OXFORD ECONOMICS

An Alternative APD regime

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Contents

Executive Summary

The current Air Passenger Duty regime discriminates against long-haul travel…

- Since its introduction in 1994, the UK's Air Passenger Duty (APD) has undergone numerous changes, of both the rates charged and the structure, leading to its current form as a four-tier system.
- Throughout these changes, the relative duty on long-haul travel has increased from being twice that of short-haul travel, to a situation today where the APD on long-haul travel ranges between 5- and 7-times that for short-haul passengers.

… and The Treasury's proposals for reform continue this trend.

- The Treasury has recognised that the current APD structure is too complex, and in March 2011 published a consultation document with two proposals for an alternative APD system.
- These proposals do simplify the APD, by using either a two- or three-tier structure, and do not adversely affect the revenue the UK Government accrues from the APD. However, they fail to adequately address the discrimination against long-haul travellers. Under the two proposals presented by The Treasury, the APD charged on long-haul travel remains between 4.5- and 5.3-times larger than that for short-haul.

But long-haul visitors should be encouraged to the UK...

- The spending of visitors on goods and services in the UK generates economic activity (in both value-added and employment terms) in the UK's travel and tourism industry.
- While they are in the UK, long-haul visitors spend, on average, more than twice the level of short-haul visitors. Consequently, each long-haul visitor generates twice as much economic activity as a short-haul visitor; increasing the proportion of long-haul visitors will increase the size of the UK's travel and tourism industry, leading to higher employment in the sector.

…and imposing APD rates that are more equitable will lead to benefits for the UK economy through increased visitor spending…

- There are a number of alternative APD regimes that could be introduced that not only simplify the APD structure, but are also APD revenue neutral, and beneficial for the UK's travel and tourism sector, as they encourage greater numbers of long-haul visitors to the UK.
- If a two-tier APD regime were to be imposed, with the Band A duty set at £19 and Band B at £51, the impact on APD would be revenue neutral. However, these alternative rates would result in the UK's travel and tourism industry benefitting from an increase in its value-added contribution to the economy of between £7 and £13 million, and support an extra 170 to 350 jobs.

…and the spending of residents remaining in the UK

- Furthermore, some UK residents will choose not to travel abroad under the new APD regime, and will instead spend money in the UK, through domestic trips or general consumption. These expenditures are additional for the UK economy and generate boosts to both UK GDP and employment.
- Imposing this two-tier regime would lead the wider UK economy to benefit from a GDP boost of between £125 and £165 million, supporting between 3,500 and 4,500 UK jobs.

1 Introduction

Since its introduction in November 1994, the UK's Air Passenger Duty (APD) has been the subject of numerous changes in both its structure and the rates levied. In March 2011, HM Treasury (HMT) opened a period of consultation to obtain views on major changes to the structure of the APD proposed by HMT[1]. The changes have been designed to be 'broadly revenue neutral', however there is significant concern that the UK's tourism economy will suffer, due to reduced numbers of long-haul foreign visitors to the UK.

Oxford Economics[2] was commissioned by three U.S. airlines - American, Continental/United and Delta - to provide suggestions of alternative APD rates that comply with the APD revenue neutrality of HMT's proposals, while also benefiting the UK's tourism economy. This report presents the findings of the study, and is arranged as follows:

- Chapter 2 provides a brief history of the APD, and outlines the changes as proposed by HMT;
- Chapter 3 outlines the methodology used to determine whether alternative APD regimes could deliver greater benefits for both the UK Government and the UK's tourism economy,
- Chapter 4 presents the findings of the investigation for an alternative two-tier APD regime;
- Chapter 5 presents a sensitivity analysis around the elasticity assumptions used in the model;
- Chapter 6 outlines a potential 3-tier APD regime that could deliver benefits to the UK; and,
- Chapter 7 concludes.

1 HM Treasury (2011) Reform of Air Passenger Duty: a consultation.

2 Oxford Economics has also conducted work on the impact of the proposed APD regimes on popular tourism markets around the world for the World Travel and Tourism Council.

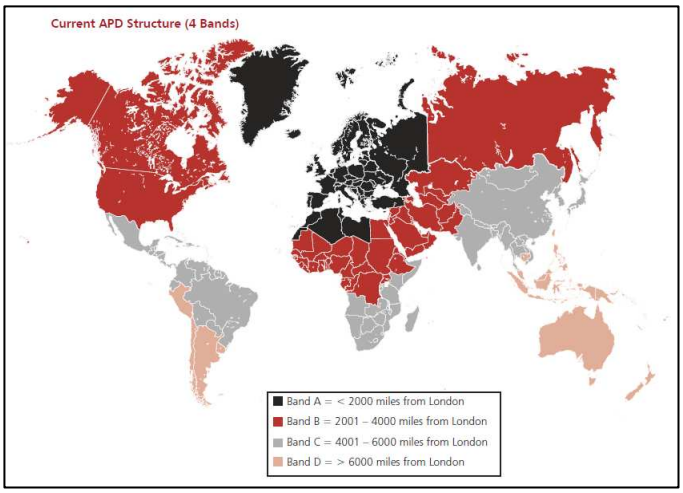
2 A brief history of the Air Passenger Duty

2.1 1994 to 2012[3]

The APD was first introduced on 1st November 1994 under a two-tier regime: journeys within the UK and European Economic Area (EEA) were subject to a £5 charge, while passengers travelling outside of this area paid a higher rate of £10. On 1st November 1997 the first change to the APD occurred, with rates doubling to £10 for travel within the UK and EEA, and £20 for all other passengers. The first change to the structure of the tax took place in April 2001, with the introduction of the reduced rate for economy passengers. Under this schedule, economy fares within the EEA were charged £5, while economy passengers outside of the EEA were charged £20; passengers travelling on business or first class tickets were charged double the reduced rate. The rates remained at these levels for the following 6 years, until all duty rates were doubled on 1st February 2007.

In November 2009, the APD regime was radically overhauled, with the introduction of a four-tier structure to determine charges. The new reduced rates (£11 for Band A, £45 for Band B, £50 for Band C, and £55 for Band D) were structured in a manner that discriminated against long-distance travellers while providing relief for short-haul passengers (Figure 2.1). Since the introduction of the four-tier regime, duty rates have increased annually, and are projected to do so until 2012, when reduced rates will be £13 for Band A, £65 for Band B, £82 for Band C and £93 for Band D.

Figure 2.1: The four-tier APD regime, introduced in 2009[4]



The evolution of duty rates has been biased towards short-haul travel; in real terms the rate payable on a flight within Band A has increased by 76% since 1994 (78% by 2012), whereas a traveller to a Band D destination pays over five times (520%) more in APD in 2011 than in 1994 (Chart 2.1). The revenue the

3 This section draws heavily from Seely (2011) Air Passenger Duty: an introduction. House of Commons Library

4 Source HM Treasury

government receives from the APD is projected to reach £2.8 billion in 2012[5], a 480% increase on the revenues generated in the APD's first full year of operation, 1995 (Chart 2.2).

Chart 2.1: Growth in APD rates by 2011 destination tier

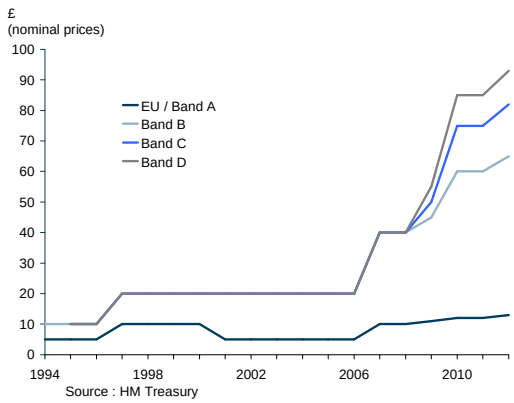
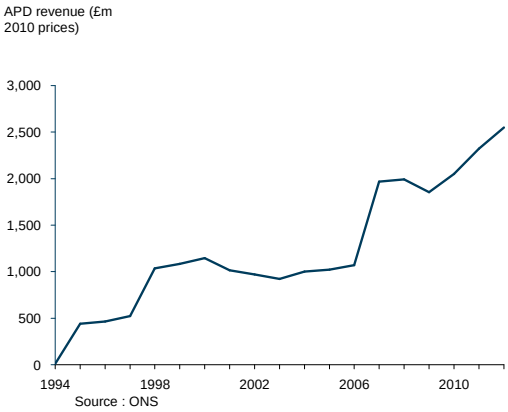


Chart 2.2: Government revenue from APD



2.2 HM Treasury's proposals for APD reform

In its March 2011 consultation paper, HMT presented two possible options for reform of the APD in 2012. Both options represent a movement back towards the pre-2009 structure. Option 1 returns to the two-tier model used prior to 2009 (with one rate for the EEA, and another for the rest of the world (Figure 2.2)). Alternatively, Option 2 utilises three tiers (the rest of the world band from Option 1 is split into two segments: journeys of less than 4,000 miles, and journeys greater than 4,000 miles (Figure 2.3)).

HMT's motivation behind changing the structure of the APD is to reduce the complexity of the system, and both of the options proposed have been designed to be 'broadly revenue neutral'. To sustain APD revenue at levels that would be delivered under a four-tier model with the consolidated long-haul bands requires a combination of higher duty rates for the most popular routes (those in Band A and Band B) to offset the reduced rates levied on passengers on the lower volume routes (Band C and Band D) (Table 2.1).

[5] Office for Budget Responsibility (2011) *Economic and Fiscal Outlook*

Figure 2.2: Bands under Option 1[6]

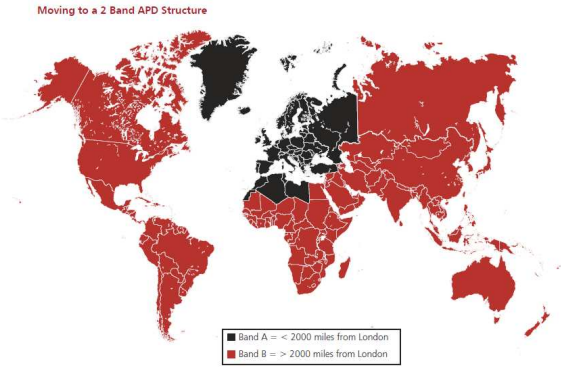


Figure 2.3: Bands under Option 2

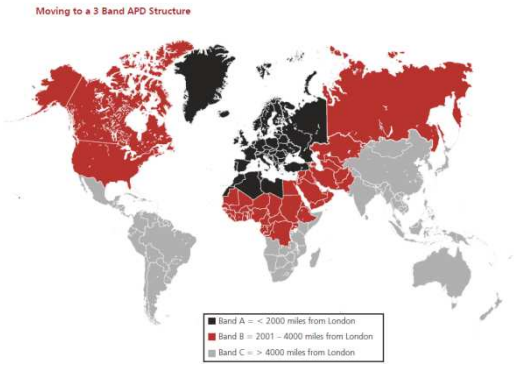


Table 2.1: Reduced APD rates under HMT's proposals

	Reduced rate
Option 1	
Band A	£13-£16
Band B	£65-£75
Option 2	
Band A	£13-£16
Band B	£60-£69
Band C	£72-£83

Source:HMT (2011)

2.3 Is discriminating against long-haul travel beneficial for the UK?

Despite the prospective increase in Band A duty, the differential between short- and long-haul duty remains sizable (long-haul rates are between 4.5 and 5.3 times greater than those levied on short-haul journeys). The level of discrimination against long-haul travellers in both the current and proposed APD schedules is harmful for the UK economy. The latest data from the International Passenger Survey indicate that long-haul visitors to the UK spend significantly more than short-haul visitors while in the UK[7]. In 2010, visitors to the UK from Band A countries spent £436 per visit, while long-haul visitors from Bands B, C and D spent £898, £1,167 and £932, respectively. Given these disparities in spending, it would appear that any policy that discourages long-haul visitors more than short-haul travellers would be more harmful to the UK tourism sector than one that encourages long-haul visitors.

[6] Source HM Treasury

[7] See http://www.statistics.gov.uk/downloads/theme_transport/mq6-overseas-travel-2010-q4.pdf

Furthermore, increasing APD for short-haul air passengers would not necessarily mean that they would not visit the UK. To the extent that higher APD rates cause short-haul visitors to the UK to eschew air travel, they may be able to travel to the UK by alternative modes of transports; for the vast majority of long-haul visitors this option does not exist. Consequently, discouraging 1,000, for example, long-haul visitors to the UK through the APD is far more detrimental to the UK's tourism economy than reducing arrivals by the same number of short-haul passengers.

These factors lead to the conclusion that alternative APD regimes exist that not only comply with HMT's requirements for reduced complexity and sustained APD revenue, but could also deliver economic benefits, through additional GDP and employment in the UK's travel and tourism sector. Put simply, increasing the duty on short-haul passengers and reducing it for long-haul travellers could lead to benefits for the UK. However, given the many factors at play in determining the level of APD revenue generated, locating the optimal mix of duties, that are also revenue neutral, is a complex process. The following chapter outlines the methodology used to identify these alternatives.

3 Methodology

In order to find the optimal mix of APD duty rates that return APD revenue neutral results and an economic benefit for the UK's travel and tourism industry in 2012, it is necessary to undertake a three stage analysis. First, a model of the demand for air travel in the UK is required to provide estimates of the impact a change in APD would have on passenger numbers. The second stage involves translating the change in passenger numbers, estimated in stage one, to an economic impact for the UK's travel and tourism industry. Finally, the effect of UK residents not making trips abroad and remaining in the UK must be considered. This section of the report outlines the approach used in each stage of the analysis.

3.1 A note on the data

Before discussing the methodologies used in this study, it is worth drawing attention to some of the data employed in the modelling.

To build a model of the demand for air travel in the UK it is necessary to draw on a wide range of data sources. For comparability and robustness purposes, where available, data were sourced from official UK agencies, such as the Office for Budget Responsibility, the Department for Transport, and the Civil Aviation Authority. Where data gaps exist in official statistics, data have been sourced from reputable and widely available sources, including the International Air Transport Association (IATA) and the World Travel and Tourism Council (WTTC)

Where appropriate, this report aims to deliver transparency to the process by detailing all amendments and assumptions made.

3.2 Stage 1: Modelling air passenger numbers

The process of modelling how changes in the rate of APD impact upon passenger numbers is a three step process. First, the impact of changes in APD rates on airfares needs to be established. Second, it must be determined how many passengers are subject to APD charges, and so would be impacted upon by the impact on prices. Finally, how changes in airfares impact on passenger numbers must be estimated.

3.2.1 How does APD impact on airfares?

The impact a change in APD will have on airfares can only be determined if airfares are known prior to the change. The International Air Transport Association (IATA) regularly publishes data on the average airfare between two countries (both for economy and other classes of travel) in its PaxIS dataset. The latest release (2010) of these data have been used to inform the average cost of a flight from the UK to each of the APD bands; when up-scaled by the projected growth in oil prices[8], these provide good estimates of airfares in 2012.

The fares data produced by IATA does not include any taxes or surcharges that may be applicable for the journey, and are not, therefore, a true reflection of the cost of the flight to the passenger. To correct this, the relevant rate of APD is added to the fare, along with a fuel surcharge, and for short-haul flights a

[8] Based on data from the Oxford Economics Global Macroeconomic Model

surcharge to reflect the additional fees passengers may have to pay for baggage and check-in facilities[9] (Table 3.1). The result of this correction is then included in the model as the average cost of air travel from the UK to a specific band in the APD, and is increased or decreased as the APD rates change.

Table 3.1: Average projected airfares for 2012

	Band A	Band B	Band C	Band D	Domestic
Reduced Rate	274	589	654	1,076	250
Standard Rate	647	2,871	2,895	3,889	277

Source: IATA; Oxford Economics Calculations

3.2.2 How many people are subject to APD?

The APD is levied on all passengers leaving a UK airport, including domestic flights. As a part of its revenue projection process, the Office for Budget Responsibility (OBR) provides projections for the number of APD-subject passengers expected in 2012[10]. These projections are provided on a disaggregated basis, which indicates the number of passengers that are expected to be charged each band of the APD, and the proportion that are eligible for reduced rates.

Although the 2012 passenger numbers presented by the OBR are used in the model as the baseline, to provide a greater level of accuracy in the model, each band is divided further into outbound (UK residents), inbound (overseas residents) and domestic passengers. This division is made using assumptions based on the share of total passengers falling into each category based on data from the Office for National Statistics' International Passenger Survey. Table 3.2 presents the total number of passengers subject to the APD in 2012, as used in the model. How these numbers change as different APD regimes are implemented is a function of the responsiveness of demand to changes in price.

Table 3.2: APD-chargeable passengers in 2012

Band	Foreign Visitors	UK Departures	Domestic	Total
A	15,300,000	32,814,000	31,233,000	**79,347,000**
B	4,075,000	7,118,000	-	**11,193,000**
C	1,641,000	4,080,000	-	**5,721,000**
D	1,321,000	1,017,000	-	**2,338,000**
Total	**22,337,000**	**45,029,000**	**31,233,000**	**98,600,000**

Source: OBR; Oxford Economics Calculations

3.2.3 Choosing price elasticities of demand for air travel in the UK

Changing the cost of air travel for passengers will impact on the number of people choosing to travel by air. The scale of this effect can be estimated using a model of the demand for air travel, and more

[9] Estimates of the scale of these surcharges have been drawn from a survey of the websites of major airlines, including short-haul, low-cost carriers.

[10] Office for Budget Responsibility (2011) *Economic and Fiscal Outlook*

specifically through the use of measures of the responsiveness of passengers to changes in air fares, known as the price elasticity of demand for air travel. The choice of elasticities used in a model can have a major bearing on the results; consequently, great consideration must be taken over which elasticities are implemented in the model.

The Department for Transport (DfT) published estimates of the price elasticities of air fares in 2009[11] (Table 3.3). DfT's estimates provide elasticities that differ according to the sector (business, leisure, charter), nationality (UK, foreign) and domestic; DfT also presents an estimate of the price elasticity of all air travel. The estimates from DfT indicate that, unsurprisingly, as fares increase, the number of passengers falls; at an overall level, a 1% increase in fares will result in a 0.5% fall in passenger numbers. The variances in the elasticities for each sector indicates differences in the responsiveness of passengers to fares – UK leisure passengers are the most responsive to price changes (denoted by the -1 elasticity) and all business travellers are the least responsive (DfT actually found that there was no significant elasticity for this group). A clear difference exists between the responsiveness of outbound (UK) and inbound (foreign) estimates, with inbound passengers far less responsive to changes in fares than outbound passengers. One hypothesis for this differential is the presence of pent-up demand for inbound travel to the UK. Pent-up demand means that as travellers choose not to visit the UK, the level of demand is such that others are willing to pay higher prices and take their place; the effect being that overall demand does not fall far in the face of increased airfares – demand is less responsive to price than normally believed. Discussions with DfT have indicated that this is a plausible hypothesis.

Table 3.3: DfT's estimates of price elasticities for air travel in the UK

Sector	Price elasticity
UK Business	-
UK Leisure	-1.0
UK Charter	-0.4
Foreign Business	-
Foreign Leisure	-0.2
International to International Interliners	-0.3
Domestic	-0.3
Overall	**-0.5**

Source: DfT 2009

Another study that examined the responsiveness of passengers to changes in air fares was conducted by InterVistas (2007) for IATA. In this study, elasticities were estimated on a global level (the DfT estimates were based on UK data only), however the result is a highly disaggregated set of elasticities that vary by length of route (short- or long-haul), the purpose of travel (business or leisure), and the regions linked by the route[12] (Table 3.4). There are two notable items when comparing the elasticities produced by InterVistas against the DfT's estimates. Firstly, passengers are generally found to be more responsive to price changes in the InterVistas estimates (as denoted by smaller values, ranging from -0.72 to -1.23). Although the DfT estimates for outbound travel for the UK fall within this range, the inbound elasticities

[11] Department for Transport (2009) UK Air Passenger Demand and CO2 Forecasts

[12] InterVistas created these different elasticities by assigning an adjustment factor to set routes, purpose of travel, and distance of journey. These adjustments are applied to a base elasticity (-0.8 for an individual nation).

are far lower, reflecting the pent-up demand described above. Second, there is a significant difference in the scale of elasticities for long-haul and short-haul travel that is not considered in the DfT analysis: the elasticities for each of the long-haul regions are lower than those for short-haul destinations. For long-haul travellers, air travel is the only realistic option. However, for travellers from short-haul destinations, there are alternative modes of transport (train and ferry) by which they may make their trip. The ability to undertake this modal switching means that short-haul passengers are more responsive to changes in airfares, as witnessed by the lower elasticities present on intra-Europe and domestic travel.

Table 3.4: InterVistas' estimates of price elasticities for air travel

	Long Haul	Short Haul
Trans Atlantic	-0.96	
Europe-Asia	-0.72	
Intra Europe		-1.23
Africa	-1.05	
Domestic		-1.23
First/Business Class Adjustment factor	0.25	0.46

Source: InterVistas (2007)

To choose between the two sets of elasticities, DfT or InterVistas, is difficult due to the advantages each offers – the DfT estimates are specific for the UK, while the greater disaggregation of the InterVistas estimates would provide greater dynamics to a model of air travel demand, especially the relativities between long- and short-haul travel. Combining the estimates for the UK developed by DfT with the estimates from InterVistas provides a solution to this, delivering disaggregated estimates that are both specific to the UK and supported by robust analysis. In discussions, the DfT has supported this approach by indicating that a set of revised elasticities due for publication in Summer 2011 will be in a disaggregated form[13]. Consequently, the estimates utilised in the model are created by multiplying the base sector elasticities from the DfT report by the relevant adjustment factors. For example, the elasticity for demand on a trans-Atlantic route for UK leisure travellers is the product of the DfT UK leisure estimate (-1), and the InterVistas adjustment factor for a trans-Atlantic journey (1.20); the elasticity is, therefore, -1.20. The same approach is used for all outbound and in-bound routes, with the exception of domestic travel (which uses the DfT estimate) and short-haul outbound flights, for which the base elasticity is the weighted average of the UK leisure and UK charter, weighted according to the share of UK to EU passengers that travel by charter flights[14]. Table 3.5 presents the elasticities used in the model, with each indicating the percentage change in passenger numbers that would occur if changes in the APD cause a 1% increase in airfares.

By applying the percentage change in passengers to the baseline passenger numbers, it is possible to calculate the number of passengers that would travel by air in the UK under a new APD regime. Following on from this, the level of APD revenue generated by the new regime is calculated as the sum of the products of the number of passengers in each tier and the APD rate for each tier.

[13] Unfortunately these estimates had not been released at time of writing.

[14] Sourced from Civil Aviation Authority statistics.

Table 3.5 Price elasticities of demand used in air travel model

Journey	Source	Inbound Passengers		Outbound Passengers	
		Long Haul	Short Haul	Long Haul	Short Haul
Trans Atlantic	InterVistas/DfT	-0.24		-1.20	
Europe-Asia	InterVistas/DfT	-0.18		-0.90	
Intra-Europe	InterVistas/DfT		-0.31		-1.34
Africa	InterVistas/DfT	-0.26		-1.31	
Domestic	DfT		-0.30		-0.30
Business travel adjustment	InterVistas	0.25	0.46	0.25	0.46

3.2.4 Inter-modal switching

As some short-haul travellers (both inbound and outbound) may still be able to undertake their journey by other means, it is important to capture these arrivals into, and departures from, the UK in order not to underestimate the economic impact modelled in stage 2. Although there is little information on modal switching of this form, the model assumes that between 10% and 30%[15] of those travellers from countries linked by train or ferry services[16] (accounting for approximately two-thirds of short-haul arrivals to the UK) will still visit the UK, but not by air.

As the model does not implement a single percentage figure, the number of passengers undertaking a modal switch is presented in the form of a range, indicating the scale of impact at either end of the range. Consequently, the numbers applied in stage two of the modelling are also presented in ranges.

3.3 Stage 2: Modelling the impact on the UK's travel and tourism sector

The second stage of this process is modelling the impact of an APD change on the UK's travel and tourism sector, and relies on the output of the first stage – the change in passenger numbers visiting the UK from each tier of the APD structure (inter-modal passengers are included in Band A arrivals). Every additional visitor to the UK generates extra spending in the UK's travel and tourism sector, generating economic activity. By contrast, every visitor lost would result in a fall in spending, and a subsequent decline in economic activity.

The World Travel and Tourism Council (WTTC) model provides forecasts of the spending of visitors to the UK, split by nationality. Combining this data, together with the overseas arrivals by APD band, generates a value for the total spending of visitors to the UK by air.

[15] Based on available ferry and rail capacity relative to current total capacity including air. Estimation of changes in the non-air share of arrivals in response to air fares suggests a broader range of impacts, but test statistics are not as good as we would like and we have taken the more cautious, lower range of impacts.

[16] The countries are France, Belgium, The Netherlands, Germany, Denmark, Norway and Spain.

While the level of spending is a useful metric, it does not reflect the level of economic activity that is supported by these visitors; to capture this, it is necessary to establish the gross value-added (GVA)[17] and employment impacts of this spending. To translate the spending of overseas visitors to the UK into a direct value-added impact, the GVA-to-output ratio of the travel and tourism sector from the WTTC model is used. Similarly, the direct employment supported by this spending is calculated using an employment-to-spending ratio for the sector, again sourced from the WTTC model.

However, this is not the end of the economic impact of these visitors. To satisfy the purchases by visitors, the businesses supplying these goods and services will have to make purchases from their own supply chain, which creates further economic activity and employment. This process cascades through the economy, and is captured by the WTTC model's total travel and tourism GDP multiplier. The employment created throughout these supply chains is similarly captured by the WTTC's total travel and tourism employment multiplier. Multiplying these multipliers by the direct GVA and employment impacts generates an estimate of the wider impact of the spending of visitors on the UK economy.

3.4 Stage 3: the impact of UK residents foregoing trips abroad

The final channel of impact a change of the APD regime can have on the UK economy is by causing UK residents to forego travelling abroad due to increased cost. As the cost of short-haul travel increases (due to increased Band A duty), UK residents planning short-haul trips are faced with four options:

1. They can still go on a short-haul journey abroad by air;
2. They can go on a short-haul journey abroad by an alternative form of transport;
3. They could substitute their short-haul trip for a (now relatively cheaper) long-haul journey instead, spending what they would have spent on a short-haul journey; or,
4. They can choose to remain in the UK.

Within the model, it is assumed that all additional long-haul outbound travellers from the UK, that ensue as a consequence of the fall in long-haul APD rates, were originally planning a short-haul journey before the duty change (i.e. they take the third option above). Therefore, any difference between the fall in short-haul passengers and the increase in long-haul passengers reflects the people that choose to either undertake a modal shift (option 2) or remain in the UK (option 4). As discussed in section 3.2.4, the model assumes that between 10% and 30% of inbound and outbound short-haul travellers will still make their journey, albeit by an alternative form of transport. Consequently, between 70% and 90% of people foregoing a short-haul trip and not taking a long-haul journey instead, will remain in the UK.

It is highly likely that those who choose to remain in the UK will spend the funds originally allocated for their journey on either a domestic journey, or on general purchases (possibly of superior goods, such as televisions); a small amount may choose to save their monies. The spending that this group makes in the UK is additional for the UK economy and is therefore a source of economic benefit for the whole economy (once imports are accounted for). This benefit can be quantified by first calculating the level of additional spending, using data from the WTTC model for UK short-haul travellers spending per trip abroad and the number of passengers, and, second, translating this spending into GDP by subtracting the level of

[17] GVA measures the contribution to the economy of each individual producer, industry or sector in the United Kingdom. It is a measure of net output and is aggregated to form the basis of Gross Domestic Product (GDP) which is the main measure of the total level of economic activity in the UK economy.

imports required to satisfy this spending; the additional employment supported can also be measured from the GDP impact using economy-wide productivity figures from the Oxford Economics model of the UK economy.

3.5 Finding alternative APD regimes

The nature of the model constructed for measuring the impact of alternative APD regimes allows total freedom in choosing the number of tiers in a regime and in setting duty rates. However, in this investigation, a number of constraints have been placed on the search for alternative APD regimes:

1. Any alternative regime must be broadly APD revenue neutral, which is defined as falling within 1% of the OBR APD revenue projections for 2012. Increased visitor spending will generate additional tax revenue for the UK Government (through VAT, corporation, National Insurance and income taxes); however these are not considered in this analysis.
2. Any new duty rate can only be implemented in whole Pounds. The HMT proposals for the APD only discuss duty rates in whole Pounds, and for simplicity we assume this practice remains.
3. Any of the alternative regimes considered by the study should adhere to the two- or three-tier structure proposed by HMT.
4. The reduced rate of duty levied on Band A is restricted to three-times the maximum increase proposed by HMT (£3); therefore Band A is restricted to £22.
5. Standard rate duties remain at twice the level of reduced rates.

The results of this analysis are presented in the following chapter.

4 Beneficial alternative APD regimes

The previous chapters of this report have outlined the rationale for reducing the discrimination against long-haul travellers that is built into the current APD regime (and remains in the proposed alternatives), the methodology by which the impact of a change in the APD can be measured, and the restrictions the study has placed on the search for alternatives. As the alternatives are measured against the baseline of the current regime in 2012, it is first necessary to describe the economic impact of this regime.

4.1 Baseline: the current APD regime in 2012

As outlined in Chapter 2, the current APD regime is a four-tier structure, with reduced rates ranging from £13 for Band A to £93 for Band D. The projections of APD revenue and passenger numbers in 2012 made by the OBR are made on the assumption that the current regime is imposed at the stated rates. Consequently, the estimation of the economic impact for the travel and tourism sector in the UK is conducted using the OBR projections.

Under the current regime, the OBR estimates that the revenue accrued from APD will reach £2.8 billion in 2012, on the basis of 98.6 million passengers paying APD charges, of which 22.3 million will be foreign visitors to the UK. Utilising the economic impact model, it is estimated that these passengers will spend £14.4 billion in the UK in 2012, generating over £16 billion in value-added for the UK economy, supporting over 161,000 jobs.

4.2 Alternative two-band options

Having established the baseline scenario of the APD continuing in its current form, identifying alternative regimes that fulfil the required criteria – APD revenue neutrality and returning an economic benefit – is a trial and error process. Table 4.1 presents the results of this process for a two-tier alternative. Given that as Band B duty increases the economic impact falls, the final analysis was conducted setting Band B equal to the lowest value in each range, maximising the economic impact while also maintaining revenue neutrality.

Table 4.1: Two-tier APD combinations returning APD revenue neutrality and economic benefit

Band A	Band B
£18	none
£19	£51-£52
£20	£47-£49
£21	£44-£45
£22	£40-£42

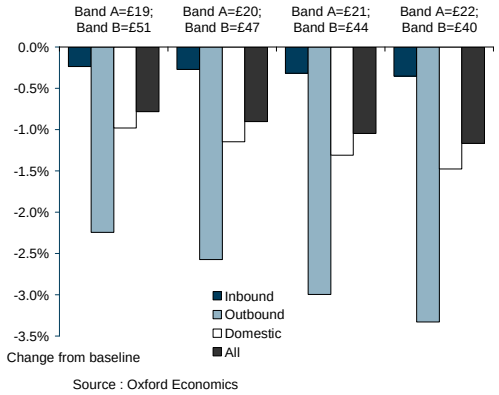
Source:Oxford Economics

4.2.5 Impact on passenger numbers

In each of the alternative regimes, the number of APD-paying passengers falls in comparison to the baseline (Chart 4.1). The scale of the decrease grows as Band A duty increases – with Band A set at £19

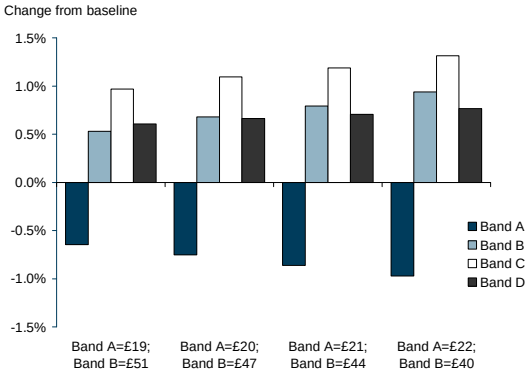
there are 772,000 fewer passengers, but with a Band A of £22 there are 1,152,000 fewer travellers. The driver behind the fall in passenger numbers is the decline in short-haul outbound and domestic air travel. Although inbound numbers do fall, these falls are driven solely by short-haul travel; travel from all of the long-haul bands increases (designated using the current APD framework in Chart 4.2).

Chart 4.1: Change in APD-paying passengers



Source : Oxford Economics

Chart 4.2: Change in Inbound passengers



Source : Oxford Economics

4.2.6 Impact on APD revenue

Despite falling passenger numbers, the revenue accrued from these alternative APD regimes remains within 1% of the OBR's projections. However unlike passenger numbers, the APD revenue accrued from these regimes shows no sign of a downward trend with increases in Band A duty. Rather there are two distinct results: small falls when Band A equals £19 and £21 (£10 million and £8 million, respectively), and larger falls at £20 and £22 (both £20 million). This occurrence is a function of the restriction to only use whole Pounds for duty rates; it would be possible to set the APD revenue falls to be equal if duty rates were set in Pence.

4.2.7 Impact on the UK's travel and tourism industry

It has been discussed previously that long-haul visitors to the UK spend, on average, twice the amount of short-haul visitors while in the UK. Consequently, although the reduction in short-haul visitors will reduce spending, the large increase in long-haul visitors will more than compensate for this fall; short-haul visitors travelling by alternative means of transport also keep spending in the UK. The scale of this spending boost increases as the Band B duty rate falls: with a Band B duty of £51, the additional spending is between £6 and £12 million; with a duty rate of £40, the range is £9 to £18 million (Chart 4.3).

As visitor spending increases, so does the additional GVA and employment created in the travel and tourism industry and its supply chains. Imposing an APD regime of £19 for Band A and £51 for Band B generates an additional £6 to £13 million in value-added and supports between 170 and 350 jobs in the UK travel and tourism industry and its supply chains; if the APD regime is set at £22 for Band A and £40 for Band B the impact is £10 to £21 million in value-added and 260 to 530 jobs (Chart 4.4).

Chart 4.3: Additional visitor spending in UK

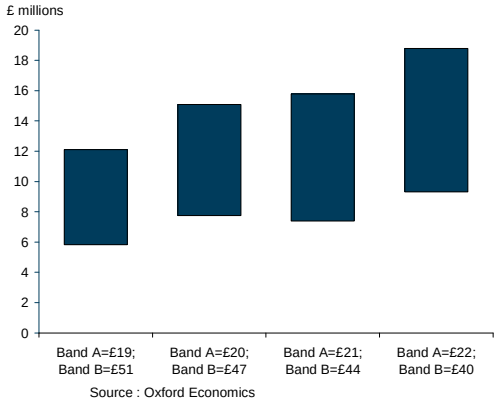
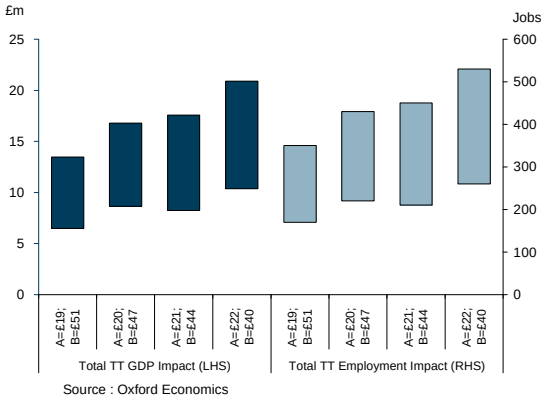


Chart 4.4: Impact on UK's travel and tourism (TT) industry



4.2.8 Impact of UK residents staying at home

The final channel of impact considered by the model is the result of significant numbers of UK residents remaining in the UK rather than undertaking a short-haul trip. Unsurprisingly, as Band A duty increases, the number of UK residents remaining in the UK also increases, to a maximum of 650,000 under a £22 Band A regime; if Band A were £19 between 350,000 and 450,000 UK residents would remain in the UK rather than making a short-haul trip (Chart 4.5).

Chart 4.5: UK residents staying in the UK

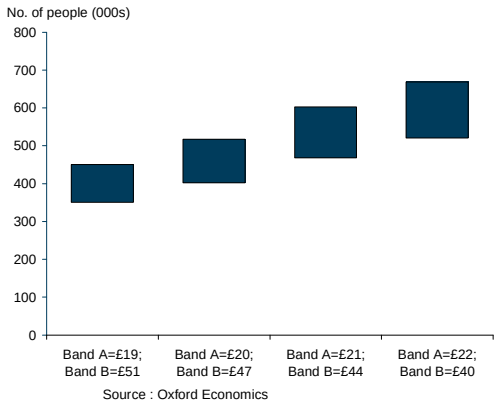
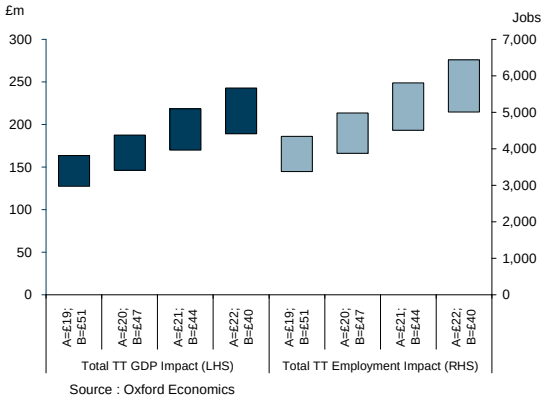


Chart 4.6: Impact of UK residents' spending



The International Passenger Survey, when up-scaled by inflation, projects that each UK resident travelling short-haul will spend £487 while overseas. By not travelling and spending that money, these UK residents introduce a considerable amount of additional economic activity to the UK economy, through spending on domestic holidays, or on general consumption and, possibly, purchases of superior goods. If Band A was £19 these UK residents would generate between £125 and £165 million in value-added for the economy and support between 3,500 and 4,500 UK jobs. Again, as the level of duty increases for

Band A, the scale of the impact grows, to between £190 and £240 million in value-added terms and 5,000 to 6,500 jobs (Chart 4.6).

4.2.9 Additional tax benefits

While this analysis has attempted to be as comprehensive as possible, there are a number of tax revenue streams that will be impacted as a consequence of these alternative APD regimes. The spending of both visitors and UK citizens in the UK economy will generate tax revenue for the government in the form of VAT directly and from income and corporation taxes indirectly, together with National Insurance contributions.

Although these revenues could be considerable, they have not been quantified in this analysis due to the level of assumptions required. However, it is worth noting that these revenues will likely make the alternative regimes revenue positive for the UK government.

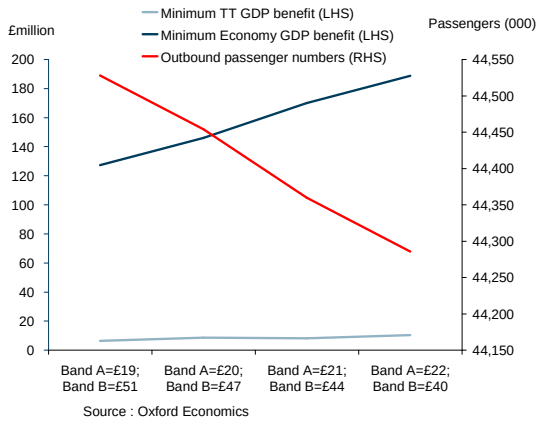
4.2.10 Which regime provides the best outcome?

There is little difference between the regimes presented here in terms of their impact on APD revenue. However, it is a different situation regarding the number of passengers travelling and the economic impacts that are generated (Chart 4.7).

If the goal of an alternative APD regime was to maintain passenger numbers, especially outbound, then the lower Band A option would be preferable. Alternatively, if maximising economic benefits was the aim, then a higher Band A rate would appear to be suitable.

Given the UK's position as an island nation, with relatively limited access by other forms of transport to the rest of Europe, maintaining outbound passenger numbers is necessary for providing UK residents with the opportunity to travel. Therefore, the alternative APD regime of Band A set at £19 (rather than at a higher rate) and Band B at £51 is recommended.

Chart 4.7: The benefits trade-off



Source : Oxford Economics

5 Sensitivity analysis

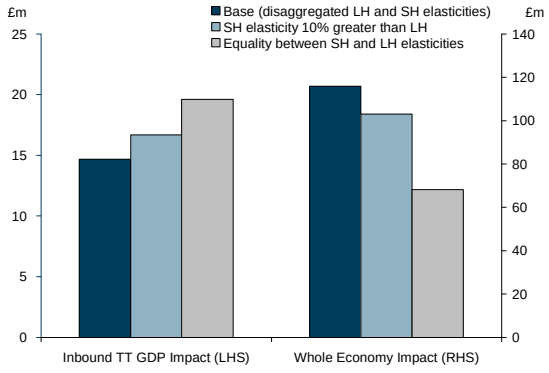
Previous chapters have outlined the importance elasticities play on the results generated by the model. The elasticities used in the model are highly disaggregated and differ by length of journey; this section presents a sensitivity analysis that assesses that impact choosing a different elasticity would have on the results of an APD regime with Band A equalling £19 and Band B set at £51. Specifically, the analysis looks at imposing equality between the elasticities for short- and long-haul travel (set at -0.2 for inbound passengers and -0.8 for outbound passengers, as estimated by DfT), as well as imposing a narrower differential between short- and long-haul (based on InterVistas' estimation of short-haul travellers being 10% more responsive than long-haul travellers).

There are two key results of this sensitivity analysis (Chart 5.1, where the data presented are range mid-points):

1. As the long- and short-haul elasticities move towards parity, the impact of UK residents remaining in the UK (the whole economy impact) falls;
2. But as parity is reached, the economic impact of inbound visitors on the UK's travel and tourism industry, and its suppliers, increases.

As the short-haul elasticity approaches the long-haul elasticity, the impact of short-haul travel changes. UK residents looking to make short-haul trips abroad become less sensitive to change in airfares, consequently fewer remain in the UK, reducing the economic impact of their spending in the UK. Similarly, short-haul visitors to the UK also become less sensitive to price changes, resulting in fewer choosing not to travel, boosting visitor spending and subsequent economic impact for the UK's travel and tourism economy.

Chart 5.1: Impact of using different elasticities



Source : Oxford Economics

6 A three-band alternative

Although the two-tier model is the preferred option for reducing the complexity of the APD system, HMT has, nonetheless, presented a three-tier proposal. Given this, it is worth highlighting that, as with the two-band regime, there are alternatives to HMT's proposals that are APD revenue neutral and would benefit the UK's economy.

As a three-tier regime has an extra degree of freedom to the two-band option, there are many different options for Band A, B and C rates that will deliver APD revenue neutrality and economic benefits for the UK. To provide an example of the scale of the impacts involved, this study has looked at the impact if the Band A duty were set at £19, Band B at £46, and Band C at £57.

If duty was set at these rates, the number of APD-paying passengers would fall by 746,000, and APD revenue would fall by £19 million (Table 6.1). Despite the fall in passenger numbers, the UK travel and tourism industry and its supply chains would benefit from a GDP boost of between £9 and £16 million, supporting 220 to 390 additional UK jobs. Furthermore, under these new rates, the spending of UK residents who forego a short-haul journey would generate between £120 and £160 million in additional GDP for the UK economy, and support between 3,200 and 4,100 jobs.

Table 6.1: The impact on passenger numbers and APD revenue of a three-tier regime

Band A	**£19**
Band B	**£46**
Band C	**£57**
Change in Passengers (000s)	-746
% change from base	-0.8%
Change in APD revenue (£m)	-19
% change from base	-0.7%
Additional TT GDP impact (£m)	9 - 16
Additional TT Employment Impact (jobs)	220 - 390
Additional UK GDP impact (£m)	120 - 160
Additional UK Employment Impact (jobs)	3,200-4,100

Source: Oxford Economics

7 Conclusion

The current APD regime is discriminatory against long-haul travel, with long-haul duty rates set at many multiples of the short-haul duty. This discrimination makes little economic sense for the UK, as long-haul visitors spend, on average, more than twice as much while they are in the UK than short-haul visitors. Consequently, every long-haul visitor to the UK generates greater economic activity and employment in the UK's travel and tourism sector than a short-haul visitor.

The proposed revisions to the APD structure presented by HMT in its 2011 consultation paper, while successful at reducing the complexity of the system, fail to address the bias against long-haul travel. This study has shown that the proposals made by HMT for restructuring the APD regime are not the only choices for changing the APD. Instead HMT's goals of APD revenue neutrality and simplification can be achieved with a duty schedule that also delivers benefits for the UK's travel and tourism industry.

If, in 2012, the Band A duty were increased to £19[18], and Band B reduced to £51, the impact of air travel in the UK would be such that the revenue the UK Government accrues from the APD would be insignificantly different from the OBR APD revenue projections for the current regime in 2012. However, an APD regime set at this level would attract more long-haul visitors to the UK, and their additional spending would boost the travel and tourism sector, together with its supply chains, by between £7 and £13 million in GVA. This additional activity would also support between 170 and 350 extra jobs in the travel and tourism industry than under the current regime. Furthermore, spending by UK residents remaining at home would create a GDP boost of between £125 and £165 million, supporting between 3,500 and 4,500 UK jobs.

[18] This level of Band A duty has been chosen due to it being a relatively small increase on top of those proposed by HMT. However, if a higher rate of Band A is chosen, for example £20, £21 or £22, similar levels of economic benefit would be experienced.

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