

Airports Policy - A Flawed Approach



By Brendon Sewill



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Brendon Sewill has a degree in economics from Cambridge, has spent some years in the Treasury as an adviser on economic policy, and is currently a member of the Council of the National Trust, a Vice President of the British Trust for Conservation Volunteers and chairman of the Gatwick Area Conservation Campaign.

Established in 1975, the AEF is the principal environmental association in the United Kingdom concerned specifically with all the environmental and amenity effects of aviation. The Federation's membership covers a broad range of interests: in addition to associate and student members, the membership comprises local planning authorities, residents' groups, amenity and environmental organisations, consultants, and aerodrome operators. The AEF is affiliated to the umbrella organisations the European Environmental Bureau (EEB) and the European Federation for Transport and the Environment (T&E).

GACC was founded in 1968, with the purpose of improving the environment around Gatwick, and reducing the nuisance caused by aircraft. It has as members over 100 Borough, District and Parish Councils, and amenity groups, covering an area about 20 miles radius from the airport.

North West Essex & East Herts Preservation Association has been in existence since the early 1960's, and has taken the lead in several major inquiries into the development of Stansted. It has many members and member organisations across Hertfordshire and Essex, and from London to Cambridge. Its primary purpose is the containment of the airport with environmental sustainability as the key note.

Friends of the Earth is one of the leading environmental campaigning organisations in the UK covering all major environmental issues. It has a large nationwide membership and an extensive network of local groups.

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A White Paper setting out UK aviation and airports policy and looking 30 years ahead is due to be published in 2001. To prepare for the White Paper, a number of studies are being carried out by DETR to assess the future demand for airport capacity in different parts of the UK and the scope for airport expansion in each region. The most complex and potentially controversial of these studies is the South East and East of England Regional Air Services Study (SERAS).¹

This paper is designed to show that, on present indications, these studies contain a serious flaw which may well invalidate the policy. Indeed it is suggested that the flaw may eventually lead to severe political upheaval.

The flaw is that no account is being taken of the appropriate future price of air travel relative to other goods and services. Any first year student of economics learns that it makes no sense to talk about the demand for a product without defining the price at which it will be offered for sale.

Air travel is remarkably cheap. This is mainly due to

- tax advantages compared to other industries,
- airport landing fees cross-subsidised from retail sales, and
- the absence of taxes related to environmental damage.

With growing international concern about the environment it seems unlikely that this situation will persist throughout the next 30 years. The EU Commission has recently called for fiscal measures to control the "unsustainable" growth in air transport.² Withdrawing the artificial tax 'subsidies' would have a substantial effect on the demand for airport capacity.

Tax Advantages

That industries should compete on the basis of "a level playing field" is generally accepted. If one industry has a tax advantage which is not justified by special social reasons, then the nation's economic welfare will be diminished because resources are misallocated. Yet nowhere in the terms of reference of the SERAS study,³ nor in the consultation paper on the methods to be used in the study,⁴ is there any mention of possible changes in the tax concessions for aviation over the next 30 years. There is some reference to the possibility of managing demand but, as explained below, that is a very different concept.

Fuel Tax

Fuel for motor vehicles has a basic cost, after the recent rise in oil prices, of 14.5p a litre. It is subject to excise duty at 49.2p per litre. Thus the excise duty on motor vehicle fuel is about 340%.⁵ In addition motor

vehicle fuel is subject to VAT at 12.1p a litre. Fuel for trains is taxed at 3p per litre. Fuel for aircraft and ships is, however, not taxed at all.

The duty on motor fuel is justified partly on the cost of providing roads, partly by the adverse environmental effects of road traffic, namely pollution and congestion, but mainly on the grounds of tax efficiency. Since demand for petrol is relatively inelastic, the tax has for many years proved an efficient method of extracting revenue.

There would seem to be a good economic case for imposing a similar tax on aircraft fuel. Although, unlike roads, the taxpayer does not have to finance the provision of airports, aircraft emissions of CO₂ per passenger km. are considerably greater than those of cars.⁶ Congestion in the skies is becoming a problem, less noticeable but potentially more dangerous than congestion on the roads. Moreover a tax on aircraft fuel would have the fiscal advantage that it would fall almost entirely on businesses and on discretionary spending.

It is not possible to establish theoretically whether a level playing field would mean taxing aircraft fuel at the same rate as fuel for cars, at the nil rate for ships, or somewhere in between. In most cases planes and cars and ships do not compete directly. Environmental, congestion and fiscal considerations indicate, however, that the tax should be considerably higher than nil. Common sense perhaps suggests a compromise at half the rate for cars.

The Treasury has calculated that if duty (not including VAT) were imposed on aviation fuel at the same rate as unleaded petrol it would raise £5 billion, assuming no change in demand.⁷ So half the rate would raise £2.5 billion a year.

The main reason why aviation fuel has never been taxed is the practical one that aircraft would fill up with fuel in countries where it was not taxed. Moreover, as discussed below, any tax on aviation fuel is ruled out by a large number of international agreements.

The EU Commission has recently carried out a study of the possibility of taxing aircraft fuel on all flights out of, and within, the EU.⁸ It concluded that a tax at 0.245 ECU per litre (14p), the minimum rate applied to kerosene in the EU, would reduce demand by 7.5%, and would reduce annual CO₂ emissions by 15 million tonnes.

Unfortunately, however, the study also found that this environmental benefit would largely be counteracted by the adverse effect of aircraft carrying heavier loads of fuel purchased outside the EU. In March 2000, EU Finance Ministers therefore agreed that the issue should be pursued on a worldwide basis.⁹

Value Added Tax

VAT is imposed in all EU countries at rates of around 15% and in the UK at 17.5%. Exemptions are normally only given for essential goods or services or those which have a social benefit, e.g. food, books,

medicines. For the same reasons, a lower rate is applied in the UK to domestic fuel. No social justification appears to exist for the exemption for air travel.

It might be argued that air travel is a type of export. Exports from the EU are not subject to VAT, and this exemption is also extended to tourists who buy goods in Europe and take them abroad permanently. Debate on whether air travel was more akin to goods permanently exported, or to a service provided in the country of departure, could run to hundreds of pages of arcane fiscal philosophy.

Many other countries have sales taxes, so British exports are often subject to tax in their destination country. Hotels and most leisure activities are subject to VAT in Europe, and often to some similar form of tax in other countries. In the leisure field, air travel and fresh air are among the few items not subject to any form of expenditure tax.

Common sense suggests that, if the majority of countries have either VAT or some similar form of tax on spending, so that most expenditure is taxed either at one end or the other, then air travel, the pig-in-the-middle, should also be included.

Imposing VAT on airline tickets would in effect also impose the tax on the components which make up the cost of a ticket, most notably the purchase of aircraft and aviation fuel, both of which carry no VAT at present.

The reason for the exemption from VAT seems to have been solely the practical one that air tickets can be bought in any country, and thus the tax could be evaded. If VAT, or some similar type of expenditure tax, were going to be imposed on air travel, it would doubtless be more efficient if imposed worldwide, as a result of international agreement.

A study of the economic contribution of the aviation industry, commissioned as part of the preparatory work for the development of a new national aviation policy,¹⁰ has concluded that the value added by aviation in the UK amounts to £10.2 billion. If that is correct, the yield of VAT at 17.5% would be £1.8 billion.

Duty Free

This concession has now been abolished on all flights within the EU, but is still available on flights to destinations outside the EU. It is equivalent to a subsidy of about £15 per head.¹¹ There appears to be no valid economic reason for the continuation of any duty free sales.

The abolition of duty free on flights within Europe was stridently opposed by the aviation industry, with dire forecasts of job losses. In the event no jobs were lost. BAA have been permitted to raise their landing fees to compensate for their loss in revenue.

Air Passenger Duty

Following the 2000 budget, this duty is charged at either £5 or £10 per passenger travelling within the UK, or to other EU countries, and at £20 (or £40 for first and business class passengers) for those travelling to destinations outside Europe. On flights outside Europe the duty roughly cancels out the benefit conferred by duty free.

Airport Charges

Although Heathrow and Gatwick are among the most congested airports in the world, BAA claims that "charges to airlines are among the lowest in the world, and have fallen by at least 15% in real terms over the past ten years."¹²

This curious situation has arisen as a result of the system of economic regulation applied by BAA's regulator, the Civil Aviation Authority. The system, called the 'single till system', involves calculating BAA's total profits including profits from retail and then applying any reduction solely to airport charges (landing fees, parking fees and passenger charges). So the more profit BAA make from retail, the more airport charges are reduced, thus increasing the demand for air travel and improving BAA's dominant position in the UK.

BAA's annual report shows that in 1998-99 their income at Gatwick from retail sales was £195 million while their income from airport charges was only £112 million. Airport charges at Gatwick work out at around £10.30 per passenger per return flight (off peak around £7.60); at Manchester the equivalent is around £17.10 (off peak £13.90).¹³

If BAA is thought to be making excessive profits, the normal economic procedure would be to allow the price of slots to rise to a market level, and then impose a levy on revenue (in the same way that a levy is imposed on independent television). Setting the price of slots at market levels would ensure a more efficient distribution between airlines, more efficient use of runways as the smaller aircraft would find slots too expensive, and - in line with Government policy - a greater encouragement to use regional airports. But again this is ruled out by international agreements.

DETR have stated that "given the extent to which demand for slots exceeds supply at Heathrow and (to a lesser degree) at Gatwick, it is logical to expect that a several fold increase [in airport charges] would be necessary to reach market clearing level."¹⁴ For the purpose of this paper it is assumed that to reach market levels airport charges at Heathrow and Gatwick would need to be trebled.

BAA's total income from airport charges at Heathrow and Gatwick in 1998 was £429 million, and by now may be around £450 million. So a levy which trebled the charges would bring in an extra £900 million.

Environmental Taxes and Charges

It is generally accepted that industries which cause environmental damage should pay additional tax (the "polluter pays" principle), partly to compensate the community or to fund remedial measures, and partly to discourage the harmful activity. The 1998 Transport White Paper stated that "aviation should meet the external costs, including environmental costs, which it imposes." No action has yet been taken.

Any environmental taxation should, of course, be imposed on top of the additional taxation needed to establish parity with other industries. The first step must be to establish the level playing field and then (to continue the sporting metaphor) impose a handicap on anti-social players.

Worldwide, concern is growing about atmospheric pollution. Fears of global warming are becoming more firmly based on factual evidence. The international conference in Kyoto in 1997 agreed national targets for reduction in greenhouse gasses. Emissions from international aviation were, however, excluded. According to the Intergovernmental Panel on Climate Change,¹⁵ aviation is responsible for 3.5% of man-made climate change, and its contribution may grow four fold over the next fifty years.

In December 1999 the EU Commission published a Communication which stated that this trend is unsustainable "and must be reversed".¹⁶ The Commission favours imposing a charge based on the distance flown and engine performance (very similar in effect to a tax on fuel). It is to develop a proposal by 2001, working alongside the International Civil Aviation Organisation (ICAO). EU Ministers have supported the idea of a European environmental charge.

To some extent the concept of a tax on aircraft pollution has already been included in the suggestion in this paper that aircraft fuel should be taxed at half the rate which applies to motor vehicle fuel - but then again it could perhaps be argued that the danger of global warming is so serious that aviation fuel should be taxed at the same rate as car fuel.

The other form of environmental damage caused by aviation is noise. Although modern aircraft engines are quieter on take-off, there has been little improvement in landing noise. The benefit from quieter engines has been partly counter-balanced by the increased number and size of aircraft.

Professor David Pearce of the Centre for Economic and Social Research on the Global Environment at London University has calculated, using the decline in property values as a measure of the nuisance caused by noise at Heathrow, that a tax to compensate for this would need to be imposed at rates varying from £146 for a B777, £282 for a B747 400, and £8,426 for Concorde.¹⁷

International Agreements

Aircraft fuel is exempt from taxation under the 1944 Chicago Convention and under about 2000 bilateral agreements between ICAO members. Moves are, however, afoot to change this situation. The EU Council has adopted a policy that excise duty should be imposed on aviation kerosene as soon as the international legal position allows.¹⁸ The British Government "supports action through ICAO to remove the current worldwide exemption".¹⁹ Similarly any levy on landing fees is ruled out by the Chicago Convention, signed at a time when aviation was still in its infancy.

The main obstacle to change is that ICAO has a traditional role as guardian and promoter of the interests of civil aviation. The airlines are prepared to consider a charge related to emissions, but regard with horror any suggestion of a tax.

Nevertheless there must be a probability that during the next decade, and certainly during the next 30 years, a United Nations conference will be held, similar to the Earth Summit held in Rio in 1992 and the UN Convention on Climate Change held in Kyoto in 1997, which will, despite ICAO, commit all governments to:

- end the exemption of aviation from the Kyoto accord
- decide to make all air travel subject to VAT or sales tax.
- agree to amend the Chicago Convention and the bilateral agreements so as to permit the taxation of aircraft fuel and the imposition of levies at overcrowded airports.

Other Obstacles

Imposing a fair tax regime on aviation would not be easy. The public, in Britain and in other countries, would naturally be reluctant to lose the benefit of cheap air travel. Tax increases are always unpopular and appear to have no direct connection to the tax cuts which they make possible.

Strong opposition would come from the aviation industry. In the UK the airlines, BAA and the CAA (which has a statutory duty to promote the interests of aviation) have a powerful influence on the DETR, on MPs and on the aviation correspondents of the national press. DETR, as sponsoring Department for the industry, also historically has a strong pro-aviation bias. This is evident in the groups appointed to monitor the airport studies where aviation and business interests outnumber those representing the environment by about four to one.

One standard ploy of the aviation industry, when faced with any proposal to curb their activities, is to threaten that air traffic will move to Paris, Amsterdam or Frankfurt airports to the detriment of Britain. It is therefore necessary to emphasise that the ideas in this

paper, although expressed in terms of the UK economy, UK airports and UK taxes, are predicated on the assumption of international agreement on a new tax regime for aviation, with all countries applying similar taxes. Thus there should be no competitive disadvantage for British airports or for British airlines.

The Magnitude of the Flaw

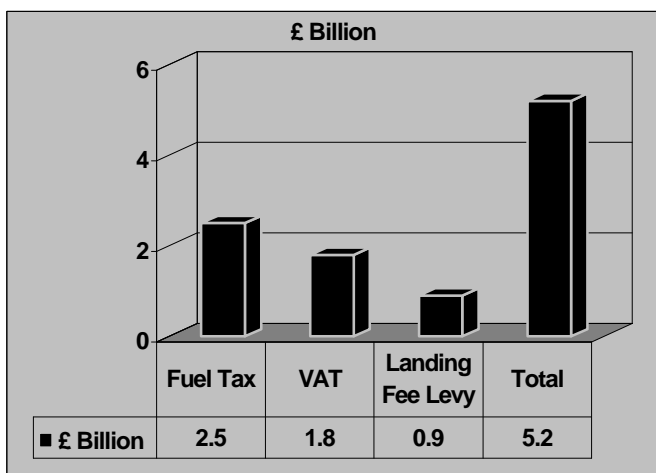
What difference would it make if the present 'tax subsidies' were removed from aviation? Some guidance can be found in Air Traffic Forecasts for the UK published by DETR in 1997. This document gives sensitivity tests for a variety of options, albeit all fairly small in scale. New forecasts are due to be published in summer 2000, but it is unlikely that the sensitivity tests will show much change.

Introducing an aviation fuel tax at 50% is calculated to reduce demand by 4.5%, and it is stated that "These results can be scaled up or down to reflect alternative assumptions." Hence it can be deduced that taxing aviation fuel at half the rate applied to motor fuel, i.e. at around 170%, might reduce demand by 15%.

Increasing airport charges by 25% is stated to reduce demand by 2.8%. That, however, applies to charges at all UK airports: in this paper it has been suggested that charges should rise only at Heathrow and Gatwick. Increasing charges there by 200%, from their present low level, might reduce demand by a further 12%.

No official estimate has been made of the effect of imposing VAT on air travel (including fuel and aircraft purchases), but a comparison of the revenue yield would suggest that the result would be to reduce demand by around a further 10 -15%

In addition account needs to be taken of the effect on demand of possible future environmental taxes on noise and pollution. They might reduce demand by a further 5% - anything less than that would hardly appear effective.



In very round terms it would thus seem reasonable to conclude that the total effect of introducing a fair tax regime, and realistic landing fees, would be to

reduce the level of demand by 40 - 45%. Since demand is forecast to double over the next twenty years,²⁰ the net effect would be to keep the amount of air travel at only slightly above its present level.

Extra Revenue

If there is no reduction in the level of demand, the additional revenue can be calculated as shown in the graph above.

Thus fair taxation of aviation would provide over £5 billion a year for spending on public services such as health and education, or for the reduction of other forms of taxation.

Cost - and Benefit - per head

It is axiomatic that if extra taxation were imposed on aviation, and if all the proceeds were to be returned in reductions in other forms of taxation, on average no one would be worse or better off. The same is true, in a more general sense, if some of the proceeds were used to improve public services. In practice there would obviously be some redistribution: frequent flyers would pay more, while those who fly less frequently, for example the elderly, the less well off, and families with children, would tend to benefit.

Nevertheless it is predictable that the airlines would set up a tremendous hullabaloo, as indeed they did over the abolition of European duty free. So it is worth setting out some simple facts.

The total number of passengers passing through UK airports is about 160 million a year.²¹ Imposing extra taxation of £5.2 billion would mean on average an extra £33 per head.²² That would be for a single flight; for a return flight the additional cost would be £66 per head - balanced by the benefit of reductions in other taxes. The cost would of course be less for cheap short flights and more for expensive long distance flights.

This money would not be lost: it would go to the UK Exchequer to make possible the reduction of other taxes, or improvement in public services. If one assumes that the benefit of extra revenue of £5.2 billion were spread evenly over the UK adult population of around 46 million, **each person would benefit by about £110 a year.**

People would tend to spend this additional purchasing power in the same proportions as they spend their incomes at present. Some smallish part might thus be spent on air travel.

If the figures for increased cost for air travel seem large that is a measure of the subsidies enjoyed by the airlines. The shock of the changes would seem less alarming if, as is probable, the tax concessions were removed gradually over a period of 20 years. In that situation the cost per average return flight would rise by about £3 a year - matched by equivalent tax cuts.

Managing Demand

In the terms of reference for SERAS, and in the consultation paper on the Appraisal Framework, the DETR refer to the possibility of managing demand. The recognition that some action may need to be taken on the pricing of air travel, rather than merely building more airports, is welcome. It is, however, approaching the problem from the wrong direction.

Managing demand implies an assumption that the present situation is correct, and that any action to reduce demand would be a deviation from the norm which would therefore have an economic cost.

If, however, the current situation is distorted, a move towards a level playing field, and towards a tax regime which reflects environmental costs, would bring economic benefit to the nation.

The fallacy of assuming that the present pricing system is correct was vividly demonstrated in a report on "The Contribution of the Aviation Industry to the UK Economy" by Oxford Economic Forecasting. This report was commissioned by DETR in 1999 as part of the preparation for the new airports policy, but financed by the airline and airport companies. Not surprisingly it reads like a propaganda blurb for the aviation industry.

The claims that the aviation industry employs a large number of people, and will employ more in future years, can equally well be seen as proof that the tax advantages enjoyed by aviation are diverting employment away from other non-subsidised industries, or from needy public services.

Airline fears that their exponential growth may be curbed appear to be reflected in the Oxford study. It states that "if the number of passengers were not allowed to grow at all over 1998 levels, the estimated effect would be to reduce the GDP by 2015 by around 2.5% - more than £30 billion." There is, however, no recognition that these figures could be a measure of the distortion caused by the tax subsidies to aviation; no recognition that the resources saved on not expanding aviation might be better used on expanding non-subsidised industries or on improving public services; and no recognition that if demand were restricted by using taxation, the extra revenue would bring equal benefits to the public.

That none of these issues were recognised in the Oxford study is perhaps not surprising in view of its sponsorship. What is worrying is that the study was launched by a DETR Minister, and that DETR civil servants are apparently prepared to take it seriously.

Unwise Investment?

Some people might recognise the tax advantages enjoyed by aviation, but think it unlikely that international agreement will ever be reached on reforming the situation. But then a further fundamental

question needs to be resolved. If aviation is so heavily subsidised does further investment in airports have any economic value to the nation? Is there any benefit in capital expenditure to meet a demand which would not exist if the tax subsidies were reduced?

Economic theory would suggest that the nation would be better off if the resources were put into investment in other, non-subsidised, industries. This point can be expressed in more emotive terms. Air travel is forecast to double in the next 20 years, perhaps treble in the next 30 years. This will require more resources and more investment - more pilots, more air hostesses, more maintenance staff, more baggage handlers, more air traffic controllers, more runways, and more new terminal buildings. This can be presented in glowing terms - a rapidly expanding, successful and exciting industry. But these resources have got to come from somewhere, if not from more immigration, then from fewer people employed elsewhere, perhaps in car production or in what remains of British manufacturing industry, or in the public services with fewer doctors, nurses or teachers, or in the hotel industry (with cheap air travel causing even greater deterioration in British coastal resorts), or perhaps in agriculture and horticulture (where the effect of the tax subsidies for aviation has helped to fill our supermarket shelves with exotic fruit and vegetables from all over the world at the cost of home produce). More investment in airports could mean less investment in new schools and hospitals. All these things may be acceptable if they come about as a result of consumer choice based on realistic market values, but less so if they are the result of a skew-whiff tax system.

The DETR justify investment in new airport capacity by using calculations of "user benefits" based on the concept of "consumer surplus" which "measures the difference between what consumers would be willing to pay for a good or service and the market price."²³ The fact that these notional benefits are calculated on a CAA computer model gives them a spurious authority whereas in practice they are as suspect as the now discarded method of calculating the value of ever-greater road building.

The main flaw is that the market price fed into the computer is the current market price, but because this is artificially low the user benefits come out artificially high. If the real market price, after removing all tax subsidies, were to be applied to the calculation, the user benefits might be less than the cost of providing new capacity.

The level playing field so beloved by economists has been referred to more than once in this paper, and the analogy can be stretched a little further- if the field is not level but is sloping so steeply that the aviation football club playing downhill scores all the goals, is the right conclusion to congratulate the club on its success and build a huge new stadium?

The Consequences

Over the next 30 years, the period covered by the SERAS study, it seems possible, perhaps likely, that international action will be taken to remove the present tax subsidies from aviation. A fair tax regime for air travel would reduce the misallocation of resources, and thus improve national well-being. This possibility needs to be properly evaluated, and fed into the new airports policy White Paper.

The consultation paper on an "Appraisal framework for airports" indicates that one of the options to be considered is of no new airport development. But the rest of the consultation paper makes it clear that this option is not taken seriously. When, however, it is recognised that much of the apparent success of aviation is due to its tax free status, the no expansion option becomes a realistic choice.

Alternatively it may be thought that the difficulty of reaching agreement at an international level, and the strength of airline lobbying, may prevent any major change in the tax situation. That could have serious consequences.

The RUCATSE Working Group concluded that an additional runway would be required in the South East by around 2015, and that "it might not be much longer, and perhaps as early as 2020, when we would be facing calls for yet another runway in the South East."²⁴ The growth in air travel has shown no sign of slowing down, so it seems at least possible that the SERAS study will result in proposals for several new runways by 2030, together with much increased use of dozens of other airports.

Already the DETR have commissioned consultants to look for possible runway sites, and at the scope for expanding existing airfields. Whether the new runways are proposed adjacent to existing airports, on former defence airfields, or on greenfield sites, a huge volume of public protest can be predicted. The public will intuitively realise that it makes no sense to go on destroying countryside and creating global pollution, for the sake of expanding a heavily subsidised industry.

The scale of the protests are likely to equal the road protests in the late 1980's that forced the Government to alter the economic assumptions on which its roads policy was based. Do we have to wait for the next massive public protest before the Government is prepared to look again at the assumption that the present price of air travel is correct?

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