



Public attitudes about climate policy options for aviation

Joseph Kantenbacher*, Paul Hanna, Scott Cohen, Graham Miller, Caroline Scarles

School of Hospitality and Tourism Management, Faculty of Arts and Social Sciences, University of Surrey, Guildford, GU2 7XH, United Kingdom



ARTICLE INFO

Keywords:

Aviation
Emissions
Policy support
Public attitudes
United Kingdom

ABSTRACT

The current trend of increasing demand for air travel runs contrary to climate-related sustainability goals. The absence of behavioural and near-term technological solutions to aviation's environmental impacts underscores the importance of policy levers as a means of curbing carbon emissions. Where past work has used qualitative methods to sketch public opinion of environmental aviation policies, this work uses data drawn from a survey of 2066 British adults to make a quantitative assessment of the acceptability of a broad range of aviation climate policy options. The findings indicate that there is significant support across demographic groups for a large number of policies, particularly those that place financial or regulatory burdens on industry rather than on individuals directly. Support for aviation policies strengthens with pro-environmental attitudes and is weaker among people who are aeromobile. Though self-interested considerations appeared to dominate policy option preferences, concern for fairness may also shape policy acceptability. Overall, this paper provides to policy-makers a quantitative evidence base of what types of policies for addressing aviation climate emissions are most publically palatable.

1. Introduction

Aviation has undergone considerable growth in recent decades, with continued substantial growth forecasted (Peeters et al., 2016). The International Energy Agency (2009) expects air travel to nearly quadruple between 2005 and 2050, as it is anticipated to expand at 3.5% per year. The present 'steep growth path' is largely attributed to the advent of the low-cost business model and the rapid development of the tourism industry in emerging world regions, particularly Asia (McManners, 2016: 87). Although aviation currently accounts for 2–3% of global CO₂ emissions (Owen et al., 2010), its contribution is forecast to rise to 22% by 2050, assuming the sector's mitigation efforts continue to lag behind that of others and that policies to combat its climate impact are further postponed (Cames et al., 2015).

Though aviation emissions are rising rapidly at a global level, there is an absence of international policy measures on the horizon to address the situation (Peeters et al., 2016). Whilst international aviation is not covered under the emissions reduction path set out by the 2015 Paris Agreement (Becken and Mackey, 2017) – the majority of its emissions are in international air space and thus not attributable to particular nations – the UN International Civil Aviation Organization has recently approved targets for emissions reductions from this source. Greater policy coverage exists for domestic aviation, the emissions from which being typically included in national GHG inventories and reduction

targets (Bows and Anderson, 2007). As domestic initiatives will conceivably remain the primary source of climate policies directed at the aviation sector, attention to the factors, including public sentiment, affecting the nature and scope of these policies is warranted.

2. Background

Aviation has been identified as the most difficult sector for implementing sustainability in policy formulation, arguably due to the idea that it represents “a prime example of a direct clash between environmental and economic policy” (McManners, 2016: 87) and because of the lack of sustainable alternatives for people to transition into. There has been little appetite among policymakers to control aviation emissions due to concerns about the economic consequences this would have, as aviation is perceived as a vital enabler of the global economy (McManners, 2016).

Furthermore, this international environmental problem will not be solved by technology alone. Although airlines have become considerably more fuel efficient since the 1960s, prospects for future efficiency gains are low and emissions growth has outpaced efficiency gains for decades due to the continuous expansion of passenger volumes (Peeters et al., 2016). Though proponents of biofuels, for instance, maintain that technological innovations will lead to a low-carbon future for aviation (cf. Filimonau and Högström, 2017), “silver-bullet”

* Corresponding author.

E-mail addresses: j.kantenbacher@surrey.ac.uk (J. Kantenbacher), p.hanna@surrey.ac.uk (P. Hanna), s.cohen@surrey.ac.uk (S. Cohen), g.miller@surrey.ac.uk (G. Miller), c.scarles@surrey.ac.uk (C. Scarles).

<https://doi.org/10.1016/j.envsci.2017.12.012>

Received 10 November 2017; Received in revised form 17 December 2017; Accepted 17 December 2017
1462-9011/ © 2017 Elsevier Ltd. All rights reserved.

technological solutions have been exposed as ‘myths’ that are stalling progress in aviation climate policy (Peeters et al., 2016).

Voluntary behavioural changes in passenger demand will also not be capable of solving the issue single-handedly. Such behavioural changes would for example include fewer flights, a reduction in distances travelled, longer lengths of stay, and choosing more sustainable transport modes (e.g., rail) (Kroesen, 2013). Though work has focused less on how to change flying behaviour than on more routine transport modes, particularly car travel, changing the former will arguably be harder and more important to change than car travel behaviour (Capstick et al., 2014). Despite evidence that publics are aware of air travel’s climate impact (Hares et al., 2010), and express concern about it (Higham and Cohen, 2011), passenger demand will not subside as a result of public concern over aviation’s climate impact (Cohen et al., 2016). Shaw and Thomas (2006) observe that air travel is a classic example of the “tragedy of the commons”, that is, that reducing personal benefits for the greater good is perceived as useless unless others do the same. A similar problem is expressed through Higham and colleague’s discussion of the “flyers’ dilemma”, defined as “the tension that exists between the perceived personal benefits of deeply embedded air travel practices and the collective climate change consequences of such practices” (2014: 462). Higham et al. (2014) note a lack of a sense of individual responsibility for the climate impacts of flying among the study’s British interviewees, who viewed individual reductions in flying as an “exercise in futility”.

Numerous studies have shown that consumers are largely unwilling to voluntarily change their air travel behaviour due to environmental concern (e.g., Hares et al., 2010; Miller et al., 2010), a conundrum now widely explained as an exemplar of the attitude-behaviour gap that can often inhibit pro-environmental behaviour (Cohen et al., 2016; Kroesen, 2013). Voluntary behaviour change approaches in their own right have been heavily critiqued, wherein they are viewed as trapped within a neoliberal framing (Hanna et al., 2017), which devolves responsibility to consumers and the market, thereby absolving governments of the need to stimulate structural change through harder regulation (Barr et al., 2011).

Recognition of the limitations of both technological innovation and voluntary behaviour change in mitigating aviation’s climate impact has led to an increasing focus on policy responses to the issue (Gössling et al., 2016). Various policy levers have been examined and critiqued, mainly relying on qualitative methods such as individual in-depth interviews and focus groups. (For an exception employing choice experiments see Araghi et al. (2016). For instance, Ryley et al. (2010) examine through focus groups UK public attitudes towards current and potential future taxes on aviation and find support to be greatest for any additional tax revenue to be spent on cross-subsidising UK surface transport and developing aircraft technology. However, their respondents on the whole felt that responsibility for aviation emissions should sit with industry and policy-makers, rather than the public. Using in-depth interviews across four nations, Higham et al. (2016) study public receptiveness to voluntary measures, such as carbon offsetting, industry initiatives and types of government regulation that can be aimed at reducing the impact of aviation emissions. Higham et al. (2016: 346) identify a range of soft bottom-up (e.g., social marketing and nudge) and hard policy responses (e.g., rationing, pricing and taxation) and conclude that in the ‘political minefield’ of regulating air travel, [w]hat form such measures take, and how they can be made more acceptable in different societies, are critical questions.’

The present paper consequently takes as its departure point the need to assess public support towards a spectrum of hard and soft aviation climate policy measures. Taking the UK as its national focus, the paper’s aim is therefore to provide a quantitative assessment of the acceptability of a broad range of aviation climate policy options to the British public. The paper’s empirical findings are from a large-scale online panel survey (n = 2066), based on a random sample, specifically commissioned for this research. Quantitative data has been gathered on

the extent to which individuals are supportive of a series of proposed policy initiatives and the extent to which demographic factors, environmental attitudes and existing travel behaviours influence the palatability of such policy initiatives. The findings can be generalised to the British public and thus provide a rigorous and original evidence base of public opinion, informing policy debates about the palatability of options for tackling the problem of aviation’s climate impact through regulation.

3. Methods

3.1. Survey instrument

A quantitative online panel survey approach was adopted to facilitate this study’s data collection. To measure the environmental beliefs and attitudes of the participants in this study, the panel survey drew on items used by the UK’s Department for Environment, Food & Rural Affairs (DEFRA) in their 2007 and 2009 research reports on public attitudes and behaviour towards the environment. These measures have been validated by DEFRA (2007, 2009) and were felt to sufficiently capture the elements of environmental attitudes of interest for this research. This study’s survey included items that measure the participants’ beliefs and degree of concern about climate change and general environmental impact (13 items) and the extent to which they feel certain institutions (e.g., national governments, charities) are responsible for tackling climate change (7 items). To measure public support for policy initiatives related to reducing the climate impact of air transport, 14 items were developed based on a range of policy initiatives related to holidays and flying that previous studies have proposed as ways to meet national and international environmental targets (e.g., Higham et al., 2014; Higham et al., 2016; Kroesen, 2013). Each item was measured on a 5-point Likert-type scale. These policy propositions represented a range of policy approaches, including taxation, subsidization, various nudge techniques, and aviation industry regulation (see Appendix A).

To examine the variance in policy support across different groups, several standard socio-demographic variables, such as gender, were measured. This study opted for a 5-point measurement of education which splits in to the following categories: 1) primary education or less; 2) secondary education; 3) post-secondary education below degree level; 4) first degree or equivalent; 5) higher degree or equivalent. In addition, to remain open to the diverse range of employment in the UK, employment status was measured as a string variable and later categorised, while age and personal income were open measurements.

Finally, respondents were asked to characterise their flying behaviour using four items. Two items asked respondents to record their typical annual count of long- and short-haul flights for both work and non-work purposes. An additional two items asked how many holidays, within the UK and abroad, the respondent goes on in a typical year.

3.2. Survey distribution

A well-established third-party organisation was commissioned to distribute the online panel survey and to ensure a random sample was obtained. This organisation is a leading market research firm in the UK and is supported by a range of leading UK higher education institutions. The panel survey was administered online during a two-week period in November 2015. The third-party organisation ensured a sample size that accounted for the minimum representation of individuals that have used air transport for at least one of their holidays in the past year (minimum of 384 required for this group based on UK statistics approximating 33 million in UK flying, minimum 95% confidence level and 5% confidence interval). To compare this population with those who do not fly and those who fly frequently, 2000 respondents were targeted to ensure the minimum sample requirements were met across all three groups of interest (with the non-flyers requiring the same

Download English Version:

<https://daneshyari.com/en/article/7466214>

Download Persian Version:

<https://daneshyari.com/article/7466214>

[Daneshyari.com](https://daneshyari.com)