transport justice for scotland
there's a way fairer way
fellow travellers
transport justice for scotland

key points

Significantly reducing or scrapping APD would be socially regressive as well as economically and environmentally unsound.

Implementing a levy on frequent flying could limit total flight demand while ensuring more Scots have the opportunity to fly at least once.

A substantial proportion of flights from Scottish airports are domestic, which are the most easily substitutable for other forms of transport.

Tourists coming to Scotland by plane would receive a small reduction in travel cost under a frequent flyer levy, unless they make more than one annual visit.

The additional tax revenues raised by a frequent flyer levy could be used to improve and expand other forms of transport, benefiting the most vulnerable and catalysing a modal shift towards rail travel.

the social and environmental injustice of aviation

Travelling by air is a major contributor to environmental problems and is primarily undertaken by a small and relatively rich segment of UK society.

The mean income for leisure passengers at Edinburgh Airport in 2013 was £56,288, more than twice the average Scottish income for that year. 70% of all UK flights are taken by only 15% of the population, while 57% of people in Great Britain took no flights abroad whatsoever in 2013. UK per capita aviation emissions are higher than anywhere else in the world.

Air travel contributes 6% of the UK’s emissions, but despite the damage caused by this privileged group of frequent flyers, aviation receives very favourable tax treatment compared to other forms of transport and is not expected to reduce its environmental impact in absolute terms, unlike other sectors.

aviation taxes are efficient and progressive

The announcement of plans to devolve taxation powers over aviation to Scotland has lead to vocal demands from the aviation industry for reductions in Scottish APD rates. These self-interested suggestions not only ignore social and environmental considerations but also lack coherence on their own (economic) terms.

The benefits of reducing APD in Scotland have been estimated in industry studies based on ‘direct, indirect and induced’ impacts on GVA and employment across a
number of sectors. It is claimed that the costs of APD reduction consist only of the lost tax revenue. But this fails to account for the indirect and induced impacts of lost tax revenue. Losing several hundreds of millions of pounds in taxation is not neutral to GVA or jobs; it requires the Scottish Government to either reduce expenditures – which has a multiplying negative impact on GVA and employment – or increase other taxes, which in general are more distorting to the Scottish economy than APD.

Contrary to industry claims, taxing air travel is efficient and progressive. It is efficient because the elasticity of demand for flights is low, which means that behaviour is less significantly distorted by changes in price, unlike many other taxes on specific goods. Indeed, a strong argument could be made for increasing APD and using the resulting revenues to offset more distorting taxes. It is progressive because it is collected mainly from rich households, since upper income groups take a disproportionate number of flights.

Thus, reducing or abolishing APD in Scotland would be both economically unwise and strongly regressive in its impact.

The industry analysis also fails to recognise that reducing Scottish APD increases the likelihood that APD rates in the rest of the UK will be reduced in reaction – that is, a race to the bottom will kick in. A retaliatory reduction in UK APD will erode the benefits of the suggested Scottish reduction (passengers displaced from English airports) but will not reduce its costs (lost tax revenues and related economic consequences).

Finally, there are far more effective ways for the Scottish Government to increase GVA and employment than cutting taxes on aviation. For example, the Scottish Government's own estimates show that direct, indirect and induced economic impacts of demand for rail transport are greater than air transport. Using public funds to invest in rail would boost GVA and employment more than using it to provide tax breaks to aviation. Out of nearly 100 sectors rail transport has the 5th highest effect on GVA and many other sectors also have greater economic effects than stimulating air transport.

**an alternative fiscal regime: frequent flyer levy**

Air passenger duty is currently applied to flights irrespective of the flyer’s previous use of air travel. As such, a low-income family’s single annual holiday is treated the same as a high-income individual’s fourth trip of the year. This exacerbates the elite nature of air travel, ensuring that the privilege of flying remains largely reserved for the well off.

An alternative tax regime could redistribute the opportunity to fly more evenly across the population while limiting the total environmental impact. This would involve scrapping Air Passenger Duty in its current form and replacing it with a Frequent Flyer Levy that is set at zero for an individual’s first outbound flight in each year and increases continually for each subsequent outbound flight. As such, it would become less expensive to take one flight in a year.

In the accompanying report, the impact of a UK-wide Frequent Flyer Levy was modelled for a number of different scenarios. That research demonstrated the tax schedules that would be necessary to meet a number of different objectives, including constraining aviation emissions, remaining tax neutral to the Exchequer, and obviating the need for new airport capacity.
figure 1 illustrates the tax schedule calibrated to prevent passenger demand from increasing more than 60% by 2050, as recommended by the Committee on Climate Change.

figure 2 illustrates the evolution of total passenger numbers under this scenario compared to the counterfactual scenario.

figure 3 illustrates how the average number of flights taken per person would change for each income quintile in 2050 under the same scenario. Crucially, under this scenario, while the total number of flights is significantly reduced, a greater number of people are expected to take a “first” flight compared to the counterfactual.

coloristics of Scotland’s aviation sector

Air travel to and from Scotland differs from the UK as a whole in a number of significant ways.

Relative to population size, slightly more passengers pass through Scottish airports compared to the UK as a whole, suggesting that on average the propensity to fly is greater in Scotland.

Compared to the UK as a whole, flights from Scottish airports consist of a much larger proportion of domestic trips. In other words, passengers at Scottish airports are far more likely to terminate or originate at other UK airports. For the UK as a whole DfT estimates around 13% of flights are domestic; Table 1 shows that for the main Scottish airports this figure ranges from 48% to 94% (the latter being the extreme case of Inverness).

There is also a greater proportion of business flights departing from Scottish airports compared to the UK as a whole. For the UK as a whole DfT estimates that around 20% of flights are for business; Table 1 shows that the corresponding figure for the main Scottish airports ranges from 27% to 61% (the latter being the extreme case of Aberdeen).
It is clear, then, that flights from Scottish airports are dominated by trips to other areas of the UK, often for business reasons. Table 1 also illustrates that Scottish airports overwhelmingly serve passengers whose origin or destination is in Scotland. In other words, Scottish airports are not used by people living in northern England or the rest of the UK, or by people trying to reach other areas in the UK via Scotland.

Despite these differences there are also some important similarities between Scottish aviation and the UK as a whole. In particular, passengers at Scottish airports are significantly richer than the average Scot and more likely to belong to the highest socio-economic groups. The mean income for leisure passengers at Edinburgh Airport in 2013 was £56,288, compared to the average Scottish income of £25,830 (i.e. more than double – see Table 2 and Figure 4).

### Table 1 - Type, Purpose and Origin/Destination of Flights at Main Scottish Airports

<table>
<thead>
<tr>
<th>Airport</th>
<th>Type of Flight (%)</th>
<th>Purpose of Flight (%)</th>
<th>Passengers with Origin or Destination in Scotland (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>International</td>
<td>Domestic</td>
<td>Business</td>
</tr>
<tr>
<td>Aberdeen</td>
<td>32.5</td>
<td>67.5</td>
<td>60.7</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>52</td>
<td>48</td>
<td>30.5</td>
</tr>
<tr>
<td>Glasgow</td>
<td>49.6</td>
<td>50.4</td>
<td>26.5</td>
</tr>
<tr>
<td>Inverness</td>
<td>5.9</td>
<td>94</td>
<td>32.9</td>
</tr>
</tbody>
</table>

### Table 2 - Socio-Economic Characteristics of Passengers at Main Scottish Airports

<table>
<thead>
<tr>
<th>Airport</th>
<th>Mean Income of Leisure Passengers</th>
<th>Leisure Passengers in Lowest Socio-Economic Group (%)</th>
<th>Leisure Passengers in Highest Socio-Economic Group (%)</th>
<th>Mean Age of Passengers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>£50,648</td>
<td>7.7</td>
<td>18.1</td>
<td>43</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>£56,288</td>
<td>15.3</td>
<td>30.8</td>
<td>45.3</td>
</tr>
<tr>
<td>Glasgow</td>
<td>£43,837</td>
<td>11.5</td>
<td>35.5</td>
<td>48</td>
</tr>
<tr>
<td>Inverness</td>
<td>£41,818</td>
<td>12.2</td>
<td>28.5</td>
<td>46.2</td>
</tr>
</tbody>
</table>

A frequent flyer levy in Scotland

Following the recommendation of the Smith Commission that powers over aviation taxes should be devolved from Westminster to Holyrood, the Scottish Government will have the opportunity to independently determine the appropriate tax regime.

The results of the modelling exercise conducted for the UK as a whole and described above can be taken as indicative of the potential for Scotland. In other words, a tax system for aviation can be designed such that environmental burdens are limited (by managing total flight demand) while social justice is prioritised (by distributing flights more evenly across the population).
However, it is necessary to consider how the particular characteristics of Scotland’s aviation sector may affect the outcome of a Frequent Flyer Levy regime.

1. Scottish airports cater for a larger proportion of business flights
   Business passengers have a lower price elasticity of demand. This means that overall demand for flights from Scottish airports might be expected to be less sensitive to changes in tax rates, compared to the UK as a whole. On the one hand, this implies that a Scottish FFL would be less effective at reducing demand; on the other hand, it implies that a Scottish FFL would be a particularly effective revenue raiser.

2. Scottish airports cater for a larger proportion of domestic flights
   Short-haul/domestic price elasticities of demand are, in general, greater than equivalent long-haul/ international elasticities. In part this is due to the greater availability of substitute transport options; for example, a flight from Edinburgh to London can be more easily substituted for a train journey than a flight from Edinburgh to Spain. This will have the effect of making Scottish flights more sensitive to price changes overall.

3. Additionally, since a large proportion of flights from Scotland are domestic, this reduces the risk that passengers would simply be displaced to northern English airports, such as Newcastle, due to price changes.

4. Scotland has more residents living in hard-to-reach places
   Under current rules flights originating in the Highlands and Islands are exempt from APD charges and it is proposed that a FFL regime should maintain this exemption.

5. Newcastle Airport
   Unlike the case for the UK as a whole, there exists at least one relatively close alternative to flying from the two main Scottish airports – Edinburgh and Glasgow. Newcastle Airport is around two hours by train or two and a half hours by car from Edinburgh. For domestic flights, which are a significant proportion of Scottish air traffic, it seems implausible that passengers would add a significant rail or road journey to the flight time from Newcastle, rather than simply substituting the entire air journey for a single rail or road journey. However, this may not be the case for people who live in the Borders, for example.

The effects of points 1 and 2 above work in opposite directions: one implies a greater sensitivity to tax changes, and the other implies a lesser sensitivity. As such, it is not clear that a FFL would be significantly more or less effective for Scotland compared to the UK as a whole.

**other considerations**

**Tourism**

Tourism is an important component of the Scottish economy, accounting for around 3% of GVA and 10% of jobs in 2011, and is responsible for a large proportion of flights (see Figure 5). The most common visitors are from the USA and Germany.

Foreign or domestic tourists that take only one holiday to Scotland per year by plane will experience a slight reduction in expense under this proposal. As such, tourism is not expected to be significantly affected, with only those tourists making multiple annual trips to Scotland experiencing any substantial increase in taxation.

![Figure 5 - Overseas Visitors to Scotland](source: Office for National Statistics, International Passenger Survey)
**Business impact**

In our accompanying paper on a UK-wide FFL policy, it was estimated that businesses would reduce their demand for flights by between 0.5% and 24.5%, depending on the number of flights currently being taken by each business. This is a lower impact compared to leisure flights since the price elasticity is lower for business flights.

Research has found that transport costs are not a primary consideration for businesses choosing where to locate, and, like APD, the FFL is a tax on passengers so does not apply to transport of goods.

A FFL regime for business passengers with different tax rates could be designed to operate in parallel with a regime for leisure passengers.

**Tax revenue**

The tax revenue that Scotland would forgo if it were to scrap taxes on passenger flights is substantial. Scotland currently receives £254 million tax revenues from APD. The proposed FFL would be able to raise similar or greater revenues. The generation of additional revenues creates the opportunity to achieve even more by improving access and quality of transport.

The revenues could be put to good use as investments in local and public transport infrastructure by increasing and expanding services. This is an area that has been plagued by chronic underinvestment, and improvements in Scotland’s infrastructure have long been called for. The investment could be used to benefit harder to reach communities and less mobile citizens (such as the elderly or those who do not own a car) and would also give a consistent and predictable stream of revenue for investment in transport projects. These investments would also have benefits for the environment, as some demand would be shifted away from fossil-fuel heavy modes of transportation.

In particular, given the dominance of domestic travel from Scottish airports, there is a large opportunity to invest in higher quality and more affordable rail networks. A concerted public effort could bring about a modal shift in short-haul travel that would see rail become the dominant form of transport.
endnotes


10. It has been argued in a study commissioned by the aviation industry that abolishing APD at the UK level would ultimately be revenue neutral to the Exchequer due to increases in revenues from income tax, VAT and others; however, this argument cannot be applied in the Scottish context, since those taxes are not all devolved.

11. A study commissioned by the industry almost managed to acknowledge this point, citing the Ramsey model of efficient taxation (in which goods with low elasticities such as flights are taxed more) but avoids the uncomfortable (though accurate) conclusion that aviation taxes are efficient by arguing that flight elasticities have been underestimated. PWC (2013). The economic impact of Air Passenger Duty. Retrieved from http://corporate.easyjet.com/-/media/files/it/easyat-sg-V2/pdf/content/APD-study-full.pdf from p32.


there's a way
fairer way

hello@fellowtravellers.org