

# Portugal and Air Transport in the Early 21st Century

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# AIR TRANSPORT

# The Nature of air transport

1. Air transport is important
  - It is a big industry
  - It is vital to many industries and regions
2. It is multi-faceted
  - Airlines
  - Airports
  - Air traffic control
  - Domestic and international
3. It is a network Industry
  - Portugal is part of Europe (legal fact)
  - Portugal is part of the world (globalization)
4. It is not wanted for its own sake
  - It “facilitates” and does not create
5. It has environmental implications
  - Noise
  - Greenhouse gas emissions

# Air transport as an industry

- Is about 1% of Western European and US GDP; 3% of Brazil's
- Carriers over 2 billion passengers a year
- 3.9 million jobs
- Over \$260 billion annual turnover
- 18,000 aircraft
- 15 million kilometer network
- 10,000 airports
- 30 million tons of freight
- Over 130 billion revenue ton kilometers
- Important for key modern industries (high-tech management flies 60% more than traditional industries)
- Carriers 40% of world trade by value
- Half of tourists outside of Europe travel by air

# AIR TRANSPORT POLICY

# Public policy phases

## THE LEGACY

- To 1910 -> gentle assistance for innovation
- 1910-1918 -> military importance
- 1920s -> national integration (mail services)
- 1930s -> internationalism (esp. Empires)
- 1940s+ -> military development
- Late 1940s-1970s -> economic regulation
  - Chicago convention
  - domestic price/ market access controls

## MODERN AGE

- 1970s+ -> “deregulation of operations”
  - domestic from late 1970s in US
  - international (Open Skies, EU packages, etc)
- 1980s+ -> “deregulation of infrastructure”
- 2000s+ -> environmental regulations

# Major recent regulatory reforms and initiatives in aviation

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|      |                                      |
|------|--------------------------------------|
| 1977 | US Air Cargo Deregulation Act        |
| 1978 | US Airline Deregulation Act          |
| 1979 | Term “Open Skies” used               |
| 1984 | UK-Netherlands liberal ASA bilateral |
| 1987 | EU’s “First Package”                 |
| 1987 | UK Airports Act (privatization)      |
| 1989 | EU’s “Second Package”                |
| 1989 | Northwest-KLM strategic alliance     |
| 1992 | EU’s “Third Package”                 |
| 1996 | NAV Canada established               |
| 1999 | “Single European Skies” initiative   |
| 2001 | NATS UK established                  |

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# Nature of liberalization

- ¥ US : Big Bang
  - ¥ Airline Deregulation Act 1978
  - ¥ Open Skies Policy from 1979
- ¥ EU: Phased liberalization
  - ¥ Add hoc reforms (from early 1980)
  - ¥ Package 1 (1988)
    - ↳ Opening up the existing structure
  - ¥ Package 2 (1990)
    - ↳ Liberalizing the EU international market
  - ¥ Package 3 (1993)
    - ↳ An open European air transport market
  - ¥ Extra-territorial authority (2003)



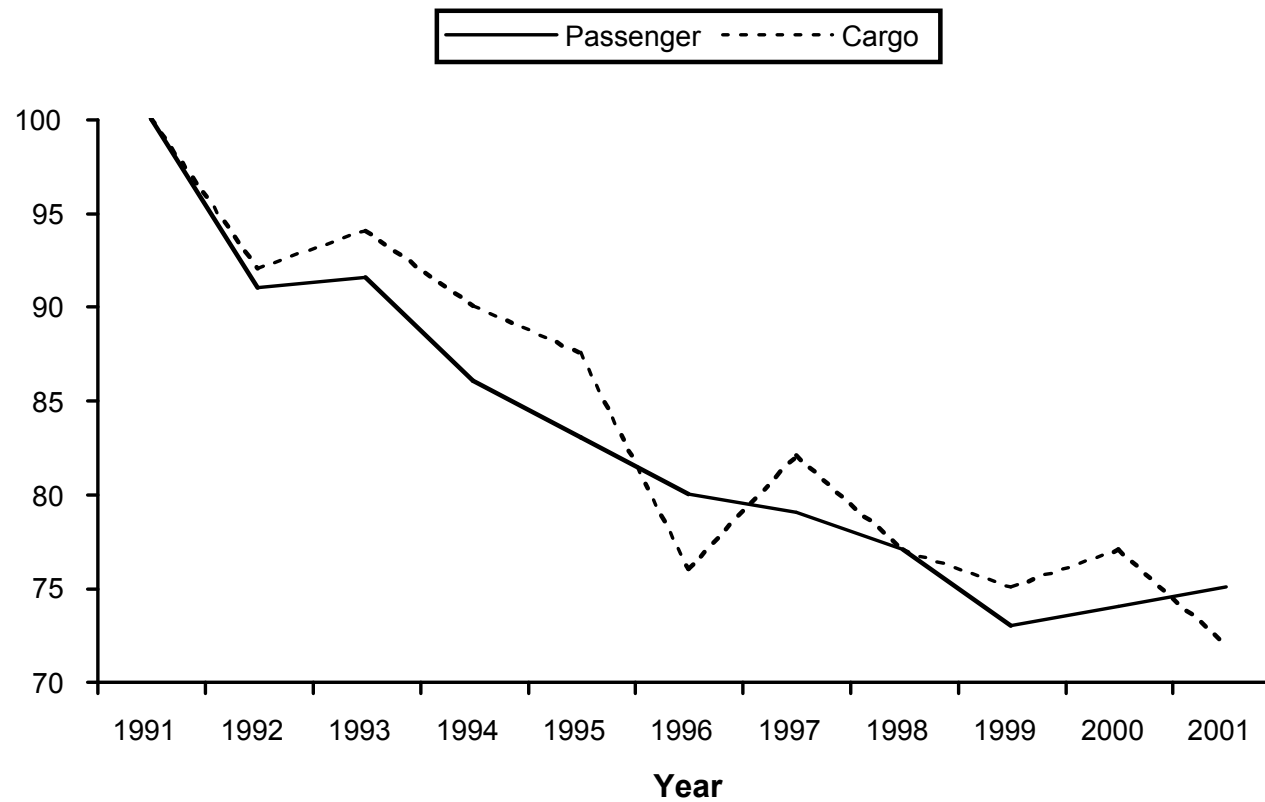
# The European based “Open Skies” initiatives (passenger services)

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|              |                        |          |
|--------------|------------------------|----------|
| Netherlands  | In Force               | 10/14/92 |
| Belgium      | Provisional            | 3/1/95   |
| Finland      | In Force               | 3/24/95  |
| Denmark      | In Force               | 4/26/95  |
| Norway       | In Force               | 4/26/95  |
| Sweden       | In Force               | 4/26/95  |
| Luxembourg   | In Force               | 6/6/95   |
| Austria      | In Force               | 6/14/95  |
| Czech Repub. | In Force               | 12/8/95  |
| Germany      | Provisional            | 2/29/96  |
| Italy        | Comity and Reciprocity | 11/11/98 |
| Portugal     | In Force               | 12/22/99 |
| Malta        | In Force               | 10/12/00 |
| Poland       | In Force               | 5/31/01  |
| France       | In Force               | 10/19/01 |

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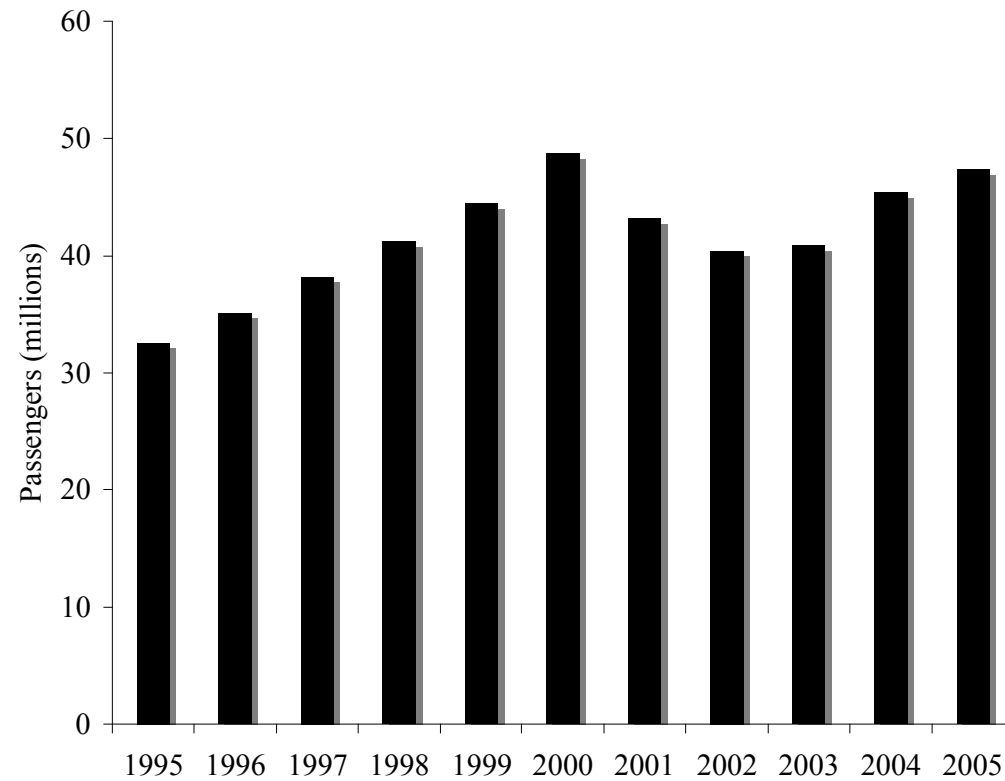
# Passenger and cargo yield for European Union scheduled airlines



# Airline labor physical productivity in Europe (ATK per employee)

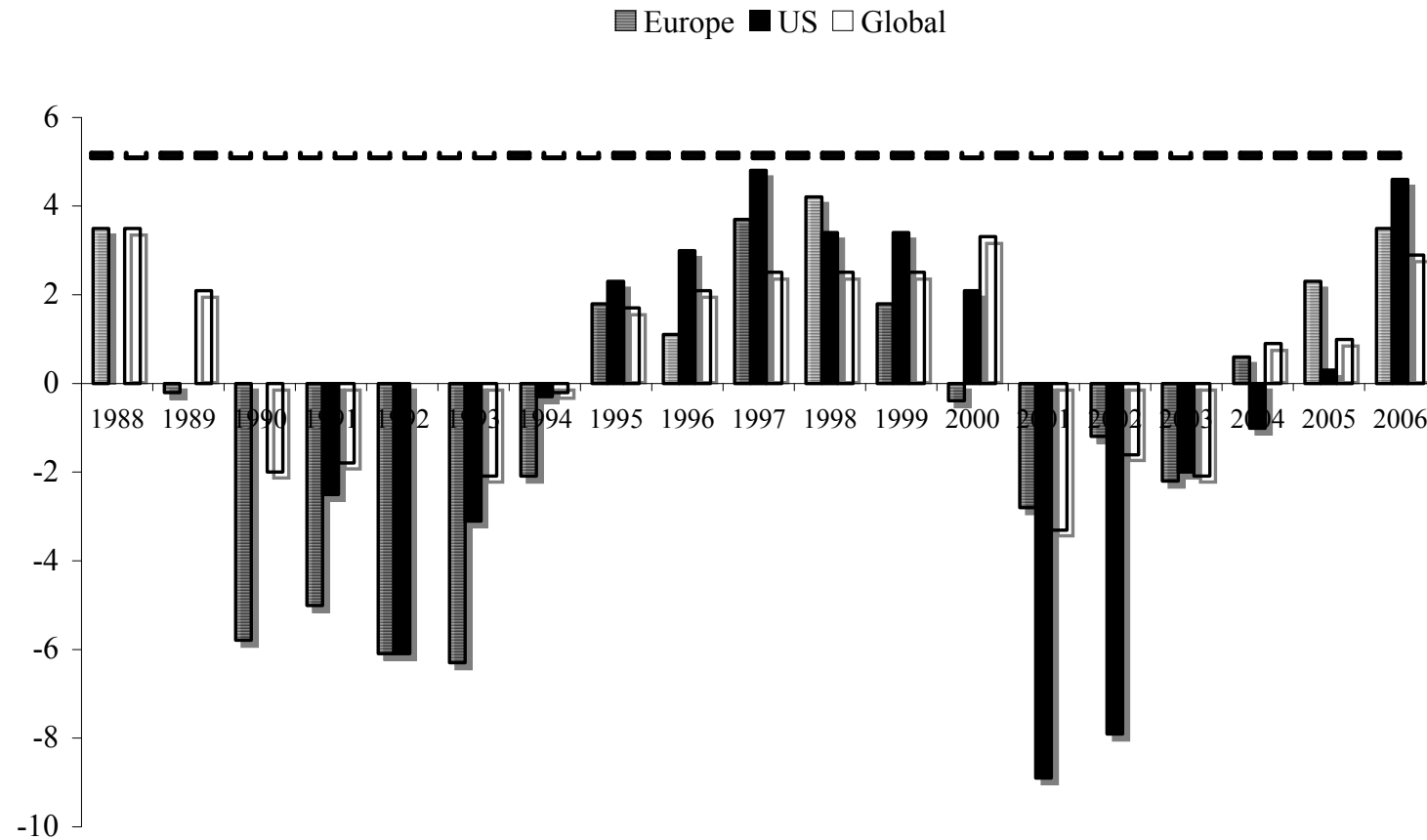


# EU-US transatlantic air passengers

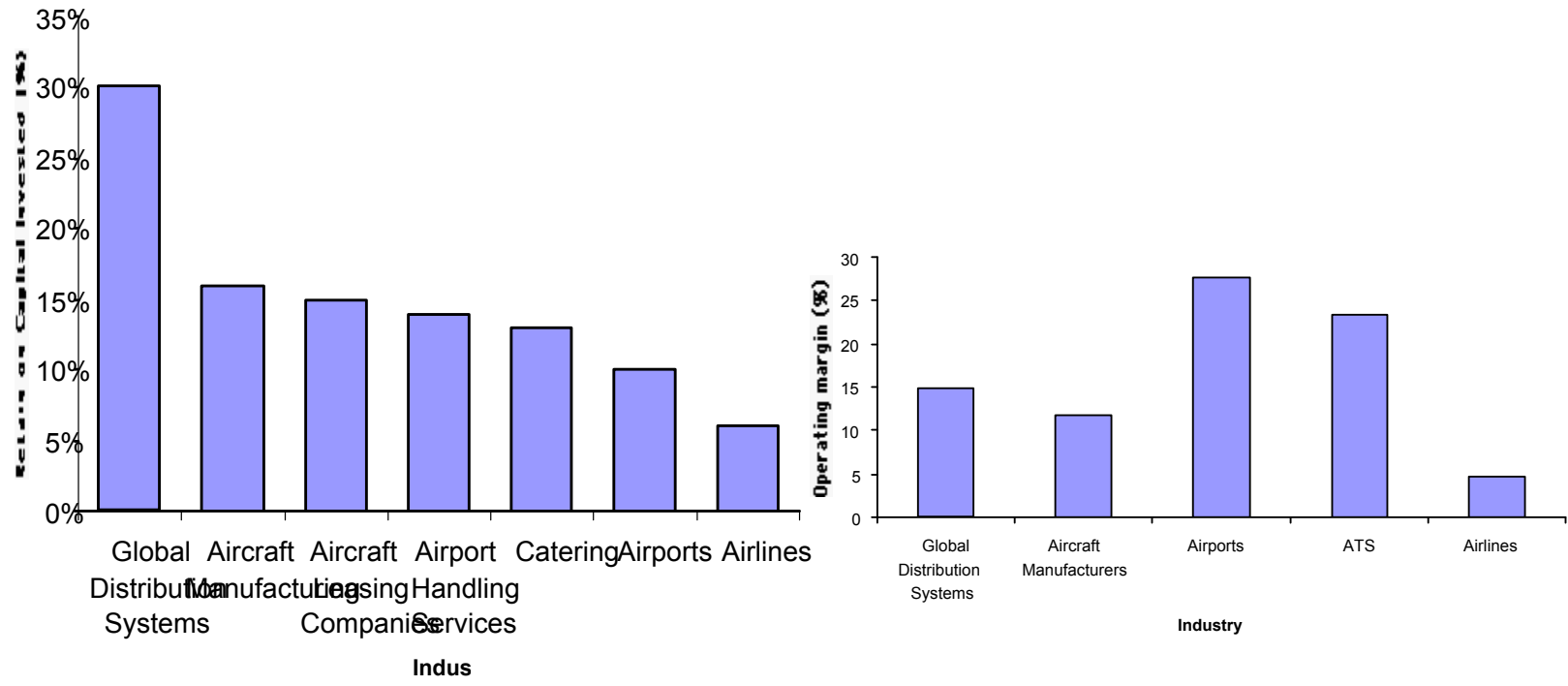


# THE CHALLENGES CONFRONTING AIRLINES

# Operating margins of airlines (1988-2006)



# Economic margins in the air transport sector



# SUSTAINING AIR TRANSPORT



# Factors influencing the future of air transport

- Macro-economic growth
- Financial viability
  - Nature of scheduled services
  - External shocks to costs (e.g. oil price)
  - External shocks to demand (e.g. September 11th)
- Environmental costs
  - Local (resistance to new infrastructure)
  - Global (greenhouse gases)
- Infrastructure capacity constraints
- Ideology
  - Re-regulation

# Dealing with a “fixed cost” - the cost of offering a scheduled service

Nature of the market

- Competitive market

- Scheduled service (i.e. fixed costs of a commitment)

Problems

- Market instability

Need for some degree of “monopoly power”

- Institutional protection

- Loyalty payments (frequent flyer programs)

- “Fortress” hubs

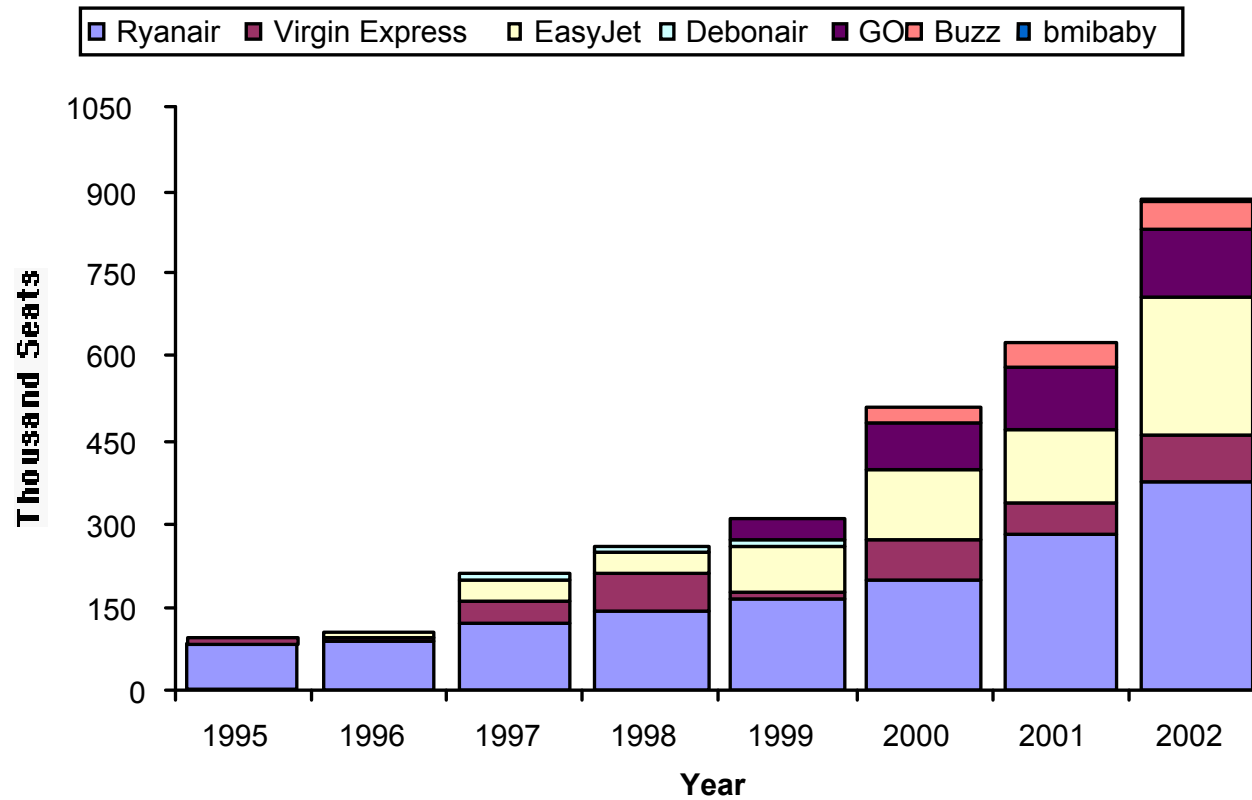
- Asymmetric information

- Low costs

- Yield management



# Growth of no-frill carriers



# Low cost airlines - a failed business model?

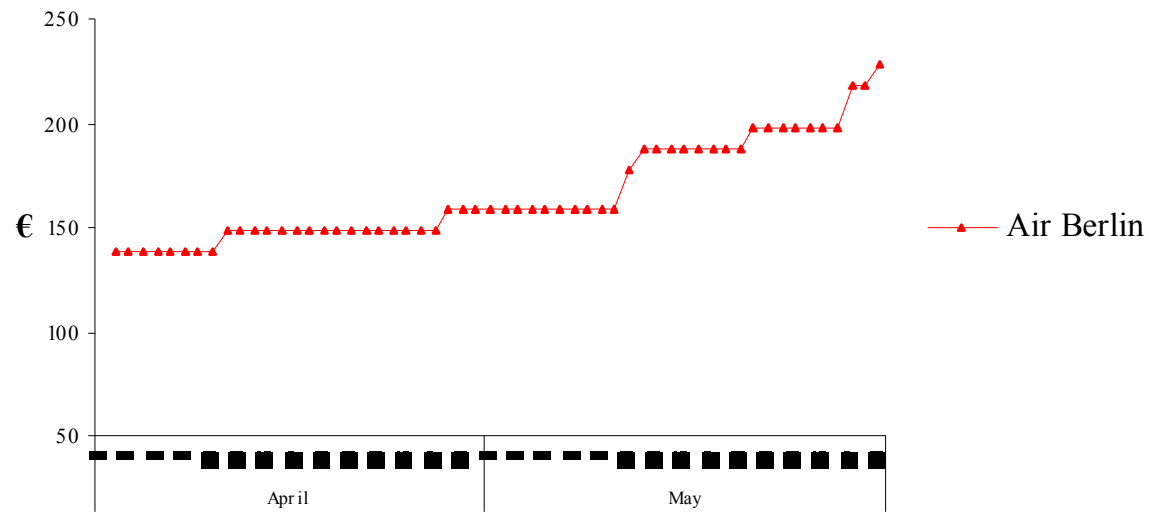
## Defunct low cost carriers

Air Canada Tango  
Air South  
America West Airlines  
ATA Airlines  
Canada 3000  
Compass  
East-West  
Eastwind Airlines  
Greyhound Air  
Hooters Air  
Impulse Airlines  
Independence Air  
JetGreen Airways  
Kiwi Airlines  
Kiwi International Air Lines  
LAPA  
MetroJet  
Midway Airlines  
National Airlines  
Oasis Hong Kong Airlines

Pacific Southwest Airlines  
Pan Am  
Pearl Air  
PEOPLExpress  
Safe Air  
Saro  
Skybus Airlines  
SkyValue  
Song (Delta)  
Southeast Airlines  
TAESA  
Tower Air  
U Air  
United Shuttle  
ValuJet  
Vanguard Airlines  
Vistajet  
Western Pacific Airlines  
Zip

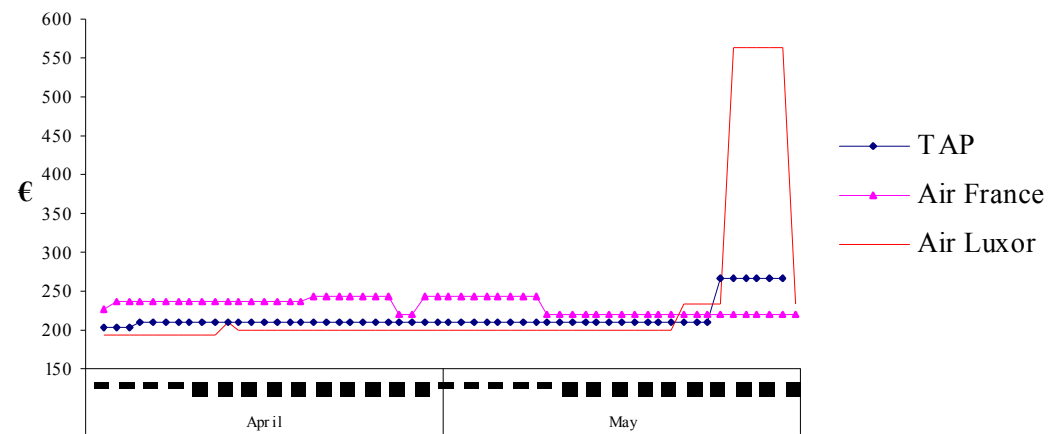
# Temporal fares-offered curve - a monopoly

Porto - Palma : 30 May



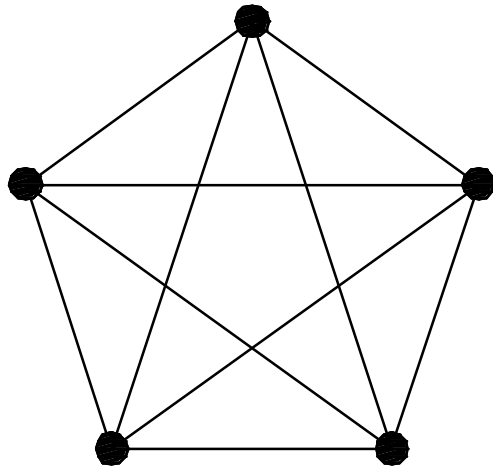
# Temporal fares-offered curve - three carriers

Porto - Paris : 30 May



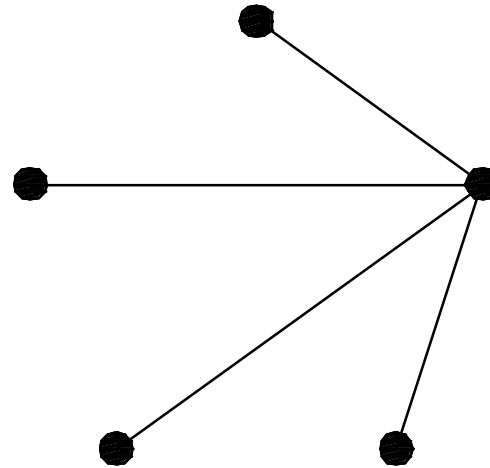
# Hub-and-spoke networks

Point to Point Network



10 different routes

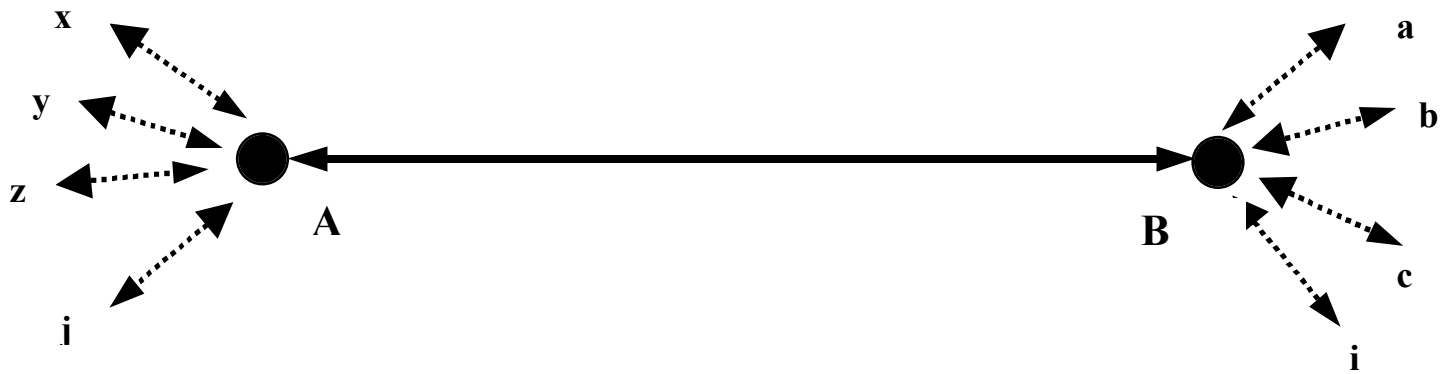
Hub and Spoke Network



4 different routes

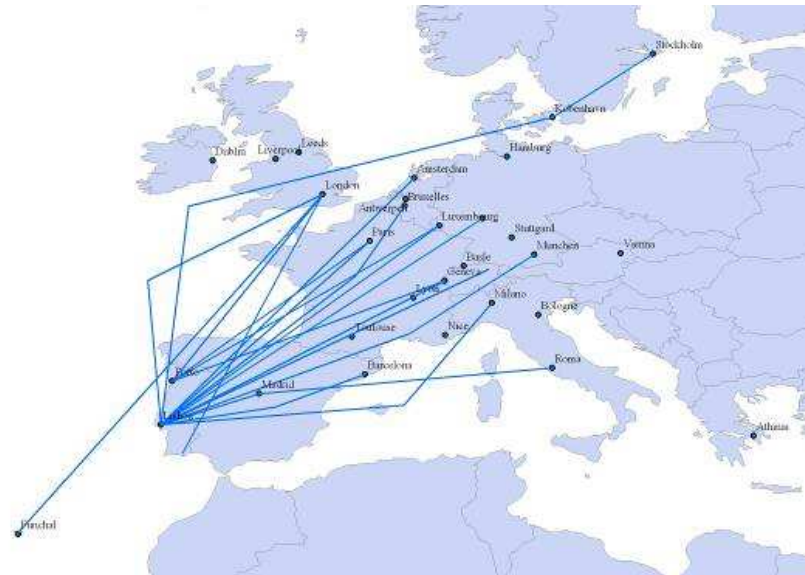
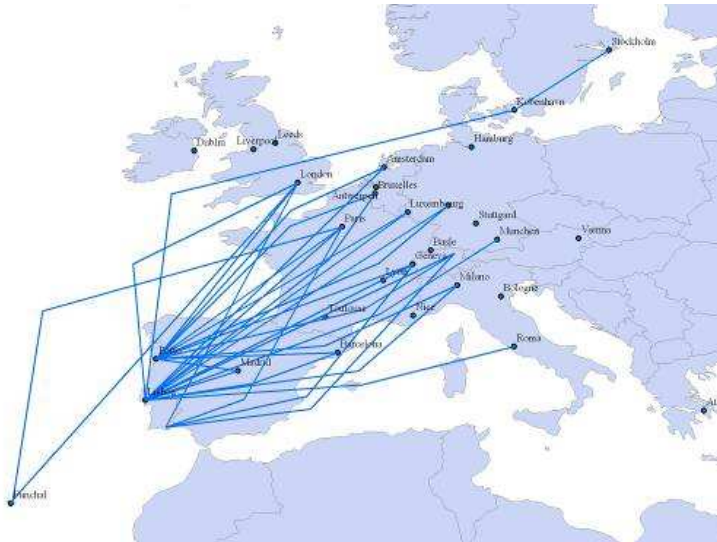


# “Dog-bone” international hub-and-spoke network





# Some short-term protection: TAP European Network 2001 and 2004



# Why do people still invest in airlines?

- Still some protection
- “Las Vegas effect”
- “Cash cow argument”
- Airlines as “Tills”
- Airlines are “Sexy”
- Institutional bale-outs (Chapter 11 in US)

# THE SITUATION IN PORTUGAL

# The situation in Portugal

- Small, relatively compact domestic market
- Significant tourism activity
- Limited airport capacity at main hub
- A small legacy carrier linked into a major alliance
- Presence of a large low cost carrier
- A number of lucrative but protected long-haul markets
- Potential competition in the long run from TGV to Madrid

# The position of the airlines

- The growth in air traffic will be slower than forecast
  - Global economic growth will slow
  - Environmental concerns will grow
  - Fuel prices will stay highMitigating factor:
  - The increased use of alternatives to mineral oil based fuels
  - More fuel efficient aircraft (1% more fuel efficient a year)
- The low cost market will continue to be unstable as carriers come and go.
  - Ryanair will find its margins eroded as other low cost carriers begin to compete on its routes
- The pressures on TAP to merge will increase despite short-term financial success in markets with restrictive bilaterals
  - These will be liberalized
  - The markets will not grow fast
  - Low cost competition will further hurt short haul routes

# Airports

- Slower than projected demand growth will take some pressure off Lisbon Portela.
- If TAP merges then role of Lisbon as a hub will change
- Once the new airport at Alcochete is completed it will be difficult to close Portela due to pressure from business travelers
  - Witness experiences in Washington, etc