Transatlantic business traveller decision drivers: Nationality & product attribute differentials

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Importance of North Atlantic Market

- North Atlantic traffic accounts for 11.9% of worldwide RPKs (IATA 2005)
- Following 9/11 BA’s traffic in this market dropped 17% and profits fell by 69% (BA 2002)
## Business class is very important to airlines

<table>
<thead>
<tr>
<th>Class of Service</th>
<th>Capacity ASK %</th>
<th>Load Factor %</th>
<th>Yield per RPK USc</th>
<th>Revenue %</th>
<th>Operating Ratio Revenue as % of Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>2.4</td>
<td>36</td>
<td>23.5</td>
<td>3.8</td>
<td>73</td>
</tr>
<tr>
<td>Business</td>
<td>14.8</td>
<td>52</td>
<td>18.8</td>
<td>28.1</td>
<td>129</td>
</tr>
<tr>
<td>Economy</td>
<td>82.8</td>
<td>77</td>
<td>5.5</td>
<td>68.1</td>
<td>105</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: IATA 2003
Propensity to fly premium

% of business travellers in premium cabins, 4 quarter moving average

Source: BA
Market in change – diverging demand

- Decreasing full Business Class demand
- Growth of single cabin Business Class services
  - Privat Air
- Development of discounted Business Class services
  - MaxJet
  - Eos
- Redefining “long haul”
- Downgrading to premium economy or economy
- Unbundling comfort and flexibility
Previous research

- Choice is based on first differentiating item – if core (schedule, aircraft, price) are similar it is the service elements (seat comfort, FFP, added services, etc.) that is the basis of the purchase decision (Guillibaud and Bond 1997)

- Brown found four market segment in LH business market
  - Switcher, Time conscious, Price Trader, and High maintenance
Long Haul Business Travel Purchase Factors

<table>
<thead>
<tr>
<th>Order</th>
<th>1998</th>
<th>2002</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Convenient schedule</td>
<td>Seat comfort</td>
<td>Frequent Flyer Program</td>
</tr>
<tr>
<td>2</td>
<td>Frequent Flier Programme</td>
<td>Convenient schedule</td>
<td>Fare</td>
</tr>
<tr>
<td>3</td>
<td>Fare</td>
<td>Fare</td>
<td>Seat comfort</td>
</tr>
<tr>
<td>4</td>
<td>Airline punctuality</td>
<td>Frequent Flyer Program</td>
<td>Convenient schedule</td>
</tr>
<tr>
<td>5</td>
<td>Seat comfort</td>
<td>n/a</td>
<td>Past experience</td>
</tr>
</tbody>
</table>

Source: CATS IATA

- Fare increasing in importance
- Schedule convenience diminishing in relative importance
- Seat and FFP no trends
Research

Research premise

– Recent changes in the decision factors and behaviour on North Atlantic business travel market means re-examination of the purchase factors is worthwhile.

Research aims

– To evaluate the value of a number of product elements by forcing a sample of business travellers to trade product benefits against travel expenditure
– Assess the effect of nationality on the decision drivers on long haul business travellers
Methodological Considerations

- Attitude scales of product elements do not force respondents to trade one element against another.
- Stated preference analysis was adopted to force respondents to trade product elements against each other – Price, Frequency, in-flight comfort, FFP rewards, ticket flexibility.
- Business travellers from US and Europe may have different preferences.
Stated preference design

- Respondents asked to consider a hypothetical route
  - London (no airport defined) and Chicago

- Variables used
  - Price (£1,000, £1,500, £2,500)
  - In-flight comfort ("Standard Seat" (Economy), Extra Leg Room (Economy Plus), Flat Bed (Business Class))
  - FFP (points awarded, points not awarded)
  - Frequency (daily, and thrice daily, five times daily)

- Orthogonal design
  - 16 product offerings

- Measurement
  - 10 point rating scale on likeliness to choose service
Survey Administration

- Online survey distributed to databases from:
  - Association of Travel Executives
  - UK Institute of Travel Management
- n = 62 respondents (10% response rate)
- 992 lines of SP data
- 200 lines held out for model validation
Results

- 79% in Director or Senior management levels
- 74% Male (72% in US)
- 80% between 25 and 65 years of age
- 14.6 business trips per year
- Of which 7.44 long haul
Company size profile of respondents

Air Transport Dept

North American
European
FFP membership

- None
- One
- Two - Four
- More Than Four

Europe vs. North America
FFP reward usage

- No difference between North American and European counterparts
  - 80% used accrued points for personal travel benefits
  - 16% used points for upgrades
  - 4% never redeemed rewards
# Model of Long Haul Business Travellers

\[ \text{Score} = 2.458 + (-1.172 \times \text{Price}) - 12.766 + (1.015 \times \text{Seat Comfort}) + 11.167 + (1.544 \times \text{FFP}) + 10.289 + (0.172 \times \text{Frequency}) + 3.841 + (0.468 \times \text{Ticket Flexibility}) + 3.119 \]

\[ R^2 = 0.26 \]

Validity test: Compare model prediction against hold-out
\[ r = 0.547 \]
## Model of European LH Business Travellers

Score = 2.458 + (-1.193 * Price) + (1.048 * Seat Comfort) + (1.120 * FFP) + (0.812 * Frequency) + (0.160 * Ticket Flexibility)

\[
R^2 = 0.241
\]

Validity test: Compare model prediction against hold-out

\[
r = 0.571
\]
## Model of North American LH Business Travellers

\[
\text{Score} = 2.458 + (-2.170 \times \text{Price}) - 8.884 + (1.040 \times \text{Seat Comfort}) + 7.654 + (0.962 \times \text{FFP}) + 10.341 + (0.190 \times \text{Frequency}) + 3.033
\]

\[R^2 = 0.34\]

Validity test: Compare model prediction against hold-out

\[r = 0.665\]
## Scenario Analysis Examples

### Price increase by £500

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Price</th>
<th>Seat</th>
<th>FFP</th>
<th>Freq</th>
<th>Flex</th>
<th>All</th>
<th>Europe</th>
<th>N. America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1</td>
<td>£ 1,000.00</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2.941</td>
<td>3.135</td>
<td>2.479</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>£ 1,500.00</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1.769</td>
<td>1.942</td>
<td>1.339</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in attractiveness</td>
<td>-39.85%</td>
<td>-38.05%</td>
<td>-45.99%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Number of Frequencies

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Price</th>
<th>Seat</th>
<th>FFP</th>
<th>Freq</th>
<th>Flex</th>
<th>Europe</th>
<th>N. America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1</td>
<td>£ 1,000.00</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4.575</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>£ 1,000.00</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4.255</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in attractiveness</td>
<td>-6.99%</td>
<td>-7.56%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Ticket Flexibility

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Price</th>
<th>Seat</th>
<th>FFP</th>
<th>Freq</th>
<th>Flex</th>
<th>Europe</th>
<th>N. America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1</td>
<td>£ 1,000.00</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4.255</td>
<td>4.649</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>£ 1,000.00</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4.961</td>
<td>4.649</td>
</tr>
<tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in attractiveness</td>
<td>16.59%</td>
<td>0.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Impact of FFP points awards on three classes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Economy</th>
<th>Economy Plus</th>
<th>Business Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>£1,000</td>
<td>£1,500</td>
<td>£2,500</td>
</tr>
<tr>
<td>Seat</td>
<td>Standard seat</td>
<td>Extra legroom</td>
<td>Flat bed</td>
</tr>
<tr>
<td>Flexibility</td>
<td>No Flexibility</td>
<td>No Flexibility</td>
<td>No Flexibility</td>
</tr>
<tr>
<td>Frequency</td>
<td>1 Daily</td>
<td>1 Daily</td>
<td>1 Daily</td>
</tr>
</tbody>
</table>

By adding FFP rewards to each of these products we can see in the increase in attractiveness
Impact of addition of FFP rewards

- Economy Class
- Economy Plus
- Business Class

Europe
North America

Air Transport Dept

Cranfield UNIVERSITY
## Economy Plus products

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Economy</th>
<th>Economy Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>£1,000</td>
<td>£1,500</td>
</tr>
<tr>
<td>Seat</td>
<td>Standard seat</td>
<td>Extra legroom</td>
</tr>
<tr>
<td>Flexibility</td>
<td>No Flexibility</td>
<td>Flexibility</td>
</tr>
<tr>
<td>Frequency</td>
<td>1 Daily</td>
<td>1 Daily</td>
</tr>
</tbody>
</table>

### Scenarios

<table>
<thead>
<tr>
<th></th>
<th>Price</th>
<th>Seat</th>
<th>Freq</th>
<th>Europe</th>
<th>N. America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario 1</td>
<td>£1,000.00</td>
<td>1</td>
<td>1</td>
<td>3.135</td>
<td>2.479</td>
</tr>
<tr>
<td>Scenario 2</td>
<td>£1,500.00</td>
<td>2</td>
<td>1</td>
<td>3.696</td>
<td>2.301</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.89%</td>
<td>-7.18%</td>
</tr>
</tbody>
</table>

NB: FFP points are not included in analysis due to the high impact on N. American respondents, but their inclusion would make Economy Plus much more attractive.
Conclusions

- Price is the key purchase factor
- For N. American business travellers FFP point accumulation and reward is still a strong purchase factor
- For European ticket flexibility adds to service package attractiveness
- Premium Economy products can be constructed to be highly attractive to both N. American and European travellers