

# *The economic impact of air taxes in Europe* France

October 2017



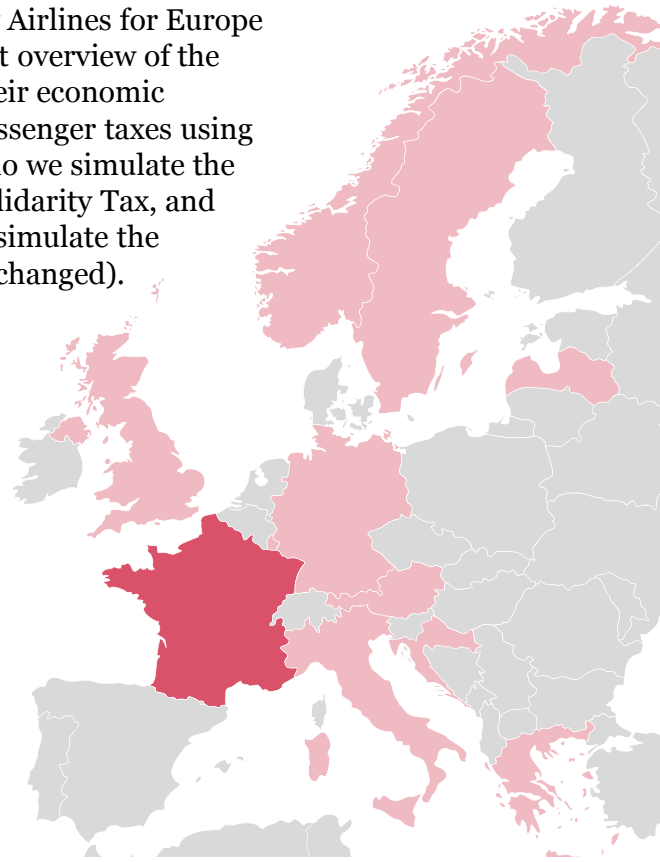
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# Executive Summary

This report is part of a broader set of reports commissioned by Airlines for Europe in which PricewaterhouseCoopers LLP provide an independent overview of the current air passenger taxes in Europe and an assessment of their economic impact. In this report we simulate two scenarios for French passenger taxes using a Computable General Equilibrium model. In the “full” scenario we simulate the impact of entirely abolishing the French Civil Aviation Tax, Solidarity Tax, and Corsica’s Fiscal tax in January 2018. In the “half” scenario we simulate the impact of halving the Civil Aviation Tax (leaving the others unchanged).



**5 million**

additional arrivals by 2020



**3.8 million**

extra inbound tourist arrivals by 2020



**€1.1 billion**

additional tourism expenditure by 2020



**€2.5 billion**

higher GDP in France per year in 2030, rising from €1.6 billion per year in 2020.



**€3.75 billion**

higher GDP across the EEA per year in 2030, rising from €1.9 billion per year in 2020.



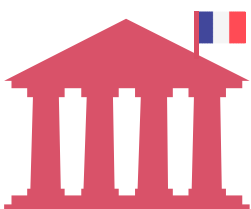
**€1.2 billion**

larger air sector in France per year in 2030, rising from €920 million per year in 2020.



**8,900**

additional jobs across the French economy in 2030, rising from 4,750 in 2020.



## 100% fiscal return

We estimate that total passenger taxes will raise €600 million in 2017. Following the abolition of all taxes, our analysis suggests that 100% of this will be recouped in indirect tax income. This increase in indirect tax income is greater than could be expected from reducing other taxes (for example, corporate tax income and VAT) due to its highly distortive nature. As such, its abolition improves the level of the GDP disproportionately more than the abolition of other taxes, and as such represents a relatively cheap method of boosting the economy for the government.

# Background to the study

## Background

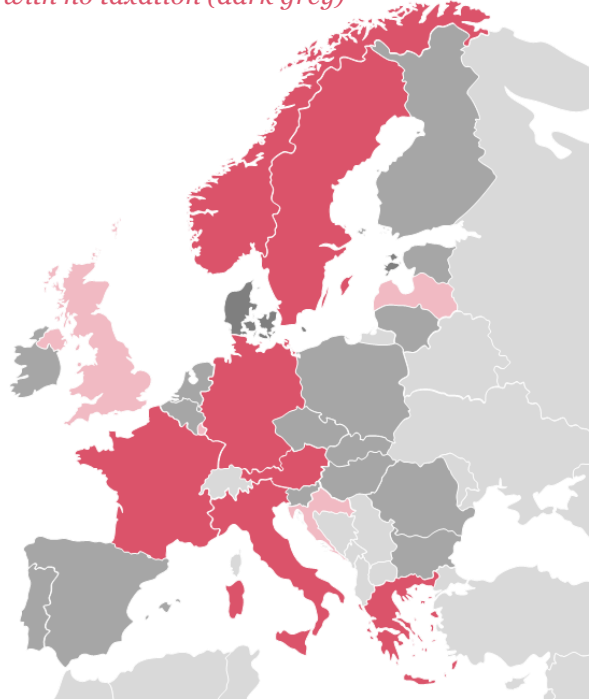
PwC have been commissioned by Airlines for Europe, the representative body of various European airlines, to provide an overview of the current aviation taxes in Europe and an assessment of their economic impact. Whilst the consortium commissioned and financed the work, and commented on draft reports, the final reports represent the independent analysis of PwC.

We are producing 7 country reports which summarise the economic impact of a change in the level of air passenger tax, as projected by our multi-regional CGE model. This includes reports on the effect of reducing passenger tax in 6 countries (Austria, France, Germany, Greece, Italy and Norway) and a report on the effect of introducing passenger tax in Sweden in line with the proposal due to be implemented in 2018.

In addition to this we are producing an EEA report, for which we model a universal and multilateral abolition of air passenger taxes across the EEA (which amounts to abolishing passenger taxes in 10 EEA countries). This forward-looking analysis is complemented by 3 case studies (Ireland, Netherlands and Italy) in which we analyse the effects of historic changes in passenger tax.

This analysis builds upon analysis undertaken by PwC in 2013 to assess the economic impact of Air Passenger Duty (APD) on the UK.<sup>1</sup> This analysis considered the potential positive impact of abolition of APD in order to aid an evidence-based assessment of the policy, and its contribution to UK public finances. This report found that abolishing APD would lead to a net positive gain to public finances through the economic activity it would stimulate, and accordingly concluded that such a tax cut would pay for itself.

*Figure 2: Location of the 7 country reports (dark pink), countries with air passenger taxes but not under analysis (light pink), and EEA countries with no taxation (dark grey)*



## Air passenger taxes in the European Economic Area

Air passenger taxation varies across Europe, in both the level and method of application. For the purpose of this study we have defined a passenger tax as one which is paid to federal government for revenue-raising purposes, as opposed to offsetting the cost of a service provided, as aligned to the IATA List of Ticket and Airport Taxes and Fees. The 10 countries in the EU/EEA with some form of passenger tax are as follows: <sup>2</sup>

- Austria – Air Transport Levy
- Croatia – Civil Aviation Authority Tax
- France – Civil Aviation Tax, Solidarity Tax, Fiscal Tax (Corsica)
- Germany – Air Transport Tax

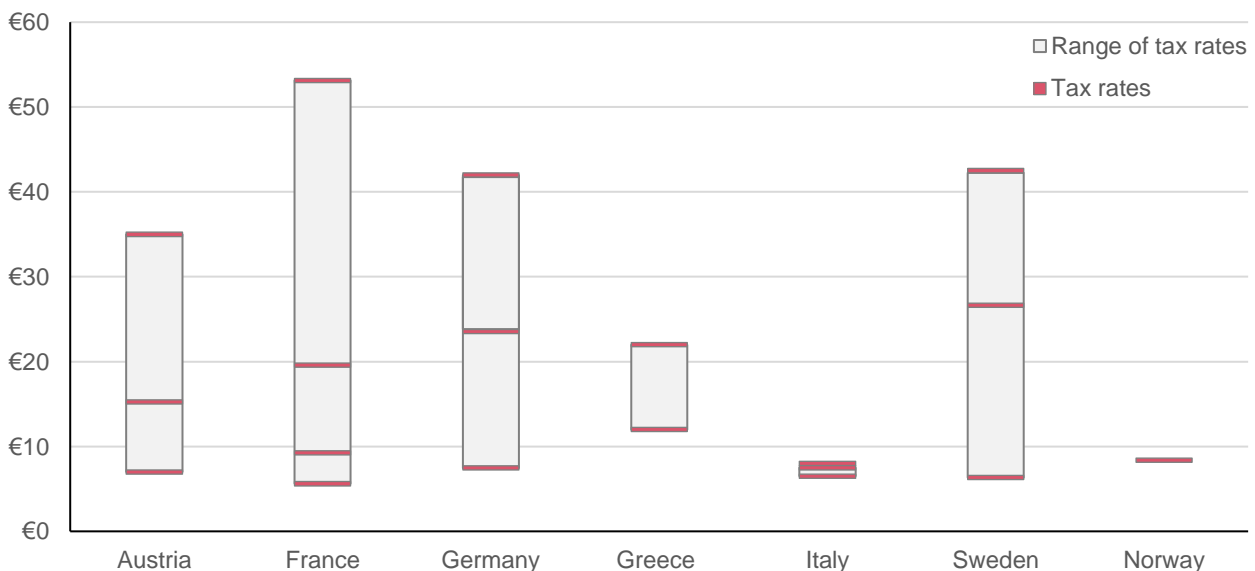
<sup>1</sup> PwC 2013, *The Economic Impact of Air Passenger Duty*

<sup>2</sup> Latvia, Luxembourg, Croatia and the United Kingdom are included in our model but will not have country-level reports.

- Greece – Air Development Charge
- Italy – Council City Tax
- Latvia – Passenger Service Charge
- Luxembourg – Passenger Service Charge
- Norway – Air Passenger Tax
- UK – Air Passenger Duty

The taxes are not easily compared between countries, as some taxes vary by destination country, others vary by airport, and some include transfers as well as departures. Nevertheless, Figure 3 benchmarks the rates across the countries under analysis against each other by including all different rates, regardless of how the taxes are banded. The pink dashes pick out the tax rates payable in each country, while the grey bars show the range. The full breakdown of taxes in each country can be found in Appendix 2. It is important to note that many countries charge no taxes, however, and so do not feature in the diagram.

*Figure 3: Benchmarking analysis of air passenger tax rates in the 7 countries under analysis*



Source: IATA, PwC analysis

This report covers the taxation system in France. There are currently three air passenger taxes in places in France: the Civil Aviation Tax (CAT), the Air Passenger Solidarity Tax (ST) and the Fiscal Tax (FT) levied in Corsica. These are all taxes levied on passengers departing on domestic and international flights, payable to the exchequer with the purpose of raising tax revenue.

For the Civil Aviation Tax, the rate paid varies according to whether a flight is domestic/within the EU or international. The rates per adult are as follows:<sup>3</sup>

- €4.48 – Domestic or within the EU
- €8.06 – International (non-EU)

<sup>3</sup> IATA List of Ticket and Airport Taxes and Fees

For the Air Passenger Solidarity Tax, the rate paid varies according to both whether a flight is within the EEA and Switzerland, and the class of ticket sold:

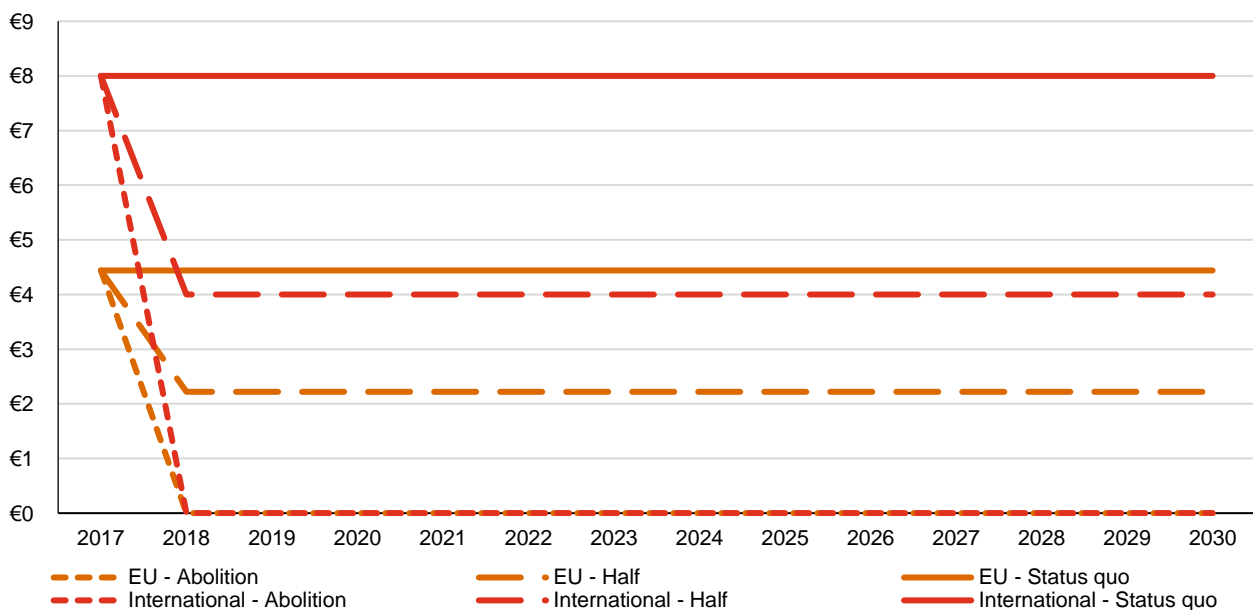
- €1.13 – EEA and Switzerland, economy
- €11.27 – EEA and Switzerland, premium
- €4.51 – Other regions, economy
- €45.07 – Other regions, premium

Finally, for the Fiscal Tax in Corsica the tax rate paid varies only according to whether the ticket purchased is a single or return:

- €4.57 – Single
- €9.15 – Return

In this report we model three scenarios. In the “half” scenario we simulate the effect of halving the Civil Aviation Tax, as illustrated in Figure 4. In the “full” scenario we simulate the effect of entirely abolishing all three taxes (CAT, ST and FT) simultaneously. Finally, we compare these two scenarios to the “do nothing” case. We have initiated our simulations to start in January 2017 and run through to 2030, with the tax reductions taking effect in January 2018.

*Figure 4: Civil Aviation Tax rates under each scenario*

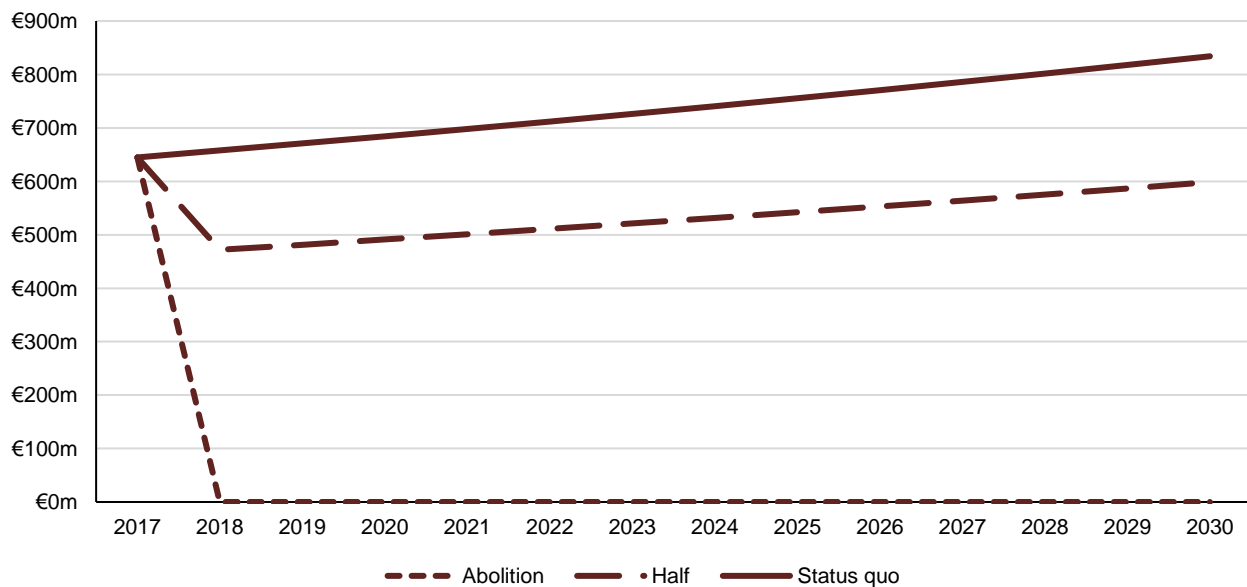


Source: IATA, PwC analysis

The scenario of full abolition demonstrates the maximum economic benefit which could be unlocked through the removal of the tax. Any reduction in the rate of tax from its current level could reasonably be expected to generate some positive economic impact below this level. A scenario in which the tax rate is halved has specifically been chosen to reflect the potential for efficiencies within the Directorate General for Civil Aviation, for which the Civil Aviation Tax pays.

The implied revenue under three scenarios are show below in Figure 5. We have used the official forecast from Senat for 2017 where possible, and then modelled the expected income for each of the scenarios, assuming that the reductions in tax rate occur in 2018.<sup>4</sup>

*Figure 5: Forecast income from all three taxes under three scenarios*



Source: Senat, PwC analysis

## Additional taxes and charges

It is important to note that air passenger taxes are not the only fees that airlines in Europe are subject to. Other costs, such as service charges levied by airports, have not been included in the analysis in this report. However, these charges nonetheless represent a cost burden to airlines operating in France, and reflect the degree to which the aviation industry already contributes towards national infrastructure and assets. As described in the introduction to this report, the air passenger taxes modelled are purely those which are revenue raising, and are distinct from, and additional to, charges which are used to pay for a service.

For example passengers travelling through French airports also pay a passenger service charge and an Airport Tax. It is important to acknowledge that in the presence of these charges, abolishing air taxes would not prevent the maintenance and upgrade of airport infrastructure. The table below outlines the rates of this charge and how they vary for different classes of passengers and at different airports.

<sup>4</sup> Senat, 2017: *Contrôle et exploitation aériens*

*Table 1: Outline of main taxes/charges and the rates*

Main Tax/Charge	Flight Category	Rate	Rates at Busiest Airport by number of passengers	
Passenger Service Charge	International (Schengen / non- Schengen area)	Varies with flight category and airport	€11.78/12.68 (Paris CDG)	€10.54/11.44 (Paris Orly)
Passenger Service Charge	International (non-Schengen area)	Varies with flight category and airport	€27.83 (Paris CDG)	€25.26 (Paris Orly)
Airport Tax	Domestic	Variable	€12.75 (Paris CDG)	€12.75 (Paris Orly)
Airport Tax	International	Variable	€12.75 (Paris CDG)	€12.75 (Paris Orly)

Source: IATA List of Taxes and Fees

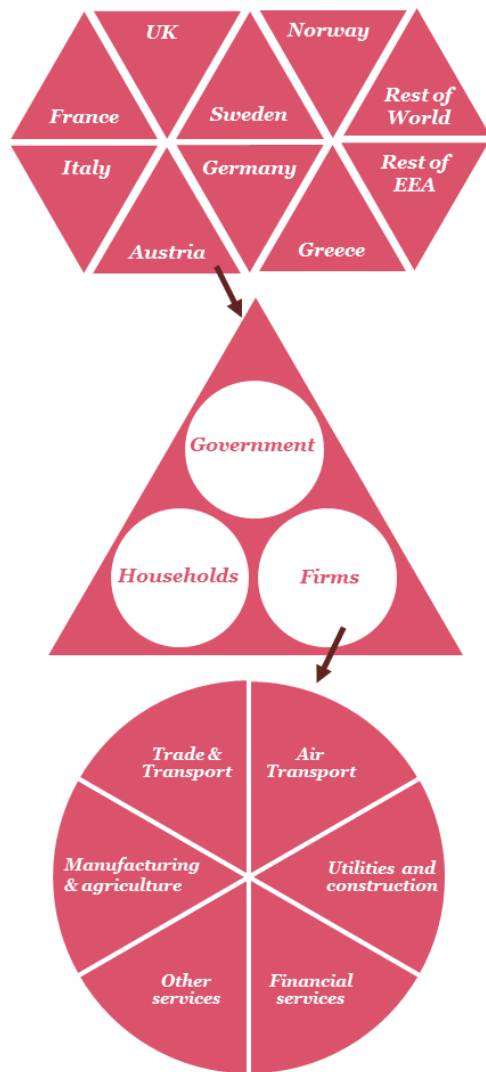
## *Modelling Approach*

To assess the economic impact of passenger taxes in Europe, we have built a multi-regional Computable General Equilibrium (CGE) model which captures the net economic impact of policy changes. This net analysis accounts for changes and displacements in the economy as it moves to a new equilibrium following the policy intervention.

CGE models are used by institutions such as the IMF, World Bank, OECD and several national governments to quantify the economic impact of policy changes. In essence, a CGE model captures the economic behaviours and interactions of all agents (consumers, producers, government, investors, etc.) in the economy. After a policy change (such as the abolition of air passenger taxes), these economic agents adjust to price changes until equilibrium is restored. A CGE model can be used to compare the differences between the baseline and policy shock scenarios to evaluate the economic impact.



Figure 6: High level structure of our multi-regional CGE model



#### Global level

We have developed a multi-regional, dynamic CGE model for Europe. Each country of interest is captured individually within the model, with all other countries combined into “Rest of EEA” and “Rest of World” regions.

#### Country level

Within each country there is a government sector, a household sector, and an industry sector. In CGE models, the government, households and businesses engage in repeated local microeconomic interactions. These in turn give rise to macroeconomic relationships affecting variables such as employment, investment and GDP growth.

#### Industry level

In order to apply a tax change to the aviation specifically, we have separated this sector from the general Trade & Transport sector. The sectors we have chosen to model for these preliminary results are split out in the diagram. Underlying each sector is GTAP data regarding the extent to which each sector in each country trades with each other sector.

The model allows us to capture different types of impact. As the CGE model captures all changes in the economy simultaneously, these impact types cannot be broken out individually. We refer to economic impacts through changes in the level of Gross Value Added (GVA) at both a sectoral and national level. GVA is a measure of the value of goods and services produced which, at a national level, is broadly comparable to GDP. The model has been calibrated with Eurostat data to create a baseline view of the European economy.

Table 2: Types of impact captured by the CGE model

Impact type	Description
Direct	GVA and employment directly attributable to changes in output in the aviation sector
Indirect	GVA and employment contribution attributable to any upstream business activities directly associated with the aviation sector
Induced	GVA generated through consumer spending by those directly or indirectly employed by the aviation sector and connected businesses.
Catalytic	The broader economic contribution of the aviation sector through stimulating changes in tourism expenditure and international connectivity

# Results

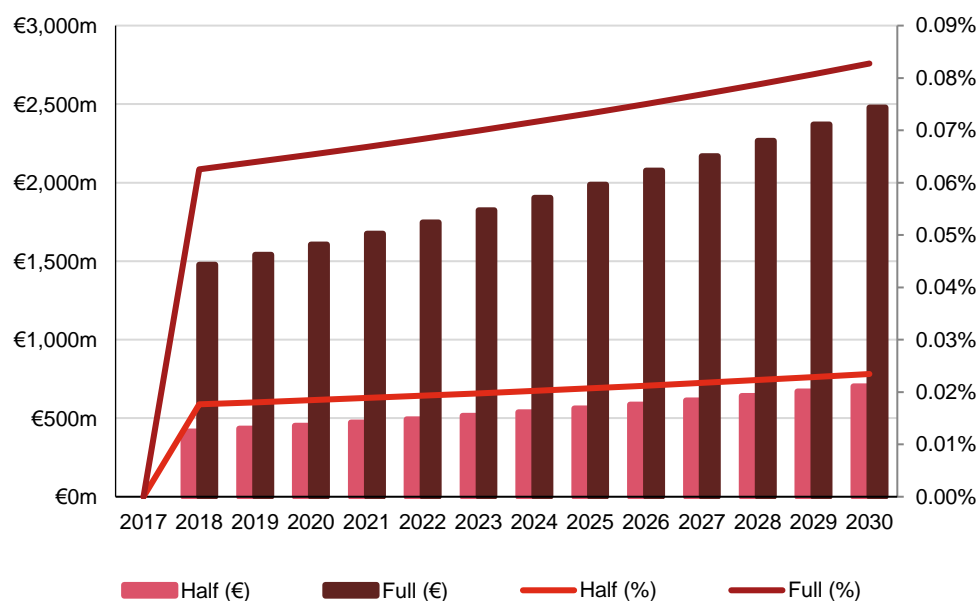
We have modelled the impact of our two scenarios on key macroeconomic indicators, both nationally and internationally, the results of which are outlined in this section. This section is intended to provide an overview of the key results from our analysis. For a deeper look into the mechanisms driving the results we refer the reader to PwC's UK APD study.<sup>5</sup>

Our results are underpinned by a number of assumptions, and rely upon a long run growth rate in the European Economic Area of 2%. A growth rate lower than this could lead to different results in absolute terms, but we would not expect the overall conclusions of the study to be materially affected.

## Impact on national real GDP

Under both of our tax reduction scenarios, real GDP increases after the tax cut, relative to the baseline scenario of no change, with the largest increase in GDP seen under the scenario in which the entire tax is removed. This uplift is sustained over the following years, with the percentage and absolute increase over the baseline rising each year. In the full scenario, 0.08% is added to GDP per year by 2030 (equal to around €2.5 billion), as opposed to over 0.02% higher under the half scenario, worth €700 million.

*Figure 7: Impact on real GDP compared to base level from the abolition of air taxes in France (percent change from the base case on right-hand axis, and impact in € on left-hand axis)*



GDP will be  
**€2.5bn**  
larger per year  
by 2030 by  
abolishing all air  
passenger taxes

This increase in GDP is reflected across all sectors of the French economy, with all experiencing a positive impact. The aviation sector experiences the most pronounced uplift in output, increasing €1.1 billion (1.99%) per year by 2030 higher than our forecast baseline in the full abolition scenario, or €320 million (0.56%) in our half scenario. Other sectors also experience improvement related to interaction effects with the aviation sector.

Although all sectors experience a positive impact in 2030 as a result of both scenarios, some sectors are impacted more than others. Under the full abolition scenario, for example, increases in output range from €26 million in the utilities and construction sector to €214 million in agriculture and manufacturing. Typically, the sectors which benefit most substantially from the tax cut, beyond those directly affected, will be those which are the biggest consumers of air transport as a share of their total purchases. Following the tax change, one would

<sup>5</sup> PwC 2013, *The Economic Impact of Air Passenger Duty*

typically expect the market price of air transport to fall, and hence those businesses for whom air transport makes up a substantial share of their spending will stand to benefit most materially.

*Table 3: Impact on real GDP by sector compared to base level from reducing air taxes in France as per the two scenarios*

*a) Full*

<i>Full</i>	<b>2030</b>
Agriculture & manufacturing	€214m
Utilities & construction	€26m
Transport	€199m
Aviation	€1,124m
Financial Services	€55m
Other services	€860m
Total	€2,478m

*b) Half*

<i>Half</i>	<b>2030</b>
Agriculture & manufacturing	€69m
Utilities & construction	€7m
Transport	€58m
Aviation	€316m
Financial Services	€16m
Other services	€235m
Total	€702m

Tourism does not fit neatly alongside the other sectors in our model as it is a category of passenger rather than a sector. If a tourist purchases a bus ticket this would contribute to the Transport sector, if a tourist paid a fee on money exchange this would contribute to Financial Services. However, Tourist Satellite Account data suggests that approximately 80% of tourist expenditure would fall into Other Services, in the form of accommodation, cultural and leisure activities, cafes and restaurants etc. The remaining 20% is mostly split between various modes of travel, including aeroplanes.

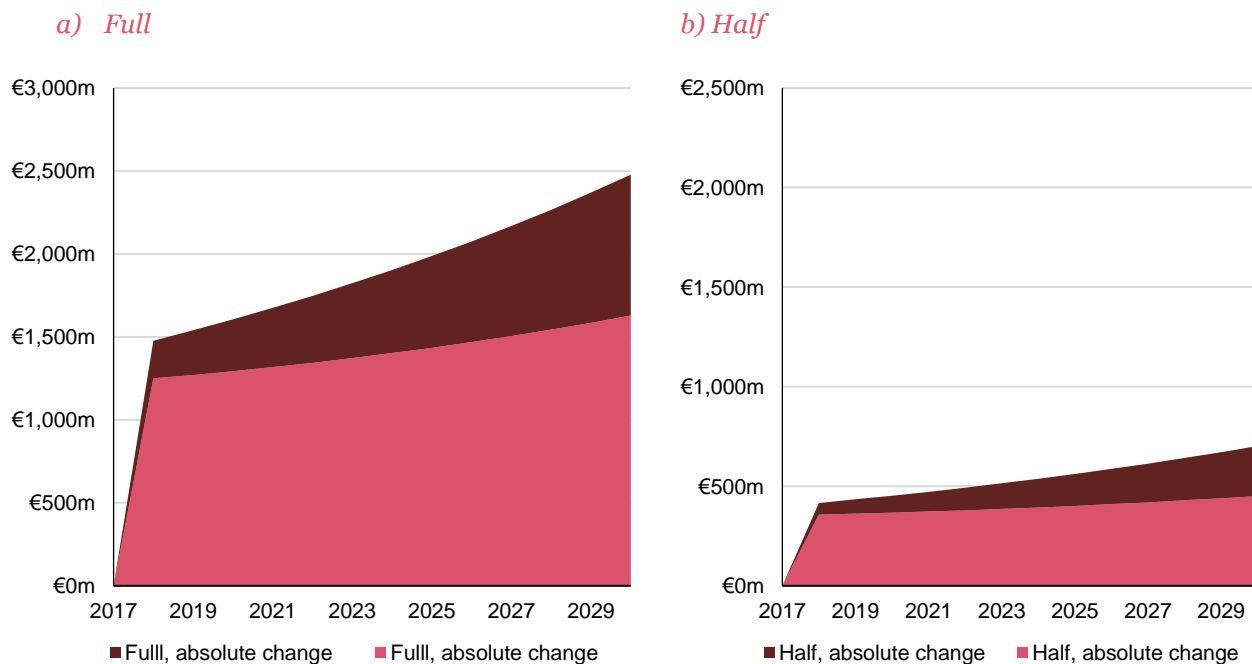
We estimate that the abolition of French passenger taxes would induce a net increase in tourist expenditure of €493 million per year in 2030, and the half scenario increase tourist expenditure by €140 million. This is relatively high due to the fact that 76% of the additional passengers are inbound tourists.

*Net tourism  
expenditure  
increases  
**€493m**  
per year in 2030*

Increasing tourism expenditure along with an improving economy contribute to higher consumption, which is a major component of GDP. In 2020 we estimate that consumption will increase by €747 million per year under the full scenario and €215 million per year under the half scenario, rising to €1.2 billion and €344 million, respectively, in 2030.

The change in GDP presented above and commensurate increase in consumption is driven by changes in income from both capital and households (i.e. increased profits and wages). Household income increases more than capital under both scenarios, though capital's share of the increase grows over the period. In the full abolition scenario, household income increases by €1.25 billion in the first year, while capital income increases by over €225 million. The scenario under which CAT is halved paints a similar picture, with a broadly similar ratio between capital and household income as in the full scenario.

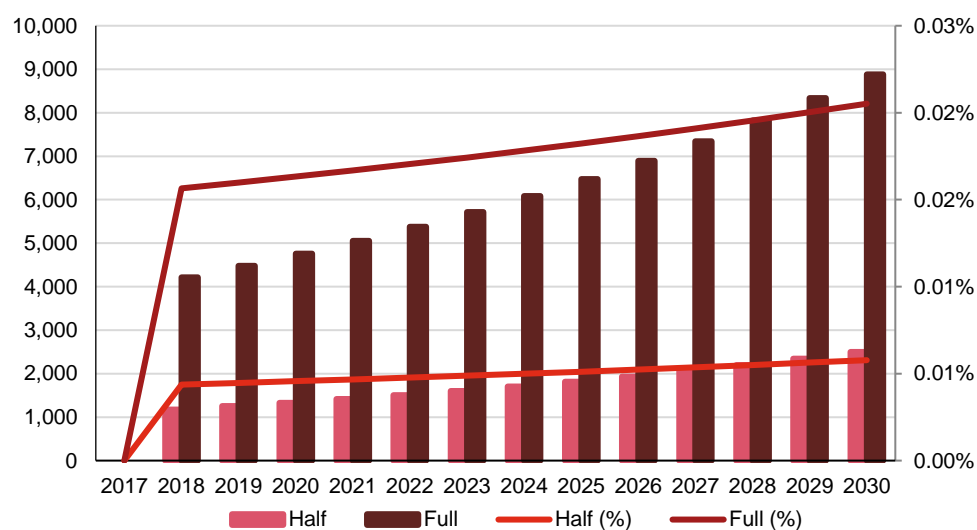
Figure 8: Impact on capital and household income compared to base level under each scenario (absolute change from the base case)



## Impact on national employment

Under the scenario that all taxes are abolished, more than 4,200 jobs will be created in the year following the implementation, and a total of 8,900 additional people will be employed by 2030. Fewer jobs are created in the scenario that CAT is halved, however there will still be nearly 2,500 additional jobs compared to the status quo by 2030. These jobs will be distributed all sectors of the economy, though the majority would likely be created in industries linked closely to aviation and tourism.

Figure 9: Impact on total national employment compared to base level from the abolition of air taxes in France (percent change from the base case on right-hand axis, and impact in € on left-hand axis)

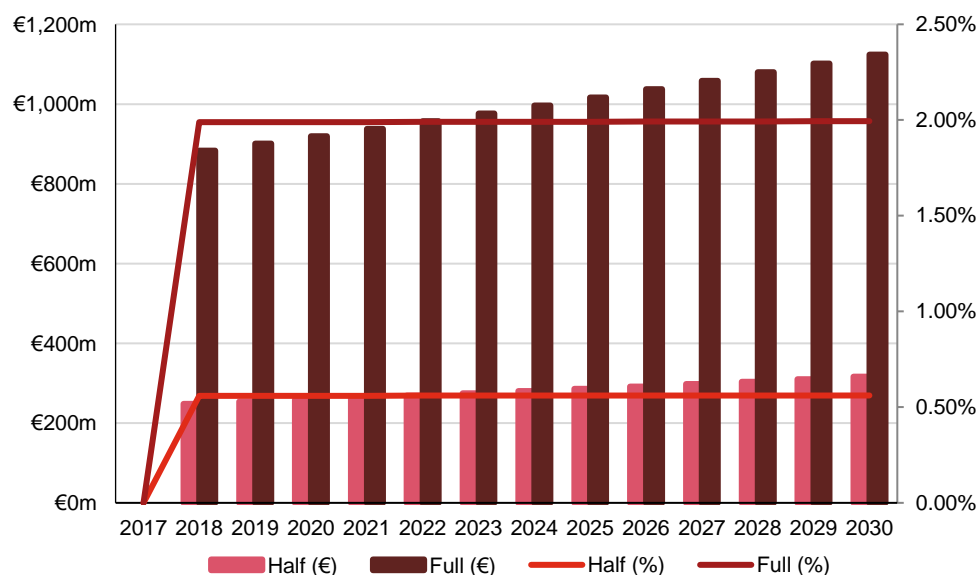


**4,750**  
additional jobs  
will be created  
two years after  
abolishing all air  
passenger taxes

## Impact on national aviation sector GVA

The value of goods and services produced in France's aviation industry is forecast to be over 1.99% larger than the baseline forecast in 2018 under the scenario that passenger tax is fully abolished, adding more than €880 million to the sector. A similar margin is maintained throughout the period until 2030. Halving the CAT has a similar but less pronounced effect, improving GVA by around 0.56% in 2018 compared to the baseline, and a similar amount each year following.<sup>6</sup>

*Figure 10: Impact on aviation GVA compared to base level from the abolition of air taxes in France (percent change from the base case on right-hand axis, and impact in € on left-hand axis)*



The aviation sector would be **€920m** larger per year two years after the abolition of all air passenger taxes

## Impacts on passengers and tourism

The CGE modelling approach captures the wider macroeconomic effects of the changes in tax rate. It is not able to provide a route-level analysis of the aviation sector, and accordingly it captures demand and capacity constraints only at an industry-wide level. However, if it is assumed that an increase in economic output of the aviation sector manifests itself in an increase in passenger numbers, then full abolition of all air passenger taxes could add an additional 1.8 million arrivals in 2020 over a baseline of 65 million (an increase of 2.7%). This would mean an additional 5 million arrivals over the three years following the abolition (i.e. by 2020). The impact of the halving Civil Aviation Tax would be an increase of roughly 500,000 arrivals (an increase of 0.8%) in 2020.

By extrapolating current trends, it is possible to split out these additional passengers by type. According to our analysis, an additional 1.35m overseas tourists will visit France in 2020 under the full abolition scenario (equal to a total of 3.85 million additional tourists over the 3 year period to 2020), and 380,000 additional tourists will visit the country if Civil Aviation Tax is halved. Inbound tourism is recorded as an export as money from other countries flows into the French economy, which supports GDP growth. However, it is important to recognise that abolishing the aviation tax will impact both inbound and outbound tourism. Outbound tourism is likely to increase as, among other factors, some French citizens will be priced into taking overseas trips and substitute domestic travel with overseas travel. This is treated as an import and will lead to money flowing out of the French economy

**5m** additional arrivals between 2018 and 2020 by abolishing all air passenger taxes

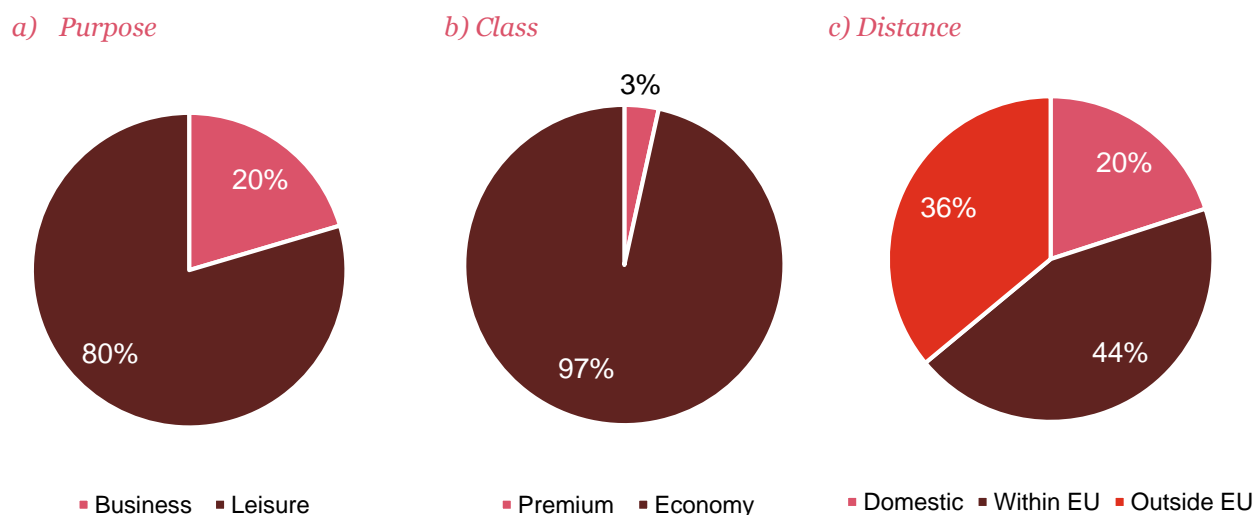
**3.8m** additional tourists between 2018 and 2020 by abolishing all air passenger taxes

<sup>6</sup> Note, we are using GTAP's definition of the aviation sector, which may be broader than other definitions.

which will offset some of the increase in expenditure by inbound tourists. As such, we forecast that the net increase to tourism expenditure (increase in exports minus the increase in imports) will be around €1.1 billion in the three year period to 2020 under the full abolition scenario.

We can extend this analysis, as shown in Figure 11, to give a breakdown of additional passenger numbers by class, distance and purpose. The chart reveals that the vast majority of passengers travel economy class on flights within the European Union. Approximately 80% of the additional passengers would come to France for leisure purposes versus 20% for business purposes, with the level and type of expenditure differing between these two groups.

*Figure 11: Additional passengers (arrivals) that would result from the tax cut, broken down by class, distance and purpose. Each segment is a proportion of the total increase in arrivals*

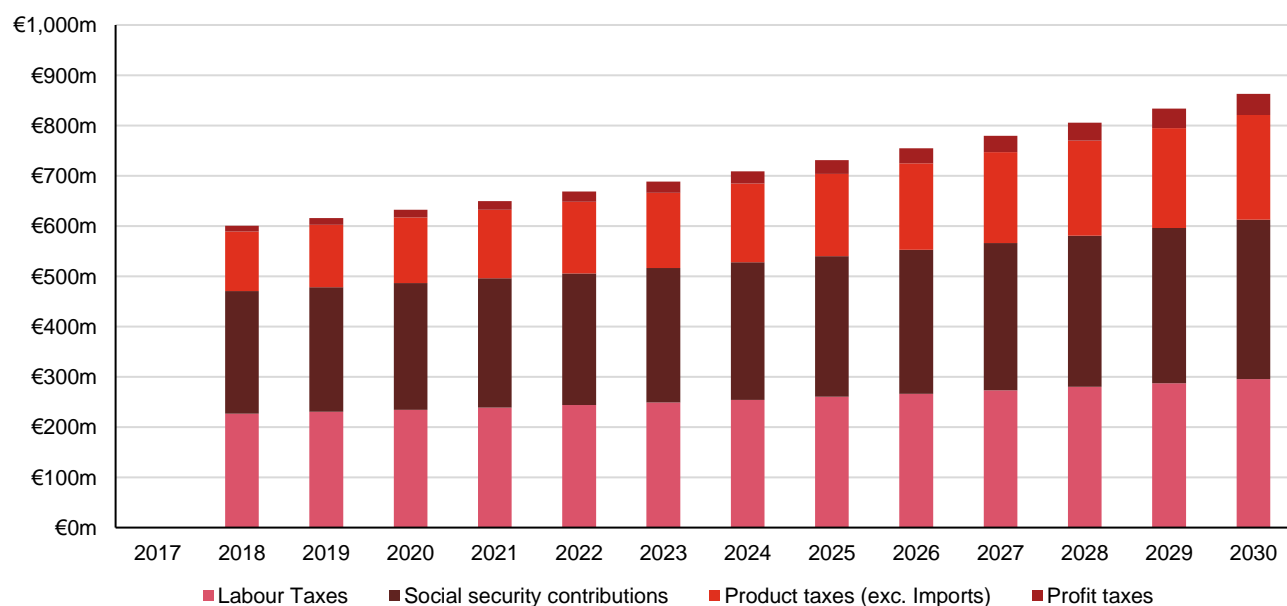


## Impact on national tax income

Whilst direct income from the CAT, ST and FT will decline as the result of their reduction or abolition, government income from other taxes will increase. These indirect increases in government income are derived from labour taxes, social security contributions, product taxes, and profit taxes, and are a result of wider improvements in macroeconomic performance, including increases in employment, productivity, wages, and consumption.

Completely abolishing the passenger taxes leads to increases in all measured taxes. Social security contributions increase the most, followed closely by labour taxes, while profit taxes rise the least in absolute terms. In the full scenario, the fiscal return on abolishing all three taxes is 1.00, implying a €1 cut results in a €1.00 increase in indirect tax income. This increase in indirect tax income is greater than could be expected from reducing other taxes (for example, corporate tax income and VAT) due to its highly distortive nature. As such, its abolition improves the level of the GDP disproportionately more than the abolition of other taxes, and as such represents a relatively cheap method of boosting the economy for the government. It is important to note that this is our central case, which is subject to a number of standard assumptions around the impact of tax on the wider economy. As such it is possible that the abolition of the aviation tax may have a greater impact on productivity, trade, and tourism than our analysis suggests, which would improve the level of recuperation and economic impact further.

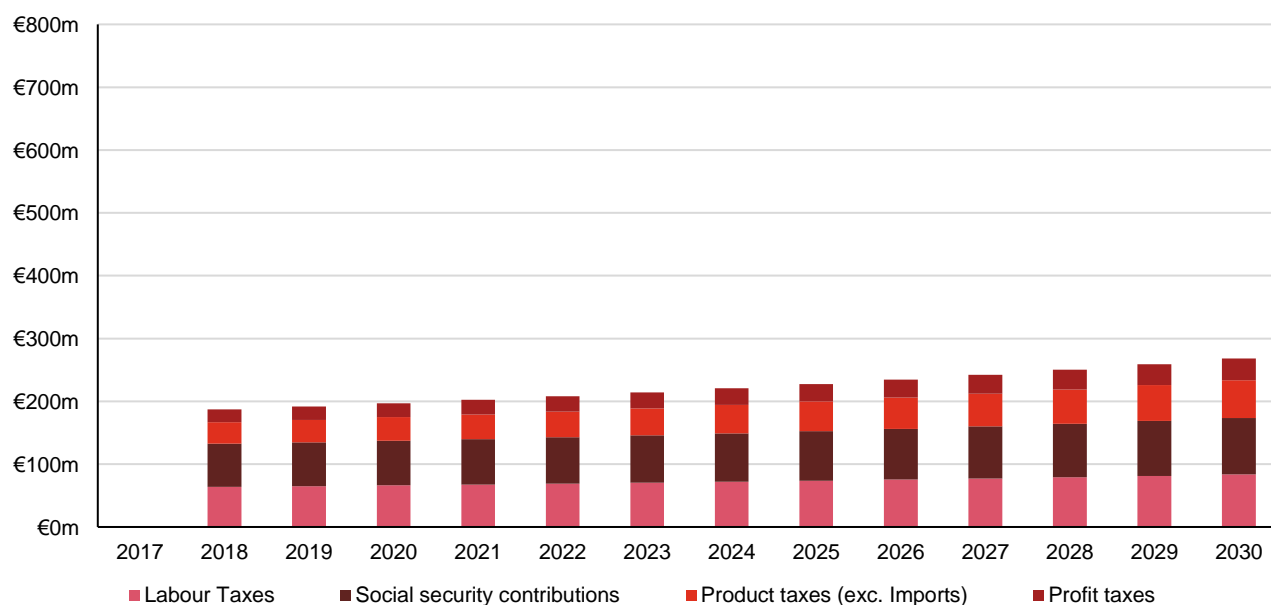
*Figure 12: Impact on tax income compared to base level from the full abolition of air taxes in France (absolute change from the base case)*



*100% of tax cut is recouped, mainly from labour taxes, social security, product taxes*

Reducing taxes by in the half scenario also increases tax revenue across all four of the taxes analysed. As with the full abolition of the tax, the largest increase is associated with social security contributions. In the scenario that the Civil Aviation Tax is reduced by a half, 96% of the tax cut will be recouped in indirect tax income.

*Figure 13: Impact on tax income compared to base level from the abolition of half of air taxes in France (absolute change from the base case)*



## Impact of French abolition on global GDP

As shown in Table 4, under the scenario that the CAT, ST and FT are completely abolished, all of the countries we have analysed experience an improvement in their real GDP over the entire period. By 2030, Germany experiences the largest absolute increase in GDP as a result of the abolition, while Great Britain experiences the largest relative increase.

Halving CAT has a similar impact. As with the full scenario, all of the countries we have analysed immediately experience an improvement in their real GDP which is sustained over the entire period. By 2030, Great Britain experiences the largest absolute increase in GDP as a result of the abolition, while Italy experiences the largest relative increase.

These improvements in the economic position of other countries – especially those close to France – are due to the reduced cost of flying allowing, among other things, knowledge to be transferred more freely between countries and French residents to spend their money on goods and services in other countries. In addition, residents and businesses in countries outside of France will benefit from being able to make trips to France for a lower price.

*Table 4: Impact on real GDP by country compared to base level as per the two scenarios (change from the base case)*

### a) Full

<i>Full</i>	<b>2030</b>
Austria	€18m
France	€2,478m
Germany	€251m
Italy	€137m
Sweden	€33m
Great Britain	€205m
Rest of EEA	€3,447m
Rest of World	€629m
<i>Total</i>	<b>€7,197m</b>

### b) Half

<i>Half</i>	<b>2030</b>
Austria	€3m
France	€702m
Germany	€53m
Italy	€51m
Sweden	€9m
Great Britain	€61m
Rest of EEA	€148m
Rest of World	€795m
<i>Total</i>	<b>€1,822m</b>



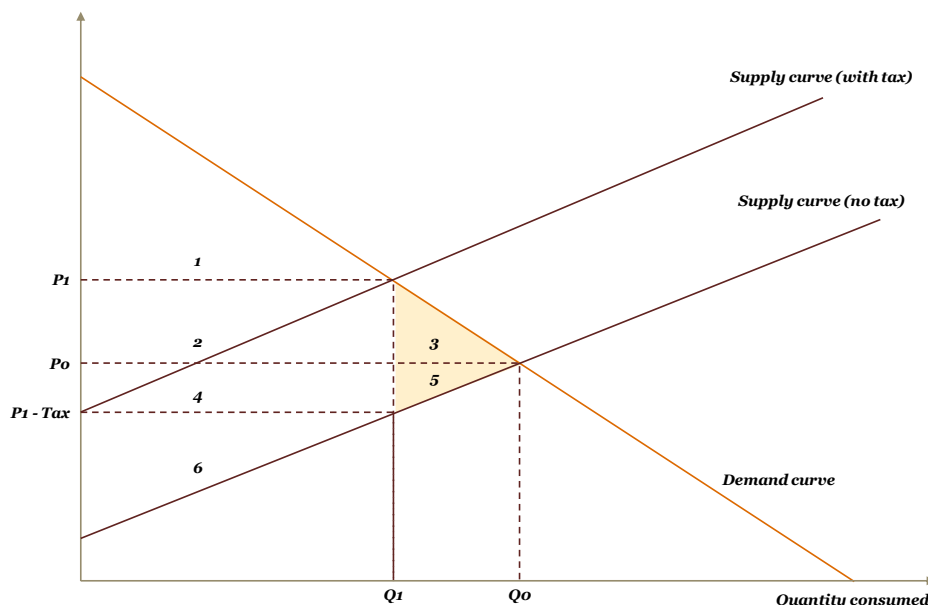
# Appendix 1: Economic theory of indirect taxes

The tax system plays a crucial role in influencing the rate of short and long-term economic growth in the economy. In aggregate, the amount of tax raised, the type of tax raised, and its interaction with public spending will affect the long-term growth rate of the economy. However, individual tax policy measures are less likely to augment the rate of economic growth for any sustained period as they are smaller in scale, but they can affect the level of GDP.

Indirect taxes, such as air passenger taxes, create distortions in the market by increasing the price of the good or service to which the tax is charged (in this case, flights), leading businesses and households to adjust their behaviour to avoid paying the tax, resulting in a lower quantity sold. By reducing the amount purchased, consumers are worse off – the extent to which is defined as a deadweight loss of taxation<sup>7</sup>. We explain this concept with use of a supply and demand curve framework (see Figure 14 below).

The equilibrium price and quantity that prevails in the market for the product or service in question (i.e. a flight ticket) is determined by the intersection of the market demand and supply curves. However, with the application of an indirect tax (i.e. the respective air passenger tax), the quantity consumed in the market is represented by point  $Q_1$  in Figure 14. Once the tax is removed, the market supply curve shifts downwards by the amount of the tax. The equilibrium price for consumers is now lower ( $P_0$ ), so they demand more of the product and as a result, the consumer surplus (a measure of consumer welfare) grows from Area 1 to Areas 1, 2 and 3. At the same time, the price received by the producer rises to  $P_0$  from  $P_1$ -tax and the producer surplus (a measure of producer welfare) increases from Area 6 to Areas 4, 5 and 6. The Government loses some revenue as its portion of the consumer and producer surplus is removed (Areas 2 and 3), however the overall level of welfare in the economy grows – represented by Areas 3 and 5 and known as the deadweight loss.

Figure 14: Illustrative deadweight loss (as marked in yellow) caused through application of indirect tax



A common measure of the deadweight loss is the amount of GDP forgone per unit of revenue raised. As an example, if the deadweight loss were to be 0.5, this would be as 50 cents of GDP lost per €1 of tax revenue raised. Governments set tax policy to balance the need to minimize the deadweight loss to society with the

<sup>7</sup> 'Intermediate Microeconomics: A Modern Approach', 8th Edition, Hal. R. Varian (2010).

imperative to use the proceeds of taxation to provide goods that would otherwise be underprovided by a free market and to correct other market failures.

The size of this deadweight loss is determined by both static and dynamics factors. In terms of static determinants, the absolute level of the tax imposed and the steepness of the supply and demand curves. In the case of the former, the higher the tax rate the further the supply curve shifts up in response and the associated deadweight loss becomes larger. For the latter, a steeper demand or supply curve reflects more inelastic supply and demand conditions in the market, and means that supply or demand is relatively insensitive to changes in price. Dynamic determinants include the extent to which air passenger tax acts as a tax on business inputs and the extent to which improving business air usage has a positive impact on GDP by boosting productivity.

# Appendix 2: Aviation tax rates in the European Economic Area

Country	Tax	Rate	Notes for Figure 3
Austria	Air Transport Levy	Short haul	€ 7
		Medium haul	€ 15
		Long haul	€ 35
France	Civil Aviation Tax	EU	€4.48
		Non-EU	€8.06
	Solidarity Tax	EU	Economy: €1.13
			Business: €11.27
		Non - EU	Economy: €4.51
			Business: €45.07
	Fiscal Tax (Corsica)	€ 4.57	
Germany	German Air Transport Tax	EU and EFTA	€7.47
		Countries not included in the EU and with a distance of not more than 6,000km	€23.32
		Other countries	€41.99
Greece	Airport Development Charge	€ 12 to Hellenic Civil Aviation Authority	
Italy	Council City Tax	Rome airport	€ 7.50
		Other airports	€ 6.50
Norway	Air Passenger Tax	NOK 82	
Sweden	N/A	Proposal for 1st of January 2018)	
		Within EU	SEK 60
		Less than 6000km	SEK 250
		More than 6000km	SEK 400

Pink dashes within Figure 3 are shown as the sum of the Civil Aviation Tax and Solidarity Tax. Fiscal Tax (Corsica) is excluded from Figure 3.

Figure 3 shows the proposed rates from January 2018.

# Glossary

<b>Computable General Equilibrium model</b>	A model used by governments and international organisations to simulate the effect of changes in policy or other external factors.
<b>Gross Value Added</b>	The total value of goods and services produced in a specific sector or area of the economy
<b>Deadweight Loss</b>	The loss in the level of welfare/efficiency in the economy when the equilibrium for a good or service is not achieved.
<b>Passenger tax</b>	We have defined a passenger tax, as opposed to a charge, as being raised by a government body for the purpose of raising revenue, rather than covering a specific cost
<b>Passenger charge</b>	A charge is a fee levied by a private body and charged on a per passenger basis
<b>Producer Surplus</b>	The difference in the price between the amount a producer is willing to receive for a unit (e.g. a seat on a plane) and the amount the producer does in fact receive
<b>Consumer Surplus</b>	The difference between a consumer's willingness to pay and the amount the consumer actually paid

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