ECONOMICS BRIEFING

March 2007

AIRLINE COST PERFORMANCE

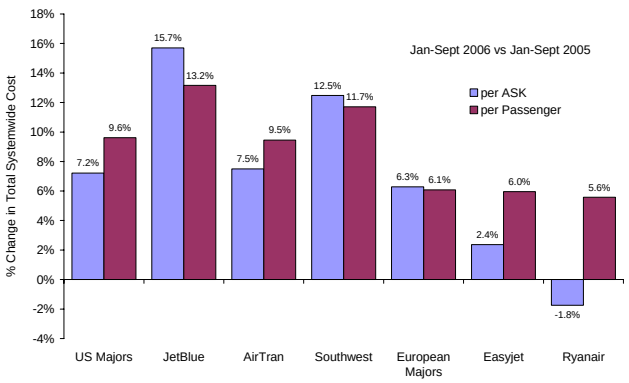
This briefing paper updates the analysis of airline costs on short-haul markets published in 2006 in the IATA Economics Briefing No 5 'Airline Cost Performance' (available at www.iata.org/economics). Since then:

- A rise in the spot price of jet fuel from $50 a barrel in 2004 to $82/b in 2006 added an average of 10% to unit costs over that period. Offsetting cuts by airlines to their non-fuel costs stabilised total unit costs in 2005, but systemwide data to September 2006 suggests that all major airlines faced rising unit costs last year;
- Despite this, profitability improved in 2006. Rising unit costs last year were more than offset by higher unit revenues, boosted by higher yields but also by higher load factors as airlines carefully controlled capacity;
- Successes during 2001 to 2005 were substantial. Crew unit costs were cut 30% by US network airlines and by 20% in Europe. Maintenance and distribution unit costs were cut 30% in both regions;
- However, supplier costs such as infrastructure charges, were more resistant to change. Greater competition in ground-handling activities has led to minor reductions in overall infrastructure unit costs. However, airport aeronautical charges paid both by airlines and directly by passengers continue to rise, partly due to rising capital spending but also a result of airports exploiting their monopoly power;
- It will be more difficult to further improve unit revenues in an environment where demand is slowing and aircraft deliveries increasing. Moreover, the pause in 2006 to the 4-year trend of falling non-fuel unit costs at network airlines indicates a tougher environment for airlines in which to achieve further cost reductions;
- This tougher environment mostly reflects tighter markets for labour and aircraft, at the end of an extended boom in economic growth and air traffic. Airlines themselves continued to improve efficiency last year with higher employee productivity and better aircraft utilisation. However, there are now shortages of skilled staff and fuel efficient aircraft, which has raised their cost. There are also rising costs, such as airport charges, where due to monopoly power the market does not work;
- Fuel costs may now have stabilised. Renewing the downward trend in non-fuel unit costs will require further success in improving airline efficiency and reducing some key supplier costs. Regulators have a key role to play in improving infrastructure to allow better aircraft utlization and in the economic regulation of monopoly suppliers to ensure charges are close to the levels a competitive market would produce.

Cost and unit revenue developments in 2006

- A rise in the spot price of jet fuel from $71/b in 2005 to $82/b (see www.iata.org/fuelpricemonitor) in 2006 added around 4% to unit costs, on average;
- Fuel hedging did make some difference to relative cost performance between airlines, but less so than in earlier years as cheaper hedges expired;
- Network airlines faced rising unit costs but performed as well or better than their key no-frills competitors on short-haul markets in the US. In Europe, lengthening stage-lengths for the no-frills airlines exaggerated their cost performance.

1.1: Estimated change in systemwide total costs[i], 2005-2006

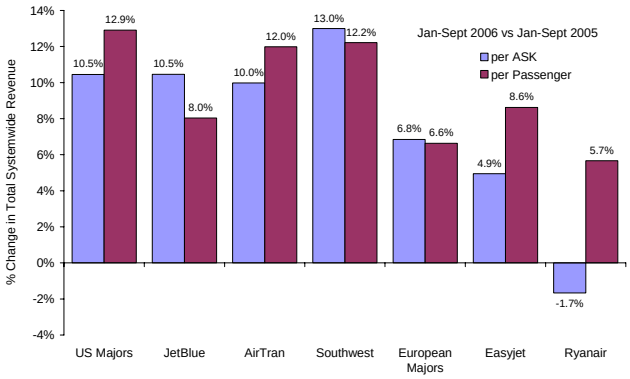


- Network airlines saw increases to their non-fuel unit costs albeit relatively small, but now adding rather than reducing pressure from higher fuel prices;
- Categories such as labour, maintenance and leasing costs, where large reductions had been achieved over 2002-2004, stopped falling and rose, albeit by a small amount;
- Performance between airlines has been uneven and distorted by changing stage-lengths. However, it does seem that tighter markets for labour and aircraft are making it more difficult to extract further cost reductions, though efficiency gains continue.

1.2: Estimated change in systemwide non-fuel costs, 2005-2006

- Unit revenues rose significantly in 2006, particularly in the US, at a faster rate than the previous year, and more than offset the rise in unit costs;
- As with unit costs, changing stage-lengths distorted the per ASK data in Europe since yields typically fall with distance flown;
- Nominal yields were stronger, reflecting the robust economic situation. However, unit revenues also rose due to higher load factors as airlines carefully managed capacity. In the US domestic market capacity was reduced in 2006, which drove the better relative performance by US airlines.

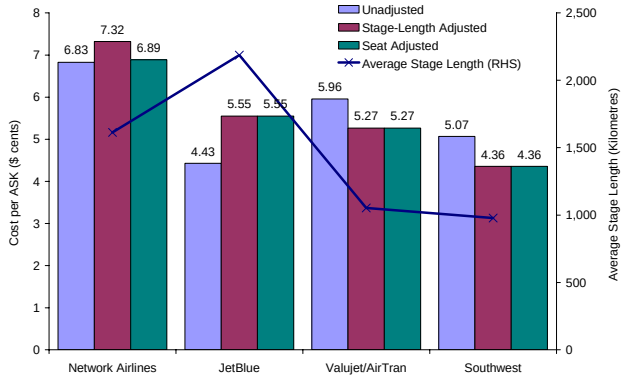
1.3: Estimated change in systemwide revenue, 2005-2006



US airline short-haul costs in 2005

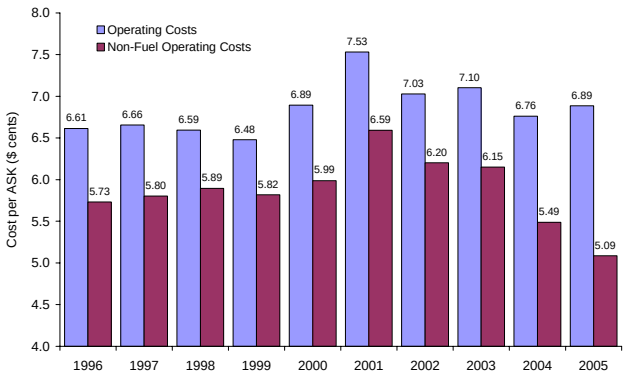
- Three adjustments are made to the raw unit costs data to allow a proper comparison. First, an inflation adjustment to earlier years;
- Second, the raw data is adjusted to the average stage length in US domestic markets of 1400 kilometers. High fixed costs in the airline business means unit costs fall as stage length increases, requiring an adjustment;
- A further, downward, adjustment is made to network airline costs to account for the average 14% additional seats placed by no frills airlines on the same aircraft as flown by network airlines;

2.1: Operating Cost per ASK, 2005



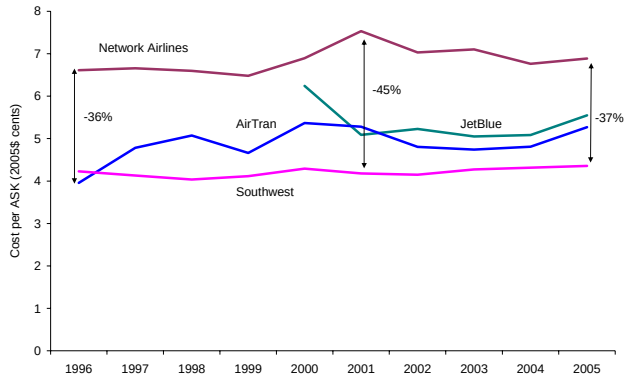
- US network airlines achieved a 7% reduction in domestic non-fuel unit costs in 2005, 23% lower than the 2001 peak, after adjusting for inflation;
- Total unit costs rose 2% in 2005, as the 42% rise in the spot price of jet fuel overwhelmed the cost efficiencies achieved elsewhere;
- The rise in fuel costs in the past three years has limited the decline in US network airlines unit costs from 2001-2005 to 8.5%. However, if fuel prices do fall significantly the underlying improvement in non-fuel cost performance will become more visible.

2.2: US Network Airlines Adjusted Cost per ASK, 1996 to 2005



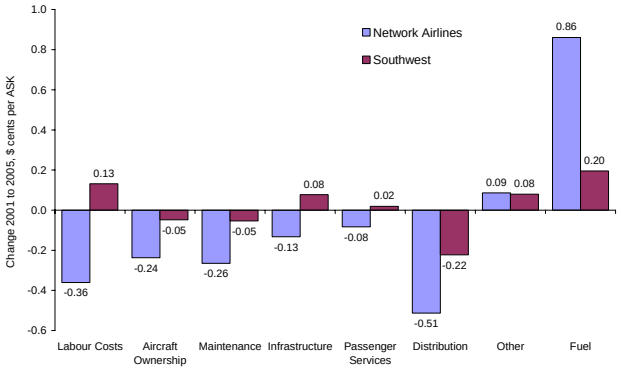
- As a result of this performance on domestic markets, the major network airlines in the US stabilised their unit costs in 2005 relative to Southwest and narrowed the gap with the number two and three no frills airlines;
- From a peak cost gap in 2001, when Southwest's unit costs were 45% lower than competing network airlines, the network airlines narrowed this gap to 37% by 2005.

2.3 Cost per ASK, 1996 to 2005



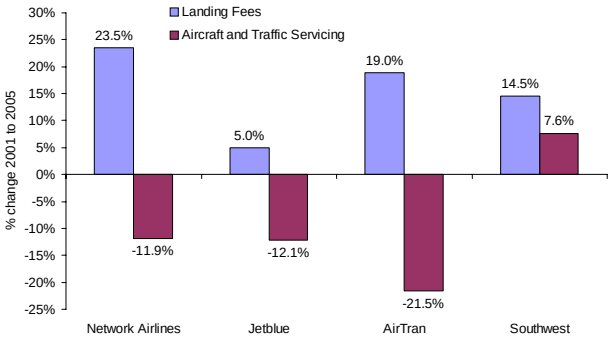
- Fuel costs have been a big differentiator between network airline and Southwest's unit costs in the four years to 2005. Southwest benefited from earlier low cost hedges, whereas the major network airlines were severely limited by poor credit quality in their ability to hedge;
- However, network airlines were far more successful in reducing other costs, albeit from a higher base. Crew labour, aircraft ownership, maintenance and distribution unit costs were all cut by 30% or more over this period.

2.4: Change in Unit Costs, 2001 to 2005 ($ cents per ASK)



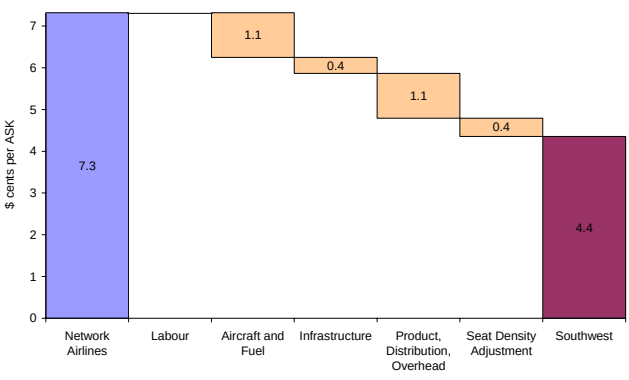
- The slight fall in infrastructure unit costs for network airlines is primarily a reflection of increased efficiency in handling and servicing operations on the ground. US airlines can directly influence efficiency gains in this area through their day-to-day input into airport handling operations, often operating terminals themselves;
- By contrast, airport landing fees – where airports enjoy monopoly market power – have risen significantly since 2001. US airports are not contributing to the efficiency improvements by their airline users.

2.5: Change in Infrastructure Unit Costs, 2001 to 2005



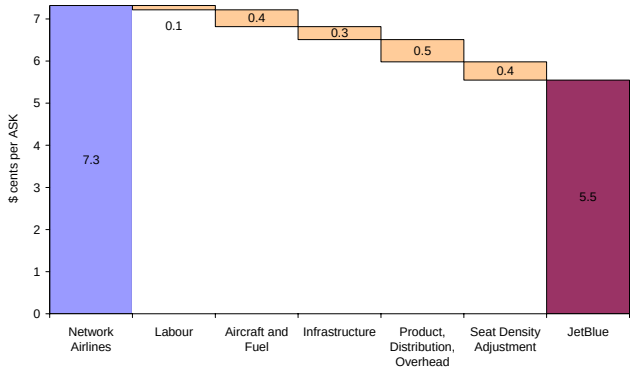
- Rising labour costs at Southwest together with Chapter 11-related cuts at some network airlines have eliminated the gap in crew labour costs;
- The majority (75%) of the remaining gap in domestic unit costs lies in aircraft and fuel, and in product, distribution and other overhead costs.
- One-third of this represents a difference in fuel costs, a large part of which will be eliminated as Southwest's fuel hedges unwind or lose value if fuel prices fall.

2.6: The Cost Gap with Southwest Airlines, 2005



- The gap with JetBlue was narrowed from 2.1 cents/ASK in 2004 to 1.8 cents/ASK by 2005. After adjusting for seat density JetBlue's unit costs were 19% lower than network airline majors in 2005;
- Cost gaps are smaller and more evenly spread. There is less difference in fuel costs since JetBlue did not have the extensive fuel hedges that benefited Southwest;
- The narrower gap in product costs is indicative of the fuller service offered by JetBlue in comparison to Southwest's no frills.

2.7: The Cost Gap with JetBlue, 2005



- The cost gap with Air Tran was narrowed from 2.3 cents/ASK in 2004 to 2 cents/ASK in 2005. After adjusting for seat density Air Tran's unit costs were 23% lower than network airline majors in 2005;
- The virtual absence of any gap in ACMI and fuel costs points to the importance of the difference in product scope and quality in determining the unit cost gap with network airlines;
- Infrastructure cost differences are much less of an issue in the US than in Europe, reflecting the use of similar airport types.

2.8: The Cost Gap with AirTran, 2005

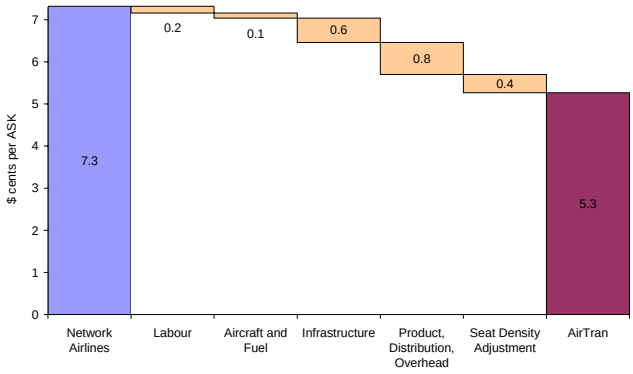


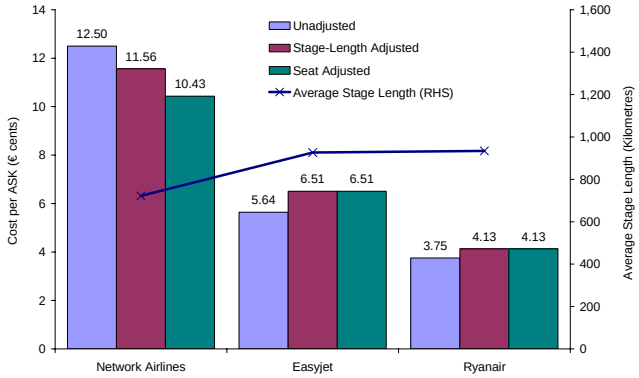
Table 1: US airline unit costs on domestic US markets, 2005

2005 $ cents per ASK	**Network Airlines**	**JetBlue**	**AirTran**	**Southwest**
ACMI + Fuel	***3.69***	***3.19***	***3.41***	***2.62***
Labour	0.76	0.66	0.60	0.76
Fuel	1.80	1.48	1.56	1.00
Aircraft Ownership	0.54	0.59	0.82	0.45
Maintenance	0.60	0.46	0.43	0.42
Infrastructure	***1.40***	***1.09***	***0.82***	***1.02***
Landing Fees	0.17	0.20	0.10	0.10
Other	1.23	0.89	0.72	0.91
Product, Distribution	***1.79***	***1.27***	***1.03***	***0.72***
Distribution	1.17	0.94	0.63	0.51
Other	0.62	0.33	0.41	0.20
All non-Fuel	***5.09***	***4.07***	***3.71***	***3.36***
Total Operating Expenses				
Adjusted	**6.89**	**5.55**	**5.27**	**4.36**
Unadjusted	6.83	4.43	5.96	5.07

European airline within-Europe costs

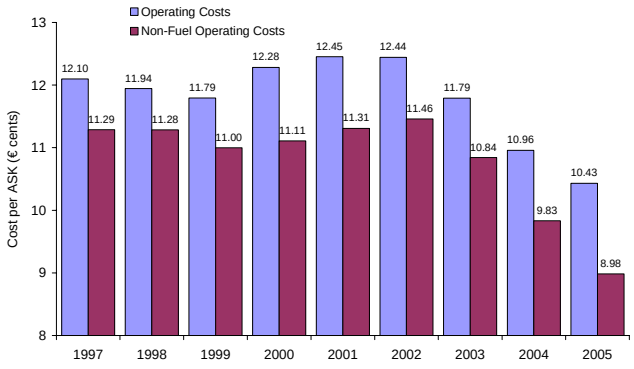
- The same adjustments to raw unit cost data are made for the comparison of within-Europe airline cost performance;
- Stage lengths are shorter than in the US domestic market, so unit costs will not benefit as much from scale economies. The data is also expressed in € cents rather than $ cents;
- Unlike the US domestic market, no-frills airlines in Europe operate longer stage lengths than network airlines. This divergence is widening requiring a downward adjustment in network airline unit costs.

3.1: Operating Cost per ASK, 2005



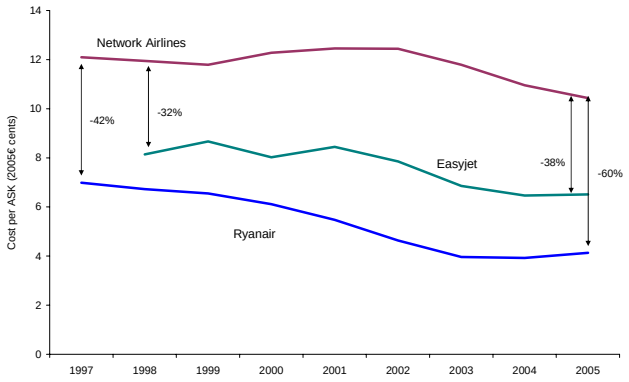
- European network airlines achieved a 9% reduction in short-haul non-fuel unit costs in 2005, 22% lower than the peak in costs four years earlier;
- Total unit costs fell 5% in 2005 as, unlike their counterparts in the US, European network airlines were able to dampen the rise in spot fuel costs through extensive hedging;
- The rise in fuel prices has dampened the underlying improvement in network airline cost performance. However, the 16% fall in total unit costs over the 2001-2005 period has allowed these efficiency gains to be more fully reflected in the bottom line.

3.2: EU Network Airlines Adjusted Cost per ASK, 1997 to 2005



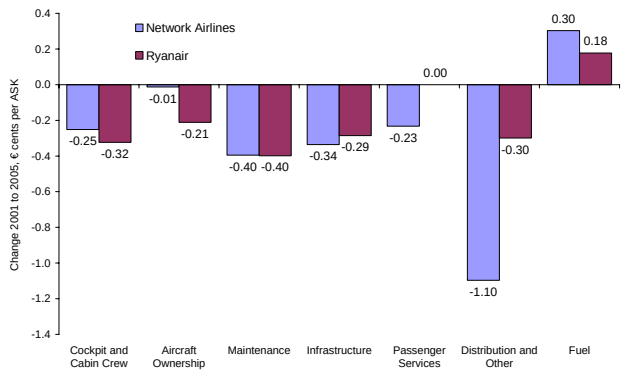
- As a result of this performance on short-haul markets, European network majors have been able to narrow the gap in their unit costs with the best performing no-frills airlines in the past two years;
- The gap was at its widest in 2003, when Ryanair's unit costs were almost 70% lower than network airline majors. This gap had been narrowed to 60% by 2005;
- The gap with easyJet had also been narrowed by 2005, to 38%.

3.3 Cost per ASK, 1997 to 2005



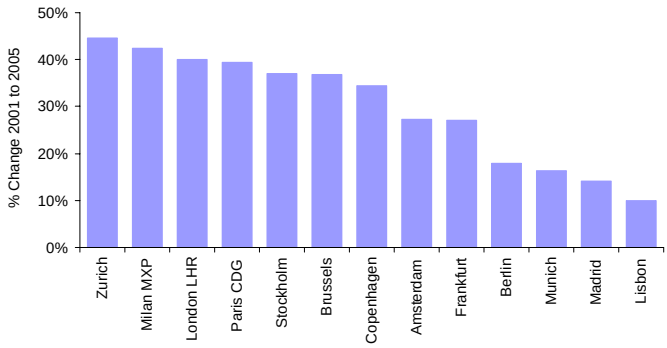
- Fuel cost increases made very little difference to the change in the cost gap over 2001-2005, unlike the situation in the US;
- One-third of the reduction in non-fuel unit costs over this period has come from lower sales and distribution costs, which were cut 32%, as paperless technologies were adopted;
- Maintenance also saw a 30% cut in unit costs, though a lack of fleet renewal over this period prevented much change in ownership costs. Crew unit costs were cut 20% over this period, a little less than in the US where airlines had the influence of Chapter 11. Infrastructure costs however were able to be cut by only 9% over this period.

3.4: Change in Unit Costs, 2001 to 2005 (€ cents per ASK)



- It is difficult to separate out the different elements of infrastructure costs for European airlines. However, evidence from elsewhere would suggest that any savings in infrastructure unit costs are concentrated among ground handling activities – and influenced by greater competition in that sector;
- By contrast, aeronautical charges have increased significantly at many major European airports since 2001. There is increased capital spending but European airports are, in many cases, exploiting their market power. Higher airport charges are paid both by airlines and directly by passengers themselves (in the latter case, therefore, not appearing in airline cost figures).

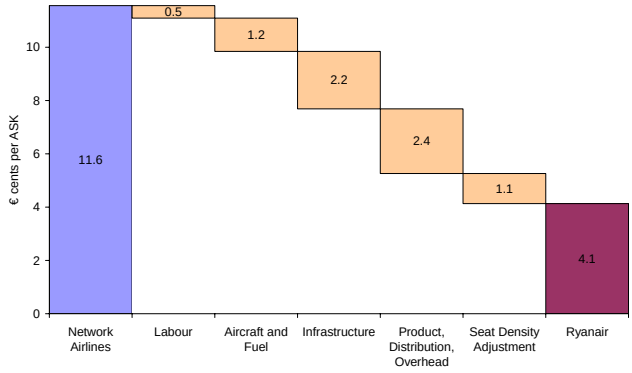
3.5: Change in European Airport Aeronautical Charges, per aircraft, 2001 to 2005



Source: TRL

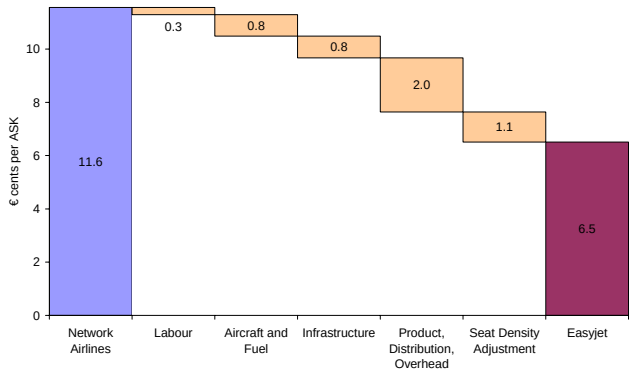
- Infrastructure costs remained a major part of the cost gap with Ryanair in 2005, reflecting discounted charges from operating at secondary airports, unlike the situation in the US;
- A newer fleet bought at the bottom of the cycle explains part of the cost gap. However, the largest gap still exists for product and distribution costs. Sales and distribution unit costs have been cut 32% over 2001-2005 by network airline majors but remain € cents 1.5/ASK higher than those at Ryanair.

3.6: The Cost Gap with Ryanair, 2005



- There is far less of a gap in infrastructure costs with easyJet since it operates at more major airports than Ryanair. The major cost gap exists with product and distribution costs;
- The gap on sales and distribution costs between the network airlines and easyJet has narrowed substantially over 2001-2005 but is still significant at € cents 1.25/ASK;
- The impact of higher seat density is estimated explicitly. The other key productivity factor reducing no frills unit costs relative to network airlines across cost categories is a faster turnaround time, generating more ASKs per aircraft.

3.7: The Cost Gap with Easyjet, 2005



Note: The data for this section combines IATA's AETF database of European network airline costs on international intra-European routes with data for domestic routes, together with information from the annual reports of no-frills airlines. We are grateful for the supply of aggregated data on European network airline costs and unit revenues on domestic routes by the Association of European Airlines.

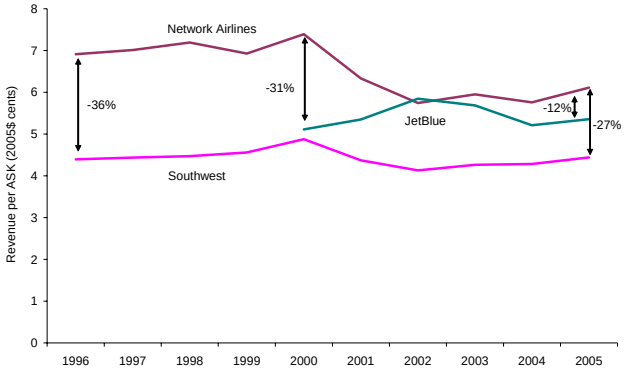
Table 2: European airline unit costs on within-Europe markets, 2005

2005 € cents per ASK	**Network Airlines**	**Easyjet**	**Ryanair**
ACMI + Fuel	***4.39***	***3.31***	***2.67***
Labour	0.99	0.73	0.52
Fuel	1.45	1.32	1.37
Aircraft Ownership	1.11	0.65	0.48
Maintenance	0.83	0.62	0.29
Infrastructure	***3.31***	***2.50***	***1.15***
Airport Charges & Station	2.70	1.95	0.68
Other	0.61	0.54	0.48
Product, Distribution	***2.73***	***0.70***	***0.31***
Distribution	1.51	0.26	0.04
Other	1.22	0.44	0.27
All non-Fuel	***8.98***	***5.19***	***2.77***
Total Operating Expenses			
Adjusted	**10.43**	**6.51**	**4.13**
Unadjusted	12.50	5.64	3.75

US & European short-haul unit revenues

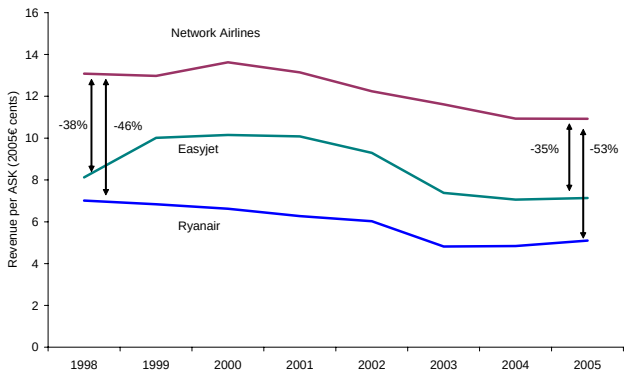
- Narrowing the cost gap with their no-frills competitors helped US network airlines to improve operating profitability in 2005, but rising unit revenues also played an important part;
- A combination of strong demand and very limited additions to capacity on US domestic markets in 2005 allowed higher yields and higher load factors;
- Southwest was achieving unit revenues 27% lower than the network majors in 2005. The cost incurred in supporting this premium revenue stream will explain some, but not all, of the cost gap.

4.1: Adjusted Revenue per ASK for US airlines



- European network airlines are able to achieve a much higher revenue premium over their no frills competitors on short-haul markets, than their counterparts in the US;
- Ryanair was receiving unit revenues (including ancillary revenues) 53% less than network airline majors. This is likely to reflect less convenient airports and lower product quality in terms of frequencies, network coverage and other factors. More so than the US, this suggests some of the cost gap in Europe is supporting premium revenue streams for the network airline majors.

4.2: Adjusted Revenue per ASK for European airlines



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[i] Passengers are enplanements in US terminology. US majors: American, Delta, United. European majors: Air France, British Airways, Lufthansa.