

1 **User Fees in the Aviation Industry: Turbulence Ahead**

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3 Evidence to the House of Representative's Committee on Small Business

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14 In my comments I would like to address two related, but separate issues; (1) the
15 desirability of aviation user charges and (b) whether the proposed mandatory \$100 flight
16 fee is likely to prove a good user fee. The broad conclusion is that in principle user
17 charging has merit in terms of ensuring better use of existing infrastructure and in
18 facilitating better decisions regarding its capacity, but that a \$100 surcharge per flight on
19 users is confusing and probably not helpful in moving towards genuine economic user
20 fees.

21
22 **USER FEES**

23 There have been important changes taking place around the world in terms of the ways
24 that air transportation infrastructure is organized, financed and regulated. In general, and
25 although the details vary considerably, there has been a greater emphasis on using market
26 mechanisms to finance and manage airports and air navigation services (ANS)¹. This

¹ K..J. Button, 'The Implications of the commercialization of air transport infrastructure', in D. Lee (eds), *The Economics of Airline Institutions, Operations and Marketing 2*, Elsevier, Oxford, 2007, pp. 171-192.

27 brings aviation infrastructure more in line with the institutional structures under which
28 users and suppliers of other forms air transportation hardware (e.g. air frame and engine
29 manufactures) and software (e.g. global distribution systems) function, as well as the
30 commercial airline industry.

31 The US economy has traditional grown because of its reliance on the Anglo-Saxon
32 economic philosophy that one leaves things to market forces and market pricing unless it
33 can clearly demonstrated that government intervention provides a superior outcome. The
34 market may not be perfect, but it has to be shown that government supply or its exercise
35 of controls over prices is actually better than a broad reliance on the market. The Airline
36 Deregulation Act of 1978, and the liberalization for air cargo markets the preceding year
37 provided evidence, not only of the benefits to air transportation users of adopting market
38 principles², but acted as a catalyst to other sectors, including the railroads and trucking,
39 that followed suit with considerable economic gains accruing.

40 While user fees have limitations, no system is perfect, some of the particular criticisms
41 that have been voiced regarding their application in air transportation infrastructure
42 provision are misguided. A common one is that in times of economic recession the air
43 navigation service providers (ANSPs) will suffer from diminished revenue flow as
44 commercial airline traffic declines. This in turn, because ANSPs have high fixed costs,
45 would force the providers to push up fees, and thus depress air traffic further. Exactly
46 what is not required. At the extreme, as they build up debt, airlines may apply for Chapter
47 11 bankruptcy protection leaving other carriers and users to bear the financial burden of
48 the infrastructure.³ While this superficially has some validity, and particularly so in the
49 context of a badly structured institutional situation, the type of circumstances outlined is
50 common to many other forms of business that have well tried mechanisms for handling it.

51 Businesses confronted with high fixed costs, for example, tend to carry more financial
52 reserves and ensure that they have lines of credit to carry them over periods of reduced

² See for example, Bailey, E.E. (2010) Air-transportation deregulation, in J.J. Seigfried (ed) *Better Living Through Economics*, Harvard University Press, Cambridge, MA.

³ See for example, D. Jenkins, *Turbulence Ahead: How User Fees Could Ground the FAA*, 2005.

53 revenue; they are not totally myopic but are well cognizant of the situation. In the
54 extreme, companies with high fixed costs in the private sector file for Chapter 11
55 bankruptcy and essentially have their costs (*de facto* debt) written down. The risks of the
56 undertaking are borne by those owning it and not but taxpayers⁴. In the event of default,
57 the infrastructure remains but is taken over and operated under a new financial structure.
58 In other words, owners take measures that provide insurance against what they consider
59 the worst downturns in cash flow, and there are institutional structures that ensure smooth
60 transitions to new business forms in the extreme cases where this is not adequate⁵.

61 There have been admitted problems with user fees in air transportation in other countries,
62 but these have been largely the result of the poor institutional arrangements in which they
63 were established, combined with extreme events. For example, NAV CANADA, the non-
64 profit corporatized Canadian ANSP had liquidity issues after the happenings of 9/11 but
65 this was seriously exasperated because of the legal requirement to match costs and
66 revenues in the very short term; essentially annually⁶. This is not a good business model.
67 Capital-intensive suppliers need to be able to hold adequate reserves, and to use them to
68 tide them over periods of reduced revenue. The UK “privatized” its ANSP as NATS in
69 2001, also just in time to be hit a major downturn in traffic. It did require injections of
70 public and private money, but this was into a business that many had feared was
71 undercapitalized in the first place⁷.

72 The main advantages of having a more commercial approach to managing ANSPs, with a
73 move to prices closer to those found in markets, and the opportunity to have access to a

⁴ This is not the case, however, when government bailouts are provided. This, because of moral hazard considerations, puts the risk, or part of it, at the door of the taxpayer.

⁵ American Airlines is still operating at the time of writing under Chapter 11 bankruptcy with no significant impact on its customers.

⁶ Air Canada went bankrupt in 2003 owing \$44 million to NAV CANADA and its chairman complained that high user fees had harmed the airline (CBC News (Canada) report, December 4, 2003 , www.cbc.ca/stories/2003/01/milton_03041)), but this should be taken in the context of the number of US carriers that received post 2001 aid from the government or themselves went bankrupt despite the publicly funded, non-user fee regime in place.

⁷ A wider discussion of the various approaches to making ANSPs more commercially oriented is found in, K.J. Button and G. McDougall, Institutional and structural changes in air navigation service-providing organizations, *Journal of Air Transport Management*, 12, 2006, 236-252

74 more diverse range of funding sources, is the stimulus this gives to efficient decision-
75 making. Market prices based user fees do three main things⁸:

- 76 • They allocate what is available to those who benefit most from using them the
77 most. They rise when there is shortage of any good or service thus giving priority
78 to those who will pay most and fall when there is a surplus. The classic short term
79 advantage is that they make more efficient use of infrastructure by differentiating
80 between periods when there is heavy demand for facilities and when demand is
81 lighter, by allocate capacity in the former to those most willing to pay for it, and
82 encourage other potential users to switch their activities to the latter.
- 83 • They provide indicators of where additional or modified capacity is needed, or
84 conversely where capacity should be reduced. If prices continually rise, this is an
85 indication that more should be provided; people are basically voting with their
86 wallets to have more or more useful infrastructure available.
- 87 • They provide funds to finance new capacity. Revenues from user fees provide a
88 direct source of funds for investment, and provide an incentive for financial
89 markets to invest. There is also a degree of accountability in terms of the returns
90 earned to help ensure efficiency in how the investment is used.

91 There are many forms of market failures, just as there are many forms of government
92 failures, that may make user fees much less efficient, or impractical⁹. In particular, is
93 often cited that ANS are public goods and thus not suited to user fees¹⁰. This confuses
94 public ownership or financing that may occur for many reasons, with the nature of a
95 public good. A public good was initially defined 50 years or so ago by the Economics

⁸ These features, together with, a discussion of the taxation approach to financing the FAA's activities are discussed in more detail in K.J. Button, *Taxing the US Airline Industry – A Time for Change*, 2005, www.aerlines.nl.

⁹ For a wider discussion see, C. Winston, *Government Failure versus Market Failure*, Brookings Institution, Washington DC, 2006

¹⁰ This seems to be the explicit rationale behind Australia's subsidizes service to some regional areas under the Location-Specific Tower Subsidy Program, see US Government Accountability Office, *Air Traffic Control - Characteristics and Performance of Selected International Air Navigation Service Providers and Lessons Learned from Their Commercialization*, GAO-05-769, 2005.

96 Nobel Laureate Paul Samuelson¹¹ as being a good or service that is non-excludable (i.e.
97 you cannot prevent people from having or using it) and non-rival (i.e. one's person's
98 consumption of it does not affect that of others; basically you do not get congestion.).
99 The existence of these conditions prevent user fees being charged, people would simply
100 not pay them, why should they if use cannot be prevented, and thus public financing and
101 other forms of funding are required. Since it is possible to both exclude people from
102 using ANS services, and the system periodically suffers from manifest congestion, they
103 are private goods in the economic sense and thus case for user fees can be made.

104 This is not to say that there are not problems in applying the user charge approach to
105 many types of goods and services, although user charges are by far the most common
106 approach to allocating and financing goods and services in the US. In the context of ANS
107 several practical issues involving user charges seem of particular relevance:

- 108 • There are indivisibilities and considerable “jointness” in the provision of many air
109 navigation services. In particular, large commercial aircraft generally require, and
110 also make use of more facilities than do non-commercial aircraft, i.e. general and
111 business aviation. Under the current structure of non-user based charging, for
112 example, a large commercial aircraft would pay between \$1,300 to \$2,000 in
113 taxes for a flight from Los Angeles to San Francisco while a corporate jet flying
114 the same route and using the same FAA ANS would pay about \$60 in taxes. The
115 “distortion” however, is likely to be less than these crude figures imply. Whether
116 the corporate jets uses or need to use the same ANS services is the point at issue;
117 the system is largely designed for the larger, commercial aircraft and executive
118 jets may well elect not use them if they had to pay the full costs.

119 This is an undeniable practical problem and one that is unlikely to produce any
120 ideal outcome; but in the words of the Scottish philosopher, Carveth Read,
121 “Better to be vaguely right than precisely wrong.” The current system is
122 wrong and fees more attuned to costs would provide better signals to users

¹¹ P.A. Samuelson, The pure theory of public expenditure, *Review of Economics and Statistics*, 36,1954, 387–389.

123 of the economic implications of their flights. While the exact calculation and
124 collection of user fees may be difficult, they would seem better than the
125 current regime that is some way from offering signals to ANS users about the
126 economic costs of their actions or indicating where new systems capacity
127 may be required.

128 • There are problems in collecting user fees. The administrative costs of collecting
129 fees or taxes are no small consideration in terms of business efficiency. The
130 current approach of partially funding aviation infrastructure from fuel excise
131 duties and other taxes, such as the international arrival and departure tax, has
132 relatively low administrative costs and is easy to collect. There are arguments that
133 user fees would pose more serious administrative challenges. This ignores two
134 considerations; first, fuel duties, while crudely related to flight distance, are not
135 closely tied to the ANS that are used and thus are costly in terms of providing no
136 incentive for efficient use of ANS services, and second, since flight plans have to
137 be filed and controlled airspace is just that, mechanisms for levying user fees
138 should not prove too intractable.

139 Other countries that have user fees adopt a variety of methods of collection, many
140 levy fees on the number of flights airlines make and the types of plane that are
141 flown. This is far from perfect, although cheap to operate, but is more kin to costs
142 than the almost ad hoc US system of taxes and duties. Given modern information
143 systems, there is an incentive to develop better collection mechanisms that
144 combine economy in fee collection and a linking of fees more closely to the
145 market.

146

147 THE SUGGESTED \$100 TAKE-OFF FEE.

148 In 2011 proposals emerged to establish a mandatory additional fee of \$100 per flight to
149 be paid by aviation operators who fly in controlled air space¹². There are some
150 exemptions to the proposal, notably Canada-to-Canada flights, aircraft flying outside of
151 controlled air space, air ambulances, military aircraft, public aircraft, recreational piston
152 aircraft, and air ambulances. The revenue generated, estimated at \$1.2 to \$1.3 billion,
153 much would depend on the elasticity of demand for use of controlled air space and the
154 general state of the economy, would go to the Federal Aviation Administration, and
155 would, according to US Treasury Department's Bureau of Public Debt calculations,
156 increase air traffic service fees above current structure levels by about 13%.¹³

157 The objective of the charge would be to assist in reducing the national deficit (the US
158 National Debt in September 2012 was \$16.02 trillion; an annual revenue of \$1.2 billion is
159 about 1/13,333th of the current Debt) and to make equitable the share of costs borne
160 across the aviation user community. There has, not surprisingly been some opposition,
161 not least from those who would have to pay the surcharge, to the proposal.

162 This approach misses a vital element in pricing; namely the efficiency with which
163 services, such as ANS, are used. There are opportunity costs of all sorts in making
164 aviation space, some clearly financial as in the case of the FAA hard and software
165 involved, but some involving the congestion caused to other users (or potential user) of
166 air space. Efficiency in the use of a system is not the same as fairness in charging or
167 using revenues from fees as a contribution to pay off national deficits.

168 In terms of efficiency the proposed surcharge has a number of limitations:

- 169 • It is an arbitrary, admittedly round, sum that seems unrelated to any notion of the
170 actual user costs imposed by the various groups making use of ANS. There has
171 been no firm articulation of why the sum was arrived at, the administrative costs
172 of its collection, or the likely impact on consumption of ANS.

¹² US Office of Management and Budget, *Living Within Our Means and Investing in the Future*, Washington DC, 2011.

¹³ An alternative of a fee of \$115 to \$125 per flight would raise \$1.5 billion annually.

- 173 • The underlying rationale behind the charge is confusing. If it is simply a
174 sumptuary sales tax imposed on grounds of fairness or equity then this should be
175 made transparent and the reasons behind it. There are also differences between
176 user fees that are meant to foster better use of a system, and taxes that are
177 intended for macroeconomic purposes of handling the costs of public
178 expenditures more generally.
- 179 • A takeoff fee is a poor indicator of the actual costs imposed by users of ANS
180 services, just as a fuel tax is. Flights are of different lengths and make use of a
181 variety of ANS, of which the terminal costs are only part. It may be a better proxy
182 to the economic costs of a flight, and thus have some attributes of a genuine user
183 fee, but it is a long way from ideal.

184 What the exact impact of takeoff surcharge will be on the various users of ANS is
185 difficult to say; in particular, evidence on the relevant elasticities of demand is lacking.
186 We have little information on the effects of such a proportionately large fixed cost
187 increase on air travel. Indeed, there is limited rigorous analysis of a technical kind of the
188 demand elasticities for many aspects of air transportation outside of the large commercial
189 sector.

190 Arguments certainly have been raised that a \$100 fee would be prohibitive and limit
191 many forms of general and business aviation activity, and possible commercial services
192 on very thin routes. In this context, comparisons with Europe, and in particular, the UK,
193 where many airports currently have higher takeoff fees for general aviation than the US,
194 have been made¹⁴. It is observed that there is much less general aviation in Europe, but
195 this sort of comparison is not really that useful. There are major physical and human
196 geography differences between the US and Europe, and there are other institutional
197 difference between them in terms of such things accesses to airports and competing
198 surface modes, that limit the validity of such international comparisons

199 Overall, in terms of the \$100 takeoff surcharge, the emphasis when it was initially
200 mooted was in terms of its potential role in enhancing the fairness of the way ANS is

¹⁴ T. A. Horne, FAA Funding debate: Euro-fees fears, *AOPA Pilot Magazine*, 50, 2007

201 financed and helping to reduce the national deficit, but this seems somewhat misguided.
202 Given the scale of the Nations' overall deficit, and that from experience we can expect
203 the annual fiscal burden will increase as interest rates rise in the future if the economy
204 moves from recession, the aggregate sums involved in the surcharge are miniscule.
205 Regarding fairness, there is insufficient consideration of the efficiency effects in the
206 detail of the charge. In the long-term, small and large businesses are only likely to
207 prosper if the US economy is globally efficient, and resources used productively; user
208 charges are designed to do this rather than be focused fairness that has many dimensions
209 including that between generations.