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EVALUATING THREE LEVELS OF ENVIRONMENTAL TAXATION IN AVIATION: GLOBAL LIMITATION, EU DETERMINATION AND UK SELF-INTEREST*

Abstract

Although the UK Coalition government has a fondness for nudge policies and proclaimed itself 'the greenest government ever', many policies are criticised or failing. In March 2011, the long-intended policy change from Airline Passenger Duty (APD) to Per Plane Tax (PPT) was dropped. Cited as ineffective at reducing aviation consumption in spite of ever-increasing fees, the APD is a transparent tax passed on to customers by airlines with immediacy, whereas the PPT would incentivise airlines to maximise capacity and therefore reduce emissions but would have purportedly breached the Convention on International Civil Aviation 1944 (Chicago Convention). This article discusses central criticisms of the APD, and looks to the *Luftverkehrsteuergesetz* in Germany, the *Taxe de l'aviation civile* in France and prospects for an EU Air Tax, to conclude that whilst there is a forward movement along three levels of decision-making (international, European and domestic), the speed and quantum of progress varies.

Key words

Environmental taxation, airline, air tax, aviation, air passenger duty, per plane tax, emissions

1. Introduction

In the realm of international aviation emissions and climate change, there appears to be progressive movement along three levels of decision-making. At macro-level is international law. Although the United Nations Framework Convention on Climate Change (UNFCCC), founded at the Rio Earth Summit in 1992, is 'universally recognized to be the appropriate legal forum to tackle the problem of climate change'[1] by establishing *national* goals and reduction and limitation commitments that guide the respective *national* strategies vis-à-vis the Kyoto Protocol, *international* aviation emissions are, by their very nature, excluded. This leaves the International Civil Aviation Organization (ICAO) as the single international body responsible for international civil aviation, as mandated by the Chicago Convention[2], as well as the sector's greenhouse gas (GHG) emissions.

Whereas ICAO deals solely with international aviation emissions, UNFCCC addresses emissions from all other domestic sectors including domestic aviation. Additionally, ICAO

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[1] UNFCCC, Kyoto Protocol and the UN Climate Change Secretariat: A Global Framework to Tackle Climate

[2] Convention on International Civil Aviation, 9th edn, Doc. 7300/9, 2006, www.icao.int/icaonet/arch/doc/7300/7300_9ed.pdf, accessed 12 May 2011.

and UNFCCC each have their own independent and distinct decision-making processes. Despite this, there are 'synergies' between the two and 'if the major portion of emissions from international aviation occurs in international airspace, reason seems to support that ICAO is the relevant and appropriate UN body to oversee the environmental aspects of international civil aviation'.[3] The most recent development at ICAO was in late 2010 when Assembly Resolutions A37-18 and 19 brought an end to the previous 'mutual agreement' stalemate and went a step further to set out 'aspirational' goals for environmental protection and climate change. The ICAO success has been called a 'breakthrough deal' by the EU; ICAO calls it an 'historic agreement'. This paper suggests that, at macro-level, international law evidences slow success.

At meso-level is the European Union (EU) with its Emission Trading System (ETS)[4]. The ETS creates the world's first international market cap-and-trade system of nationally allocated rights across the EU based on the proportion of industry in each Member State, which may be bought and sold. Through the ETS, the EU aims to achieve its Kyoto commitments while balancing which sectors and installations to include in it. This paper questions whether the ETS is, particularly following the decision taken to include international aviation emissions in it[5], an example of 'successful' EU unilateralism in the global sphere.

Finally, at micro-level are EU Member States – the focus of this paper is the United Kingdom (UK). The UK Air Passenger Duty (APD) was first introduced in 1994[6] and rose steadily until March 2011 when was frozen. While it is unclear whether the APD is actually an environmental tax, it is certainly 'successful' at raising government revenue. This paper notes instances of similar taxes on civil aviation in other Member States such as Germany and France; these have been considered in this paper insofar as that they might offer a worthwhile comparative evaluation of the APD and proposals to change or replace it. In the main, this paper considers the theoretical space within which the APD exists as a 'tax' along a spectrum of Pigouvian[7], 'rectificatory' and 'nudging' taxes[8], to suggest that it fails to deliver on its purported corrective intention. One is likely to query whether the aim is to raise revenue, correct inefficiencies, reduce externalities, change behaviour or achieve an appropriate balance of some or all of these. Thus the APD potentially may be viewed as a 'successful cash cow' for filling government coffers whilst it is an ineffective fiscal instrument for its regulatory objectives. The APD is posited in this paper against government proposals to move to a Per Plane Tax (PPT).

This paper observes the past movement and forward trajectory of decision-making relating to aviation emissions at three levels: international, EU and UK. The commonality is recognition

[3] Steven Truxal, 'The ICAO Assembly Resolutions on International Aviation and Climate Change: An Historic Agreement, a Breakthrough Deal, and the Cancun Effect' (2011) 36(3) A & SL 219.
[4] Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC [2003] OJ L275/32.
[5] Directive 2008/101/EC of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community [2009] OJ L8/3.
[6] Finance Act 1994, ss. 28—44 and schs 5A and 6, as amended.
[7] See A.C. Pigou, *The Economics of Welfare* (4th Edn, Macmillian 1932); *A Study in Public Finance* (3rd Edn, Macmillian 1947).
[8] See for instance A. Ogus, ´Nudging and rectifying: the use of fiscal instruments for regulatory purposes´ (2006) 19(2) *Legal Studies* 245; R. Thaler and C.R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, New Haven: Yale University Press, 2008.

of the need for positive change, which in this context is necessarily a synonym for abatement. Using this as the measure of 'success' and therefore the qualifying and quantifying factor in this analysis, the macro and meso-approaches are thereby evidence of consistent 'success'; however, the micro approaches vary in achievements. The French *Taxe de l'aviation civile*, for example, 'charges one rate for passengers flying within the EU and a higher rate for flights outside the EU — though the rates are significantly lower than APD rates'.[9] Evidently less nuanced than the UK's multiple 'bands' method and with lower rates than the UK, the French system is perhaps less likely to induce behavioural change and is unequivocally 'not primarily designed for environmental purposes'.[10] The *Taxe* has this in common with the German *Luftverkehrsteuergesetz* (LuftVStG), which the German legislature highlights as dual- purpose: for environmental protection and raising revenue.[11] It has a ceiling of just EUR 45[12] and consequently may struggle to change behaviour considering that the UK have been unsuccessful in doing so with rates of up to GBP 170 (EUR 200).[13] Ultimately, the APD is a non-success whilst the proposed per plane tax (PPT) would be a relative success even if it skirts along the edges of existing international law.

2. Three levels of environmental taxation

2.1 Macro-level

Article 3(1) of the Kyoto Protocol provides that participating countries will endeavour to address climate change by reducing emissions to five per cent below 1990 levels. Article 2(2) of the Protocol provides that the ICAO shall be the relevant body through which to seek reductions of greenhouse gas (GHG) emissions in civil aviation. While this makes it clear that the international nature of the industries ought not to exclude them from obligations to reduce emissions, it also means any success shall be inextricably linked to the organisational structure and governance of the relevant; this is particularly problematic in the context of the ICAO.[14]

The fact that ICAO is the single body responsible for international civil aviation seems to advocate for its position as the *de facto* forum for any dialogue on establishing an international aviation emissions framework.[15] The ICAO already reports carbon dioxide (CO_2) international aviation emissions data to UNFCCC, which is used to assess to the progress of implementation.

ICAO faces a problem in Article 44 of the Chicago Convention, which mandates it, *inter alia*, to:

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[9] JM Truby, 'Reforming the Air Passenger Duty as an Environmental Tax' (2010) 12(3) ELR 200, 206.
[10] ibid.
[11] BT-Drucks. 17/3030,1,23,26.
[12] LuftVStG §11.
[13] Her Majesty's Revenue and Customs 2008 Pre-Budget Report (24/11/2008), p 2. <http://www.hmrc.gov.uk/pbr2008/pbrn20.pdf> accessed 2 February 2011.
[14] See Steven Truxal, 'The ICAO Assembly Resolutions on International Aviation and Climate Change: An Historic Agreement, a Breakthrough Deal, and the Cancun Effect' (2011) 36(3) A & SL 217; Michel Adam, 'ICAO Assembly's Resolution on Climate Change: A "Historic" Agreement? (2011) 36(1) A & SL 23; Ruwantissa Abeyratne, 'The Worldwide Air Transport Conference of ICAO and its Regulatory and Economic Impact' (2003) 28(4-5) A & SL 218..
[15] See Steven Truxal, 'The ICAO Assembly Resolutions on International Aviation and Climate Change: An Historic Agreement, a Breakthrough Deal, and the Cancun Effect' (2011) 36(3) A & SL 217, 219.

> Insure safe and orderly growth of civil aviation…encourage the development of airways, airports and air navigation facilities…prevent economic waste…and promote generally the development of all aspects of civil international aviation.

The focus is on growth and as there is no mention of 'environment' in the 1944 Convention.[16] While not surprising, it is nonetheless clear that any subsequent political traction within ICAO concerning environmental protection will also compete with other more entrenched values and schemes. Acquiring and maintaining a foothold for clear environmental protection policy in the sector has proved challenging – an emerging cycle of practical details defeating broad declarations.

Whilst emissions trading schemes are generally viewed[17] as a favourable tool for environmental protection as they are not overly pervasive or punishing in nature, controversy over the use of such market-based measures (MBMs) has been brought sharply into focus in the ICAO by the EU's extension of its ETS whereby including international commercial aviation. In 2007, the ICAO passed Assembly Resolution A36-22 in relation to emissions trading in international commercial aviation, concluding that such schemes should only be 'on the basis of mutual agreement between those States'[18], which amounted to a stalemate on international aviation emissions and climate change. The ICAO's 37th Session of the Assembly 'agreed to an historic agreement on aviation and climate change' in 2010[19], adopting two key resolutions: A37-18 and 19, which supersede Resolution A36-22. The goals put forward in the Resolutions are

> …essentially non-specific, meaning it is yet unclear whether an actual reduction will be achieved; [but] they are not necessarily weak in effect. For instance, specific elements of the resolutions include an agreement with two requirements: aircraft emissions must be stabilized and State Action Plans will be introduced. Of course, the most significant, extensive goal is for [Carbon Neutral Growth] by 2020.[20]

It is noted that this is far less ambitious than the EU's own unilateral position on including aviation in the ETS from 2012, which calls for a 10 per cent reduction of 2005 baseline levels by 2020 and reducing carbon emissions in the sector by 50 per cent by 2050. Although ICAO is currently *working* towards this more modest carbon neutral growth, it must be remembered that agreements done at ICAO are multilateral.

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[16] See ICAO, 'Annex 16 to the Convention on International Civil Aviation ('Environmental Protection')', <http://www.icao.int/eshop/pub/anx_info/an16_info_en.pdf>, accessed 12 November 2011.
[17] The ICAO shared the same view formerly also. See 'Resolutions Adopted at the 33rd Session of the Assembly (A33-7), (October 2001), http://www.icao.int/icao/en/assembl/a33/resolutions_a33.pdf, accessed 26 February 2011.
[18] 'Resolutions Adopted at the 36th Assembly (A36-22)' (October 2007), <http://www.icao.int/icao/en/env/A36_Res22_Prov.pdf>, accessed 14 May 2011.
[19] ICAO (2010), 'ICAO Member States Agree to Historic Agreement on Aviation and Climate Change', (Press Release PIO14/10, 8 October).
[20] Truxal, Steven. 'The ICAO Assembly Resolutions on International Aviation and Climate Change: An Historic Agreement, a Breakthrough Deal, and the Cancun Effect' (2011) A & SL 36(3) 237.

2.2. Meso-level

In contrast to ICAO, the EU has 'progressed' insofar as it is overtly required to integrate environmental concerns into all policies 'with a view to promoting sustainable development' by virtue of Article 11 of the Treaty on the Functioning of the EU (TFEU).[21]

Article 191 TFEU dictates that EU environmental policy shall be based on the principle that 'the polluter should pay' – the ETS as cornerstone of EU environmental policy. The mechanics of this particular instance are relatively straightforward, placing costs on companies that continue to pollute, driving innovation and rewarding the more efficient; this accords well with the principle. Following the extension of scope of the ETS, there surface international legal issues in the calculation of those emissions.[22]

The ETS legislation appears to have an extraterritorial effect[23] which *prima facie* conflicts with Article 1 of the Chicago Convention (which is itself a reflection of customary international law): '…that every State has complete and exclusive jurisdiction over the airspace above its territory'. Milde notes that overflying international waters is also the reserve of the ICAO[24], so any extraterritorial element breaches Article 1 of the Convention. However, as only the Member States, and not the EU, are party to that Convention the Court of Justice of the European Union (CJEU) found that rules therein were not to be binding on the EU.[25] Inasmuch as any rules reflect customary international law though, the EU would be bound to the extent that the EU made 'manifest errors of assessment concerning the conditions for applying those principles'.[26] The CJEU then proceeded to consider any extraterritoriality, as Article 1 of the Chicago Convention clearly reflected customary international law.

In a technical analysis, excluding the suggestion of any extraterritorial scope, the CJEU stated that:

> …the fact that, in the context of applying European Union environmental legislation, certain matters contributing to the pollution of the air, sea or land territory of the Member States originate in an event which occurs partly outside that territory is not such as to call into question, in the light of the principles of customary international law…the full applicability of European Union law…[27]

The reasoning, and subsequent upholding, of the EU legislation in the CJEU has not ended the matter though. Member States' exposure to international litigation remains and economic

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[21] Just as in the Chicago Convention, the original European Economic Community Treaty contained no 'environmental' provisions.
[22] [Tonne kilometres = distance x payload] where 'distance' includes those parts of flights beyond the combined EU geographical area.
[23] A challenge was brought against the 'legality' of the ETS legislation before the UK High Court, which made a reference for a preliminary ruling to the CJEU. See Case C-366/10 *Air Transport Association of America, American, Continental and United Airlines v Secretary of State for Energy and Climate Change* (2011), available at <http://curia.europa.eu> accessed 5 January 2012.
[24] Michael Milde, *International Air Law and the ICAO* (Eleven International Publishing 2008) 69.
[25] Case C-366/10 *Air Transport Association of America, American, Continental and United Airlines v Secretary of State for Energy and Climate Change* (2011) para 62.
[26] ibid para 110.
[27] ibid para 129.

reprisals against European companies by large trading partners are being considered.[28] Yet the EU has been unflinching in its resolve.[29] The CJEU judgment is notable for its promotion of the EU position and, by extension, the merits of environmental protection:

> ...it must be pointed out that, as European Union policy on the environment seeks to ensure a high level of protection in accordance with Article 191(2) TFEU, the European Union legislature may in principle choose to permit a commercial activity, in this instance air transport, to be carried out in the territory of the European Union only on condition that operators comply with the criteria that have been established by the European Union and are designed to fulfill the environmental protection objectives which it has set for itself in particular where those objectives follow on from an international agreement to which the European Union is a signatory, such as the Framework Convention and the Kyoto Protocol.

In spite of reference to international objectives there is clear judicial support for the EU legislature, in setting the environmental agenda and its pace, primarily through EU objectives. The task of EU environmental protection is not always a simple one though.

For instance, it is interesting to note the lack of an EU-wide tax regime and thus the corresponding absence of a potential significant tool for environmental protection. The EU is funded through payments by Members States from gross national income, proceeds of agricultural levies and customs collected by Member States and a proportion of value-added tax (VAT) collected by Member States.[30] Even where EU legislation deals with taxation, the conditions under which Member States shall collect revenue is the subject matter[31]; this cautious approach reflects the fact that 'tax policy goes to the heart of national sovereignty'[32] and is politically sensitive.[33] Some consideration has gone into which taxes which the EU could adopt, but '[T]he fact that the current system of own resources assures the funding of the EU budget indicates that if change is to be contemplated it must be for reasons other than pure revenue raising'.[34] That is to say, there needs to be a political purpose or cause in order to drive change.

Indeed the focus of this paper is to identify the political conflict between what may be perceived as revenue raising *versus* what may be considered 'legitimate' environmentally protective policy, pursued through 'green' taxation. Such a conflict that does not presently arise at EU level owing to the lack of an EU-wide tax regime, but other drawbacks also pertain. Firstly, each Member State administers the ETS for certain allocated airlines[35] - a decentralization that may lead to inefficiencies. A second issue is the coherent and consistent use for environmental purposes of ETS-raised funds. Under the ETS, for instance, 'it shall be for the Member States to determine the use to be made of revenues generated' but that

[28] Pilita Clark, 'Airbus warns of emissions trade war', *The Financial Times* (London, 6 June 2011) 1.
[29] In the context of the ICAO see 'EU Statement of Reservation' made to the ICAO 18-28 September 2007 <http://ec.europa.eu/transport/air/international_aviation/european_community_icao/doc/memo_eu_statement.pdf> accessed 5 January 2011.
[30] I Begg, 'Funding the EU Budget: A Case for Inaction?' (2009) 9(4) Harrisburg 506, 513.
[31] See *e.g.* Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity OJ L283/51.
[32] M Lee, *EU Environmental Law* (Hart Publishing 2005) 191.
[33] I Begg, 'Funding the EU Budget: A Case for Inaction?' (2009) 9(4) Harrisburg 506, 514.
[34] ibid 516.
[35] See Regulation (EC) 748/2009, OJ L219/1.

expenditure should be on 'the cost of administering the Community scheme'[36], and environmental causes potentially, but not exclusively, including those in the field of air transport.[37] This lacks efficiency and clarity of focus that a centralized EU taxation capacity could arguably provide. Although the EU has made significant strides for environmental protection in the sector especially when compared to relative stagnation at the macro-level, it could do more. But to provide the relevant powers may require 'legislative changes up to and including Treaty change'[38] – the former a complex and time consuming negotiation and the latter seemingly unthinkable at present.

2.3 Micro-level

2.3.1 UK's 'greenest government ever'

In the UK, protection of the environment is seen more and more frequently as a 'universally desirable policy objective', but just as for other governments, it is not the only objective – policymakers must balance environmental concern with other socio-economic and political considerations, and these are heightened by the global recession.

Indeed in the 'green' context, the fundamental challenge for any government is '…to devise a way of limiting [environmental]...damage while minimising the impact on the economically or socially valuable activity that gives rise to it'.[39] In the UK, policymakers have been working to formulate a suitable policy response – a sustainable transition to a 'low carbon economy'.

The 'greenest government ever', as the current UK government has proclaimed itself, has as its priority to 'support a strong and sustainable green economy; to encourage businesses, people and communities to manage and use natural resources in a sustainable manner … and work to ensure that the UK economy is resilient to climate change'.[40] Such resilience requires sustainability in industry and consumption – major challenges for any government. So-called 'green nudge' policies, intended to drive individual behaviour using social influence to change attitudes and behaviour to achieve environmental sustainability, are likely to make up the format of the government's green regulation 19 of 23 green policies estimated as delivered by this route.[41] Schofield observes that:

> Green policies are by definition policies designed to trigger a behavioural change … Getting the signal right is crucial, as if the policy is poorly designed and has to be changed, the consistency value of this initial signal for any future policy announcements can be substantially damaged.[42]

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[36] This is expected to be half of total revenue.
[37] Directive 2008/101/EC, art 3d(3).
[38] I Begg, 'Funding the EU Budget: A Case for Inaction?' (2009) 9(4) Harrisburg 506, 529.
[39] David F Williams, 'Environmental Tax Policy' (2008) 925 Tax Journal 18.
[40] 'Defra, Draft Structural Reform Plan', (*Number 10*, 16 July 2010) <http://www.number10.gov.uk/wp-content/uploads/defra-srp.pdf> accessed 20 August 2011.
[41] Matthew Spencer, 'Green Agenda is the glue holding the coalition together' (*The Guardian (online)*, 21 June 2010) <http://www.guardian.co.uk/environment/cif-green/2010/jun/21/green-agenda-coalition> accessed 8 March 2011.
[42] Mark Schofield, 'Budget analysis – Environment', (2010) 1036 (30) Tax Journal 2, 31.

But balancing a green policy is no easy chore. For instance, the UK Committee on Climate Change (CCC) recommended a host of 'financial incentives through carbon prices, taxes and subsidies; support for technology innovation; information and encouragement; and regulation when needed'.[43] Clearly there is little in the way of a common position so far on how best to proceed.

Cleary there will always be political plans, but the essential role for government in this area is to set a long-term, sustainable policy framework 'to encourage the confidence for businesses to invest and enable timely development of innovative products and services to speed the transition to a low carbon economy'.[44] The key elements of the current UK environmental policy framework[45] appear consistent with Stern's Review[46]:

- the pricing of carbon through tax, trading and regulation;
- support for innovation and the deployment of low carbon technologies;
- the removal of barriers to energy efficiency; and
- improvements in information and education.

It is interesting to note that the UK was the first country in the world to set legally binding 'carbon budgets' under the Climate Change Act 2008, which has as its aim to achieve a 34 per cent reduction of UK emissions by 2020 and a reduction of at least 80 per cent by 2050.[47] The CCC is charged with recommending the carbon budget levels and carbon pricing is supported by way of the UK's participation in the EU ETS, and in even more precisely encouraged by joint initiative by British, French and German ministers to push the EU to move from its current commitment of a 20 per cent reduction of GHG emissions to 30 per cent reduction target by 2020.[48]

Despite the obvious advantages to its 'market' alternative, calls have come in recent years from 'a number of prominent economists from across the political spectrum … for Pigouvian taxes on gasoline as a potential means of dealing with unpriced externalities'[49], Applying Pigou's theory that actors should internalize the full social costs of their activities and be 'charged' with them. The experience has been a steady rise in gasoline taxes and, in the aviation, the APD.

The main problem with the Pigouvian tax is that it 'concentrates on the presumption that the tax should equal the marginal externality…'.[50] But one might ask, what '…is the optimal quantity of the good or activity that produces the externality'[51]? According to Nye, 'There may also be a conflict between the desire to attain the optimal efficiency level and the desire

[43] The Committee on Climate Change, 'Building a Low Carbon Economy' (December 2008).
[44] ibid 85.
[45] The Chartered Institute of Taxation, 'The Green Tax Report 2009: Green Taxes in Operation' (2009) <http://www.greentaxreport.co.uk/read-chapters-online/12-green-taxes-in-operation> accessed 11 March 2011.
[46] Nicholas Stern, *The Economics of Climate Change: The Stern Review* (CUP 2007).
[47] The reduction targets are founded on the 1990 baseline emission levels.
[48] Chris Huhne, Robert Röttigen and Jean-Louis Borloo, 'Joint EU Climate Change' (*Department of Environment Energy and Climate Change*, 15 July 2010).
[49] JVC Nye, 'The Pigou Problem' (Summer 2008) Regulation 32, 32.
[50] ibid 36.
[51] ibid.

to attenuate pollution, congestion, or carbon emissions directly.'[52] Economic theory suggests working towards the optimal efficiency whereas 'a great deal of policy seems concerned with reducing the size of the externality itself'.[53] Nye gives a first-rate example of how these two goals are often in conflict:

> As carmakers develop less polluting automobiles or gas suppliers discover better refining techniques, the principle of Pigou taxation would require that the gas tax be lowered, yet there is no mechanism for monitoring when taxes are too high (Nye 2008:37).[54]

Citing a study carried out by Parry and Small[55], Nye concludes that, 'most calls for Pigou taxes are misguided attempts to condemn a particular activity as undesirable without consideration of the true workings of the market'.[56] So perhaps the Pigouvian tax in its ideal form is not the most appropriate instrument to apply in the present context of aviation emissions particularly when the actual cost of that pollution cannot be determined.[57]

Ogus identified two fiscal instruments which, 'while falling short of the ideal Pigouvian tax, still attempt to induce socially desirable behavioural change'[58]: 'rectificatory tax' and 'nudging tax'. The first is different from the ideal Pigouvian in that it 'relates to the imposition of the harm caused by the activity, but only to a *subset of the costs* thereby incurred'[59] whereas in ideal Pigouvian form, 'the tax, as an internalising device, should be equal to *all the costs* generated by the activity which are not reflected in the costs which the actor incurs for the activity'.[60] Ogus differentiates the social and private costs of the activity, removing the problem of setting the appropriate cost in Pigouvian taxes. Ogus's second fiscal instrument is also noteworthy: the 'nudging tax' and its altogether different approach to calculation 'by reference to what level of payment is likely to reduce the undesired behaviour' rather than relating 'the imposition of the harm caused'.[61]

The nudging tax aims to reduce inefficiencies rather than eliminate them by achieving a perfect economic efficiency; but, according to Ogus:

> That does not mean that behavioural considerations are irrelevant. In devising fiscal regimes, policy-makers are likely to take account of behavioural effects, if only because they wish to maximize receipts and that will depend crucially on how individuals respond to impositions.[62]

However, 'If…the demand for the activity or product is highly inelastic, the tax will be ineffective as a regulatory device…[but] a fruitful source of revenue…'.[63] Applying this to

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[52] JVC Nye, 'The Pigou Problem' (Summer 2008) Regulation 32, 37.
[53] ibid.
[54] ibid.
[55] IWH Parry and KA Small, 'Does Britain or the United States have the right gasoline tax' (2005) 95 American Economic Review.
[56] JVC Nye, 'The Pigou Problem' (Summer 2008) Regulation 32, 37.
[57] This is a significant challenge to the 'the polluter should pay' principle.
[58] A Ogus, ´Nudging and rectifying: the use of fiscal instruments for regulatory purposes´ (2006) 19(2) Legal Studies 245, 248.
[59] Ibid (emphasis added).
[60] ibid (emphasis added).
[61] ibid.
[62] ibid 250.
[63] ibid 265.

the APD, which is proving a successful at raising government revenue though having negligible effect on passenger numbers and therefore emissions; its environmental credentials are called into question.

2.3.2 UK APD

The UK Office for National Statistics currently reports on six key types of environmental taxes collected domestically: fuel duty, vehicle excise duty, air passenger duty, the climate change levy, landfill tax, and the aggregates levy.[64]

Although this paper considers the UK's APD in the main, it is interesting to note that a majority of duties collected are transport sector-specific. This includes the use of cars or roads including public transport and increasingly through the 'use' of air as it become more 'public', which seems to be a natural association. Despite this, the airline industry continues to benefit from certain historical exemptions as a consequence of its international nature:

> At present, although road fuel is charged excise duty, which represents a substantial proportion of the pump price paid by motorists, aviation kerosene (AVTUR), which is used in jet engines, is *exempt* from this tax, under international agreement.[65]

In this context the introduction of the UK APD in 1994 can perhaps be seen as a government policy aimed at limited redress of this sector's favourable treatment. But, as with the advent of fuel duties, the APD was undoubtedly intended primarily to raise *revenue*. In recent years, however, the APD has been cited as having a hand in combating climate change, although amidst strong speculation.

The APD rates were doubled in 2007, which brought with it a surge in tax revenue that was effectively sustained, owing apparently to the negligible effect on passenger numbers following introduction of the tax.[66] Next, there came proposals to replace the APD with a more environmentally friendly PPT.

In the *Pre-Budget Report 2008*, the PPT proposal was scrapped with little explanation. Instead, APD rates were increased and a new structure introduced comprising four geographical bands based on distance from London to the capital city of the destination.[67] The span of the APD was increased from between GBP 10-80 (EUR 11-90) during the years before 2008 to GBP 11-110 (EUR 13-125) in 2009.

The UK House of Commons Environmental Audit Committee challenged the veracity of the APD increases and recommended the UK Treasury reinstate the plan to reform the APD into PPT. However, another increase to the APD was announced in Budget 2009 across a range

[64] The Chartered Institute of Taxation, 'The Green Tax Report 2009: Green Taxes in Operation' (2009) <http://www.greentaxreport.co.uk/read-chapters-online/12-green-taxes-in-operation> accessed 11 March 2011.
[65] A. Seely, 'Taxing Aviation Fuel' (Parliament briefing paper, 9 October 2009) 1 <http://www.parliament.uk/briefing-papers/SN00523> accessed 10 June 2011.
[66] The Chartered Institute of Taxation, 'The Green Tax Report 2009: Green Taxes in Operation' (2009) <http://www.greentaxreport.co.uk/read-chapters-online/12-green-taxes-in-operation> accessed 11 March 2011.
[67] The exception is Russia, which is split into two geographical sections.

between GBP 12-170 (EUR 14-194).[68] The anticipated effect of this rise in APD was an increase in annual revenue to GBP 3.8 billion (EUR 4.3 billion).[69] George Osborne announced in his emergency Budget speech in June 2010 that the new government would 'explore changes to the aviation tax system, including switching from a per-*passenger* to a per *plane* duty, which could encourage fuller planes'.[70] Though PPT has not yet been adopted anywhere, Germany and France also have APD-type schemes. Here it should be noted that in the Netherlands, an 'ecotax' was introduced in 2008 and abolished within 12 months when passengers began flying from other airports within a wide catchment area in Belgium and Germany where no such tax existed. A similar such scheme in Ireland was also scrapped that year.

2.3.3 Germany and France

The German Parliament introduced the *Luftverkehrsteuergesetz*[71] in January 2011 for two reasons: (1) The deficit of the national budget should be reduced[72] utilising the estimated income from the tax of EUR 1 billion per annum[73]; (2) The taxation focuses on mobility. Thus a modification is sought in the environmental behaviour of consumers.[74] This rationale is not dissimilar to the stance of the current UK government, which has distanced itself from the purported 'green' origins of the tax in 1994 to now maintain that:

> We have two agendas that we've been perfectly frank about… One of them is using taxation to drive behaviour change; the other is using taxation to drive down the deficit. And aviation cannot be exempt from sharing and dealing with that problem any more than any other.[75]

In both UK and Germany, the relative weights between the two aims of revenue-raising and environmental protection are called into question. In Germany, the *Luftverkehrsteuergesetz* rates are bracketed: EUR 8, EUR 25 or EUR 45.[76] In comparison to the German and French equivalent rates, the UK's EUR 200 ceiling is particularly high. Despite this, the APD has 'largely failed as an instrument to change behaviour and instead is generally seen only as a revenue-raising measure'.[77] This implies that the two aims, even if superficially logical, are not necessarily mutually reinforcing. It also follows that the UK policy may be more controversial than the French and German systems, appearing more opportunistic or blatant in its pursuit to raise revenue.

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[68] 'Budget March 2010 – motoring and travel', (*Directgov*, 25 June 2010) <http://www.direct.gov.uk/en/Nl1/Newsroom/Budget/Budget2010/DG_186642> accessed 12 March 2011 (this rate has remained unchanged).
[69] Oliver Smith, 'Chancellor delays decision over Air Passenger Duty reform' (*The Telegraph* (online), 22 June 2010) <http://www.telegraph.co.uk/travel/travelnews/7846901/Chancellor-delays-decision-over-Air-Passenger-Duty-reform.html> accessed 3 March 2011.
[70] ibid.
[71] There is a pending action at the Federal Constitutional Court to nullify the *Luftverkehrsteuergesetz* (BVerfG Az: 1 BvF 3/11).
[72] BT-Drucks. 17/3030,1.
[73] ibid, 32.
[74] ibid 23,36.
[75] Pilita Clark, 'Air tax rise sparks fears over loss of traffic to rivals' (*The Financial Times*, 29 October 2010) quoting the Transport Secretary, Philip Hammond <http://www.ft.com/cms/s/0/73143386-e37c-11df-8ad3-00144feabdc0.html#axzz1V8TclRxq> accessed 13 May 2011.
[76] §11 LuftVStG.
[77] JM Truby, 'Reforming the Air Passenger Duty as an Environmental Tax' (2010) 12(3) ELR 200, 208.

The German tax covers commercial flights but private and cargo flights are excluded[78]; the UK has now closed included private flights. The stated rationale for Germany's exclusion of cargo flights is the existence of good levels of international competition and 'sensibility' of the market.[79] The UK also focuses only on passengers whereas the French *Taxe* imposes a (lesser) charge on cargo.[80] Whilst the UK government ultimately felt that international law precluded switching to PPT, a more nuanced APD following the French model and incorporating cargo, would have operated within the confines of international law, 'reluctantly' accepted as the obstacle.[81] This would prioritize environmental protection and social justice.

The lowest *Luftverkehrsteuergesetz* rate applies to all flights with target countries less than 2,500 kilometres away from Frankfurt/Main airport. Consequently some flights, such as those to British or France Overseas Territories, have distances greater than 15,000 kilometres and will only be charged at the EUR 8 rate.[82] The likelihood of changing consumer behaviour in these instances inevitably declines because of the missing link between actual pollution and the tax rate.[83] To deal with this, the UK government consulted '…on how to improve the existing and rather arbitrary bands that appear to believe that the Caribbean is further away than California'.[84]

Examination of the divergent approaches to German, French and UK– including or excluding cargo, charging significantly different rates based on varied calculations – reveals that no single method exists for balancing satisfactorily the relevant competing interests in this area. Truby concludes overall that the UK APD remains a 'blunt, misconceived and arbitrary economic instrument' for which abolition is 'long overdue'.[85]

2.3.4 UK PPT proposals

A successful policymaker would distinguish more clearly between 'improving the tax environmentally (by aligning the tax with emissions rather than passenger numbers, something the EU ETS is supposed to address, when it applies to the airline sector) from attempts to raise more revenues from the sector'.[86] A change to PPT would also accord with the polluter pays principle. Airline companies currently pass APD rates on to consumers with immediacy, which has not modified consumer behaviour and as very succinctly stated by one commentator, 'environmental taxes change behaviour'.[87] The APD is then flawed by this

[78] §§4, 2 Nr. 1 LuftVStG.
[79] BT-Drucks. 17/3030,36.
[80] JM Truby, 'Reforming the Air Passenger Duty as an Environmental Tax' (2010) 12(3) ELR 200, 206.
[81] Budget Statement by the Chancellor of the Exchequer, the RT Hon George Osborne MP (23 April 2011) <http://www.hm-treasury.gov.uk/2011budget_speech.htm> accessed 3 May 2011.
[82] Eilers, Stephan 'Hey, Johanna. Haushaltskonsolidierung ohne Kompetenzgrundlage-Finanzverfassungsrechtliche Würdigung des neuen Luftverkehrsteuergesetzes' [2011] DStR 97, 98 (German journal article).
[83] The French system has just two rates: EU (reduced) and non-EU.
[84] Budget Statement by the Chancellor of the Exchequer, the RT Hon George Osborne MP (23 April 2011) <http://www.hm-treasury.gov.uk/2011budget_speech.htm> accessed 3 May 2011.
[85] JM Truby, 'Reforming the Air Passenger Duty as an Environmental Tax' (2010) 12(3) ELR 200.
[86] Mark Schofield, 'Budget analysis – Environment', 1036 (30) Tax Journal, 5 July 2010, 30.
[87] Andrew J White, 'Decentralised environmental taxation in Indonesia: a proposed double dividend for revenue allocation and environmental regulation' (2007) Journal of Environmental Law 42, 45 citing Joe Loper, 'Evaluating Existing State and Local Tax Codes From an "Environmental Tax" Perspective: The Case of

standard – but even if it were modifying consumer behaviour it also does not recognize that airlines are part of the problem. Presumably, airlines operating below capacity would be more damaged financially under the PPT. The PPT would drive efficiency and encourage innovation. At current the consumer has only two choices in terms of limiting emissions: take the flight or not. And under PPT the airlines would be incentivized to engage with multiple factors, such engagement would be better for competition. In this context it is notable that a trait of oligopolies[88] is often transparency and similarity of cost structures.[89]

In the 2011 Budget, George Osborne stated:

> We hoped we could replace the per passenger tax with a per plane tax. We have tried every possible option, but have reluctantly had to accept that all are currently illegal under international law. So we will work with others to try to get that law [the Chicago Convention] changed. [90]

This statement raises some interesting questions. For example, the analysis above reveals the immediacy with which it could be seen that such a policy could *prima facie* conflict with the Chicago Convention. Arguably one would have anticipated, however, the APD to have already breached it. This perception was addressed (at least insofar as UK courts are concerned) in the *Tour Operators case*[91] in which the Court interpreted Article 15 of the Convention rather restrictively.

Mr Justice Burnton took the language of ICAO's *Policies on Taxation*[92], stating that 'each Contracting State shall reduce…and make plans to eliminate…all forms of taxation on the sale or use of international transport by air, including taxes on…operators and taxes levied directly on passengers or shippers'[93], to mean that Article 15 could not have *required* abolition of the APD. This reflects the current state of UK law[94] and therefore it is difficult to comprehend why such reasoning could not be applied equally to the PPT. Hypothetically, the PPT would be placed on a firm legal basis, contrary to recent government assertions.

It is thus questioned what exactly has changed and whether international problems previously perceived by government as less relevant now provide a convenient excuse. The UK approach is recalled as markedly inconsistent with the rather bold stance of the EU; this might be taken as undermining EU confidence in ETS-legality. The rather obvious reality is that UK government is not optimistic about Chicago Convention amendments. Indeed, the APD scheme now includes private jets, is frozen until 2012 and rates on long-haul routes to Northern Ireland have been halved.

Energy-Related Taxes' (1994) 12 Pace Environmental Law Review 61, 64.

[88] Oligopolistic markets encourage illegal cartelisation or legal (yet damaging to consumers) 'tacit coordination'.

[89] A Jones and B Sufrin, *EC Competition Law; Text, Cases and Materials* (3rd edn, OUP 2008) 863.

[90] Budget Statement by the Chancellor of the Exchequer, the RT Hon George Osborne MP (23 April 2011) <http://www.hm-treasury.gov.uk/2011budget_speech.htm> accessed 3 May 2011.

[91] *Federation of Tour Operators and others* v *Her Majesty's Treasury Customs and Excise* [2007] EWHC 2062 (Admin).

[92] 'The ICAO's Policies on Taxation in the Field of International Air Transport' (Doc 8632, 3rd edn 2000) available at <http://www.icao.int/icaonet/dcs/8632/8632_3ed_en.pdf> accessed 1 April 2011.

[93] It was noted that 'On the other hand, a number of States imposed no taxes on international air transport' (*Tour Operators case* para 64).

[94] The appeal was confined to just one separate ground.

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3 Conclusion

The transport sector has traditionally been the breadwinner of environmental taxes in the UK, so when it comes to air transport, the advent and implementation of the APD was expected. In any case, UK policymakers are clearly in a difficult predicament when it comes to transport, which is as essential to development as it is to detrimental to sustainability, as they perform this particular balancing act. Over the past four years, however, the APD duties on some flights have increased more than three-fold. It comes as no surprise then that the APD has been heavily criticised by consumers on the grounds that as a 'tax on tourism', it restricts on the one hand opportunities for the less-advantaged to travel by air, and on the other hand incoming tourism to the UK.

At a time when it appears numbers of passengers travelling to Europe are on the increase, a decrease in UK traffic would be bad news for the APD. In November 2011, CEOs of the four major airlines in the UK met with George Osborne on a joint campaign to scrap the APD – a response is awaited. The previous response was a reminder that the APD is a tax on airlines; they pass it on to passengers as a business charge.[95]

As the air transport sector is naturally global, it seems only appropriate that the UK should not need to 'go it alone'. Rather than at various stages be subject to different interpretations by states, the subject should ideally be dealt with on the macro-level under the Chicago Convention, or if that is not possible then on the (meso) EU-level. Whilst it is not foreseeable that the Treaty will be amended anytime soon, there has been limited talk of a new direct taxation scheme on air transport with a view to co-finance the EU budget. But it is interesting to note that duties on air traffic may serve purposes other than supporting 'the green agenda', namely serving as a direct finance resource; taxation can lead to temptation. Thus although EU determination does not currently resemble self-interest, nor appear likely to capitulate under increasing global pressures, one should also remember that the UK's 'greenest government ever' seems to have fallen foul of both. Perhaps then EU direct taxation in aviation is undesirable overall. It currently appears that quasi-taxation 'schemes' are preferable to direct 'duties'. That multiple interests can prevent schemes coming to fruition, whilst self-interest can undermine the environmental credentials of any scheme already in existence. The EU sits uniquely between such extremes, with political commonalities and very limited interest in the *revenue* its ETS raises it has been provided with the opportunity to focus on making the greatest *environmental* progress. But crucially, it has taken it.

[95] Her Majesty's Revenue and Customs, *Prebudget Report* (24 November 2008) <http://www.hmrc.gov.uk/pbr2008/pbrn20.pdf> accessed 10 May 2011.