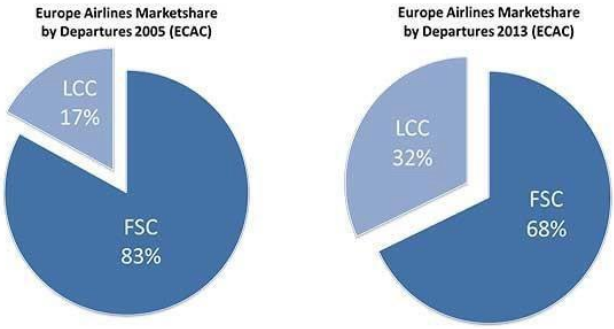
Airline Business Models

Core Concept	LCC	Full Service
Costs / Fares	Low Costs / Low Fares – KISS principle	All fare types including economy and fully bundled business and premium
Airport usage	Secondary Airports	Primary Airports
Network Characteristics	High Frequency, Shorthaul , Point to Point Services	Hub and spoke systems, augmented by strategic alliance membership
Fleet	Single Type Fleet	Multiple
Sales and Distribution	Direct Sales and Distribution	Multichannel including airline website, travel agents and tour operators
Ancillary Revenue	High Emphasis	Less Emphasis. Multiple service attributes which are fully bundled
Customer Service	Focus on performance - punctuality, cancellations etc	•Structured approach on a one to one basis •Alliance based FFP

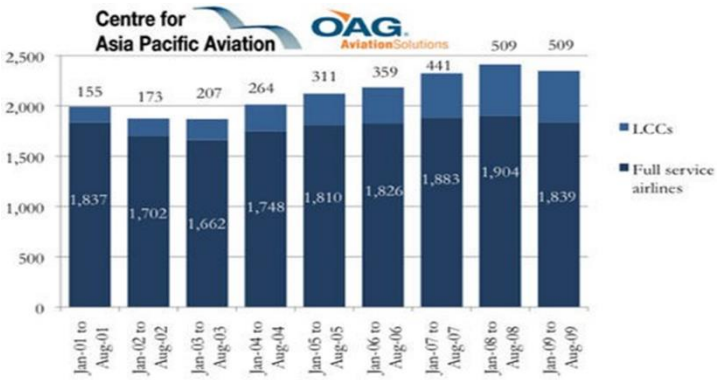
Full Service Business Model

- Based on differentiation of the service offering when compared to competitive rivals
- Value is created by offering a premium service for additional costs
- The overall service is branded more like an 'experience'
- What ways can airlines differentiate their service to add value?

Full Service VS LCC Market Share



Full Service VS LCC Numbers



Definition of Full Service Carriers (FSC)

- A "legacy" or "**full service carrier "** is an airline that focuses on providing a wide range of pre-flight and on-board services, including different service classes, and a network of connecting flights.
- A **full service** carrier typically offers passengers inflight entertainment, checked baggage, meals, beverages and comforts such as blankets and pillows in the ticket price.
- The seats generally have more recline than a low cost carrier as well as more leg room.
- Since most FSCs operate a hub-and-spoke model, this group of airlines are usually also referred to as hub-and-spoke airlines.
- Examples in Europe include Air France/KLM, Lufthansa, British Airways, Iberia, Austrian Airlines, LOT
- While most of the former national carriers in larger EU countries are now either fully or at least partially privatized, some (often smaller) EU countries still have significant interests in their respective national carriers

Full Service Carriers: Characteristics

FSCs are characterized by the following aspects:

1. **Fleet:** Different aircraft types, from small regional feeder aircraft to B747/B777/ A340/A380 long range widebody aircraft
2. **Geographical network range**: Domestic, European and worldwide flights (some smaller FSNCs, however, stick to Europe) with focus on the respective home country
3. **Network structure**: Hub-and-spoke network (feeder flights from the respective hubs), often complemented by selected decentralised non-hub flights
4. **Schedules**: wide range of O&D's (origin & destinations) offered via the respective hub, high frequencies
5. **Service range**: 2-4 service classes, dedicated services in business and first class
6. **Pricing**: complex yield management, price discrimination

Operational Characteristics (FSC)

1. High unit cost structures
2. Hub and Spoke connectivity
3. Short haul/Long haul ops
4. Primary airports - Congested
5. Longer Turnaround times
6. High frequency
7. Reliability/Safety
8. Cargo operations
9. Multiple aircraft types/ older fleet
10. Catering complexity

Flight Products of (FSC)

1. First class (Limited but still popular for Middle East carriers)
2. Business class (driven by economic cycle)
3. Premium economy (growing)
4. Economy class (Threat from LCCs)
5. Cabin comfort
6. Airport lounges
7. IFE/Internet/Mobile
8. Catering and beverages
9. Check-in facilities (traditional, technological)
10. Onboard Service (cabin crew)
11. Moving to Ancillary revenues

Distribution Channels of (FSC)

1. Travel agents
2. Online travel agents
3. Sales offices
4. Call centres
5. Tour operators
6. Websites
7. Corporate travel website
8. Travel portals (e.g. Opodo)
9. Mobile phones

AIRLINE BUSINESS MODELS

Core Concept	Full Service
Costs / Fares	All fare types including economy and fully bundled business and premium
Airport usage	Primary Airports
Network Characteristics	Hub and spoke systems, augmented by strategic alliance membership
Fleet	Multiple
Sales and Distribution	Multichannel including airline website, travel agents and tour operators
Ancillary Revenue	Less Emphasis. Multiple service attributes which are fully bundled
Customer Service	•Structured approach on a one to one basis •Alliance based FFP

FSC Strategies

It's possible to identify a number of common elements;

1. Service Offering
2. Global Network Connectivity
3. Target market
4. Distribution Channels
5. Customer Engagement & Relationship Management

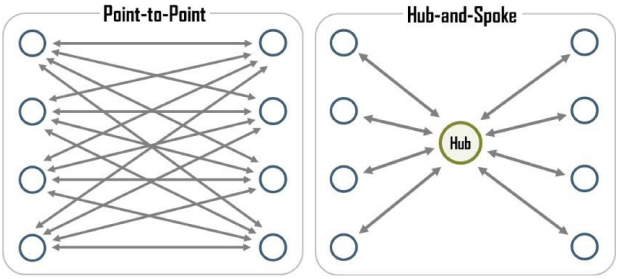
- 1. **Service offering** – FSCs offer multiple service attributes which are fully bundled
- For example;
- Flexible check in, premium desks, airport lounge usage, inflight technology, seating, crew, catering, transfer and baggage handling
- Seating and inflight technology
- Crew and catering

- 2- **Global Network Connectivity** - FSCs typically use primary airports in a designated region
- Use of capital city airport where possible
- Advantage of location, transfer facilities, ground transportation and services
- For eg Heathrow T5

Network Connectivity

- Complex route networks with many hubs
- Augmented through strategic alliance membership

Hub & Spoke



- 3. **Target Market** - Business and premium leisure market
- 4. **Distribution Channels** – Multichannel including travel agents and tour operators
- These work in tandem with the airlines own website sales
- 5. **Customer Engagement & Relationship Management** - Structured approach on a one to one basis
- Alliance based FFP

EMIRATES; A FULL SERVICE CARRIER

- On 25 October 1985, Emirates flew its first routes out of Dubai with just two aircraft—a leased Boeing 737 and an Airbus 300 B4.
- Its first route was Dubai to Karachi, Pakistan
- With a fleet of more than 265 aircraft, Emirates currently fly to over 155 destinations in more than 80 countries around the world.
- Over 1,500 Emirates flights depart Dubai each week on their way to destinations on six continents
- By 2020, Emirates anticipates it will carry 70 million passengers to more than 180 destinations, utilising an ultra-modern fleet of more than 300 aircraft.
- Emirates SkyCargo, today the world's largest international air freight airline by revenue tonne kilometres (RTKMs), will handle more than 15,000 tonnes of freight a day

Emirates Service Offering in flight technology

- ***1. Information***; real time maps & BBC news headlines
- ***2. Communication***;
- Use of mobile phone on select Emirates flights, OnAir - Wi-Fi in the sky and In-seat telephone, SMS and email
- ***3. Entertainment***
- Over 1,800 channels of premium entertainment; The latest and best movies, television, audio and games from around the world.

Emirates Seating

- **First Class** - Each suite comes fully equipped with a sliding door, a personal mini-bar, adjustable ambient lighting, and its own vanity table, mirror, wardrobe, and privacy divider for central suites.
- First Class Private Suites are available on all Emirates A380 and Airbus A340-500 aircraft, and most Boeing 777 aircraft. First Class cabins on other aircraft offer flat-bed seats or deeply- reclining comfort.
- Lie-flat **Business Class** seats are available on all Emirates A380 aircraft, and most Boeing 777 aircraft.
- Business Class cabins on other aircraft offer deeply-reclining comfort, or spacious sleeperettes.
- **Economy Class** seating designed to create more space and comfort.
- Includes special lighting to reduce the effects of jetlag and spacious seats in every cabin.
- Emirates Chauffeur Drive

Global Network Connectivity – Emirates Hub

- The hub of Emirates activity is at Dubai
- Emirates calculates that currently 5.7 billion people live within eight hours of Dubai, and estimates that figure will rise to 7.0 billion in 2030.
- With A380 aircraft 98% of the world's population is accessible from Dubai
- By then, the world's fastest-growing populations will reside in Africa, the Middle East and Central and South Asia, increasing 48%, 36% and 25%, respectively, according to population experts
- Emirates differs slightly with more emphasis on tactical agreements than strategic alliances
- Skywards miles FFP in conjunction with partner airlines such as Easyjet, Jet Blue and Qantas

Emirates Co-Operation

- ***Tactical commercial cooperation rather than strategic alliances***.
- "An alliance can be limiting."
- Nevertheless, Emirates recently signed a 10-year code-share frequent-flyer partnership with Qantas that will see the two jointly offer 98 weekly flights from Australia to Dubai, including four daily A380 flights.
- Of seven daily A380 flights from London Heathrow, Emirates will provide five and Qantas two under the new arrangement.

Network Ambition

- Plan is to Double in size from current fleet of 271
- In 2019 Emirates announced a $21.4 billion deal for 40 A330-900 aircraft, and 30 A350- 900 aircraft
- The latest generation Airbus A330neo and A350 aircraft will be delivered to Emirates starting from 2021 and 2024 respectively.
- In addition, Airbus and Emirates reached an agreement on outstanding A380 deliveries.
- The airline will receive 14 more A380s from 2019 until the end of 2021, taking its total A380 order book to 123 units.
- New Destinations since 2012 – Rio, Buenos Aires, Dublin, Lusaka, Harare, Dallas, Seattle, Ho Chi Minh, Barcelona, Lisbon, Erbil, Washington, Adelaide, Lyon, Phuket, Warsaw, Algiers, Tokyo Haneda, Tripoli, Stockholm, Conakry, Sialkot, Kabul, Taipei, Boston
- Emirates estimates that by 2030 some 87 so-called **aviation mega-cities**–each representing more than 10,000 daily long- haul passengers–will dot the globe.
- The airline now serves some 20 destinations with its A380s, and it sees an abundance of new lucrative routes.

AER LINGUS BUSINESS STRATEGY 2009+ NO LONGER AN LCC?

The pure low cost/low fares model, in the image of Ryanair, was deemed unsustainable for Aer Lingus for the following reasons:

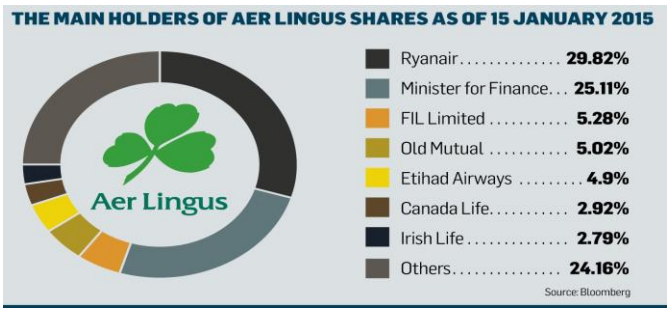
1. Deeply discounted aircraft are no longer available.
2. The market proposition and customer expectation is for central rather than secondary peripheral airports, implying higher airport charges.
3. Tax funded marketing deals with secondary peripheral airports are no longer available.
4. The cost overhang of the Aer Lingus staff.

Aer Lingus Strategy

- Equally, the 'full service' model adopted by many flag carriers was deemed not competitive because:
  1. There is a relatively small business market to/from Ireland.
  2. The Dublin hub is in a disadvantageous geographical position for short-haul connecting flows.
  3. Most importantly, low fares are embedded in the Irish market place and in the Irish consumer mind-set.
- The airline's primary markets are Ireland, the United Kingdom, Europe and the United States.
- Destinations served in the United States partly reflect those regions and cities where the Irish-American diaspora are concentrated, namely New York, Boston and Chicago.
- The Irish people typically undertake several overseas flights a year.
- This is partly driven by Ireland's status as an island nation but also reflects the inherent propensity among the Irish to travel to visit overseas friends, relatives and colleagues.
- This is a well-established feature of Irish national behaviour and contrasts significantly with several other European countries:
  1. Warsaw and Barcelona transfer traffic through Dublin was also developed
  2. Targeted cities with no or poor transatlantic service
  3. Agreement with jetBlue in USA

Bid from IAG

- In January 2015, IAG launched a third-bid for Aer Lingus proposing a
- €2.55 per-share takeover offer, totalling close to €1.4bn.
- On 27 January 2015, Aer Lingus' Board announced that, "the financial terms of IAG's third proposal for the airline are at a level it is willing to recommend.",



On the Table from IAG

- Aer Lingus would continue to operate as a separate business with its own brand, management and operations
- Aer Lingus would continue to provide connectivity to Ireland and gain from membership of a larger airline group
- Aer Lingus would become part of the
- Oneworld alliance again
- Aer Linus would join IAGs joint business with AA benefitting from natural traffic flows between Ireland and the US

A Political Issue?

- The bid quickly became a hot political issue in Ireland
- Sale of the government's 25% stake required parliamentary approval
- The junior coalition partner the Labour party ideologically opposed to sale

WHY WAS AER LINGUS ATTRACTIVE?

1. **LHR slots**……which constrained Bas expansion?

- Dublin-LHR one of the busiest and most profitable routes in Europe
- Walsh argued that the value of the LHR slots was in using them on Dub- LHR

2. **The Aer Lingus brand**

3. **Potential for expansion out of Dublin airport**

Source Irish Independent 2015

The Concerns

1. Jobs; Fears about likely cuts arising from consolidation. Iberia experience?
2. Connections; potential loss of international links for Shannon and other airports
3. Loss of the brand

Alleviating Concerns

- IAG tried to ease concerns by offering legally binding commitments on;
  1. LHR slots – won't be sold and will operate on Irish routes for 5 years
  2. HQ and incorporation to remain in Dublin
  3. The name will remain

The Outcome

- On 26 May 2015, the Irish government agreed to the sale of its 25% shareholding to IAG, with a takeover now dependent on Ryanair's position on the matter.
- On 10 July 2015, Ryanair voted in favour to sell its nearly 30% stake in
- the airline.
- The takeover was later approved by the EU and US regulators subject
- to IAG giving up 5 slot pairs at LGW
- On 2 September 2015, IAG assumed control of Aer Lingus.

Potential Challenges for FSCs

1. Substantial losses
2. Large debts
3. Large pension deficits
4. Undercapitalised
5. Overstaffed (changing)
6. Bureaucratic (changing)
7. Government influenced (changing)
8. Network linked to state history
9. Aircraft purchasing linked to politics
10. Strong trade unions
11. Frequent Management changes
12. Too many managers
13. Slow to change
14. Low productivity (staff & aircraft)
15. Inconsistent service quality
16. Difficult to generate long term sustained profitability

CHAPTER 11: Airline Alliances

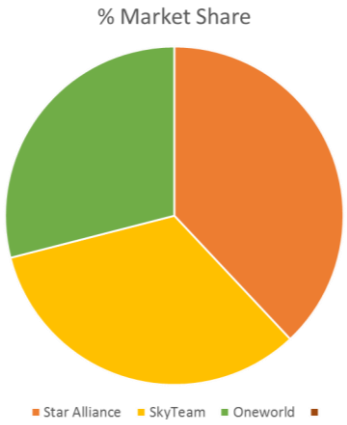
- **DEFINITION**:
  A Strategic alliance links the facets of 2 or more firms in a trading partnership that provides for the mutually beneficial trade of technologies, skills or products among members"
  Yoshino and Rangan (1995)

- An alliance is where two or more airlines agree to cooperate in a number of fields which include;
  1. Scheduling, marketing, purchasing, administration, maintenance
  2. Member airlines are likely to have generally complimentary services without much overlap

- International Airline Alliances – Key Features 2019

Feature	Oneworld	Skyteam	Star Alliance
Founded	1999	2000	1997
Airlines	13	19	27
Countries Served	180	175+	193
Airports Served	1,016	1,080	1,317
Passenger (millions)	557.4	730	727.62
Fleet	3,560	3,052	4,919
Daily Departure	13,814	17,000	18,000+
Employees	389,788	481,691*	423,210
Total Revenue $ billions	130.92	140.98*	170.95
Global Market Share %	16.4	19.2	23.5

Scheduled Traffic RPKs by Alliance Grouping 2016



SKYTEAM

- Sky Team was founded on 22 June 2000
- Its management team, *SkyTeam Central* is based at the World Trade Center Schiphol Airport, Netherlands
- SkyTeam was the last of the three major airline alliances to be formed

ONEWORLD

- Oneworld was founded on 1 February 1999.
- The alliance's stated objective is to be the first-choice airline alliance for the world's frequent international travellers.
- Its central alliance office is currently based in New York.

STAR ALLIANCE

- The **Star Alliance** is the world's largest global airline alliance headquartered in Frankfurt, Germany
- It was founded in 1997 with its name and emblem representing the five founding airlines;
    1. Scandinavian Airlines
    2. Thai Airways
    3. United Airlines
    4. Air Canada
    5. Lufthansa

REASONS FOR AIRLINE ALLIANCES

- Alliances are generally a strategy that companies use when the acquisition of another company or internal development as means of growth is not an option

1. The inability of airlines to grow naturally.

- The home markets limited in size & infrastructure constraints.
- High marketing and other costs required to develop outside of the home area.

2. The Inability of airlines to grow by acquisition;

- Legislation constrains airlines from increasing ownership and control of airlines in other countries

3. **To increase the opportunity for earning a profit**

- Airlines need to operate in more markets i.e. they need to grow

4. **To take advantage of economies of scope**

5. **To reduce competition by joining forces**

6. **Strategic alliances enable airlines to expand, without investing new resources, the reach of their network and services to many parts of the world**

ADVANTAGES OF ALLIANCES FOR AIRLINES

1. Increased efficiency and productivity through network economies of scope; purchasing leverage, schedule co-ordination, and reduced marketing costs
2. Discounted fares for connecting services
3. Increased market power and co-ordination
4. Cooperate with airlines that previously were competitors
5. Knowledge and Information sharing
6. Stability and insulation

ADVANTAGES FOR THE CONSUMER

1. **Greater choice of destinations throughout the network.**

- At the very least, an alliance airline can offer more itinerary choices to its passengers than non-alliance airlines of similar size.

2. **Higher frequency of service**

- An airline should be able to offer greater value to customers by extending its network of relationships with other airlines.

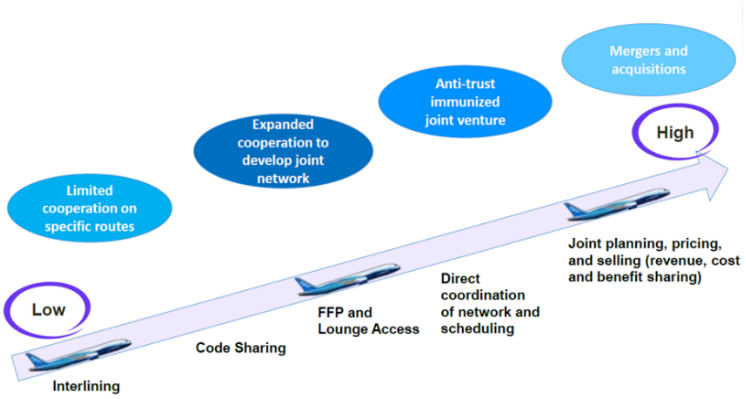
3. **Improved passenger services**

- For eg through check in, seamless baggage transfer, shared customer information re seat and meal preference.
- If the passenger decides to change flight plans at the last moment, he has the option of transferring to a variety of routes, airlines and schedules of the alliance network.

4. More routes to build Frequent Flyer Miles;

- In the past, FFP benefits accrued under one program were not transferable.
- With the formation of global alliances, frequent flyer points and other benefits can now be accrued with any airline within an alliance, eliminating the need for membership of multiple frequent flyer programs.
- This means that FFP members can achieve priority status faster by accruing points under one program

NETWORK CARRIERS ARE USING MARKETING ARRANGEMENTS WITH OTHER AIRLINES TO GROW THEIR MARKET SIZE



DISADVANTAGES FOR THE CONSUMER

1. Lower network fares make point to point **competition more difficult** and may lead to less competition. Alliances can easily result in limitation of competition
2. Reduced consumer choice of airlines. The major problem concerns alliances that are very strong at certain hubs (i.e.: Heathrow, Frankfurt) having the potential to become superpowers at those hub airports, thus creating anti-competitive practices.
3. Confusion about which airline is providing the service. Disconnect between booking and actual service
4. **Potential for fewer direct services**. As airlines increasingly cooperate and integrate their schedules there may be reductions in the number of routes offered by each airline.

TYPOLOGY OF AIRLINE ALLIANCES

1. Code sharing

- Refers to a practice where two or more airlines share the same flight operated by only one airline.
- Commercial agreement to place a two letter code of both airlines on flights within the agreement.
- Both airlines then sell and market the flight
- Disclosure - airlines must make the customer aware which airline is operating the flight before the ticket is purchased
- Occurs with independent airlines either one large, one small or two equally sized airlines in different and geographically detached market (natural growth limited by slots) or a number of airlines in a number of markets (strategic alliance)

2. Marketing Agreements

- These may include;
- Co-operation on FFPs, shared Lounges, corporate shared\common\brand advertising, discounts
- Joint marketing initiatives - for example two for one offers and discounts on combined services

3. Franchising

- Independent airline operates flights for a major carrier for example
- **Franchisee gains;**
  1. Global brand identity
  2. Global marketing, advertising, promotion, distribution and selling
  3. Improved financial performance
- **Franchiser obligations**
  1. Sales support,
  2. Passenger handling,
  3. Revenue accounting and management,
  4. FFP participation,
  5. IT support,
  6. Branded goods for example
  7. Uniforms and interiors
  8. Specify product,

4. Equity Investment

- An airline may invest in an alliance partner
- improvement of trust \ commitment
- harder to dissolve the alliance
- Greater control by investor
- to cement some alliance airlines may exchange equity
- KLM and Northwest this was problematic
- BA and US Air this again was problematic.

ALLIANCE MEMBERSHIP VS CODE-SHARE

Code-sharing Bilateral		Criteria		Alliance membership
		Potential Opportunities		
An agreement where an operating carrier allows its flights to be marketed by another carrier	✓	Network extension	✓	Typically enables more extensive revenue opportunities with code-sharing across multiple member carriers
	✓	New distribution channels	✓	
	✓	Reduced route competition	✓	
	✓	Capacity rationalization	✓	
		Joint purchasing	✓	
Can be used as a targeted route specific approach to enhance revenue without the 'strings' of alliance membership		Shared systems	✓	In addition, offers further benefits including shared facilities and frequent flyer (FFP) offerings.
		Shared facilities (lounges)	✓	
	✓	Reciprocal FFP earning	✓	
	✓	Reciprocal FFP redemption	✓	
		Potential Restrictions		
		Standardizations (IT, FFP)	✓	
		Investment	✓	
		Non-alliance partner limitations	✓	
Note: Most carriers have a combination of alliance membership and independent code sharing				

3 PHASES IN BUILDING AN ALLIANCE

PHASE ONE: REVENUE GENERATION

- Code sharing
- **Reciprocal FFP**
- **Feeding Traffic**
- **Access to New Markets**
- Gets around Regulatory constraints
- Network co-ordination
- Separate airline brands
- **Entry and Exit is easy**

PHASE TWO: COST REDUCTION

- **Co-location at airports**
- **Joint purchasing**
- Shared Airport Lounges-
- Common ground handling
- Joint maintenance
- Joint sales in third countries
- Joint call centers
- Common IT platforms
- Fleet harmonization
- Separate Airline brands
- Exit is more difficult - can be costly

PHASE THREE: JOINT VENTURE ORIENTATED

- Equity Investments -
- Franchising
- Joint product development
- Sharing of Revenues
- Joint Scheduling (Timing)
- Joint Pricing on routes (Fares)
- Sharing Costs and Profits
- Exit is very difficult

Source: Doganis, 2010; O'Connell 2017