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-facited
   • 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

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>US Air Cargo Deregulation Act</td>
</tr>
<tr>
<td>1978</td>
<td>US Airline Deregulation Act</td>
</tr>
<tr>
<td>1979</td>
<td>Term “Open Skies” used</td>
</tr>
<tr>
<td>1984</td>
<td>UK-Netherlands liberal ASA bilateral</td>
</tr>
<tr>
<td>1987</td>
<td>EU’s “First Package”</td>
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<tr>
<td>1987</td>
<td>UK Airports Act (privatization)</td>
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<tr>
<td>1989</td>
<td>EU’s “Second Package”</td>
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<tr>
<td>1989</td>
<td>Northwest-KLM strategic alliance</td>
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<tr>
<td>1992</td>
<td>EU’s “Third Package”</td>
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<tr>
<td>1996</td>
<td>NAV Canada established</td>
</tr>
<tr>
<td>1999</td>
<td>“Single European Skies” initiative</td>
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<tr>
<td>2001</td>
<td>NATS UK established</td>
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</tbody>
</table>
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
The European based “Open Skies” initiatives (passenger services)

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>In Force</td>
<td>10/14/92</td>
</tr>
<tr>
<td>Belgium</td>
<td>Provisional</td>
<td>3/1/95</td>
</tr>
<tr>
<td>Finland</td>
<td>In Force</td>
<td>3/24/95</td>
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<tr>
<td>Denmark</td>
<td>In Force</td>
<td>4/26/95</td>
</tr>
<tr>
<td>Norway</td>
<td>In Force</td>
<td>4/26/95</td>
</tr>
<tr>
<td>Sweden</td>
<td>In Force</td>
<td>4/26/95</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>In Force</td>
<td>6/6/95</td>
</tr>
<tr>
<td>Austria</td>
<td>In Force</td>
<td>6/14/95</td>
</tr>
<tr>
<td>Czech Repub.</td>
<td>In Force</td>
<td>12/8/95</td>
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<tr>
<td>Germany</td>
<td>Provisional</td>
<td>2/29/96</td>
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<tr>
<td>Italy</td>
<td>Comity and Reciprocity</td>
<td>11/11/98</td>
</tr>
<tr>
<td>Portugal</td>
<td>In Force</td>
<td>12/22/99</td>
</tr>
<tr>
<td>Malta</td>
<td>In Force</td>
<td>10/12/00</td>
</tr>
<tr>
<td>Poland</td>
<td>In Force</td>
<td>5/31/01</td>
</tr>
<tr>
<td>France</td>
<td>In Force</td>
<td>10/19/01</td>
</tr>
</tbody>
</table>
Passenger and cargo yield for European Union scheduled airlines
Airline labor physical productivity in Europe (ATK per employee)
EU-US transatlantic air passengers

![Bar chart showing EU-US transatlantic air passengers from 1995 to 2005. The number of passengers increases over the years, peaking in 2000 and maintaining a high level through 2005.](chart.png)
THE CALLENGES 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
Cost differences between a no-frill carrier and a legacy carrier

![Cost Comparison Diagram](image-url)
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

Air Berlin
Temporal fares-offered curve - three carriers

<table>
<thead>
<tr>
<th>Carriers</th>
<th>Porto - Paris: 30 May</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAP</td>
<td>€150 - €200</td>
</tr>
<tr>
<td>Air France</td>
<td>€250 - €300</td>
</tr>
<tr>
<td>Air Luxor</td>
<td>€350 - €400</td>
</tr>
</tbody>
</table>

![Graph showing fares offered curve for different carriers between Porto and Paris for April and May.](image-url)
Hub-and-spoke networks

Point to Point Network

Hub and Spoke Network

10 different routes

4 different routes
“Dog-bone” international hub-and-spoke network
Some short term protection: TAP South American Network 2001 and 2004
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 high
  Mitigating 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 bilateralts
  - 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