USING FOCUS GROUPS TO DEEPEN UNDERSTANDING OF AIR TRAVEL BEHAVIOR

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ABSTRACT

The overall objective of the air travel focus groups was to deepen understanding of the arguments surrounding air travel behavior. Focus groups are a qualitative method that provides a forum for participants to share their attitudes, feelings and beliefs and perhaps reach a consensus on a topic.

Based in the East Midlands region of the United Kingdom, the focus groups were conducted in the early 2007 and split into two sets. The first set considered influences upon air travel choices, the second set developed upon the themes of the acceptability of current and potential future aviation taxes. The focus groups were semi-structured, following discussion themes. First set themes were the decision-making process when choosing flights, the effect of life stage upon choices, and the effect of the media upon travel behavior. Second set themes were the environmental issues associated with aviation, acceptability and attitudes towards existing aviation taxes, measures on which to spend any additional revenue from aviation taxes, and possible future tax and charging systems for aviation.

Focus group insights have been developed into the air travel behavior of various population segments, particularly for the life stages of having children and retiring. The aviation tax focus groups show a public mistrust in the current United Kingdom tax system, a desire for the aviation industry to develop solutions, and a resistance to measures that directly restrict travel.
INTRODUCTION

Individuals are flying more than ever before and over greater distances. Air travel has increased five-fold in the United Kingdom (UK) over the past 30 years, and demand is projected to be between two and three times current levels by 2030 (1). Although this increasing demand has provided greater travel opportunities for individuals, there are environmental challenges to ensure that the development of aviation is more sustainable. The UK was set a legally binding target to reduce greenhouse gas emissions, to 12.5% below 1990 levels by 2008-2012. The UK is set to meet the Kyoto targets, partly due to manufacturing decline and changes in the energy sector ‘dash for gas’, but increases in road transport and aircraft emissions are of concern (only domestic aviation emissions of CO2 are accounted for in the Kyoto Protocol).

This paper reports on focus groups conducted as part of two air travel research projects within the Transport Studies Group at Loughborough University. The focus groups were undertaken in February and March 2007, in the East Midlands town of Loughborough and the nearby village of East Gostcote. Each research project develops understanding of the public response to market advances and potential political interventions, either generally or by a specific segment of society. The first, an EPSRC (Engineering and Physical Sciences Research Council, a United Kingdom funding body) funded project entitled ‘Propensity to fly’, explores how the growth in low cost airlines, a catalyst for the increase in air travel, has influenced behavior. The second, the ‘Public engagement on aviation taxes’ project, was commissioned by the Sustainable Development Commission (the UK Government’s independent watchdog on sustainable development) and concerns the public acceptability of the fiscal measures designed to limit demand (and emissions) and provide revenue for the Government.

The ‘Propensity to fly’ project

The ‘Propensity to fly’ project (November 2006 to April 2009), examines individual responses to low cost air travel in the East Midlands region of the UK. The project will deliver a stated choice modeling capability and a greater understanding of air travel market segments. Data for these modeling and segmentation tasks will largely come from a questionnaire survey of individual flying preferences, from over 1,000 residents of the East Midlands region. Such findings will be of benefit to aviation policy-makers, as they consider air travel demand forecasting and future airport capacity.

The first data collection within the Propensity to fly project concerns the three focus groups reported in this paper, conducted in February and March 2007. They explore some of the issues surrounding the propensity to fly, primarily to deepen understanding of the arguments surrounding air travel behavior and consumer decision-making. The focus groups informed the content of the Propensity to fly questionnaire survey, conducted in Autumn 2007.
The ‘Public engagement on aviation taxes’ project

The ‘Public engagement on aviation taxes’ project considered the public response to air travel taxation from four groups, conducted and analyzed in March 2007. The overall aim of these focus groups was to deepen understanding of the arguments around the acceptability of current and potential future aviation taxes. In terms of current aviation tax (as of March 2007, the month of the focus groups), air travel is subject to Air Passenger Duty (APD), introduced in 1994 and payable per passenger per flight on departure from UK airports at standard amounts differentiated by distance and class (2). APD is currently, in the lowest class of travel, £10 for most European destinations and £40 for further a field; the levels were doubled from 1st February 2007, announced in the Pre-Budget Report (3). There are a number of other options which have been considered in this project: VAT on flight tickets, fuel duty payable on aviation fuel, inclusion of air travel in the European Union Emission Trading Scheme, individual carbon rationing, and frequent flyer taxes.

The Stern Review (4), commissioned by the UK Government, calls for the aviation industry and air passengers to cover the external costs of air travel in terms of the cost of climate change. The Stern Review identifies the growing contribution air travel is making to greenhouse gas emissions both in terms of carbon emissions and the effect of ‘radiative forcing’. The report recognizes that there is potential for efficiency gains for the aviation industry but at present there is no prospect of technology switching (although biofuels, and possibly some hydrogen or electric vehicles could have some impact for surface transport, technology breakthroughs are unlikely in the aviation sector). It is suggested that support for making air travel more expensive on environmental grounds has grown over time (5). Their suggestions for restraining air travel demand include an increase in APD levied by the UK Government on passenger trips from UK airports, and the addition of VAT to domestic air tickets (also suggested by the UK Parliament House of Commons Environmental Audit Committee in August 2006). Other options might include fuel tax, and a more radical solution would be to develop personal carbon allowances.

Including aviation in the European Union Emission Trading Scheme is the focus of UK policy plans for the aviation industry (6); the argument supporting this move is that it will allow market forces determine where emission levels can be reduced most efficiently. During the time frame of the focus groups, February and March 2007, the subject of aviation taxes was high on the policy agenda. This was partly due to the development of green policies by the two main political parties. In mid-March, the Conservative party produced a Consultation document on the use of environmental taxes to reduce carbon emissions from aviation (7); these proposals include fuel tax on domestic flights and a frequent flyer tax. The UK Government also put forward for consultation a draft Climate Change Bill (8), which would make CO₂ targets binding.
USING A FOCUS GROUP METHODOLOGY

Focus groups are a qualitative research method, defined as “a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research” (9). They provide a forum for participants to share their attitudes, feelings and beliefs and perhaps reach a consensus on a topic. A preferable focus group size involves 6-8 participants plus the moderator(s), however Gibbs provides examples of successful focus groups which included between four and 15 people (10). Focus groups can be used as a single method of data collection, as with the Aviation tax project, but often they complement other methods, as with the Propensity to fly project.

Focus groups provide an illustrative or purposive sample rather than a representative sample of the population, as expected in quantitative methods of data collection and analysis (11). Whilst this does not allow for statistical analysis of results, the purposive sample allows participants to be chosen according to knowledge or experience of the research subject or by other personal characteristics of relevance to the research (12).

Focus group participants can be recruited in a number of different ways, dependent upon the target group. Each of the sets of focus groups discussed were interested in the opinion of the general public, recruitment was based in specific geographical locations to facilitate access to focus group locations. The Propensity to fly focus groups generated participants through self-selection on postal surveys; the Aviation tax focus groups relied on on-street recruitment.

Homogenous group of people are often chosen over a heterogeneous groups, particularly if the research topic is sensitive or controversial, or segments of society are likely to have widely conflicting views. Whilst heterogeneous group may provide a wider variety of responses, shared characteristics across the group can encourage all participants to engage in the research discussion and limits unnecessary conflict (10, 13, 14, 15). The Propensity to fly focus groups were homogenous; two focus groups concerned individuals in employment, one retired individuals. These groups were selected to consider how travel choices alter by life stage. The Aviation tax focus groups concerned a heterogeneous group to reduce sample bias and to encourage debate. This was achieved through quotas, reducing gender bias and preventing over-representation of students in each group; Loughborough is a university town, however results of the focus groups need to be applied more widely across the UK. The quota demanded that invitations for each focus group be limited to no more than three students, and at least three of each gender.

Incentives are generally offered to participants. This is regularly in the form of cash payment but providing a meal or other incentives can also act as encouragement for individuals to participate. Participants received incentives to attend: the provision of food for the Propensity to fly focus groups, a financial payment for the Aviation tax focus groups.

The focus groups were facilitated by a moderator and an assistant moderator, each with pre-defined roles. The general responsibility of the moderator is to facilitate the group, make sure everyone is involved and introduce the topics of discussion. The assistant moderator is responsible for the recording equipment, making notes and providing general assistance.
The Propensity to fly focus groups

Participants for the Propensity to fly focus groups were recruited through the Charnwood air travel survey, October 2006. A postal questionnaire was distributed to households in two local areas, one in Loughborough itself and another centered on the village of East Goscote. The survey explored individual air travel experiences, air travel choices to low-cost airline destinations, the price sensitivity of respondents to changes in air fare and attitudinal statements. Survey respondents willing to participate in focus groups provided their details at the end of the questionnaire. The sample enabled three focus groups to be undertaken in the two survey areas: two focus groups concerned individuals in employment (one in East Goscote, one in Loughborough), one focus group concerned retired individuals (in East Goscote). The purpose of the focus groups was to deepen understanding of the arguments surrounding air travel behavior. To achieve this, the following topics of discussion headings were developed:

1. Introduction – their air travel
2. Perceptions of the aviation industry and air travel
3. Examining the decision making process when choosing flights
4. Changing trends in air travel over time, considering the effect of life stage
5. Aviation tax (to link in with the Aviation tax focus groups)
6. Air travel and the media
7. Experience of East Midlands Airport

The Aviation tax focus groups

During March 2007, an independent sample of participants was recruited on-street from people in the centre of Loughborough, Leicestershire, to attend four focus groups the following week. In addition to partaking in the focus group, participants also completed a short, standardized questionnaire survey, to gain information on respondent attitudes to the environment, measures to reduce aviation emissions, and their likely behavioral response to price signals. The questionnaire data provided more quantitative information than the qualitative focus group data, and was a useful validation tool.

The aim of the focus groups was to ascertain the acceptability of current and potential future aviation taxes. To enable this, the following topics of discussion headings were developed:

1. Introduction – their air travel
2. Environmental issues associated with aviation
3. Examine people’s acceptability and attitudes towards existing aviation taxes
4. How people would like to see the money spent (additional revenue) raised from aviation taxes
5. Exploring possible future aviation taxes and other measures

For concepts that were difficult for individuals to grasp (Air Passenger Duty and the European Union Emissions Trading Scheme), a briefing sheet of each measure was given to participants.
COMPOSITION OF THE FOCUS GROUPS

Table 1 shows the composition of all seven focus groups across the two projects. There were 41 participants across the two projects, and an even gender split. Most of the focus groups had the preferred focus group size of between six and eight participants. The focus group with only three participants (Propensity to fly focus group 3) enabled the most in-depth discussion due to fewer individuals, and therefore represented a valuable contribution to the analysis. The Aviation tax focus groups were more representative of the population as a whole, as expected given the recruitment methods and quotas, but did have younger participants than the population of Loughborough and the UK as a whole. Quotas ensured that students were not over-represented within the four Aviation tax focus groups; the number in each focus group ranged from no students (focus group 1) to three students (focus group 2).

TABLE 1 Composition of the seven focus groups

<table>
<thead>
<tr>
<th>Focus group</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propensity to fly focus groups</td>
<td></td>
</tr>
<tr>
<td>1: Retired participants</td>
<td>5 (all male)</td>
</tr>
<tr>
<td>2: Employed participants</td>
<td>6 (2 male, 4 female)</td>
</tr>
<tr>
<td>3: Employed participants</td>
<td>3 (2 male, 1 female)</td>
</tr>
<tr>
<td>Aviation tax focus groups</td>
<td></td>
</tr>
<tr>
<td>1: Heterogeneous group</td>
<td>6 (2 male, 4 female)</td>
</tr>
<tr>
<td>2: Heterogeneous group</td>
<td>8 (3 male, 5 female)</td>
</tr>
<tr>
<td>3: Heterogeneous group</td>
<td>7 (5 male, 2 female)</td>
</tr>
<tr>
<td>4: Heterogeneous group</td>
<td>6 (3 male, 3 female)</td>
</tr>
</tbody>
</table>

FOCUS GROUP ANALYSIS

Propensity to fly focus groups

All of the focus group participants had flown before (from the ice-breaker question). Most (10 out of 14) had flown the previous year, as shown by the questionnaire; three of these could be considered frequent flyers (flown at least four times the previous year). Most flights undertaken by participants the previous year had been for leisure purposes; although four participants had flown for business purposes.

Making decisions about air travel

When choosing a flight, participants tended to choose destination prior to considering how to select and book a flight. When traveling to the chosen destination, price and departure airport were viewed as important, and time of the flight was also considered. Individuals preferred to fly during the day to short haul destinations, considering routines and access to transport at each end of the journey. Choice of airline was not viewed as important for short haul flights, but a priority for longer haul flights; carriers providing long haul services were viewed as more customer focused.
When considering outcomes by focus group segment, retired individuals in particular favored a local departure airport to reduce length of time traveling. Cost was seen as less important to the retired group than the employed segment. Many retired participants also remarked upon the decline of both customer services and aircraft comfort and facilities irrespective of the length of flight. Participants in group 3 stressed the importance of choosing flights to prolong their holiday, arriving in the destination early and leaving late; they would also consider paying more to access an airport central to the destination to reduce surface travel time and costs.

Individuals are increasing their use of the internet when choosing and booking flights and holidays. Responses to the Charnwood air travel survey indicated that all but three focus group participants had used the internet to book a flight; two of these individuals were in the retired focus group. One participant frequently checked the internet for flight prices (focus group 3). There was an element of finding the best travel deal using the internet; this was seen as an enjoyable challenge by a number of participants. Additionally the internet was seen as a validation tool, checking whether you could get a better deal on alternative websites (focus group 3). Responses within the focus group suggested that the purpose of the flight also determined how it was booked. Business flight bookings tended to be by the company or through travel agents.

*Life stage influences upon air travel choices*

The focus groups explored how air travel choices altered by life stage. The following four life stages were identified from the focus groups as having influencing travel choices:

1. Pre-family
2. Family with children
3. Empty-nesters
4. Retired

Of these life stages, starting a family was identified as having the greatest influence upon travel habits, by all participants irrespective of whether they had children of their own. Focus group 2 included a number of participants who lived in a household with young children. There was the feeling that holidays with children need to be more organized and well planned (focus group 2) and as a result there is a less flexible choice of destinations (focus group 1). Price, airport and travel times were important to all segments, but particular so for families. There were two main reasons for the price concerns when traveling as a family: the extra cost in paying for children as well as adult travelers, and the increased flight prices during school holidays. Discussion suggested that low-cost airline tickets were similarly priced to other airlines during this time period. Participants reported traveling on certain days at certain times to benefit from lower prices, a level of flexibility which was viewed as more difficult with children. In almost every circumstance, day-time flights were preferred over evening or night time flights. The primary reason for this is that they fit in with the regular routine of the family. Similarly, nearby airports were most popular, given the difficulty of traveling long distances with a child. Disrupting the daily routine of a child was viewed as making the journey more difficult, when compared to the effect upon adults (focus group 2).
Families were seen as one of the two groups of people who would still benefit from package holidays, which were viewed as decreasing in popularity, with the greater use of the internet as discussed above. They were seen as easier, safer and providing an environment where adults can enjoy sometime to themselves (focus groups 2 and 3). Whilst one participant traveling with young children argued that they still preferred to book elements separately, few participants shared this experience.

The first life stage discussed, pre-family, could be broken down further in sub-groups. Some identified sub-groups included student backpackers, young people wanting the party and pre-family couples traveling together.

In addition to the arrival of children affecting travel behavior, the role of children leaving home and gaining independence was seen as an impacting factor. Many participants were in or approaching this 'empty-nester' life stage, making holiday plans which considered the flexibility of traveling without children and often chose to spend more money on themselves (focus group 2). Meanwhile, a number of participants also reported that their grown-up children still enjoyed holidaying with them (focus group 2).

*Generational differences in air travel*

The increased ease and cost at which individuals can travel by airplane has had varied effects upon the different generations. The focus groups reflected upon what is possible now, or for their children, in comparison to what was possible when they were younger or when they first traveled by airplane. One participant commented that destinations come in and out of ‘fashion’, whilst referring to the current trend to visit cities not previously frequented by tourists (focus group 1). Another trend identified was the move away from package holidays and towards increasingly exotic resorts.

Participants in focus group 2 considered the fact that many people in their early twenties will have seen much of Europe when growing up, and so will desire to travel further. This contributes to the popularity of student backpacking, for example to Australia. A number of participants considered family members who had either moved abroad as a result of cheap flights, and the ease at which you could visit family living outside the United Kingdom. Two participants owned houses abroad, encouraged by low-cost air travel; they believed they would still use the properties if air fares increased. In the third focus group, one participant reflected that the geographical areas considered for holidays had expanded over time; perhaps retracting as people got older and less mobile and confident. A further participant felt that they had missed out on a ‘gap’ year because of the limited opportunities when young, and so had chosen to enjoy the experience after his children had left home.

*Aviation tax focus groups*

All of the aviation tax focus group participants had flown before. Most (20) had flown the previous year, as shown by the questionnaire; three of these could be considered frequent flyers (flown at least four times the previous year). Most flights undertaken by participants the previous year had been for leisure purposes; only three participants had flown for business purposes (two had made one business trip, and one at least five business trips).
Existing tax system

There was much confusion and a lack of understanding about the nature of the existing aviation tax system. Some related to United Kingdom Government messages: they are encouraging more personal air travel and yet also try to stop this flying (focus group 2). There was general frustration across focus groups that airlines attract you with low price and only then adds tax to the cost; it is particularly difficult when having to pay for multiple flights (e.g. when traveling with children).

In response to the Air Passenger Duty summary (APD) sheet, all of the focus groups wanted transparency in the tax system, value for money, and were critical of the UK Government. In terms of improvements, focus group 1 thought that air freight companies should pay for their emissions, whilst focus group 4 reckoned that more bands could be added to the current APD structure to incorporate distance.

Amongst all focus groups was a desire for an open, accountable UK Government. Examples within the focus groups for UK Government misuse of taxation money included the Iraq War (focus groups 1 & 3), road tax (cannot see where the money is going - focus groups 1, 3 & 4) and the National Health Service (lot of money spent and cannot see improvements - focus group 2). One view within the second focus group was that the UK is already taxed on everything through VAT (Value Added Tax) and the UK is the highest taxed country in Europe. This focus group was also cynical towards aviation tax, which would undoubtedly increase further. The evident distrust of Government spending is a barrier to the acceptance of further taxes, even those benefitting the environment.

The idea of a Trust Fund was proposed within the second focus group. The general public could decide, say through an election, where the aviation tax goes to; the fund would have independent (i.e. not political) management. This concept was also considered in focus group 4, a fund marked for environmental improvement, but with increased accountability.

Hypothecation of revenue from taxes

Participants were more willing to pay aviation tax, if it was hypothecated to offset the negative impacts of flying. The groups discussed a number of investment options, which could potentially offset some of the negative effects of air travel. A number of related suggestions were also considered in the short questionnaire. From the questionnaire, the three most popular responses (in order) to Question 6 (of nine listed), ‘Where should any additional money raised from increased aviation tax go?’ were: ‘Green’ energy (e.g. wind farms, solar panels, and energy efficient light bulbs), improving aircraft and aviation technology, and investment in UK transport infrastructure.

Long term carbon reduction projects to reduce the environmental impacts of aircraft, were discussed within all focus groups. Such projects included improving aircraft and aviation technology, aviation research, and investment in UK transport infrastructure.

“I think I like the engineering aspects of the fuel development of other forms of energy like hydrogen. I know this isn’t going to be very helpful in the short term but in the long term if somebody can come up with a breakthrough that could potentially change a lot. Obviously that’s the long term because people are still skeptical if they can do it.” (focus group 4)
Surface transport in the UK was criticized across all focus groups; poor service reliability and cleanliness were stressed most. International examples of what had been achieved elsewhere were discussed, to further illustrate UK shortcomings, such as the US yellow school bus system and the Swedish train system. Improved rail pricing was stressed in focus group 3, to make rail travel more competitive than air travel.

Other short term investments to reduce the environmental impacts of aircraft, either in the UK or abroad were presented to participants: planting trees, improving degraded areas, and ‘green’ energy (e.g. wind farms, solar panels, energy efficient light bulbs). There was general agreement in favor of these measures, particularly the ‘green’ energy measures (e.g. focus group 1). Often when ‘green’ energy is mentioned, participants would like more wind turbines, but recognize people tend to complain about them because of visual pollution (e.g. focus groups 3 and 4). Focus group 4 would like help for households to implement green energy (e.g. solar panels), both in terms of awareness and financial assistance.

“Planting trees to make things better is a good idea; I don’t think many people would have a problem with that. I am not sure whether wind power is researched well enough and could be researched better. Would the energy needs of transporting it to places for us be a consideration too? At the moment it is experimental research and investments that is needed for such things.” (focus group 2)

Support for measures to reduce carbon emissions

Of the fiscal and regulatory measures considered in the questionnaire, the inclusion of airlines in the European Union Emission Trading Scheme (EU ETS) was the preferred measure, as demonstrated in Table 2. This backed up the viewpoint that airlines should be taking a greater share of responsibility as discussed in the focus groups, particularly focus group 3.

| TABLE 2 Questionnaire responses as to which measures should be developed to reduce carbon emissions from aircraft |
|--------------------------------------------------|----------|-----------------|-----------------|----------|
| Be part of the EU Emission Trading System         | 15       | 4               | 6               | 25       |
| Improve aircraft efficiency                       | 25       | 0               | 0               | 25       |
| Link aviation tax to fuel price                   | 12       | 7               | 7               | 25       |
| Link aviation tax to the percentage price of the ticket (e.g. VAT) | 13       | 9               | 3               | 25       |
| Relate aviation tax to the frequency of flying   | 9        | 11              | 5               | 25       |
| Relate aviation to lifestyle choices across sectors | 7       | 11              | 7               | 25       |
| Impose limits on the number of flights an individual can make | 2       | 20              | 3               | 25       |
Initially there was some awareness of the EU ETS, but limited understanding of how the concept worked, across the groups. In response to the EU ETS summary sheet, participants were tentatively supportive of the scheme. Focus group 1 agreed that it worked superficially, although actual success would depend on the level set. Within focus group 2, it was agreed that companies would not take the initial step to improve their emissions and so the only way would be to compel them through government intervention (e.g. via the EU ETS).

Focus groups 3 and 4 felt that EU ETS should encourage companies further to aim as low as possible in their carbon emissions. Rather than setting a percentage cap, higher expectations should be encouraged with tax breaks to companies who exceed their targets by the most. In focus group 4 it was suggested that companies over the target should be penalized, but that those under the target should not be rewarded; also, if the cap is reduced larger companies will have more power to buy permits and so smaller companies might suffer.

“Anything that gets the emissions down sounds good to me but rather than settling a percentage figure that they have to achieve like 10%, which is very small, we should be striving for the absolute maximum that you can go for and the more percentage that a company can reduce the CO$_2$ the more tax breaks you’ll get. I suppose it seems silly to me to set like a percent reduction you can easily do that but there’s no incentive to push the boundary even further.” (focus group 3)

The role of lifestyle choices across sectors (e.g. trade-off air travel against energy choices), and the associated concept of rationing, were proposed by the moderator during the focus groups. Focus group 1 identified this is an EU ETS scheme at a lower, individual level; it was proposed as a solution prior to being suggested by the moderator. As a group they had a greater proportion of people who could fit into a ‘green’ segment.

“Perhaps we could think of people having a bank of carbon credits and spending them could affect our lifestyle and how people can fly. When they have used them up, perhaps they can but them off someone else. Living on individual terms doesn’t always work, but at least the carbon emission output is more controlled.” (focus group 1)

Focus groups 3 and 4 however, were cynical about the practicalities of this proposal, that there would be difficulty in administering and policing the system (“people would fiddle the system”).

As reflected by the results in the table, there was also some support for proportional taxes such as fuel duty and VAT (Value Added Tax) on flights; a frequent flyer tax received a more mixed response. On the suggestion that aviation tax should be linked to fuel price (difficult with legally binding bilateral agreements but many are being renegotiated), focus group 1 thought it would make sense to link to fuel, ensuring tax would be proportional to flight price rather than as a flat rate. In a similar vein, focus group 4 considered that a proportional fuel duty, such as VAT, should be considered.
CONCLUSIONS

All participants in the Propensity to fly focus groups tended to focus on destination, price and departure airport when choosing flights. The focus groups also illustrated how the internet has developed the way individual’s book and compare flights; some participants relish the challenge of finding a cheap deal on the internet. Of particular interest are the findings split by population segment, showing the benefit of homogeneous focus groups of retired and employed individuals. Of all the different life stages identified by the focus groups, being responsible for children was the one which had the greatest effect on the types of holidays, how the holidays were booked and the choice of destination. Similarly, children leaving home provided greater flexibility and choice in terms of responsibility and cost. Air travel behavior characteristics of retired individuals were also identified. For instance, they favored a local departure airport to reduce length of time traveling.

The Aviation tax focus group had a more specific remit. The current United Kingdom Air Passenger Tax system was criticized by participants because of the lack of clarity in the amounts charged; there is a need to overcome distrust of Government taxation. Suggested solutions included hypothecation of funds, with particular support for developing ‘green’ energy alternatives, improving aircraft and aviation technology, and investing further in United Kingdom public transport. In terms of the measures to limit the negative effects of air travel, participants were supportive of the options directed at industry; these option would require them to take an active role in emissions reduction, namely improved aircraft efficiency followed by the European Union Emissions Trading Scheme. Participants were less supportive of measures which directly restricted individual behavior, such as putting limits upon the number of flights an individual can take and personal carbon trading. Proportional taxes, such as Value Added Tax or according to distance traveled were preferable to restricted travel, but not favored as much as industry solutions.

Focus groups have proved a useful research tool to deepen understanding of travel behavior issues, and arguments around the acceptability of current and potential future aviation taxes. Insights have been developed into the air travel behavior of various population segments, particularly useful for marketing purposes. The focus groups relating to aviation taxes provided further insights into the willingness to pay of the population in response to the increasingly important environmental issues. These focus groups showed a public mistrust in the current aviation tax system, a desire for the aviation industry to develop solutions, and a resistance to measures that directly restrict travel.

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REFERENCES


(4) Stern, N. *Stern Review on the Economics of Climate Change,* HM Treasury, 30 October 2006. [www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm). Accessed July 27, 2007.


