



# Analysis of Airport Charges - Airlines 4 Europe

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# Executive Summary

**The airport charges paid by A4E members have increased significantly since 2005, with an increase of 80% at Europe's 21 largest airports (Summary1).**

- This increase is reflected in the work carried out by Aviation Economics to estimate the increase in charges paid at Europe's 21 largest airports, which see 50% of the passengers at Europe's airports. These modelled estimates were developed to support the verification of the data provided by the A4E airlines.
- On a benchmark basis for common aircraft types charges have gone up by 90% at the top 10 airports, and by 18% at the bottom 10 airports.
- Using an estimate of the total airport charges paid at these airports, charges have gone up by 85% at the top 10 airports and by 35% at the bottom 10 airports (summary 2).

# Executive Summary 1 – Member Airline Data

**Airport charges paid by A4E member airlines at the top 21 European airports have increased by 80% since 2005.**

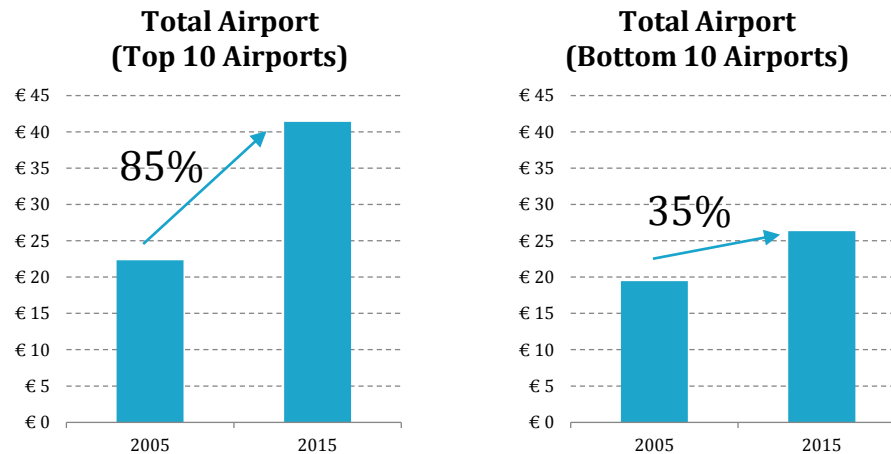
Change in average per passenger charges – Member Airline Data

Country	2005	2014	% Change
Spain	€ 5.67	€ 20.11	255%
Italy	€ 13.66	€ 32.93	141%
United Kingdom	€ 19.82	€ 43.63	120%
Ireland	€ 10.43	€ 20.54	97%
Belgium	€ 25.57	€ 32.79	28%
Germany	€ 28.12	€ 35.72	27%
Switzerland	€ 31.36	€ 38.24	22%
Denmark	€ 24.60	€ 27.97	14%
France	€ 15.91	€ 17.92	13%
Austria	€ 25.45	€ 26.50	4%
Netherlands	€ 34.02	€ 32.96	-3%
Norway	€ 23.83	€ 22.00	-8%
Sweden	€ 24.42	€ 21.97	-10%
<b>Weighted Average</b>	<b>€ 19.28</b>	<b>€ 34.63</b>	<b>80%</b>

- Data has been provided by the member airlines, the results are based on the average per passenger fee paid at airports within each of the 13 countries. The 13 countries cover the 21 airports included within the analysis.

# Executive Summary 2 – Total Airport Analysis at A4E Bases

**Our modelling of the total airport charges paid, shows that charges for the top 10 airports increased by 85% since 2005. Charges rose by 35% at the bottom 10 airports.**



- Average across all the study airports was a 69% increase in charges.

Average is not weighted by airport passenger volumes.

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# Introduction

# Introduction

- This analysis has been commissioned by Airlines 4 Europe – the newly formed airline association. Member airlines are Air France KLM, IAG, easyJet, Lufthansa Group and Ryanair.
- Focussing purely on airport charges, Aviation Economics (part of RDC) has been tasked with producing analysis that covers three broad areas; charges that have been paid by member airlines, representative aircraft published charges and total published charges covering all airline schedules.
- Data for both 2005 and 2015 has been collected and calculated for each of the three areas, facilitating the benchmarking of amounts and changes over time.
- The analysis covers Europe's 21 largest airports. These 21 airports have been selected as they cover 50% of passengers flying from Europe.
- A4E member airlines have been asked to provide the actual fees that they have paid to each of the 21 airports, along with the passenger numbers carried. We have then expressed this as a per passenger number in both 2005 and 2015 and calculated the increases seen within each country. Given the highly confidential nature of the data, it has been ensured that none of the data provided has or can be shared amongst the member airlines.
- To contextualise this data, three representative aircraft have been identified and analysed; a Dash 8 Q400 representing the regional and domestic market, an Airbus A320 representing the shorthaul European market and a Boeing 777 to represent the longhaul market. The airport charges for each of the 21 airports have been calculated for each of the three aircraft types and the increase seen between 2005 and 2015 has been presented.
- To add further context, the total airport charges revenue has been calculated for each of the airports in the study, based on their published charges. This is based on actual airline schedules operated in both 2005 and 2015. By default, this takes into account the mix of aircraft types, frequency and capacity operated as well as destinations served.
- All assumptions used within each of the three sections are included within the methodology section of this report, along with the list of the 21 European airports.
- The results of the analysis, covering each of the three areas is included within the report and summarised within the summary.

# Methodology



# Airport Charges Overview

- Airport charges are the fees paid by an airline to an airport in exchange for the use of the airport infrastructure.
- Although the exact fees levied is dependent on the airport in question, airport charges generally comprise of two methods of charging. The first is based on the type/weight of the aircraft operating (movement based) and the second is based on the number of passengers carried (passenger based).
- Within each of the two categories, airports can choose what charges they levy and, for non-regulated airports, the level of charges.
- Within this report, only charges directly levied by the airport to the airline are included. The table below shows the typical movement based and passenger based charges that are levied by airports. All charges within these categories have been included within the analysis, if they are levied by the airport.

Movement Based	Passenger Based
Runway	Passenger Service Charges
Parking	Passenger Security Charges
Noise/Environment	Infrastructure Charges
Terminal	PRM
Infrastructure Charges	

- Excluded from the analysis are any charges that are not directly levied by the airport. Typical examples of these charges are shown below:

Exclusions
Government levied (Tax)
Air Navigation
State levied Security
Cargo
Handling

Source: [airportcharges.com](http://airportcharges.com)

# Methodology – Airports Analysed

- Data for this report has been obtained from 3 different sources; member airlines (member airline analysis), published airport charges for a Dash 8 Q400, an Airbus A320 and a Boeing 777 (representative aircraft analysis) and published charges for the entire airport operated schedule (total airport analysis). All results are presented to country level to preserve airline anonymity. The methodology for each is shown on the following slides.
- Within each of the sources, data for the top 21 airports has been used. These airports have been selected as they are within the EU and EFTA and accounted for 50% of European passengers in 2014. The list of airports is shown below.

Airport	Country	2005 Passengers	2014 Passengers	2014 Cumulative Proportion of Total
London Heathrow	United Kingdom	67,683,000	73,371,195	5%
Paris CDG	France	53,798,000	63,813,756	9%
Frankfurt	Germany	52,219,000	59,566,132	13%
Amsterdam	Netherlands	44,163,000	54,978,023	17%
Madrid	Spain	41,940,000	41,833,374	20%
Munich	Germany	28,619,000	39,716,877	23%
Rome Fiumicino	Italy	28,620,000	38,506,467	25%
London Gatwick	United Kingdom	32,693,000	38,094,845	28%
Barcelona	Spain	27,122,000	37,559,044	31%
Paris ORY	France	24,861,000	28,862,586	33%
Copenhagen	Denmark	19,908,000	25,627,093	34%
Zurich	Switzerland	17,835,000	25,477,622	36%
Oslo	Norway	15,896,000	24,269,235	38%
Palma de Mallorca	Spain	21,237,000	23,115,499	39%
Vienna	Austria	15,859,000	22,483,158	41%
Stockholm Arlanda	Sweden	17,241,000	22,417,351	42%
Manchester	United Kingdom	22,083,000	21,951,758	44%
Brussels	Belgium	16,133,000	21,933,190	45%
Düsseldorf	Germany	15,511,000	21,850,489	47%
Dublin	Ireland	18,450,000	21,712,173	48%
Berlin Tegel	Germany	11,533,000	20,688,016	50%
Total (21 Airports)		593,404,000	727,827,883	50%

Source: Various including UK CAA and airport websites

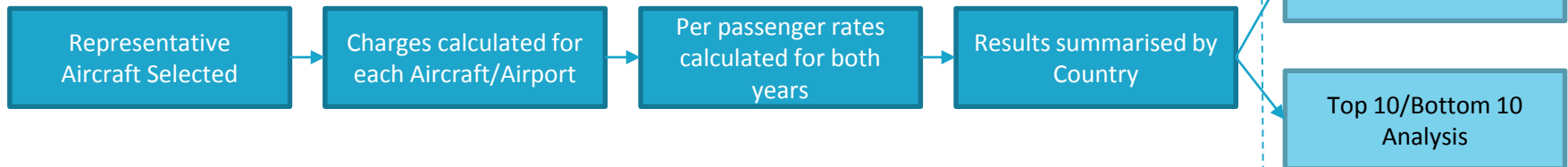
# Methodology - Summary

- A calculation process has been undertaken for each of the three sets of data. This is illustrated in the process diagrams below. The specific assumptions used are presented within the following methodology section.

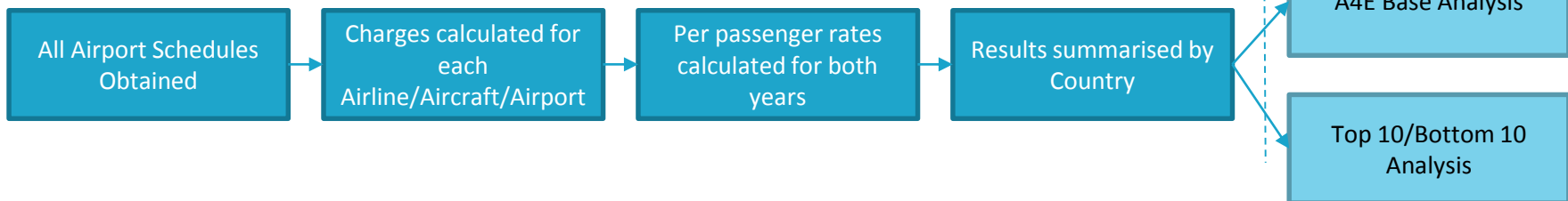
## Member Airline Analysis



## Representative Aircraft Analysis



## Total Airport Analysis



# Methodology

## Member Airline Analysis

- Member airline data has been provided by Aer Lingus, British Airways, Iberia, Lufthansa and Ryanair for 2005 and 2015 (referred to as A4E member airlines within the report). This data includes the following charges at each of the 21 airports (if applicable):
  - Runway
  - Passenger
  - Environment
  - Infrastructure
  - Parking
  - Security (not state levied)
- If 2015 data was not available, 2014 data has been used. This has not been changed or grown to 2015 values. Airlines that provided 2014 data are Aer Lingus, British Airways and Iberia .
- All airlines have provided total fees paid and passengers flown. Using actual departing airport passengers numbers, the results have been weighted to ensure that the data is a fair representation.
- Expressed as a per passenger number by airport, this data has been used to calculate the total increase in member airline charges since 2005.
- All data is report by Country to preserve airline anonymity. Given the highly confidential nature of the data, it has been ensured that none of the data provided has or can be shared amongst the member airlines.

# Methodology

## Representative Aircraft Analysis

- Using published airport charges in 2005 and 2015 a Dash 8, A320 and B777 aircraft have been selected as representative of a regional, narrowbody and widebody aircraft.
- The capacity used for each of the aircraft types is the 2015 average. This average has been calculated using airline schedule data and is shown in the table below.

Aircraft	Departing Seats	Departures	Average Capacity
Dash 8 Q400	24,440,816	317,853	76
A320	219,129,757	1,279,382	171
B777 family	35,174,783	110,663	317

- Comparison studies for each of the 21 airports have been run on both aircraft types (in Euros) using the following assumptions

### Regional Aircraft Assumptions

- Aircraft – Dash 8 Q400 (76 seats)
- Load Factor – 80% (61 passengers)
- Route Type – Regional (domestic destinations - country specific)
- Parking – 30 minutes

### Narrowbody Aircraft Assumptions

- Aircraft – Airbus A320 (171 seats)
  - Load Factor – 80% (137 passengers)
  - Route Type – EU (Athens)
  - Parking – 45 minutes
- To facilitate a like for like comparison the load factor in both 2005 and 2015 has been set at 80%. In reality the load factor will have been lower in 2005, meaning that the per passenger charges would have been marginally higher than stated.

# Methodology

## Representative Aircraft Analysis (cont.)

### Widebody Aircraft Assumptions

- Aircraft – Boeing 777 (317 seats)
- Load Factor – 80% (254 passengers)
- Route Type – International (New York)
- Parking – 3 hours
- To facilitate comparison with the member airline analysis, a per passenger figure has been calculated by country for both 2005 and 2015.

# Methodology

## Total Airport Analysis

- Using published airport charges in 2005 and 2015 the total airport charges that would have been paid for all airline/aircraft movements have been calculated at each of the 21 airports.
- All results have been returned in Euros and the following assumptions have been applied:
  - Aircraft type, destination, frequency – As per published schedule data
  - Load Factor – 76% (2005) and 81% (2015)
  - Noise and Emissions values - as per aircraft type
  - Gated position - 1 airbridge required (where applicable)
  - Transfer/transit Passengers – Proportion of local/transfer and transit specific to each airport (obtained from annual reports/Aviation Authorities/statistical bodies)
  - Cargo charges – None assumed
  - Lighting charges – None assumed
- The resulting per airport amount has been converted into a per passenger fee to facilitate comparisons with the other data sources.

# Member Airline Data Analysis

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# Member Airline Data - Introduction

- All data used within this section are actual fees paid and has been obtained from member airlines.
- Data has been provided by easyJet, IAG (Aer Lingus, British Airways and Iberia), Lufthansa and Ryanair.
- 2005 data has been provided by all airlines and 2015 data has been provided by all except for the IAG member airlines. These airlines have provided 2014 data. No alterations have been made to any of the data supplied.
- To protect airline anonymity, all results are presented by country. Given the highly confidential nature of the data, it has been ensured that none of the data provided has or can be shared amongst the member airlines.
- All results are based on the average per passenger fee paid at airports within each of the 13 countries. The 13 countries cover the 21 airports included within the analysis.

# Member Airline Data

## **Airport charges paid by A4E member airlines at the top 21 European airports have increased by 80% since 2005.**

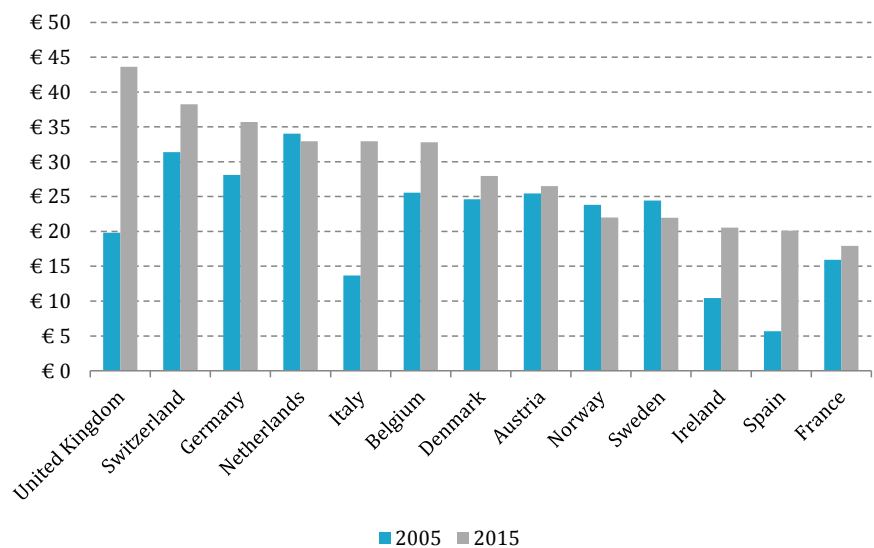
- Using data provided by the member airlines, the results are based on the average per passenger fee paid at airports within each of the 13 countries. The 13 countries cover the 21 airports included within the analysis.
- 10 out of 13 countries have seen an increase in the average per passenger fee paid.
- At a country level, Spain has seen the largest increase of 255%.
- This is followed by Italy with a 141% increase and the United Kingdom with a 120% increase.
- The United Kingdom has also gone from ranking 9<sup>th</sup> in terms of charges levied in 2005 to 1<sup>st</sup> in 2015, with the most expensive charges across all countries analysed.

# Member Airline Data

Change in average per passenger charges – Member Airline Data

Country	2005	2014	% Change
Spain	€ 5.67	€ 20.11	255%
Italy	€ 13.66	€ 32.93	141%
United Kingdom	€ 19.82	€ 43.63	120%
Ireland	€ 10.43	€ 20.54	97%
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<b>Weighted Average</b>	<b>€ 19.28</b>	<b>€ 34.63</b>	<b>80%</b>

2005 and 2015 average per passenger charges – Member Airline Data



# Representative Aircraft Analysis

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# Representative Aircraft Analysis - Introduction

- The purpose of this analysis is to contextualise the data provided by the member airlines.
- Three aircraft types have been chosen to be representative of airline operations and are:
  - Dash 8 Q400 – Representative of regional and domestic operations
  - Airbus A320 – Representative of shorthaul European operations
  - Boeing 777 – Representative of longhaul operations
- The charges for each of the three aircraft types have been calculated for both 2005 and 2015.
- Assumptions relating to load factor, destination type and parking times have been made. Full details of these can be found within the methodology section.
- This facilitates the comparison of both the actual change in charges levied and the percentage increases provided by the member airlines.
- The top 10 and bottom 10 airports (based on 2014 passenger throughput) of the 21 analysed airports have been presented, identifying whether larger airports are able to increase charges by more than smaller airports.
- In addition, changes in charges at A4E bases (5million departing seats or more operated by an A4E airline(s) in 2015) have been analysed and compared to non A4E base airports to identify whether there is any correlation or trends evident.

# Representative Aircraft Analysis – Top 10/Bottom 10

## **Airport charges at the Top 10 airports increased by 90% compared to 18% at the bottom 10 airports.**

- Using the blended representative aircraft charges, an average increase of 50% is evident since 2005. Looking purely at the top 10 airports, this increases to 90%.
- The bottom 10 airports increased by 18% since 2005.
- Breaking this down by representative aircraft types at the top 10 airports, the Dash 8 Q400 saw the greatest increase with an uplift of 132% since 2005. This is followed by the A320 with a 99% increase and the Boeing 777 with an 80% increase.

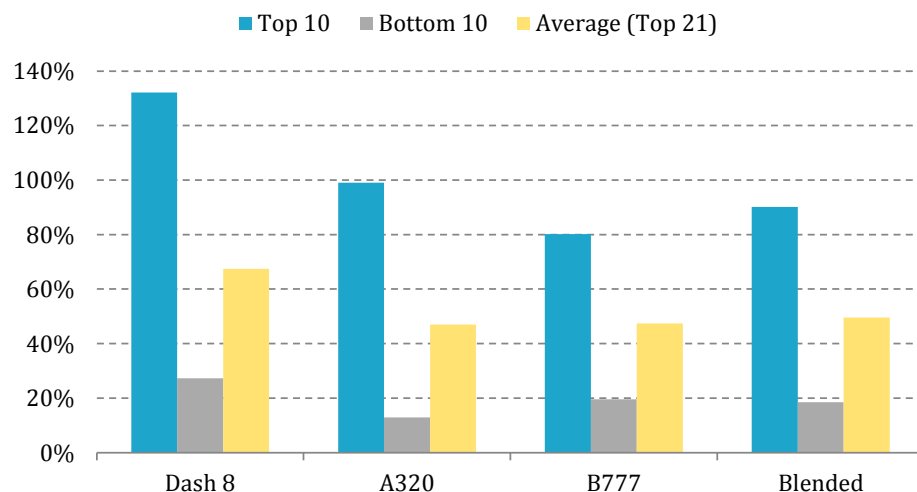
Out of the 21 airports included within this study, the definition of the top 10 and bottom 10 airports is based on 2014 passenger throughput. Average is not weighted by airport passenger volumes.

# Representative Aircraft Analysis – Top 10/Bottom 10

Change in airport charges per passenger for representative aircraft 2005-2015

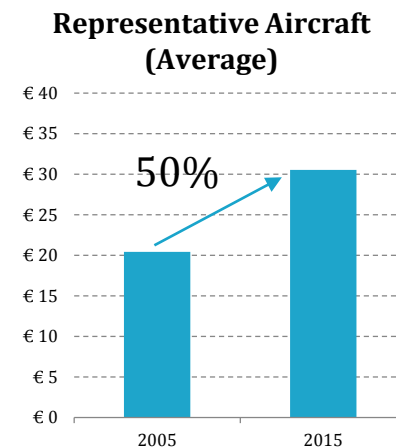
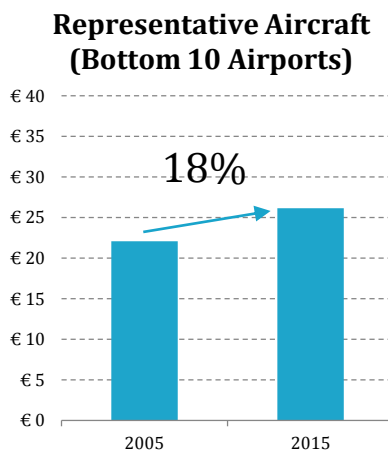
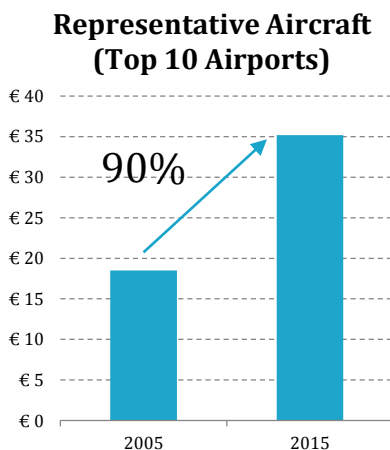
	Dash 8 Q400			A320			B777			Blended		
	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change
Top 10	€ 14.24	€ 33.07	132%	€ 14.71	€ 29.27	99%	€ 21.58	€ 38.88	80%	€ 18.51	€ 35.19	90%
Bottom 10	€ 18.69	€ 23.79	27%	€ 21.57	€ 24.35	13%	€ 23.15	€ 27.68	20%	€ 22.07	€ 26.14	18%
Average (Top 21)	€ 16.90	€ 28.30	67%	€ 18.21	€ 26.77	47%	€ 22.44	€ 33.09	47%	€ 20.41	€ 30.53	50%

Percentage change – Top 10/Bottom 10 and Average



# Summary - Representative Aircraft at the Top 10 Airports

**At the top 10 airports, charges have increased by 90% since 2005. Charges rose by 18% at the bottom 10 airports.**



Out of the 21 airports included within this study, the definition of the top 10 and bottom 10 airports is based on 2014 passenger throughput.



# Representative Aircraft Analysis – A4E Bases

## **Airport charges at A4E bases increased by 90% compared to 14% at non base airports.**

- Using the blended representative aircraft charges, an average increase of 50% is evident since 2005. Looking purely at A4E bases, this increases to 90%. Non base airports increased by just 14% since 2005.
- In terms of capacity, A4E member airlines operate 55% of the total capacity at the airports categorised as bases. This is compared to a 16% capacity share at non base airports.
- Breaking this down by representative aircraft types at A4E bases, the Dash 8 Q400 saw the greatest increase with an uplift of 129% since 2005. This is followed by the A320 with a 99% increase and the Boeing 777 with an 81% increase.

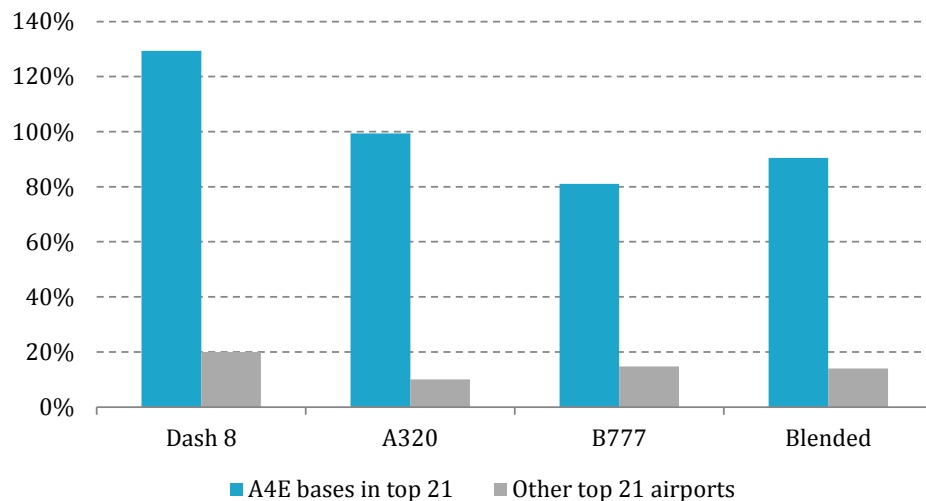
Bases are defined as airports where A4E member airlines operated 5million seats or more in 2015 (11 of 21 airports).  
Non base airports are the remaining airports (10 of 21 airports).

# Representative Aircraft Analysis – A4E Bases

Change in airport charges per passenger for representative aircraft 2005-2015

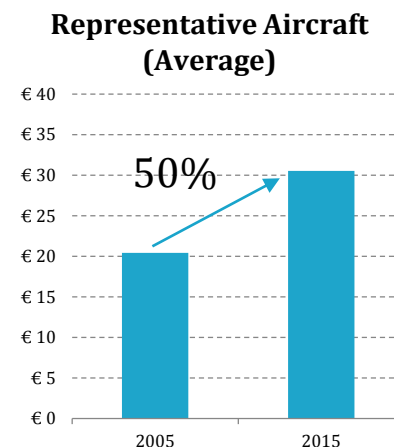
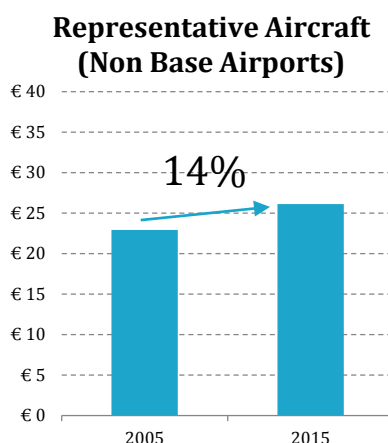
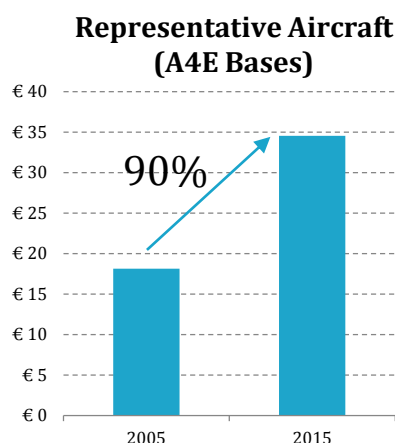
	Dash 8 Q400			A320			B777			Blended			A4E Capacity Share
	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change	2005	2015	% Change	
A4E bases in top 21	€ 14.00	€ 32.10	129%	€ 14.40	€ 28.70	99%	€ 21.14	€ 38.27	81%	€ 18.13	€ 34.54	90%	55%
Other top 21 airports	€ 20.09	€ 24.11	20%	€ 22.41	€ 24.65	10%	€ 23.88	€ 27.39	15%	€ 22.92	€ 26.12	14%	16%
Average (Top 21)	€ 16.90	€ 28.30	67%	€ 18.21	€ 26.77	47%	€ 22.44	€ 33.09	47%	€ 20.41	€ 30.53	50%	43%

Percentage change – A4E versus non base



# Summary - Representative Aircraft at A4E Bases

**At A4E bases, charges have increased by 90% since 2005. Charges rose by 14% at non base airports.**



Bases are defined as airports where A4E member airlines operated 5million seats or more in 2015 (11 of 21 airports).  
Non base airports are the remaining airports (10 of 21 airports).

# Representative Aircraft Analysis – Regional

**Taking a Dash 8 Q400 as a representative regional aircraft, published charges increased by 67% at the 21 airports analysed.**

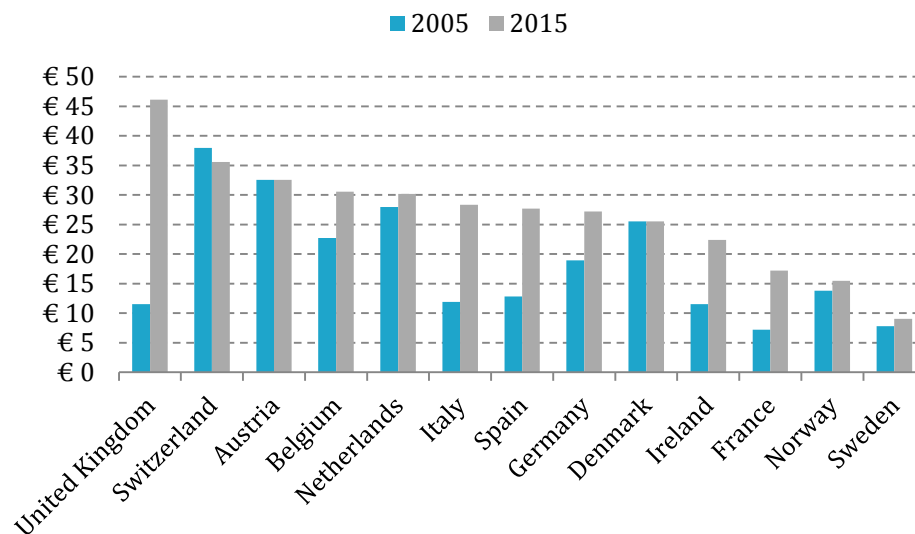
- A Dash 8 Q400 aircraft has been chosen to represent a typical regional aircraft. The aircraft is widely used and is comparable in weight and capacity to similar aircraft types.
- In terms of the change in airport charges since 2005, United Kingdom has seen the greatest change with a 300% increase over the period. This meant that the UK has moved from being one of the cheapest countries in 2005 to the most expensive in 2015.
- France, Italy and Spain have also seen significant increases in charges since 2005 with 139%, 138% and 116% respectively.

# Representative Aircraft Analysis – Regional

Change in average per passenger charges – Regional Aircraft

Country	2005	2015	% Change
United Kingdom	€ 11.54	€ 46.09	300%
France	€ 7.20	€ 17.22	139%
Italy	€ 11.90	€ 28.31	138%
Spain	€ 12.81	€ 27.70	116%
Ireland	€ 11.55	€ 22.40	94%
Germany	€ 18.91	€ 27.21	44%
Belgium	€ 22.72	€ 30.57	35%
Sweden	€ 7.81	€ 9.06	16%
Norway	€ 13.81	€ 15.45	12%
Netherlands	€ 27.94	€ 30.15	8%
Austria	€ 32.52	€ 32.52	0%
Denmark	€ 25.54	€ 25.54	0%
Switzerland	€ 37.94	€ 35.56	-6%
<b>Average</b>	<b>€ 16.90</b>	<b>€ 28.30</b>	<b>67%</b>

2005 and 2015 average per passenger charges – Regional Aircraft



# Representative Aircraft Analysis – Narrowbody

**Taking an A320 as a representative narrowbody aircraft, published charges increased by 47% at the 21 airports analysed.**

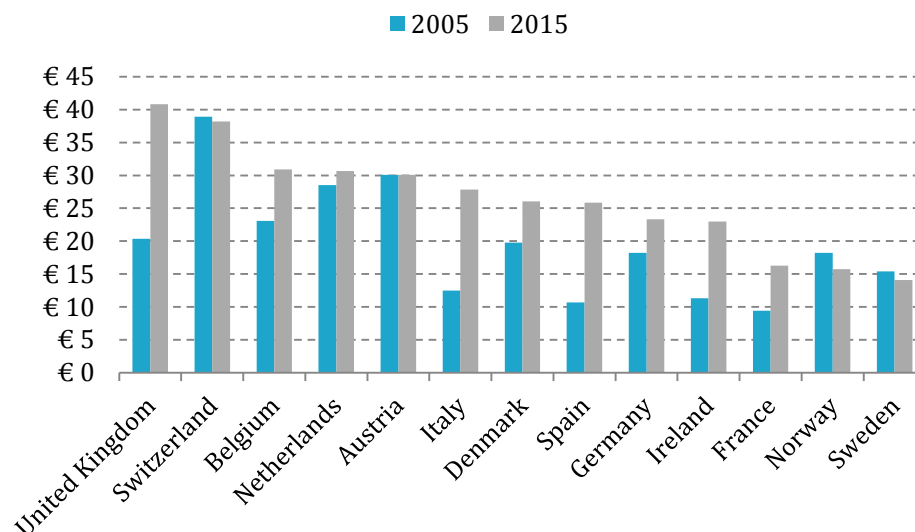
- An A320 aircraft has been chosen to represent a typical narrowbody aircraft. The aircraft is widely used and is comparable in weight and capacity to similar aircraft types.
- In terms of the change in airport charges since 2005, Spain has seen the greatest change with a 142% increase over the period. This meant that they have moved from being the 12<sup>th</sup> most expensive country in 2005 to the 9<sup>th</sup> most expensive in 2015.
- Italy, Ireland and United Kingdom have also seen significant increases in charges since 2005 with 123%, 103% and 101% respectively.

# Representative Aircraft Analysis – Narrowbody

Change in average per passenger charges – Narrowbody Aircraft

Country	2005	2015	% Change
Spain	€ 10.68	€ 25.85	142%
Italy	€ 12.49	€ 27.82	123%
Ireland	€ 11.31	€ 22.98	103%
United Kingdom	€ 20.35	€ 40.81	101%
France	€ 9.40	€ 16.25	73%
Belgium	€ 23.07	€ 30.91	34%
Denmark	€ 19.76	€ 26.03	32%
Germany	€ 18.23	€ 23.32	28%
Netherlands	€ 28.51	€ 30.66	8%
Austria	€ 30.09	€ 30.09	0%
Switzerland	€ 38.91	€ 38.18	-2%
Sweden	€ 15.40	€ 14.09	-9%
Norway	€ 18.19	€ 15.75	-13%
<b>Average</b>	<b>€ 18.21</b>	<b>€ 26.77</b>	<b>47%</b>

2005 and 2015 average per passenger charges – Narrowbody Aircraft



# Representative Aircraft Analysis – Widebody

**Using a B777 aircraft as being representative of a widebodied aircraft, published charges increased by 47% at the 21 airports analysed.**

- A Boeing 777 aircraft has been chosen to represent a typical widebody aircraft. The aircraft is widely used and is comparable in weight and capacity to similar aircraft types.
- In terms of the change in airport charges since 2005, United Kingdom has seen the greatest change with a 126% increase over the period. United Kingdom was the 9<sup>th</sup> most expensive country in 2005 and is now ranked as the most expensive country in 2015.
- Spain (118%), Italy (110%), Ireland (92%) also saw significant increases over the period.

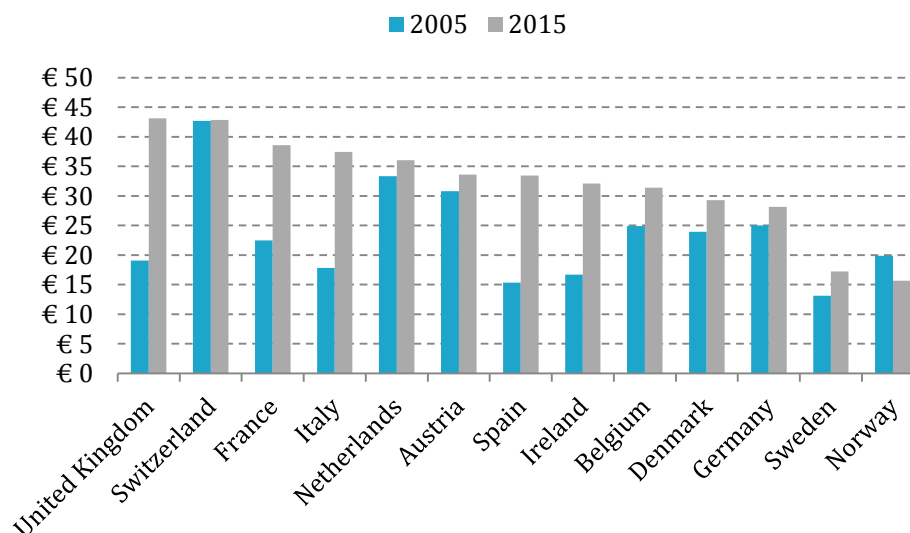


# Representative Aircraft Analysis – Widebody

Change in average per passenger charges – Widebody Aircraft

Country	2005	2015	% Change
United Kingdom	€ 19.05	€ 43.11	126%
Spain	€ 15.34	€ 33.44	118%
Italy	€ 17.84	€ 37.44	110%
Ireland	€ 16.71	€ 32.10	92%
France	€ 22.47	€ 38.56	72%
Sweden	€ 13.13	€ 17.24	31%
Belgium	€ 24.89	€ 31.39	26%
Denmark	€ 23.93	€ 29.26	22%
Germany	€ 24.99	€ 28.13	13%
Austria	€ 30.78	€ 33.60	9%
Netherlands	€ 33.33	€ 36.05	8%
Switzerland	€ 42.70	€ 42.86	0%
Norway	€ 19.91	€ 15.66	-21%
<b>Average</b>	<b>€ 22.44</b>	<b>€ 33.09</b>	<b>47%</b>

2005 and 2015 average per passenger charges – Widebody Aircraft



# Representative Aircraft Analysis – Blended

**Combining the results published charges increased by 50% at the 21 airports analysed.**

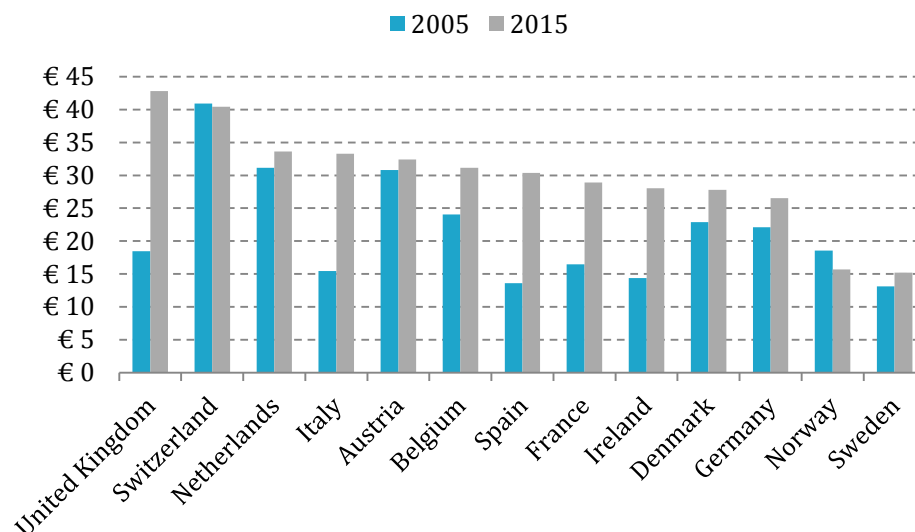
- The results of the three aircraft type analysis have been combined to create a blended view.
- The combined results show that United Kingdom, Spain and Italy have experienced the most significant increases in charges since 2005, with 132%, 124% and 116% respectively.
- The United Kingdom and Switzerland have the highest charges in 2015 and Sweden and Norway have the lowest.

# Representative Aircraft Analysis – Blended

Change in average per passenger charges – Blended Aircraft Types

Country	2005	2015	% Change
United Kingdom	€ 18.43	€ 42.81	132%
Spain	€ 13.58	€ 30.36	124%
Italy	€ 15.42	€ 33.29	116%
Ireland	€ 14.38	€ 28.03	95%
France	€ 16.45	€ 28.92	76%
Belgium	€ 24.05	€ 31.13	29%
Denmark	€ 22.88	€ 27.78	21%
Germany	€ 22.12	€ 26.55	20%
Sweden	€ 13.10	€ 15.18	16%
Netherlands	€ 31.14	€ 33.62	8%
Austria	€ 30.80	€ 32.39	5%
Switzerland	€ 40.91	€ 40.46	-1%
Norway	€ 18.56	€ 15.66	-16%
<b>Average</b>	<b>€ 20.41</b>	<b>€ 30.53</b>	<b>50%</b>

2005 and 2015 average per passenger charges – Blended Aircraft Types



# Total Airport Analysis

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# Total Airport Analysis - Introduction

- As with the representative aircraft analysis, the purpose of this analysis is to contextualise the data provided by the member airlines.
- All airline schedules have been identified at each of the 21 airports in both 2005 and 2015. The published charging structure for each year has been applied to the schedule and the charges due have been calculated.
- To ensure that the data is as realistic as possible, assumptions relating to load factors, local and transfer/transit passengers and use of infrastructure have been included. Full details of these can be found within the methodology section of this report.
- The results of this analysis, presented by country, can be compared to the member airline data.
- Again, the top 10 and bottom 10 airports (based on 2014 passenger throughput) have been presented, identifying whether larger airports are able to increase charges by more than smaller airports.
- In addition, changes in charges at A4E bases (5million departing seats or more operated by an A4E airline(s)) have been analysed and compared to non A4E base airports to identify whether there is any correlation or trends evident.

# Total Airport Analysis – All Scheduled Operations

**Calculations of the total airport charges paid at all 21 airports suggest that charges increased by 69% between 2005 and 2015, based on published charges.**

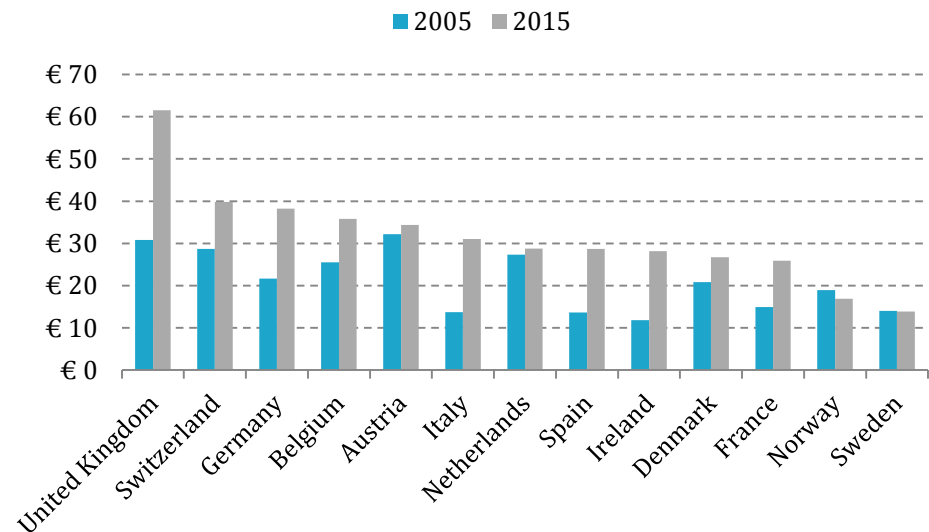
- Over 200,000 calculations have been performed, resulting in a estimation of the total published airport charges revenue across each of the 21 airports.
- This method of calculation has been used to illustrate the average per passenger fee if all airline operations were charged at published rate.
- This analysis is specific to the aircraft, capacity and schedules operated by all airlines in both 2005 and 2015.
- Ireland, Italy, Spain and United Kingdom have all seen increases in excess of 100% since 2005 with 138%, 126%, 111% and 100% respectively.
- As with the representative aircraft analysis, the United Kingdom and Switzerland have the highest charges in 2015 and Sweden and Norway have the lowest.

# Total Airport Analysis – All Scheduled Operations

Change in average per departing passenger charges – All Scheduled Operations

Country	2005	2015	% Change
Ireland	€ 11.81	€ 28.14	138%
Italy	€ 13.71	€ 31.05	126%
Spain	€ 13.62	€ 28.73	111%
United Kingdom	€ 30.79	€ 61.49	100%
Germany	€ 21.66	€ 38.21	76%
France	€ 14.93	€ 25.90	74%
Belgium	€ 25.53	€ 35.83	40%
Switzerland	€ 28.70	€ 39.81	39%
Denmark	€ 20.83	€ 26.75	28%
Austria	€ 32.20	€ 34.34	7%
Netherlands	€ 27.34	€ 28.80	5%
Sweden	€ 14.03	€ 13.90	-1%
Norway	€ 18.97	€ 16.86	-11%
<b>Average</b>	<b>€ 21.44</b>	<b>€ 36.19</b>	<b>69%</b>

2005 and 2015 average per departing passenger charges – All Scheduled Operations



# Total Airport Analysis – Top 10/Bottom 10

**Total published airport charges at the top 10 airports increased by 85% since 2005. This is compared to a 35% increase at the bottom 10.**

- The analysis includes all operations from all airlines at the 21 airports and shows that the average increase has been 69% (€14.75) since 2005.
- The top 10 airports have seen an increase of €19 since 2005.
- The bottom 10 airports have seen an increase of just under €7.
- Across all 21 Airports, airport charges have increased from €6.4 billion to €13.2 billion.

Out of the 21 airports included within this study, the definition of the top 10 and bottom 10 airports is based on 2014 passenger throughput.

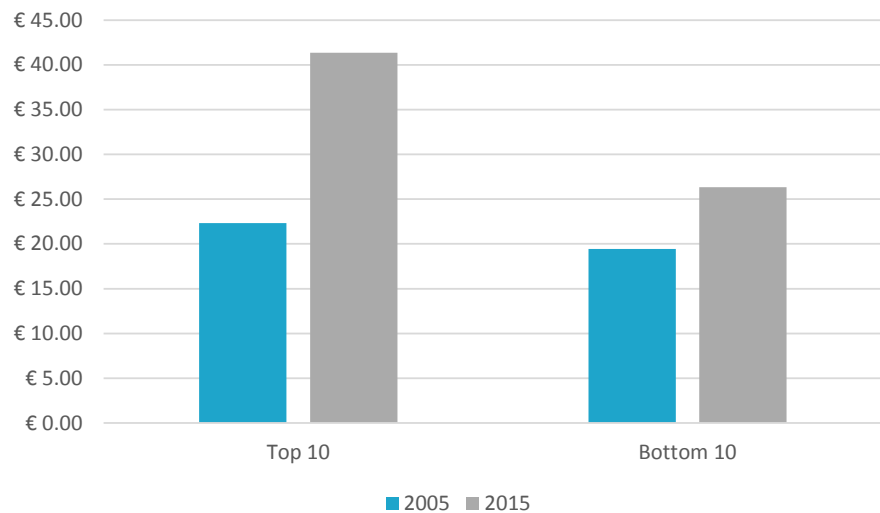


# Total Airport Analysis – Top 10/Bottom 10

Change in average per passenger charges – Top 10 and Bottom 10 Airports

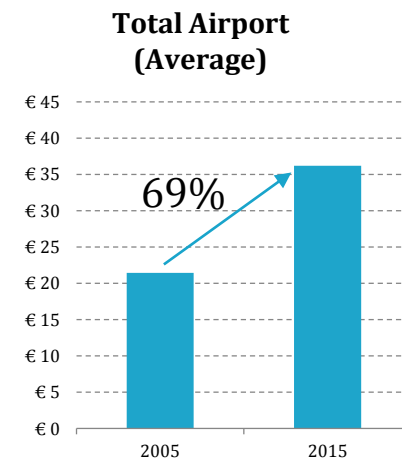
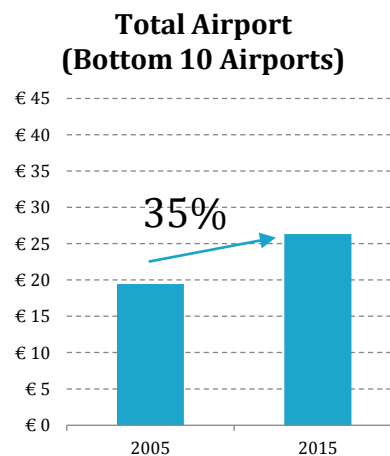
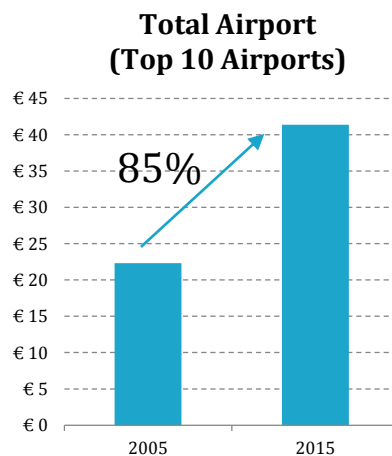
	2005	2015	% Change
Top 10	€ 22.32	€ 41.37	85%
Bottom 10	€ 19.44	€ 26.33	35%
<b>Average (Top 21)</b>	<b>€ 21.44</b>	<b>€ 36.19</b>	<b>69%</b>

2005 and 2015 average per passenger charges – Top 10 and Bottom 10 Airports



# Summary – Total Airport Analysis at the Top 10 Airports

**At the top 10 airports, charges have increased by 85% since 2005. Charges rose by 35% at the bottom 10 airports. With an overall increase of 69% across all the airports in the study.**



Out of the 21 airports included within this study, the definition of the top 10 and bottom 10 airports is based on 2014 passenger throughput.

# Total Airport Analysis – A4E Bases

**Total published airport charges at the at A4E bases increased by 87% since 2005. This is compared to a 28% increase at non base airports.**

- The analysis includes all operations from all airlines at the 21 airports and shows that the average increase has been 69% since 2005.
- The A4E base airports have seen an increase of €19 since 2005.
- The non base airports have seen an increase of just under €6.

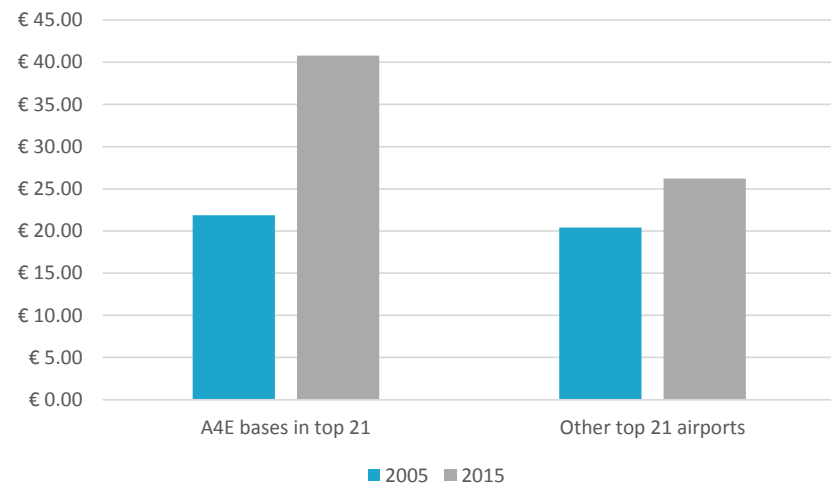
Bases are defined as airports where A4E member airlines operated 5million seats or more in 2015 (11 of 21 airports).  
Non base airports are the remaining airports (10 of 21 airports).

# Total Airport Analysis – A4E Bases

Change in average per passenger charges – A4E Bases

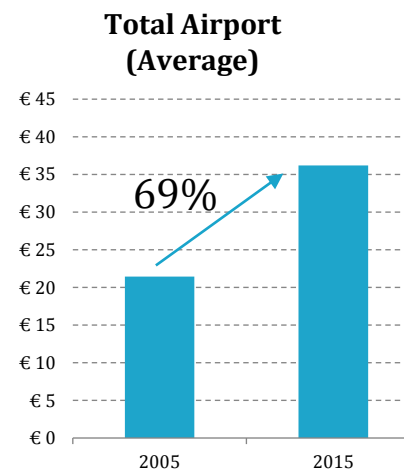
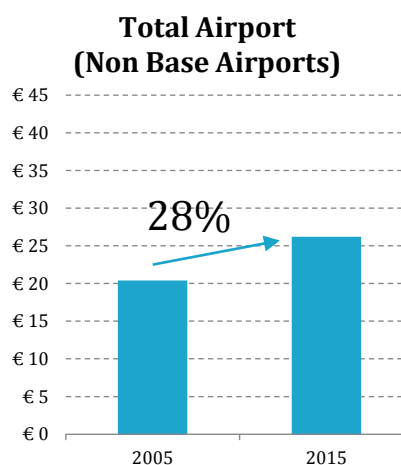
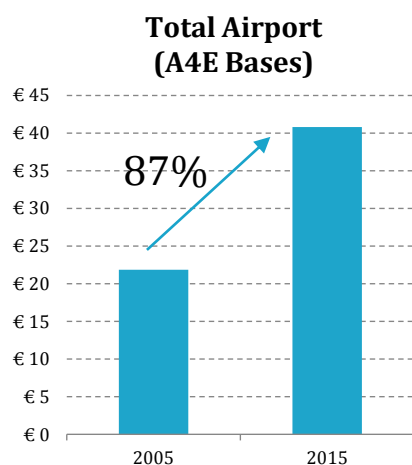
	2005	2015	% Change
A4E bases in top 21	€ 21.86	€ 40.79	87%
Other top 21 airports	€ 20.41	€ 26.21	28%
<b>Average (Top 21)</b>	<b>€ 21.44</b>	<b>€ 36.19</b>	<b>69%</b>

2005 and 2015 average per passenger charges – A4E Bases



# Summary – Total Airport Analysis at A4E Bases

**At A4E bases, charges have increased by 90% since 2005. Charges rose by 28% at non base airports.**



Bases are defined as airports where A4E member airlines operated 5million seats or more in 2015 (11 of 21 airports). Non base airports are the remaining airports (10 of 21 airports).

# Notices and Contact

## Disclaimer

Data for this report has been obtained from a number of sources including airportcharges.com, member airlines, the CAA and other suppliers to Aviation Economics and RDC. We make a number of adjustments to the data in order to maintain integrity and consistency; however, the Company is not responsible for the accuracy of any data provided by or obtained from third parties.

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