Appendix: Aviation and the economy

The relevance of growth

No-one would doubt that electricity and water are essential to the economy. Yet no-one argues we need more and more water or electricity in order to grow the economy; on the contrary, strenuous attempts are being made to reduce consumption. This is partly for environmental reasons but also because economic efficiency and economic growth are facilitated by more efficient use of resources and therefore less consumption. Yet for aviation the assumption seems to be that because the sector at its present level makes a contribution to the economy, more of it must make a bigger contribution. In reviewing the available evidence on the economic impacts of aviation it is important to question the direction of causality in any observed correlation between growth in air travel and growth of the economy more generally.

Cost benefit analysis for aviation development

Economic analysis can never be fully dispassionate. There is always a significant element of judgment, for example, in deciding on input data, which, of course, entirely determines the conclusions. Much of the evidence on aviation's economic benefits has been either written or funded by the aviation industry, so there is an inevitable tendency to select data such as to increase the industry's apparent benefit. Undoubtedly, new economic studies will be submitted as evidence to this consultation, on which we will only subsequently be able to comment. In general, however, we believe that the Government needs to critically scrutinise any economic evidence in relation to aviation that has been prepared by interested parties.

As an example, a review of the literature on aviation's economic benefit by academic economists as part of the Omega academic partnership[1] makes the following comment on work by OEF on the economic impact of Heathrow expansion:

> OEF establishes a relationship between business use of aviation and the overall level of productivity in the economy, using econometric techniques. This aspect of the OEF work has not been reviewed in the literature and there may be general methodological issues that would benefit from further research, for example on the direction of causality. OEF uses this econometric relationship to calculate the GDP impact from additional business passengers arising from scenarios involving different levels of aviation infrastructure expansion (Heathrow mixed mode, Heathrow third runway, and full implementation of the ATWP proposals). This is an interesting approach but is flawed by assumptions of increased business use of air travel in response to capacity increases that are 6 times more than those adopted by DfT and not supported by any evidence. (page 12)

[1] D Gillingwater et al, January 2009, *Omega study 40 – Economic benefits of aviation technical report*, Loughborough University, http://www.omega.mmu.ac.uk/economic-benefits-of-aviation.htm

More detailed analysis of OEF's work forms part of a 2008 study by Dutch consultants CE Delft on *The Economics of Heathrow Expansion*, commissioned by HACAN. In relation to OEF's widely quoted study of 2006 on the economic impacts of aviation on the UK economy, the authors argue that:

- A sector's direct, indirect and induced employment levels and its contribution to GDP are not valid indicators of its importance to the economy, as in the absence of aviation growth, other sectors could fill the gap in terms of both jobs and spending
- The assumption that increases in trade will benefit the UK is not substantiated – social welfare cannot be measured by the quantity of trade
- Assumptions on increases in business travel deviate wildly from DfT forecasts (see above).
- Double counting exists in relation to the economic benefits brought about by increases in business travel, and
- OEF's presentation of their results does not make clear that the figures quoted are often upper limits rather than central values.

As with OEF's analysis, the Government's approach to assessing the costs and benefits of airport development and aviation expansion appears to be structured such as to maximize calculations of economic benefits. A 2009 report by the Green Alliance[2] on the New Approach to Transport Appraisal – the cost benefit analysis policy recommended by DfT for assessing transport development proposals - concludes that the model is not fit for purpose and in many cases "is in direct conflict with the government's own objectives, which include reducing transport related carbon emissions and promoting travel modes beneficial to health." The report (page 2) argues that despite some improvements in recent years, a number of problems with NATA persist:

- the appraisal model is still not reflecting national objectives, as it does not take proper account of carbon reduction targets and exaggerates the value of small time savings;
- the decision-making process is far from transparent and lacks co-ordination across regions;
- there is an absence of reliable data and a lack of co-ordination in the decision-making process;
- insufficient attention is given to alternative schemes that could offer better value for money;
- individual schemes are implemented in isolation without proper consideration being given to demand management and multimodal approaches that may be significantly more cost effective.

Alternative approaches to Cost Benefit Analysis often generate quite different conclusions in relation to airport proposals. In April 2010 the New Economics Foundation published *Grounded: a new approach to evaluating Runway 3*[3]. The

[2] Cary et al, November 2009 *The Right Route: improving transport decision making*, Green Alliance
[3] http://www.neweconomics.org/publications/grounded

study considered the costs and benefits of a third Heathrow runway used a model known as Social Return On Investment (SROI), which includes quite a detailed quantification of community and environmental impacts, together with a re-run of the Government's economic model using updated official forecasts for growth, exchange rates and carbon prices. NEF concluded that in contrast to the DfT's estimate of a £5 billion benefit as a result of the new runway, in fact the development would generate a £5 billion loss.

The economic benefit of tourism

Estimates of the economic benefits generated for the UK by tourists routinely fail to note that aviation facilitates both incoming and outgoing tourism, and that UK citizens have, for many years, been spending a great deal more money abroad than foreign tourists have been spending in the UK. The trade deficit on international travel was £12.4 billion in 2010.

In Chapter 2 claims are made about economic benefits for tourism, business travel and aerospace sectors. Yet each of these has quite a different economic impact. As a result of them being interwoven, it is not always clear exactly what type of benefit is being claimed for which sector and for which sectors growth is important.

Tourism/leisure and business travel have very different characteristics. In particular the 'price elasticity of demand' is much higher for leisure than business[4]. Therefore, increases in price resulting from constraints in supply or less competition will affect leisure much more than business. This is crucial because it means that if demand is managed, either by capacity or pricing, the impact on business is likely to be small.

The aerospace sector, which includes aircraft manufacture, is relatively large in Britain, accounting for at least 1% of GDP and about 0.5% of employment. It can be argued that this level, or an increased level, is a benefit to the British economy. However, aircraft manufacture and sales are very much international activities. The success of the UK aerospace industry does not depend on the amount of air travel to and from the UK so growth or otherwise in UK air traffic is not an important factor.

Tax

In any consideration of broad economic impacts, any taxes on and subsidies for the sector concerned are a significant issue, as they can fundamentally affect estimates of the real economic value of that sector. Paragraph 22 of the scoping document says "The Government's objectives are a simple tax system for air transport services in the UK, which does not hamper growth."

If the statement refers growth of aviation or aviation-related activities, it is not a sensible objective. A tax on almost any product or service "hampers" its growth.

[4] See, for example, UK Aviation Forecasts 2011, table 2.1, http://www.dft.gov.uk/publications/uk-aviation-forecasts-2011

Taxes undoubtedly hamper the growth of car travel and alcohol consumption, for example. But this is not necessarily a bad thing. Even if hampering growth in the sector concerned is disadvantageous in its own right, the offsetting benefits may be greater. For example loss of aviation growth might well be more than offset by the benefits of the tax raised, such as lower emissions and a reduction in the level of cuts needed to public services. The offsetting benefits may lead to greater overall economic growth.

It is widely recognised that aviation is under-taxed compared with other sectors of the economy and other forms of consumption. Tax advantages and exemptions include the zero rating for VAT on tickets, zero rating for VAT on aircraft purchases and parts, exemption from excise duty on jet fuel, zero rating for VAT on jet fuel, and the duty free goods (outside the EU). There is a debate to be had about what the right level of tax should be for aviation. However, a widely quoted figure is based on the amount of tax that aviation would pay if its fuel were taxed at the same rate as petrol. A DfT document from 2008 estimates that "were the UK to charge a fuel duty and VAT on tickets, this could result in revenues of around £10 billion"[5].

The economic impact of aviation's treatment in climate policy

AEF very much welcomes the fact that aviation is set to be included, at last, in the EU Emissions Trading System and the UK Climate Act. We note, however, the extent to which aviation will enjoy lenient treatment in comparison with other sectors.

In the EC, aviation emissions are, we understand, being counted towards the total from the traded sectors which must be reduced by 20% of 1990 levels by 2020. Yet under the EU ETS, aviation's cap will be fixed at a few percentage points below average 2004-2006 levels (97% in 2012 and 95% thereafter) – roughly double the sector's emissions in 1990. Further, the majority of permits for airlines will be available for free. The cost burden as a result of aviation's inclusion in the scheme will thus be borne much more heavily by other sectors than by aviation itself.

Similarly in the UK, the Committee on Climate Change has advised that if emissions from both international aviation and shipping have been returned to 2005 levels by 2050 but are no lower than that, and if, as is likely, agricultural and other non-CO2 emissions are reduced by only 70% by 2050 (relative to 1990), then emissions of CO2 in other sectors of the economy will have to fall by around 90% in order to meet the overall 80% target. If aviation emissions are not constrained at 2005 levels then abatement in other sectors will have to be even higher than 90%. Additional pressure will clearly be felt in sectors such as power generation, where abatement costs are already beginning to be passed on to the consumer.

[5] DfT 2008, *Summary of responses to the Government's consultation on the aviation emissions cost assessment*

Justification for aviation's protected status with respect to economic instruments often centres either around its economic importance (on which we have commented above), or around the need to continue a trend of democratisation in air travel. In fact, the growth in travel has been predominantly among the better off, as described in CAA (ERG) study published in 2008[6]:

> 4.7 The Department for Transport publication, "Public experiences and attitudes to air travel" is based on the ONS Omnibus Survey of May 2006. The survey indicates that 51% of adults had not flown in the last 12 months. This corresponds with the results of the 2002 Omnibus Survey, where 51% of adults had not flown in 2001. However, as the report notes, although the proportion of the population who have flown in the past year is the same in both surveys, in the more recent survey a higher proportion of air travellers were making multiple trips. In 2006, 30% of air travellers said they had flown three or more times in the last year; in 2002 the figure was 23%.
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> 4.8 From this, it can be inferred that passenger growth in recent years is coming at least as much from an increased flying frequency by those that do fly, as from a diminishing pool of non-fliers.
>
> 4.9 Interviewees for the CAA Passenger Survey are asked whether they are a first-time flyer or not. For the last ten years, the airports surveyed continuously have recorded that less than 1% of passengers are adults flying for the first time. This also indicates that much of the UK resident growth in passenger traffic in recent years has come from existing passengers travelling more often (in line with the Omnibus Survey results referred to above), so the recent downturn in growth is unlikely to have come from a decline in the proportion of new passengers, but rather from slower growth in the frequency of travel by existing passengers. (page 55)

Growth in air travel in recent years may, it appears, have facilitated a greater concentration of flying among high earners – the very opposite of democratisation. The fact that the percentage of non-fliers in 2010 was higher than in 2001 – 53% as opposed to 51%[7] - lends weight to this analysis. This being the case, higher earners benefit most, and benefit increasingly, from the sector's tax breaks (to the detriment of lower earners who would be likely to benefit most from the additional public spending that additional tax revenues would permit), from both the lenient terms under which aviation is to be included in the EU ETS, and from the fact that aviation is unlikely to be expected to make cuts in CO2 emissions that match those expected from other sectors under the Climate Act. As with any 'externalities', meanwhile, the environmental burdens of aviation are not of course borne exclusively or even largely by those enjoying its benefits, and many of those who suffer the most intrusive levels of aircraft noise are in social housing so have limited choice as to where they can live.

[6] Civil Aviation Authority, January 2008, *Recent trends in growth of UK air passenger demand*
[7] DfT 2010, *Public experiences of and attitudes towards air travel*