



Effect Of A New Heathrow Runway On Air Traffic Demand

Introduction

There has been a huge lobbying campaign by Heathrow Airport to convince politicians and opinion formers that regions will benefit economically from Heathrow expansion. The argument being that more air travel brings more trade. It remains unproven that having more and more air travel generates more trade, not least because the great majority of air travel is leisure, not business. However, this paper just examines the changes to numbers of passengers resulting from Heathrow expansion. It shows **big reduction in traffic growth at regional airports**.

Traffic demand data

The Airports Commission (AC) carried out a detailed analysis of demand, the results being published in ‘Strategic Fit – updated forecasts’ July 2015.^[1] The demand was forecast in the case of a new (third) runway at Heathrow, termed here ‘With R3’. The demand was also forecast for a ‘Do Minimum’ case. This assumes no new runway at Heathrow but, crucially, no new runways anywhere else. The Do Minimum traffic can be compared with the With R3 traffic to show the effects of the new runway.

Results

As might be expected, the demand for the UK is a bit larger with R3 than Do Minimum. (But only if there is no constraint on carbon emissions.) However, the great majority of the increase is due to ‘International-to-International Transfers’. These are foreigners changing planes in the UK, mainly at Heathrow. Because the passengers do not stay in the UK, they bring no appreciable economic benefit. They even avoid tax (no Air Passenger Duty, no tax on aircraft fuel, duty-free goods, etc.)

The reason why there is such a slight effect of a new runway at Heathrow is that there is ample spare capacity at all UK airports except Heathrow and Gatwick. If the latter are not expanded, terminating demand will be simply be met at other airports.

There are large increases in traffic at Heathrow with R3. But these cause **a reduction of traffic at regional airports**. The traffic at 2030 is 2.5% or 10.3% less in 2030 for a third runway than without, depending on policy on carbon emissions (see appendix). Traffic at 2050 is 8% or 24% less, depending on carbon policy. See appendix for figures quoted and references.

In terms of growth, the figures are even more revealing. **Growth to 2030 is 7% or 32% less, depending on carbon policy. Growth to 2050 is 16% or 43% less.** See appendix.

Conclusions

A third runway would increase slightly the total UK traffic, but only assuming no constraints on carbon emissions. It would greatly reduce growth of traffic at regional airports (irrespective of carbon). It is hard to see how this could be good for regional economies.

A new runway will increase the concentration of aviation-related and aviation-dependent industries in the SE and away from the regions. It will also mean that government expenditure on surface access, estimated at £4-17 billion, will be spent in the SE and not in the regions.

Appendix – Traffic Demand at 2030 and 2050

The tables below show the effects - as forecast by the Airports Commission (AC) – of a third runway at Heathrow. Results are given for the UK as whole and for the “regions”, that is all UK airports except the London airports.

Data for these tables is taken directly from the Airports Commission (AC) report ‘Strategic Fit: Forecasts. July

2015'. References are given to the table (T) and page number (p) of the report. Effects in percentage terms are calculated straightforwardly from the data.

'Do Min' is the AC's 'Do Minimum' scenario where there is no new runway in the SE or anywhere else in the country. 'With R3' is where the Heathrow NW option is built but there is no new runway anywhere else.

The AC used a number of forecast scenarios with more or less 'optimistic' growth projections. However, the one it based its conclusions and report upon is 'Assessment of Need'.

Figures in the table are millions of passengers per annum at UK airports (mppa). The effect is calculated as a percentage increase or decrease in traffic with R3 as compared with the Do Min option. (For regional airports the traffic excluding international-to-international transfers is not shown because the transfers are negligible.)

UK traffic (carbon traded)

Year	Total traffic			Traffic excluding International-to-International transfers		
	Do Min	With R3	% effect	Do Min	With R3	% effect
2030	313.5	330.9	+ 5.6%	292.4	294.8	+ 1.0%
2050	410.5	435.4	+ 6.1	403.4	412.2	+ 2.2%
Source	T5.5 (p77-78)	T6.15 (p137-138)	Calc	Calc from T5.5	Calc from T6.15	Calc

Regional traffic (carbon traded)

Year	Total traffic			Growth in traffic (from 2011)		
	Do Min	With R3	% effect	Do Min	With R3	% effect
2011	82.8	82.8				
2030	129.1	125.9	- 2.5%	46.3	43.1	- 6.9%
2050	207.1	190.0	- 8.3%	124.3	107.2	- 16.0%
Source	T5.5 (p77-78)	T6.15 (p137-138)	Calc	Calc from T5.5	Calc from T6.15	Calc

In its forecasts and estimates of economic benefits, AC used two different approaches to address the issue of aviation's climate changing emissions. One approach is 'carbon traded'. Here a 'cost of carbon' is assumed to be included in air fares and this feeds through to demand and economic benefits. The approach is called carbon traded because the cost of carbon (supplied by Department of Energy and Climate Change) is based on the assumption that airlines will have to purchase carbon permits in a traded market. The above tables are AC's carbon traded scenarios.

AC's alternative approach is 'carbon capped'. Here the amount of carbon that aircraft can emit is capped at a level that is consistent with the UK's CO2 target in the Climate Act and budgets. The tables below show the effect of a third runway in AC's carbon capped scenario.

Neither of AC's approaches take account of non-CO2 emissions that are estimated to add another 60% to aviation's climate impact.

UK traffic (carbon capped)

Year	Total traffic			Traffic excluding International-to- International transfers		
	Do Min	With R3	% effect	Do Min	With R3	% effect
2030	303.1	295.8	- 2.4%	281.3	262.7	- 6.6%
2050	385.7	368.9	- 4.4%	377.4	338.4	- 10.3%
Source	T5.6 (p79-80)	T6.16 (p140-141)	Calc	Calc from T5.6	Calc from T6.16	Calc

Regional traffic (carbon capped)

Year	Total traffic	Growth in traffic (from 2011)
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	Do Min	With R3	% diff	Do Min	With R3	% effect
2011	82.8	82.8				
2030	122.8	110.2	- 10.3%	40.0	27.4	- 31.5%
2050	184.8	141.3	- 23.5%	102.0	58.5	- 42.6%
Source	T5.6 (p79-80)	T6.16 (p140-141)	Calc	Calc from T5.6	Calc from T6.16	Calc

It can be seen that there is actually a reduction in UK traffic as a result of R3. This is due to the carbon inefficiency induced by a new (unnecessary) runway. The regions suffer much larger losses than in the carbon traded scenario because even more of the carbon-limited growth is sucked into Heathrow.

Contact: Nic Ferriday, West London Friends of the Earth
0208 357 8426 ; 07873 388453 ; wlfoe@btinternet.com

[1] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/439687/strategic-fit-updated-forecasts.pdf