The economic impact of air taxes in Europe Germany

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 the German Aviation Tax using a Computable General Equilibrium model. In the "half" scenario we simulate the impact of halving the German Aviation Tax as of January 2018, and in the "full" scenario we simulate the impact of abolishing the tax entirely in January 2018.



24.6 million additional arrivals by 2020





extra inbound tourist arrivals by 2020



€1.6 billion

additional tourism expenditure by 2020



€6.9 billion

higher GDP in Germany per year in 2030, rising from €4.1 billion per year in 2020.



€12.1 billion

higher GDP across the EEA per year in 2030, rising from €4.6 billion per year in 2020.



€3.5 billion

larger air sector in Germany per year in 2030, rising from €2.8 billion per year in 2020.



26,000

additional jobs across the German economy in 2030, rising from 12,300 in 2020.



108% fiscal return

We estimate that total passenger taxes will raise €1 billion in 2017. Following the abolition of all taxes, our analysis suggests that 108% of this will be recouped in indirect tax income. Our modelling therefore suggests that this tax does not raise overall government revenue, but rather costs the economy jobs. As such, 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.¹ 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.

with no taxation (dark grey)

Figure 2: Location of the 7 country reports (dark

pink), countries with air passenger taxes but not

under analysis (light pink), and EEA countries

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: ²

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

¹ PwC 2013, The Economic Impact of Air Passenger Duty

² 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.

€60 ■ Range of tax rates ■ Tax rates €50 €40 €30 €20 €10 €0 Austria France Germany Greece Italy Sweden Norway

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

Source: IATA, PwC analysis

This report covers the German "Luftverkehrsteuergesetz", translated as the Aviation Tax. This tax is levied on passengers departing on domestic and international flights, and is payable to the exchequer with the purpose of raising tax revenue.

The tax rates varies according to whether a flight is short haul, medium haul or long haul. The tax rates for 2017 are as follows: 3

- €7.47 Short haul
- €23.32 Medium haul
- €41.99 Long haul

³ IATA List of Ticket and Airport Taxes and Fees

In this report we model the macroeconomic and fiscal effects of halving the current tax rates as well as modelling the effect of abolishing the tax entirely. 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 shows the rate of Aviation Tax under each of the scenarios.

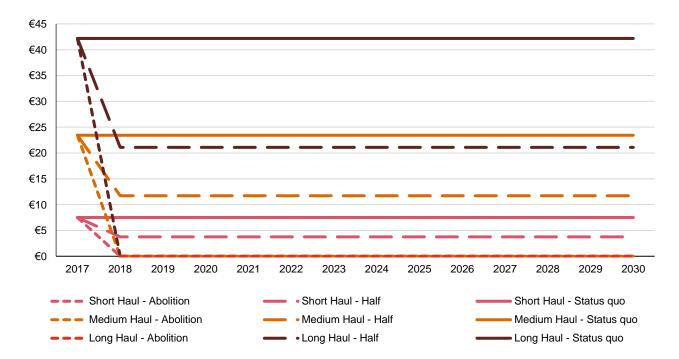


Figure 4: German Aviation Tax rates under three scenarios

Source: IATA, PwC analysis

The implied revenue under three scenarios are shown below in Figure 5. We have used the official forecast of the Finance Ministry for 2017, and then modelled the expected income for each of the scenarios, assuming that the reductions in tax rate occur in 2018.⁴

The scenario of full abolition demonstrates the maximum economic benefit which could be unlocked through 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 mirror the amendment made to the Austrian Air Transport Levy, which proposes to half tax rates from \mathfrak{C}_7 , \mathfrak{C}_{15} and \mathfrak{C}_{35} to $\mathfrak{C}_{3.50}$, $\mathfrak{C}_{7.50}$ and $\mathfrak{C}_{17.50}$, respectively.

⁴ German Federal Ministry of Finance 2017, Tax Revenue in April 2017

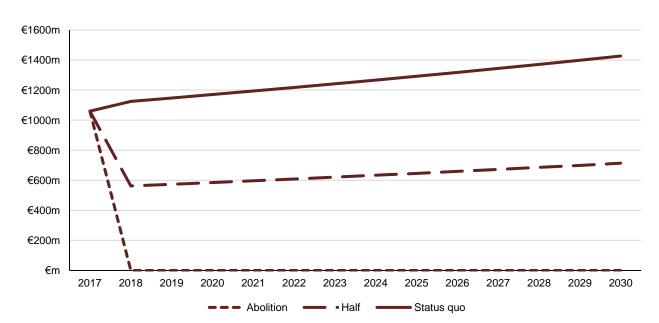


Figure 5: Forecast income from the German Aviation Tax under three scenarios

Source: Federal Ministry of Finance, 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, it is important to recognise that these charges nonetheless represent a cost burden to airlines operating in Germany, 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.

As an example, Germany also levies the Passenger Service Charge against all passengers, the amount of which varies depending upon the destination of the flight and the airport from which the flight is departing. The charge is allocated to the respective airport to finance fire services, bird strike prevention, as well as safety and environmental monitoring. It is important to acknowledge that in the presence of other charges, abolishing air taxes would not prevent the maintenance and upgrade of airport infrastructure. The table below outlines the rates of these additional charges and how they vary for different classes of passengers and at different airports.

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

Main Tax/Charge	EU, Iceland, Norway, \	Rate Vary by airport and type of flight	Rates at Busiest Airports by number of passengers	
Passenger Service Charge			€26.50 (Frankfurt)	€20.35 (Munich)
Passenger Service Charge	Other International	Vary by airport and type of flight	€33.50 (Frankfurt)	€21.30 (Munich)
Airport Security Charge	International	Vary by airport	€9.10 (Frankfurt)	€6.39 (Munich)
Airport Security Charge	Domestic	Vary by airport	€10.83 (Frankfurt)	€7.60 (Munich)

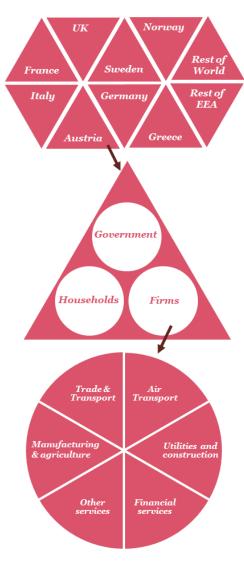
Source: IATA List of Taxes and Fees

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, 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 shown 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.

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Table 2: Types of impact captured by the CGE model

Impact type	Descriptions
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

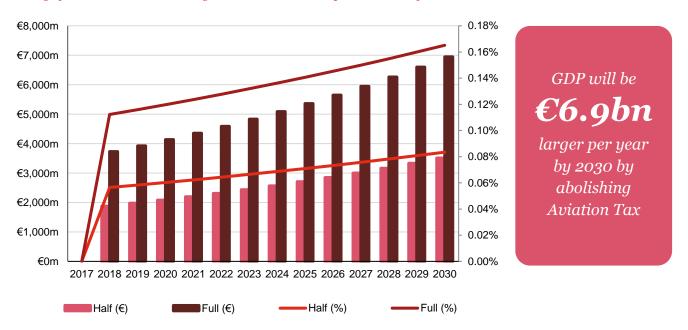
We have modelled the impact of our two scenarios on key macroeconomic indicators, both nationally and internationally, the results of which are outlined in this section. This section is intended to provide an overview of the key results from our analysis. For a deeper look into the mechanisms driving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

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 immediately following 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, 0.17% is added to GDP per year by 2030, equivalent to €6.9 billion, and in the half scenario, GDP is 0.08% higher than the baseline, equivalent to €3.5 billion per year.

Figure 7: Impact on real GDP compared to base level from the abolition of air taxes in Germany (percent change from the base case on right-hand axis, and impact in \mathfrak{C} on left-hand axis)



This increase in GDP is reflected across all sectors within the German economy, with all experiencing a positive impact. The aviation sector is subject to the most pronounced uplift in output, increasing 3.26% (€3.5 billion) per year by 2030 in the full abolition scenario, or 1.63% in our scenario where the tax rate is cut by half. Other sectors also experience improvement related to interaction effects with the aviation sector.

Although all sectors experience a positive impact in 2030 under both scenarios, some sectors are impacted more than others. Under the full abolition scenario, for example, increases in output range from €67 million in the utilities and construction sector to €597 million in the agriculture and manufacturing sectors. 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

⁵ 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 the full abolition of air taxes in Germany (change from the base case)

Table 4: Impact on real GDP by sector compared to base level from the abolition of half of air taxes in Germany (change from the base case)

Full	2030
Agriculture & manufacturing	€597m
Utilities & construction	€67m
Transport	€459m
Aviation	€3,531m
Financial Services	€175m
Other services	€2,119m
Total	€6,947m

Half	2030
Agriculture & manufacturing	€303m
Utilities & construction	€34m
Transport	€235m
Aviation	€1,766m
Financial Services	€89m
Other services	€1,082m
Total	€3,510m

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.

Net tourism
expenditure
increases
€570m
per year in 2030

We estimate that the abolition of German Aviation Tax would induce a net increase in tourist expenditure of €570 million in 2030, and the half scenario increase tourist expenditure by €30 million. This is relatively low compared with other countries due to the fact that 71% of the additional passengers are outbound tourists. This is the highest proportion of outbound passengers of any of the 7 countries we modelled.

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 €2.25 billion per year under the full scenario and €1.14 billion per year under the half scenario, rising to €3.87 billion and €1.98 billion, respectively, in 2030.

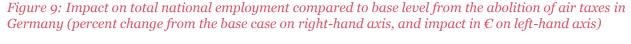
The change in GDP presented above and increase in consumption is driven by changes in income from both capital and households (i.e. increased profits and wages). Household income increases more than capital under both scenarios, with the gap widening from the baseline over the period until 2030. In the full abolition scenario, labour income increases by more than $\mathfrak{C}2.6$ billion in the first year, while capital income increases by nearly $\mathfrak{C}1.1$ billion. The scenario under which taxes are reduced by half paints a similar picture, with a $\mathfrak{C}1.3$ billion increase in labour income and $\mathfrak{C}0.5$ billion increase in capital income in 2018.

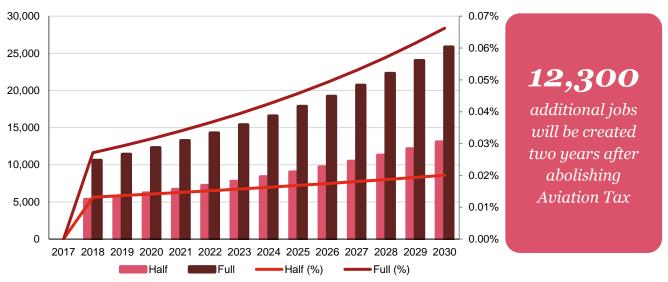
a) Full b) Half €8,000m €8,000m €7.000m €7.000m €6,000m €6,000m €5,000m €5,000m €4,000m €4,000m €3,000m €3,000m €2,000m €2,000m €1,000m €1,000m €0m €0m 2019 2021 2023 2025 2027 2029 2019 2021 2025 2027 2029 2017 2023 ■Full, absolute change ■ Full, absolute change ■ Half, absolute change ■ Half, absolute change

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 the Aviation Tax is fully abolished, more than 12,300 jobs will be created in the two years following the implementation, and this number will rise to a total of 26,000 by 2030. Fewer jobs are created in the scenario where taxes are reduced by a half. However, there will still be over 13,000 additional jobs compared to the status quo in 2030.

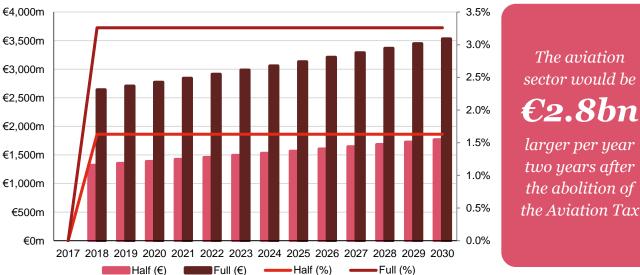




Impact on national aviation sector GVA

The value of goods and services produced in Germany's aviation industry is forecast to be nearly 3.3% larger than the baseline forecast in 2018 under the scenario that Aviation Tax is fully abolished, adding more than €2.6 billion to the sector. A similar relative margin is maintained throughout the period until 2030. Reducing the rate of tax by half has a similar but less pronounced effect, improving GVA by around 1.6% in 2018 compared to the baseline, and a similar amount each year following.

Figure 10: Impact on aviation GVA compared to base level from the abolition of air taxes in Germany (percent change from the base case on right-hand axis, and impact in $\mathfrak C$ on left-hand axis)



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 8.7 million arrivals in 2020 (an increase of 8.6%) over a baseline of 101m. This would mean an additional 25 million arrivals over the three years following the abolition (i.e. by 2020). The impact of halving all air passenger tax rates would be an increase of roughly 4.3 million arrivals.

Of these passengers, we estimate that there will be an additional 2.5 million tourists flying into Germany in 2020, and a total of 7 million additional tourists in the period to 2020. Inbound tourism is recorded as an export as money from other countries flows into the German economy, which supports GDP growth. 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 German 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 German economy 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 €131 million in the three year period to 2020.

25madditional
arrivals between
2018 and 2020 by

abolishing

Aviation Tax

additional
tourists between
2018 and 2020 by
abolishing
Aviation Tax

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 short

haul flights. Approximately 79% of the additional passengers would come to Germany for leisure purposes versus 21% for business purposes, with the level and type of expenditure differing between these two groups. It should be noted that despite representing more than 90% of trips covered by the Aviation Tax, less than 70% of the impact on GDP would come from short haul passengers. This result is driven by the higher tax rates levied on long haul routes.

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

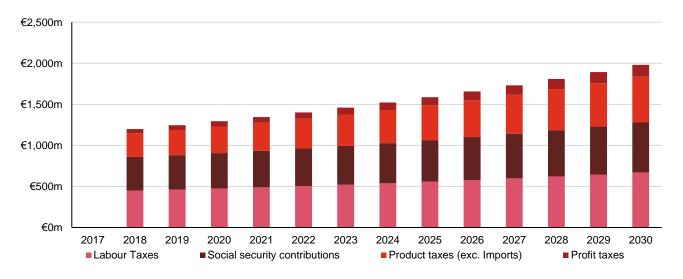


Impact on national tax income

Whilst direct income from the Aviation Tax will decline as the result of its 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 Aviation Tax leads to increases in all categories of tax. Labour taxes increase the most, followed by social security contributions, while profit taxes rise the least. In the full scenario, the fiscal return on abolishing Aviation Tax is 1.08 in 2020, implying a $\mathfrak{C}1$ cut results in a $\mathfrak{C}1.08$ increase in indirect tax income. This means the government could expect a net 8% increase in tax income as a result of abolishing the tax. The German aviation market is underserved compared to similar economies, particularly in the low-cost segment of the market and as such, its abolition has the potential to stimulate significant investment. This is likely to cause a larger increase in GDP than in other European markets, as well as more substantial effect on tax income than by cutting other taxes. It is important to note that this is our central case and is subject to a number of 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 differing impact on productivity, trade, and tourism than our analysis suggests, which would result in a different level of recuperation and economic impact.

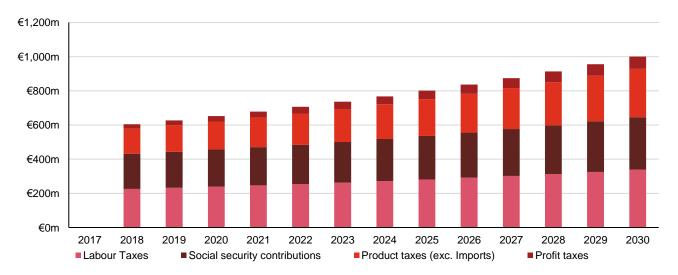
Figure 12: Impact on tax income compared to base level from the full abolition of air taxes in Germany (absolute change from the base case)



Federal tax revenues in Germany would increase by 8% by abolishing the Aviation Tax

Reducing taxes by a half also increases tax revenue across all four of the tax categories analysed. As with the full abolition of the tax, the largest increase is associated with the labour tax, generating around €220 million in the first year after the reduction. As with the full scenario, the ratio between direct tax income lost and indirect tax income gained is €1.08, meaning that there will be a net 8% increase in tax income for each €1 cut.

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



Impact of German tax abolition on global GDP

As shown in Table 5 and Table 6, cutting or abolishing aviation tax increases global GDP. In the full scenario, this increase is worth €17.5 billion per year, with more than €12 billion of that increase within the EEA. Reducing taxes by a half has a similar, but less pronounced effect on the global economy, with the majority of the increase once again within the EEA. These improvements in the economic position of other countries are due to the reduced cost of flying allowing, among other things, knowledge to be transferred more freely between

countries and German residents to spend their money on goods and services in other countries. In addition, residents and businesses in countries outside of Germany will benefit from themselves being able to fly to Germany more cheaply.

Austria is the only country impacted negatively by the tax reduction, with the economy shrinking by around €43 million compared to the baseline in the full scenario and €22 million in the half scenario. This is predominantly a result of the similarities between the two economies and their geographical proximity enabling substitutability of demand. One such example of this is aviation demand, with Austrian consumers who live within a reasonable distance of German airports choosing to fly from Germany rather than Astria as prices decline and route options increase.

base level from the full abolition of air taxes in Germany (change from the base case)

Table 5: Impact on real GDP by country compared to Table 6: Impact on real GDP by country compared to base level from the abolition of half of air taxes in Germany (change from the base case)

Full	2	2030		
Austria	-0.01%	-€43m		
France	0.03%	€833m		
Germany	0.17%	€6,947m		
Italy	0.03%	€634m		
Sweden	0.00%	€7m		
Great Britain	0.04%	€1,316m		
Rest of EEA	0.01%	€2,418m		
Rest of World	0.03%	€5,382m		
Total		€17,494m		

Half	20	030
Austria	0.00%	-€22m
France	0.01%	€423m
Germany	0.08%	€3,510m
Italy	0.01%	€322m
Sweden	0.00%	€4m
Great Britain	0.02%	€670m
Rest of EEA	0.00%	€1,227m
Rest of World	0.02%	€2,723m
Total		€8,858m

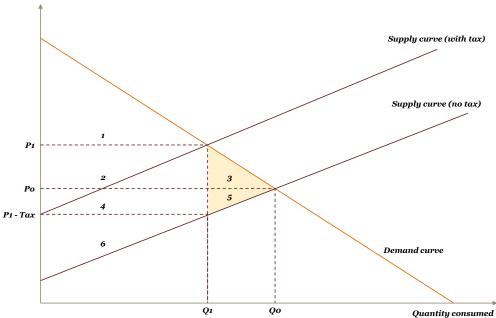
Appendix 1: Economic theory of indirect taxes

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. 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 Q1 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 (Po), 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 Po from P1-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

⁶ 'Intermediate Microeconomics: A Modern Approach', 8th Edition, Hal. R. Varian (2010).

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raised. Governments set tax policy to balance the need to minimize the deadweight loss to society with the 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
		Short haul	€7	
Austria	Air Transport Levy	Medium haul	€ 15	
		Long haul	€ 35	
	Civil Aviation Tax	EU	€4.48	
		Non-EU	€8.06	Pink daghag within Figure 2 are
		EU	Economy: €1.13	Pink dashes within Figure 3 are shown as the sum of the Civil
France	Solidarity Tax	EU	Business: €11.27	Aviation Tax and Solidarity Tax.
	Solidarity Tax	Non - EU	Economy: €4.51	Fiscal Tax (Corsica) is excluded from Figure 3.
			Business: €45.07	
	Fiscal Tax (Corsica)	€ 4.57		
	German Air Transport Tax	EU and EFTA	€7.47	
Germany		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	$\mathop{\mathfrak{C}}$ 12 to Hellenic Civil Aviation Authority		
T+al-v	Council City Tax	Rome airport	€ 7.50	
Italy		Other airports	€ 6.50	
Norway	Air Passenger Tax	NOK 82		
Sweden	N/A	Proposal for 1st of January 2018)		
		Within EU	SEK 60	Figure 3 shows the proposed rates from January 2018.
		Less than 6000km	SEK 250	
		More than 6000km	SEK 400	

Glossary

Computable General Equilibrium model	A model used by governments and international organisations to simulate the effect of changes in policy or other external factors.
Gross Value Added	The total value of goods and services produced in a specific sector or area of the economy
Deadweight Loss	The loss in the level of welfare/efficiency in the economy when the equilibrium for a good or service is not achieved.
Passenger tax	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
Passenger charge	A charge is a fee levied by a private body and charged on a per passenger basis
Producer Surplus	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
Consumer Surplus	The difference between a consumer's willingness to pay and the amount the consumer actually paid

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