

# Efficiency, capacity and growth in European aviation

*Why industrial action in  
ATM is not the issue*



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## Why industrial action in ATM is not the issue

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## Summary

### 1. Introduction

- Airline lobby group A4E last year commissioned and promoted a “study of the impacts of air traffic controller (ATC) strikes in Europe” from PricewaterhouseCoopers LLP (PwC).
- This paper assesses and contextualises some of the claims of the PwC/A4E study.

### 2. Causes of delay and cancellation

- PwC/A4E’s claims about the disruptive impact of ATC strikes are significantly greater than official data indicates.
- Official data show that by far the largest share of flight delay is the responsibility of airlines themselves, accounting for 51% of primary delay over the period 2010-2015. Air Traffic Flow and Capacity Management delays accounted for 23%.
- Official publications indicate that in 2015 – the only year for which an official figure is available – industrial action accounted for around 1% of total delay.
- PwC/A4E base their claims on larger measures of the delay resulting from ATC strikes. The evidence and methodology upon which they base these claims are not transparent enough to be fully evaluated or checked.
- But even on their measure ATC strikes would account for a relatively small share of total delay – at most 8%, and almost certainly much less if the same methodology were used to calculate the total.
- The delay that PwC/A4E claim results from ATC strikes would also constitute a small proportion of total arrival delay.
- The cancellations that PwC/A4E claim result from ATC strikes also constitute a small proportion of the total cancellations (subsequent to filing of final flight-plan) recorded in the Eurocontrol data, and probably an even smaller fraction if PwC/A4E’s method of counting were applied to cancellations with other causes.

### 3. Economic impacts

- PwC/A4E’s attempt to dramatise their claims about the economic impact of ATC strikes as equivalent to the GDP of Malta are not helpful. Even if their estimate of the economic impact were realistic, it would represent less than 0.01 per cent of GDP.
- Moreover if their methodology were sound, the economic impact of delays caused by airlines would be far greater - at least €42bn over 6 years, probably more like €150bn (more than the GDP of Hungary).

- By the same method, cancellations caused by airlines and other causes unrelated to ATC industrial action would cost at least €92bn, probably more like €350bn (similar to the GDP of Norway).
- Recent assessments of the rising costs to European economies of airport capacity constraints put them at 25 to 70 times that claimed by PwC/A4E for ATC strikes.

#### **4. Contexts**

- ATCO earnings are broadly in line with other highly skilled and safety-critical professional roles requiring regular weekend and overnight working.
- The concentration of ATC strikes in a small number of countries – with around half in France, and most of the rest in Greece, Italy, Portugal and Spain – indicates that constructive efforts to resolve longstanding issues and improve industrial relations in those countries would be far more effective than continent-wide restrictions on trade union and employment rights.
- Rights to employee representation and collective action are enshrined in the European Convention on Human Rights and the Charter of Fundamental Rights of the European Union, and protected under the Treaty on the Functioning of the European Union.
- International evidence shows that free and independent trade unions make a net positive contribution to productivity, competitiveness as well as safety.

#### **5. Conclusion**

- Air travel is vital to European economies – boosting productivity, creating jobs, and raising growth potential.
- The best way to secure this positive contribution is to deliver the investment in staff, technology and infrastructure needed to improve airline performance and expand capacity, while addressing the underlying causes behind poor industrial relations in some countries.

## 1. Introduction

Airlines for Europe (A4E) are a new industry lobby formed in 2016. One of their key campaign objectives are restrictions on collective action in air traffic management.<sup>1</sup>

In support of this aim, A4E last year commissioned and promoted a "study of the impacts of air traffic controller (ATC) strikes in Europe"<sup>2</sup> from PricewaterhouseCoopers LLP (PwC), who provide auditing and tax advisory services to a number of A4E member airlines.<sup>3</sup>

This paper assesses and contextualises some of the claims of the A4E/PwC study.

It does not dispute the proposition that air traffic control strikes can cause flight delays and cancellations, and that this can have knock-on effects on the wider economy. Nor does it seek to provide a complete evaluation of the study's methodology – in part because the workings are not transparent and the relevant data not published.

However, examining PwC/A4E's claims in light of available evidence, it does show that:

- PwC/A4E's claims about the disruptive impact of ATC strikes are significantly greater than official data indicates
- Even if PwC/A4E's claims about the disruptive impact of ATC strikes were granted, they would still constitute a relatively marginal cause of delays and cancellations in the European aviation network, the most common delays being the responsibility of airlines themselves
- Likewise, the economic costs that PwC/A4E allege to be the consequences of ATC industrial action are marginal compared to the costs of delays and cancellations that are the sole responsibility of airlines, as well as the economic costs of airport capacity constraints
- PwC/A4E' also fail to consider the contexts and causes of ATC strikes. A constructive approach to improving industrial relations in a few key countries would be a better way of seeking to reduce ATC strikes rather than imposing restrictions on employee and trade union rights. Such restrictions could have an overall negative impact on industrial relations and the productivity and safety of the sector as a whole

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<sup>1</sup> <https://a4e.eu/call-for-action>

<sup>2</sup> <http://docplayer.net/30049232-Economic-impact-of-air-traffic-control-strikes-in-europe.html>

<sup>3</sup> See Appendix.

## 2. Causes of delay and cancellation

PwC/A4E's claims concerning the economic impact of ATC strikes are based in the first instance on assertions about the extent of disruption they cause.

Specifically, their report is built on claims that in the six years (inclusive) from 2010 to 2015, ATC strikes resulted in:

- 24 million minutes of flight delay (over six years)
- 1.5m passengers affected by flight cancellations (on average per year)

This section assesses these claims in the light of data and analysis published by Eurocontrol and its Central Office of Delay Analysis (CODA).

### Flight delays

Delay is a daily feature of air travel in Europe. In the UK, for example, a recent analysis of official data by consumer group Which? found that almost one in four flights are delayed by 15 minutes or more. Over 10,000 flights to or from the UK over a one year period were more than three hours late.<sup>4</sup> Across Europe, average delay per flight was 10.4 minutes in 2015, up from 9.8 minutes the previous year.

Delays can occur for a number of reasons. Eurocontrol's Central Office of Delay Analysis (CODA) groups delay causes under the following categories:

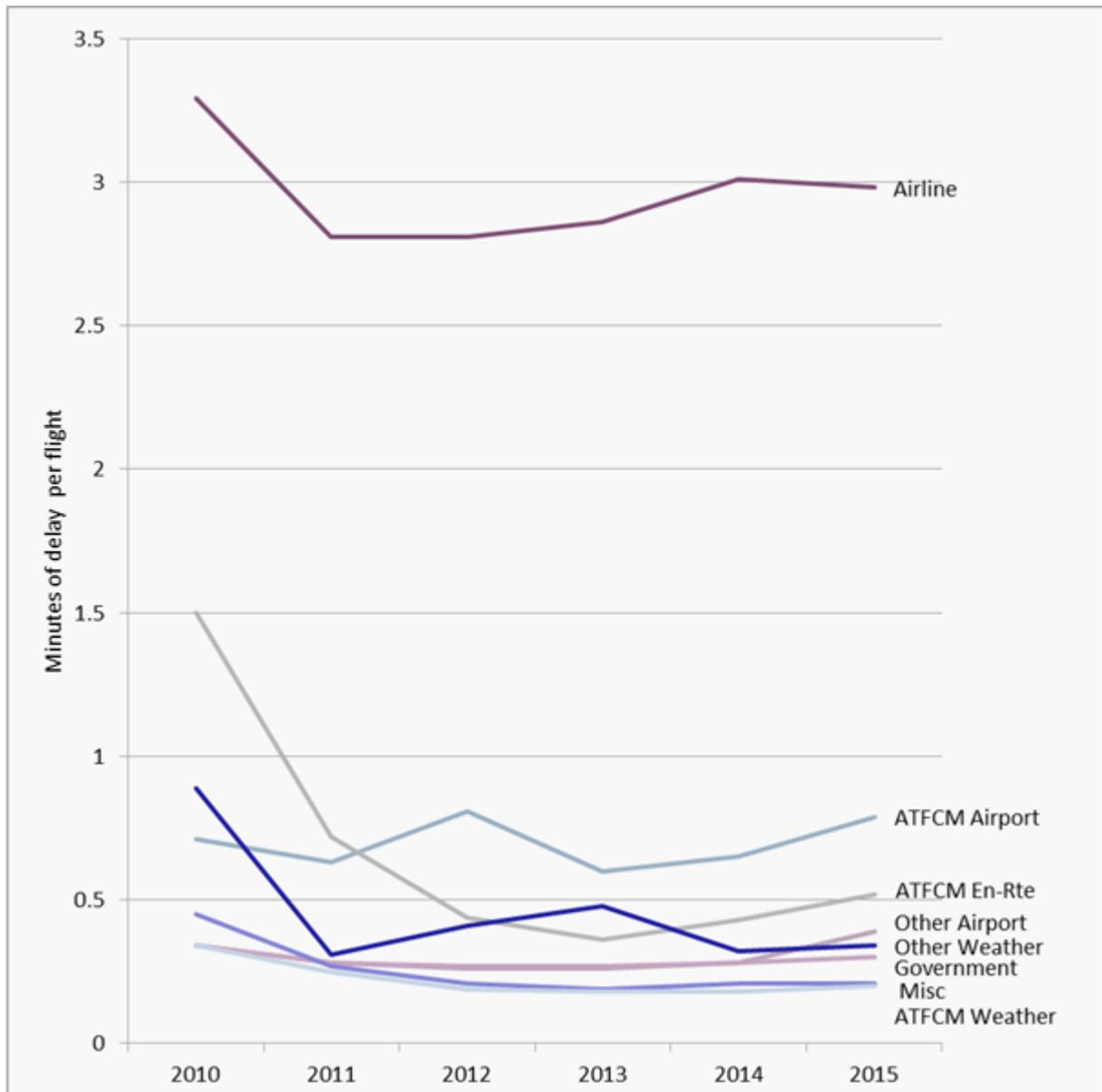
- *Airline delay* – including passenger and baggage delays, cargo and mail delays, aircraft and ramp handling delays, technical and aircraft equipment delays, damage to aircraft & EDP/Automated Equipment Failure delays, Flight Operations and Crewing delays
- *Airport delays* – including Air Traffic Flow Management (ATFM) delays due to Restriction at Destination Airport, Airport Facilities, Restrictions at Airport of Destination or Departure
- *En-Route delay* – including Air Traffic Flow Management delays due to Air Traffic Control En-Route Demand / Capacity, or Air Traffic Control Staff / Equipment
- *Government delay* – including Security and Immigration delays
- *Weather delay* – at airport of departure or destination

ATC strikes are one among several possible cause of "ATFM delay" – others including capacity problems, staff shortages, equipment failures, or weather.

Eurocontrol data demonstrates clearly that **by far the largest cause of delays is "Airline delay", which typically accounts for around half of all delays to air traffic**. This is a consistent and relatively stable pattern across the period covered by the PwC/A4E report. Taking the 2010-15 period as a whole, airline delays accounted for 51% – or 172 million minutes over the period.

<sup>4</sup> <http://press.which.co.uk/whichpressreleases/43-million-air-passenger-journeys-delayed/>

Delay causes, 2010 to 2015<sup>5</sup>



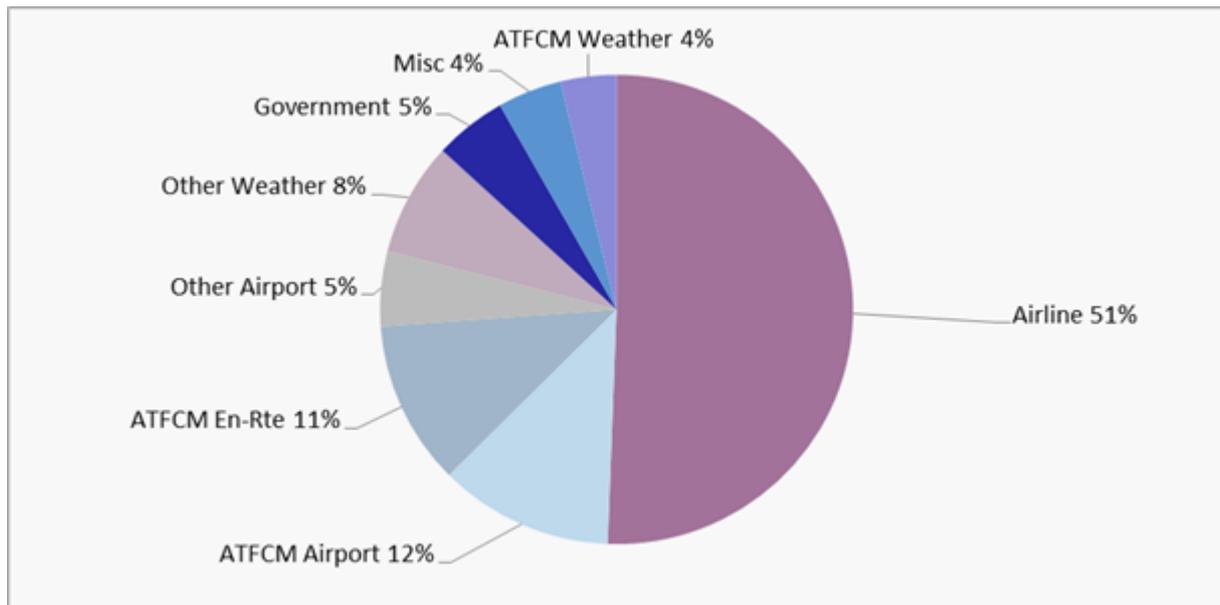
Eurocontrol has defined "airline delays" as "delays that are directly under the influence of the airline", noting that

*"This definition might seem contentious, as many functions within this area are carried out by companies and agents that supply goods and services to the operator. However, the view is taken that any such supply contract is assumed to have associated with it a Service Level Agreement, with a supporting mechanism for enforcing performance standards. Should this not be the case, then the operator is still deemed to be responsible for not having ensured that the appropriate controls were in place."<sup>6</sup>*

<sup>5</sup> Eurocontrol CODA Digests, 2011-2015

<sup>6</sup> <https://www.eurocontrol.int/sites/default/files/publication/files/tat2-air-traffic-delay-europe-2007.pdf>

*Total delay, 2010-2015 (inclusive)*



Passenger rights' organisations have argued that budget carriers rely on "making profits by keeping aircraft flying as much possible, running to tight schedules. This means that it is susceptible to delays caused by defects and repairs".<sup>7</sup> Some airlines have gone to considerable lengths to minimise compensation payable to passengers as a result of such problems.<sup>8</sup>

A similar pattern is reported for the US, where, under their different delay classification system, airline delays are the most common reason for air traffic delays.<sup>9</sup>

<sup>7</sup> <https://www.flihtright.co.uk/airlines/ryanair>. See also <http://www.flightbucks.com/blog/airlines-with-the-most-flight-delays-or-cancellations-within-europe>;

<http://www.which.co.uk/news/2015/08/delayed-air-passengers-could-claim-millions-411688/>

<sup>8</sup> <http://www.thisismoney.co.uk/money/holidays/article-2918943/Airlines-new-excuses-reject-compensation-claims-flight-delays-4-budget-carriers-ask-consumer-claims-hold-ahead-crucial-European-court-decision.html>; <http://www.which.co.uk/consumer-rights/letter/letter-for-compensation-for-flight-changes-due-to-technical-faults>;

<http://www.telegraph.co.uk/travel/news/More-passengers-to-get-flight-delay-compensation-after-legal-win/>;

<https://www.theguardian.com/money/2015/sep/19/flight-delay-claims-compensation-airlines-passengers>;

<http://www.express.co.uk/finance/city/606200/Ryanair-breaking-the-law-delayed-flight-compensation-policy>;

<http://www.bbc.co.uk/news/uk-33833059>;

<http://www.which.co.uk/news/2015/08/delayed-air-passengers-could-claim-millions-411688/>;

<http://www.which.co.uk/news/2015/09/delayed-airline-passengers-benefit-from-eu-ruling-416263/>;

<https://publicapps.caa.co.uk/docs/33/CAP%201275%20Compliance%20Report%20230315.pdf>

<sup>9</sup> Air passenger advocates have explained airline delays on carrier business models: "they don't have any give in the system anymore... I think a lot of it has to do with this drive to profitability." The US's highest performing airline criticised competitors who were blaming the air traffic system, arguing that "What sets Delta apart is that we have invested in our people, our operation and our technology to enable us to outperform our competitors within the system where we all operate."

<https://www.bloomberg.com/news/articles/2016-08-23/blame-the-airlines-not-the-weather-for-most-u-s-flight-delays>; <http://news.delta.com/bastian-op-ed-why-delta-favors-collaboration-not-privatization-improve-airspace>

## Industrial action as a cause of delay

Eurocontrol publications do not provide regular data for delay caused by industrial action – by Air Traffic Controllers, or airline or airport staff.

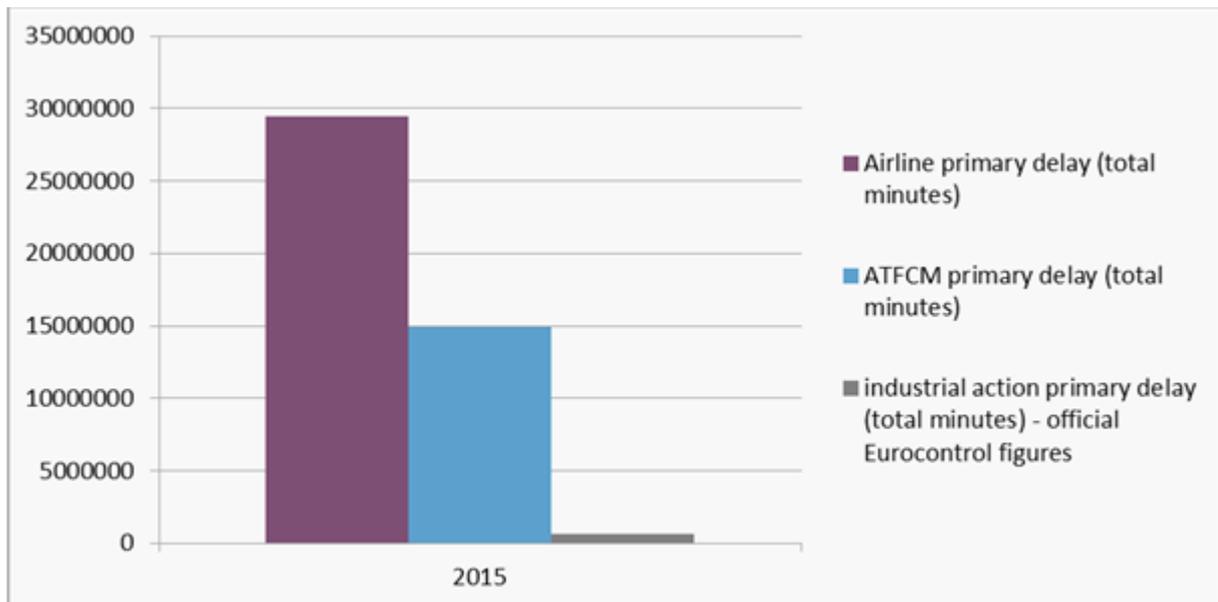
Taking the 2010-15 period as a whole, analysis of Eurocontrol data shows that Air Traffic Flow and Capacity Management delays (en route and airport) accounted for 23% of primary delays – 92m minutes over the six year period.

So by this measure ATC strikes could not account for more than this amount, but only a fraction of this amount given that ATFCM delay covers several other common causes.

There is however a reference in the most recent annual digest to “600,000(+) minutes delay recorded in 2015 due to industrial action”.<sup>10</sup> **This allows us to note that in 2015 industrial action accounted for around 4% of total Air Traffic Flow and Capacity Management delay, or about 1% of total delay.**

(It is not clear whether the figure refers to only to industrial action by ATC staff, or includes also other forms of industrial action such as airline or airport staff. If the latter the proportion of total delay caused by ATC industrial action would be even smaller. But we assume going forward that the figure refers to ATC industrial action.)

### *Selected causes of primary delay compared, 2015*

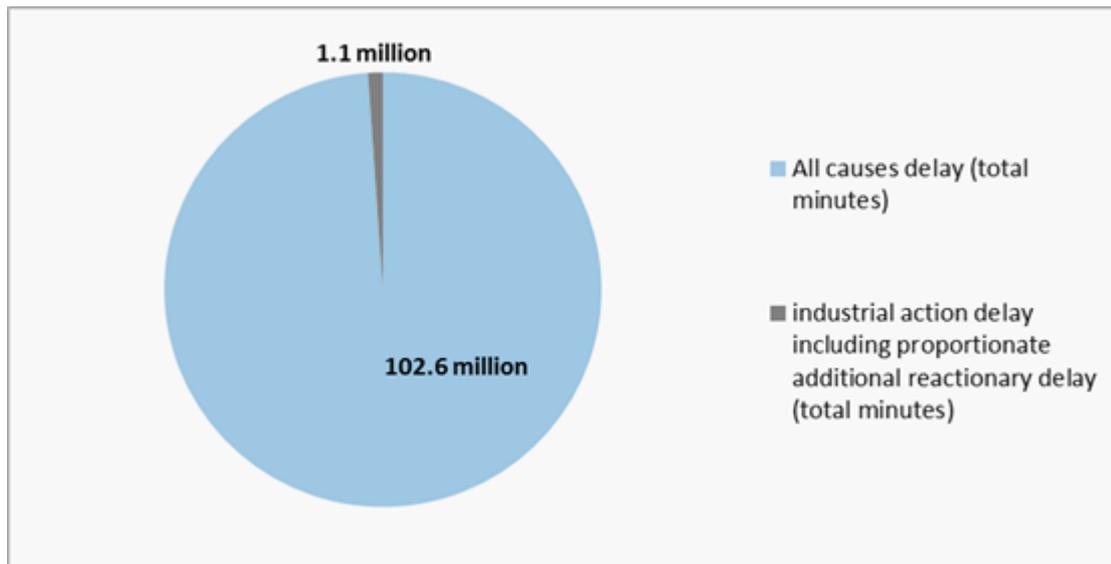


If we assume that this figure generated a proportionate amount of “reactionary delay” (and there seems no reason to assume that industrial action would create more or less reactionary delay than other forms of delay), then it would account for 1.14m minutes delay, or around 1% of the total.<sup>11</sup>

<sup>10</sup> <http://www.eurocontrol.int/publications/annual-network-operations-report-2015>

<sup>11</sup> From 2010 to 2015, primary delay generated an average additional 90% in reactionary delay.

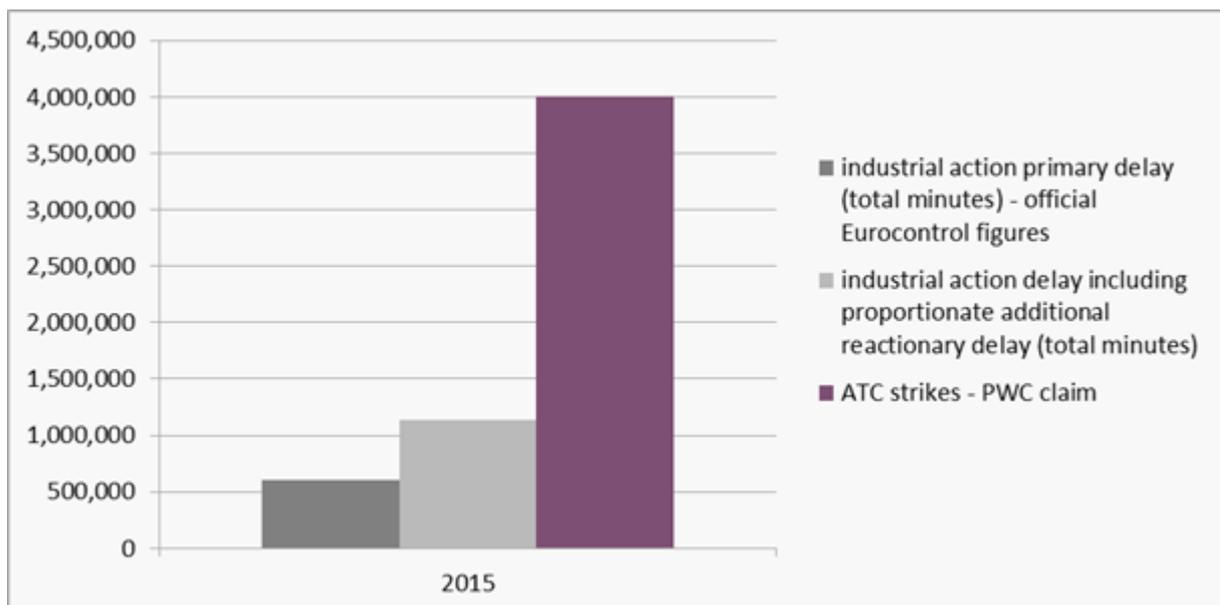
*Industrial action delay as a share of total delay, 2015*



**PwC/A4E's alternative measurement of delay: methodological questions**

The PwC/A4E report implies an annual average of 4 million minutes of delay caused by industrial action— six times higher than the figure given for 2015 by Eurocontrol, and more than three times higher if a proportionate amount of reactionary delay is assumed.

*Industrial delay caused by ATC strikes – PwC/A4E claims compared with Eurocontrol figures*



PwC/A4E present 2015 as a year of above-average strike activity (this is evident from their graphics, but their report does not contain precise numbers). Moreover, as noted above, Eurocontrol's figure for delay caused by "industrial action" may include industrial action other than ATC strikes, such as action by airport or airline staff.

PwC/A4E have chosen not to use the official measures of delay and its causes, and instead base their estimates on their own methodology using data supplied by A4E companies. They state that this is because Eurocontrol data understates the impact of disruption by measuring delays to take-off rather than arrival, and because it is based on comparing flights against most recent flight plans which fails to capture rescheduling that has happened as a result of ATC strikes.

To derive alternative figures they selected two out of 95 strikes, and assumed that the difference between total arrival delay on strike days and total delay on equivalent days in the week prior to and after the strike was the result of the strike, and extrapolated this level of "extra delay" as the typical impact of strike action on delay.

PwC/A4E do not share the data or workings that would enable this alternative methodology to be assessed. But on the basis of what they do share it can be considered questionable:

- Two out of 95 strikes seems a very narrow sample upon which to base such a consequential extrapolation.
- In particular, although (as we discuss below) France accounts for a high proportion of total ATC strike activity over the period, its geographical location means that the disruptive impact of any such action may be unrepresentative of that resulting from even longer strikes in other locations.
- It is also unrealistic to compare the consequences of local strikes at local airports with those taking place at national level.
- Moreover it assumes that the influence of other causes on delays is largely constant week to week – not an assumption that the data would seem to support.

Thus, in the absence of a more transparent approach, there are good reasons to doubt whether PwC/A4E's approach is robust, and that their rejection of official data on delay caused by industrial action in favour of much higher alternative figures is based on sound reasons.

### **PwC/A4E's alternative measurement of delay: implications for other causes of delay**

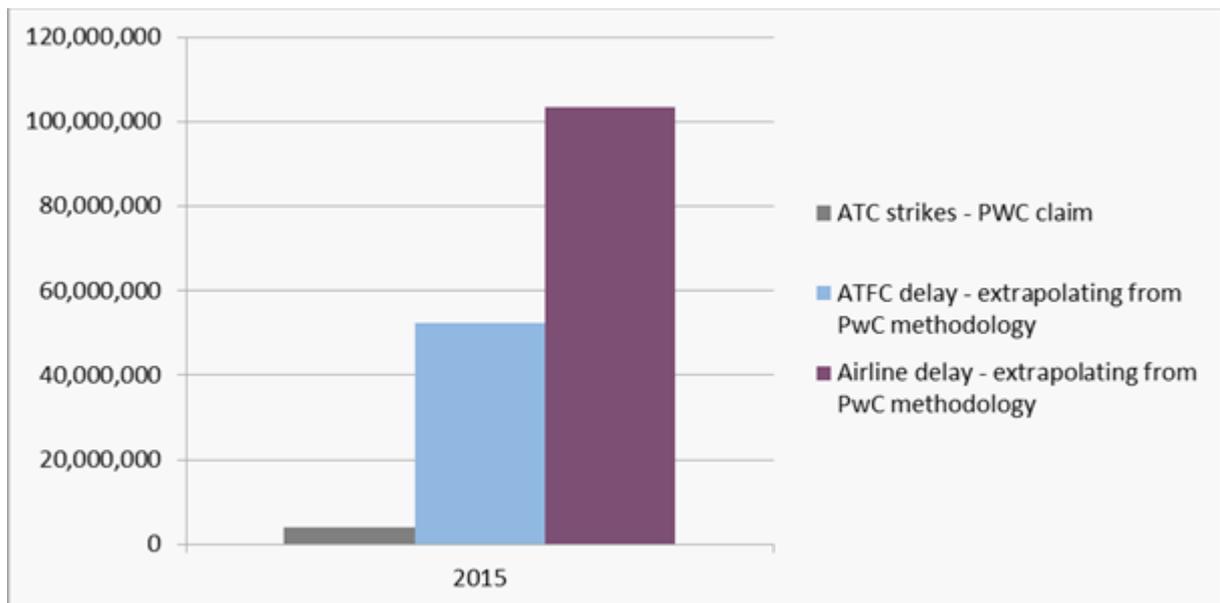
However, even if these extrapolations were a valid way of measuring "arrival delay" and "rescheduling delay" that is not captured by official statistics, there is no reason to think that all delay, whatever its cause, is not underrepresented in the Eurocontrol statistics for the same reasons.

Thus while Eurocontrol data show total delay (primary and reactionary) to average around 10 minutes per flight, a more inclusive measure designed to capture "arrival

delay” and “rescheduling delay” would reveal average delay of around 70 minutes per flight.<sup>12</sup> And there would be no reason not to think that the broad balance of causes revealed by the official delay analysis is a reasonable guide to the likely balance of causes of this more inclusive definition of delay.

So if, in 2015, industrial action resulted in 4 million minutes of delay as PwC/A4E claim, rather than 600,000 minutes as Eurocontrol record, then total ATFC delay would be likely to come to more than 50 million minutes, and airline delay more than 100 million minutes.

*Selected causes of delay compared, extrapolated from PwC methodology, 2015*



And if it is true that ATC strikes accounted for 24 million minutes of delay over the period, as PwC/A4E claim, then PwC/A4E’s methodology would also be likely to show that other forms of Air Traffic Flow and Capacity Management accounted for around 300 million minutes of delay, and “airline delay” accounted for 600 million minutes over the period.

In sum, then, even if PwC/A4E’s method of defining and measuring delay was reasonable, it would not alter the fact that industrial action accounts for a tiny proportion of total delay, while airline delay accounts for around half.

<sup>12</sup> In fact such an approach would be hard to put into practice, because PwC/A4E’s methodology is based upon comparing traffic across different weeks – when the Eurocontrol data indicate that there are significant levels of delay affecting traffic on every day in every week – so a zero-delay “baseline” against which to measure additional delay caused by different causes is not likely to be available.

## Punctuality / arrival delay

Another comparison we can make is of PwC/A4E's claim with the official data for punctuality. PwC argue their broader measure of delay captures late arrival time, which is more important for customers.

This is debated within the sector,<sup>13</sup> and currently Eurocontrol does not publish regular comprehensive data on arrival delay. However they do publish basic figures for "airline arrival punctuality" – the percentage of flights that arrive within 15 minutes of their Scheduled Arrival Time.

We can use this to construct a minimum figure for total arrival delay minutes over a year, which will significantly understate the full extent of total arrival delay because (a) it does not count any arrival delay that is under 15 minutes, and (b) it assumes that all delays of 15 minutes or more are *only* 15 minutes, when in fact they are likely to be more.

Even this very restrictive approach to estimating arrival delay indicates that the total delay of only the most severely delayed flights adds up to *at least* 27 million minutes a day in 2015. The average annual 4 million minutes of arrival delay attributed by PwC/A4E to ATC strikes is around 15% of this figure. So, again, even if PwC/A4E's methodology is sound, delay resulting from industrial action can only be a small fraction of 15% of the total.

This is just another way the available data demonstrates that the PwC/A4E focus on industrial action is looking only at a very small part of the picture when it comes to delay, however defined and measured.

## Flight cancellations

Eurocontrol official data shows operational flight cancellations typically running at around 1-2% on any given day.

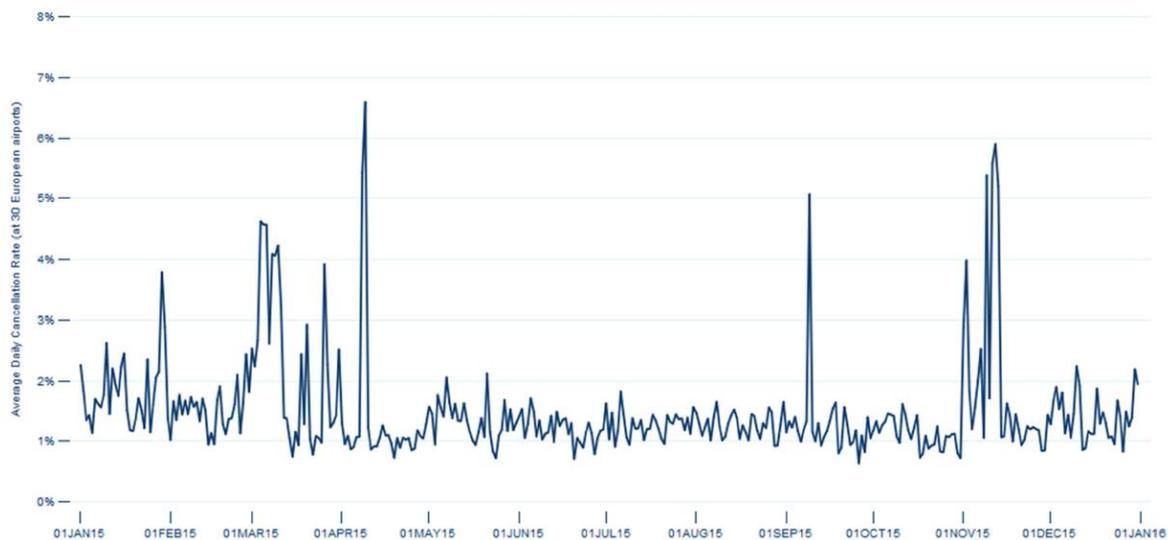
Peaks above this level can be the result of a number of causes, including industrial action but also exceptionally adverse weather or other unusual events.

Over a year, the average cancellation rate is around 1.5%.

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<sup>13</sup> "There is a continuing debate about the significance of delay during different parts of the journey. For the holiday-maker, for whom push-back signals the beginning of the holiday experience, departure delay is likely to be paramount. For the business traveller, attention will be focused on the likely delay on arrival, as the reason for travel will almost certainly imply a time constraint at the destination. The likely greater experience of this traveller will tell him or her that time can be made up – hence a delay on departure does not inevitably mean a delayed arrival."  
<https://www.eurocontrol.int/sites/default/files/publication/files/tat2-air-traffic-delay-europe-2007.pdf>

### Average Daily Cancellation Rate 2015<sup>14</sup>



Given that total flights have been between 9.5m and 10m a year, this indicates around 150,000 flights cancelled each year – just over 400 a day.

Using PwC/A4E’s own assumption that each aircraft carries, on average, 162 passengers, it would suggest around 25 million passengers affected by flight cancellations each year, or 70,000 each day.

Eurocontrol do not publish analysis of the causes of flight cancellations. PwC/A4E claim that 1.5 million passengers are affected each year by flight cancellations resulting from ATC strikes.

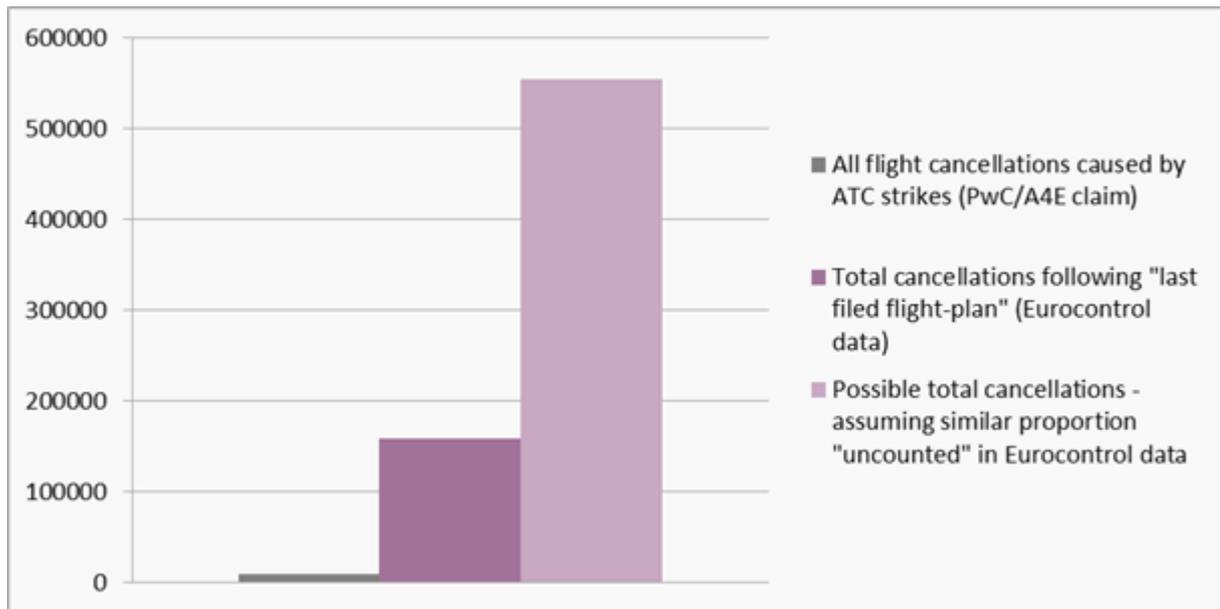
They say this is based upon reports provide by A4E member airlines about cancellations made as a result of ATC strike action. This data is not published and so there is no way of verifying or assessing PwC/A4E’s methodology or estimate.

However, even if PwC/A4E’s claim is taken at face value, **ATC strikes would then account for around 6% of approximately 150,000 flight cancellations in 2015, with at least 94% of cancellations the result of other factors.**

In fact this is probably not comparing like with like, since PwC/A4E’s broader and more inclusive method of counting cancellations would presumably produce a larger measure of total cancellations than that published by Eurocontrol – meaning that ATC strikes account for an even smaller fraction of the total.

For example, **if we assumed that official cancellation figure understated the true scale of disruption to a similar degree that PwC/A4E claim for delays, then we would expect total cancellations (on the PwC/A4E measure) to be three to six times as high as the Eurocontrol data indicates. ATC strikes would then account for just 1% to 2% of all flight cancellations.**

<sup>14</sup> <http://www.eurocontrol.int/publications/coda-digest-2015>

*Causes of flight cancellations, 2015*

### 3. Economic impacts

PwC/A4E's claims about the economic impact of ATC strikes has two major elements:<sup>15</sup>

- an estimate of the impact of flight delays on passenger productivity
- an estimate of the impact of flight cancellations on the tourism industry

The figures are derived using methodologies and models developed to support the UK Airports Commission in 2014.

The reliability and robustness of this model has been questioned by economic advisors to the Airports Commission, as well as rival consultants.<sup>16</sup> We do not enter into these debates here.

It is certainly plausible that flight delays and cancellations have an economic cost through the kind of channels identified by PwC/A4E. However it is important to keep the share of these attributable to ATC strikes in perspective.

#### Putting aggregates in perspective

PwC/A4E's headline figure of €10.4bn of EU GDP is arrived at by rolling together claimed impacts over a six year period.

Aggregating economic costs over several years without providing a comparative indication of the size of the affected industry or sector is certainly a way of making the number sound as dramatic as possible – as is their claim that it is equivalent to the *annual* GDP of Malta (the 4<sup>th</sup> smallest economy in Europe, around 0.4% of the size of the UK).

For example, a similar technique could be applied to the prices typically charged by airlines for in-flight drinking water, to produce the claim that if every European passenger bought one bottle at a cost of £1.80<sup>17</sup> the total cost to the European economy over six years would be around €11.3 billion – almost the annual GDP of Albania.

Or, to take another example, it has been estimated that in the UK alone compensation due to passengers for flight delays that airlines had sought to deny responsibility for (according to Supreme Court and European Court of Justice rulings) could amount to £3.89 billion, around €4.5 billion, over a six year period.<sup>18</sup> If this were representative of

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<sup>15</sup> Their figures also include a smaller estimate of the impact of ATC strikes on airline revenues, making up 6% of the total economic impact they claim, which we do not examine here.

<sup>16</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/438981/economy-expert-panelist-wider-economic-impacts-review.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/438981/economy-expert-panelist-wider-economic-impacts-review.pdf);  
[http://www.gatwickobviously.com/sites/default/files/downloads/deloitte\\_report\\_review\\_of\\_pwc\\_analyses\\_conducted\\_for\\_the\\_airports\\_commis.pdf](http://www.gatwickobviously.com/sites/default/files/downloads/deloitte_report_review_of_pwc_analyses_conducted_for_the_airports_commis.pdf)

<sup>17</sup> <https://www.theguardian.com/travel/2016/feb/26/snacks-on-a-plane-budget-airlines-accused-of-extortionate-in-flight-prices>; see also <http://www.mirror.co.uk/news/uk-news/ryanair-flyers-charged-biggest-mark-9624015>; <http://www.travelsupermarket.com/blog/dont-get-caught-out-by-sky-high-inflight-catering-prices/>

<sup>18</sup> <http://www.bottonline.co.uk/flight-compensation-latest-news/landmark-day-for-millions-with-flight-delay-claim>

the situation across the EU – within which UK passengers made up around a quarter of the total<sup>19</sup> - total delay compensation withheld over the six year period would be in the region of €18 billion – more the annual GDP of Iceland.

A less dramatic but more informative way of presenting PwC/A4E's claim about the economic impact of ATC strikes would be as an annual percentage – that is, **around 0.01 per cent of European GDP.**

### **Economic impacts of other causes of delay and cancellation**

If A4E/PwC's model does give a fair indication of the economic impact of flight delays and cancellations, then the costs to the European economy of airline failings, equipment and capacity problems, and other factors would dwarf those that PwC/A4E claim to be the cost of ATC industrial action.

For example, applying PwC/A4E's model to published Eurocontrol data suggests that, over the period covered:

- **the productivity cost of airline-caused delays would amount to at least €42bn, and probably more like €100bn** – more than the GDP of Slovakia
- **the cost to tourism of flight cancellations unrelated to ATC strikes amounted to at least €92bn, and probably more like €350bn** – similar to the GDP of Norway

The first “conservative estimates” quoted above are likely to be significant understatements since, as we have seen, PwC/A4E's claims are based on a different way of measuring delays and cancellations that produces estimates of their scale several times greater than that presented in official Eurocontrol data.

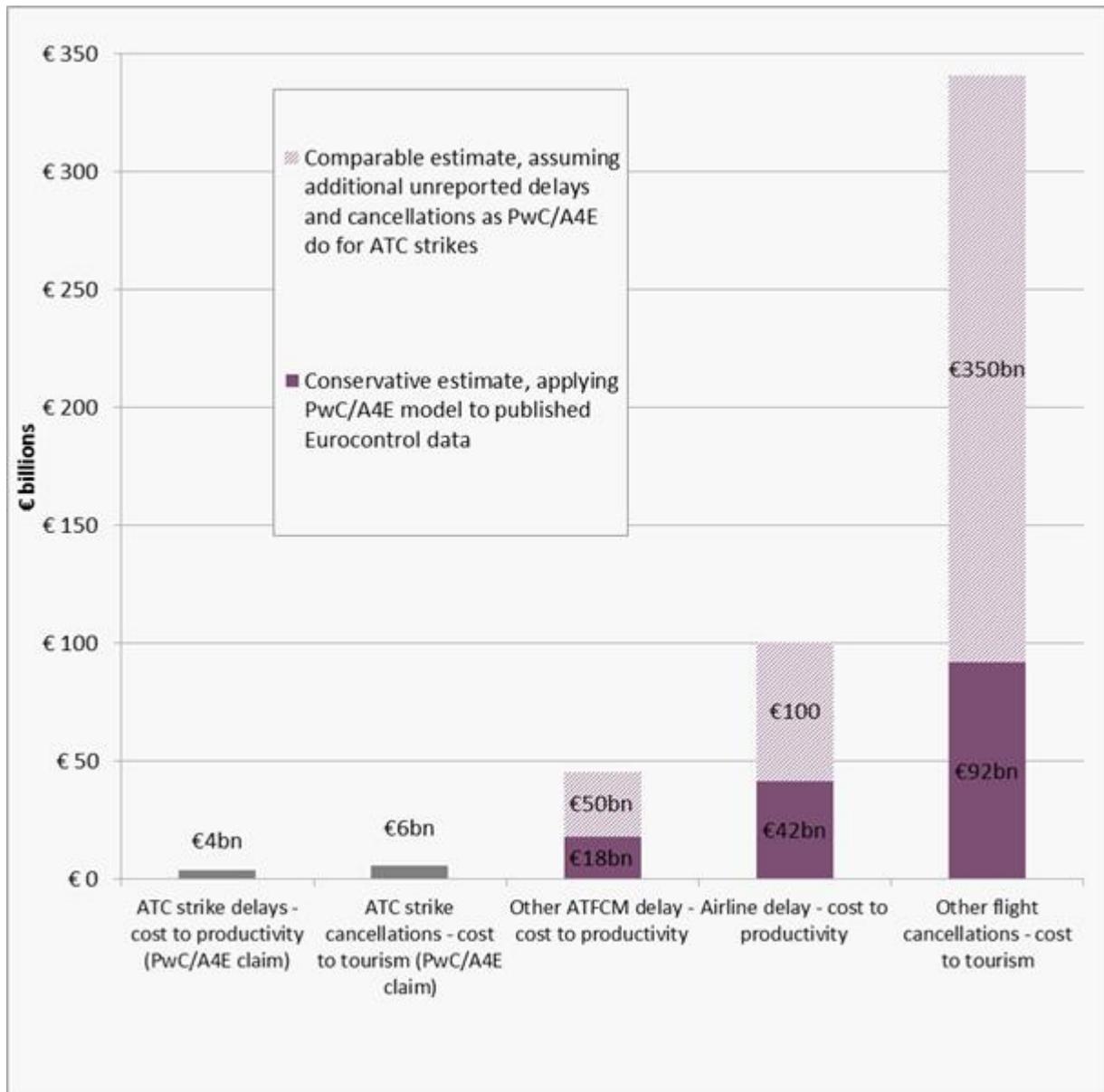
The fact that PwC/A4E do not publish their data or workings means we cannot replicate their methodology for delays and cancellations unrelated to ATC strikes. But on the assumption that it would identify a similar scale of underreported delays and cancellations, we could expect it to point to even greater economic impacts, many multiples of those claimed for ATC strikes.

These estimates suggest that a focus on the alleged economic impact of ATC strikes is a distraction from far more important factors holding back productivity and growth such as airline performance, air traffic control technology and airport capacity.

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<sup>19</sup> [http://ec.europa.eu/eurostat/statistics-explained/index.php/Air\\_transport\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Air_transport_statistics)

*Estimated economic costs of air traffic delays and cancellations, 2010-15*



### **Economic impacts of airport capacity limits**

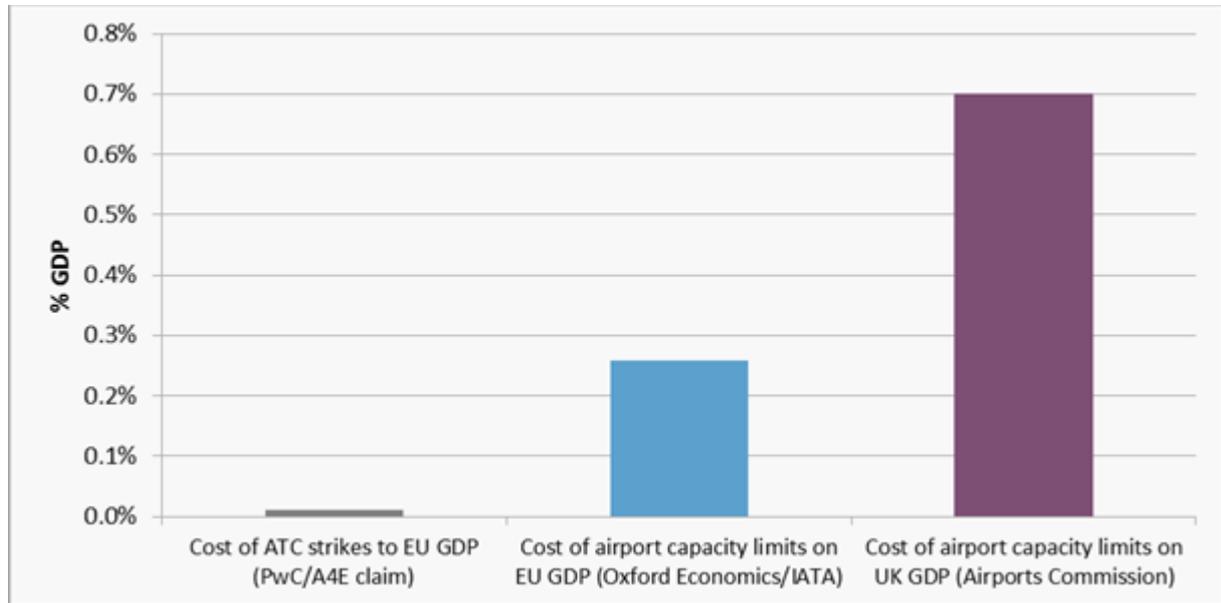
This perspective is reinforced by the work of the European Observatory on Airport Capacity & Quality on the worsening “capacity crunch” constraining European aviation, which cites an assessment by Oxford Economics for IATA that the costs of being unable to accommodate demand will by 2035 reach €52.3bn a year (more than €300bn over the kind of time period that PwC/A4E’s figures cover- more than the annual GDP of Ireland).<sup>20</sup>

Indeed, a further example of this is provided by PwC’s own work for the UK Airports Commission, which provided an assessment that not expanding airport capacity as it

<sup>20</sup> [https://ec.europa.eu/transport/sites/transport/files/modes/air/airports/doc/tf1\\_final\\_report.pdf](https://ec.europa.eu/transport/sites/transport/files/modes/air/airports/doc/tf1_final_report.pdf)

proposed would mean the UK eventually missing out on 0.65 to 0.75% of GDP a year – around seventy times the alleged cost to EU GDP of ATC strikes.<sup>21</sup>

*Economic costs of ATC strikes compared to airport capacity constraints*



<sup>21</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/440316/airports-commission-final-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/440316/airports-commission-final-report.pdf).

## 4. Contexts

### ATCO pay

The PwC/A4E document claims not to be concerned with ATCO remuneration and working conditions, yet draws attention to “many reports in the media relating to the very high salaries enjoyed by individuals”.

Air traffic control work calls on highly specific and extremely rare skillsets meaning the UK provider NATS accepts just 0.6% of applicants for training, which typically lasts three years.<sup>22</sup>

The International Labour Organisation has noted that

*“air traffic controllers are widely recognized as an occupational group which has to cope with a highly demanding job that involves a complex series of tasks, requiring high levels of knowledge and expertise, combined with high levels of responsibility, not only with regard to risking lives, but also the high economic costs of aeronautical activities.”<sup>23</sup>*

In the UK, the Government’s own career information service reports that ATCO salaries start at £17,000-£21,000 a year, and range from £32,500-£36,000 a year for experienced controllers and £46,000-£50,000 a year for the most highly experienced.<sup>24</sup>

Available data for the UK show that ATCO earnings are above-average but not out of line with other highly skilled and safety-critical professional roles regularly requiring weekend and overnight shifts.<sup>25</sup>

Typical airline executives’ reported remuneration for 2015 ranged from 20 to 200 times’ average national salaries.

<sup>22</sup> <http://nats.aero/blog/infographic-becoming-a-controller/>

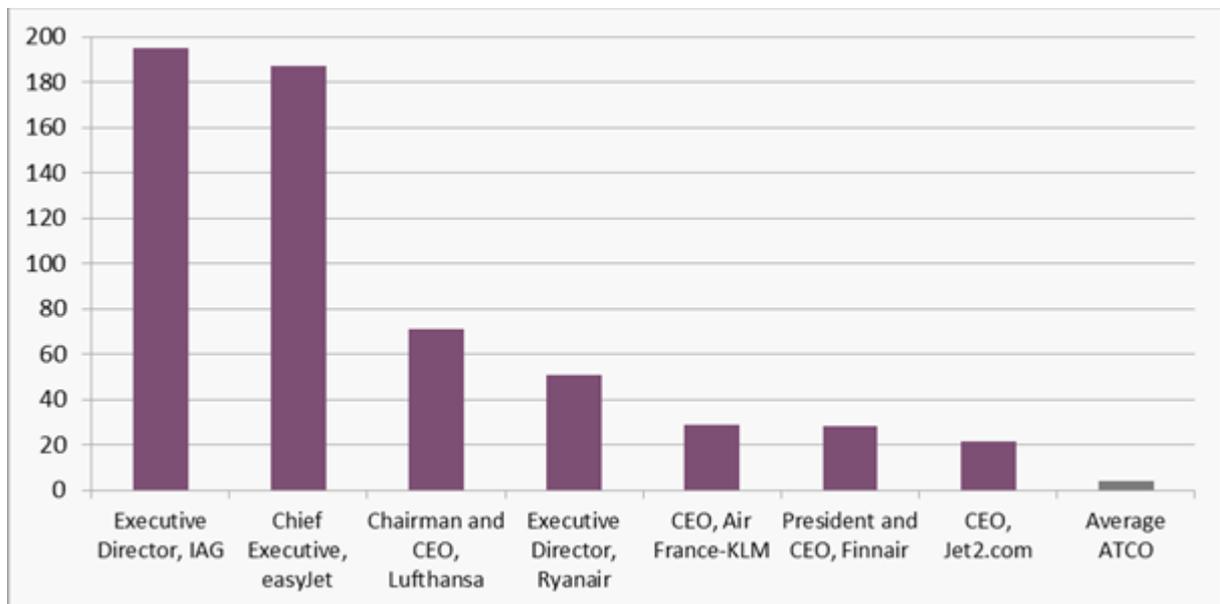
<sup>23</sup> [http://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---safework/documents/publication/wcms\\_118241.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_118241.pdf)

<sup>24</sup> <https://nationalcareersservice.direct.gov.uk/job-profiles/air-traffic-controller>  
<http://www.ons.gov.uk/ons/about-ons/business-transparency/freedom-of-information/what-can-i-request/published-ad-hoc-data/labour/march-2015/annual-survey-of-hours-and-earnings--ashe-.xls>

Mean gross pay as percentage of national mean, UK, 2015



Ratio of airline CEO remuneration to national average salaries, 2015<sup>26</sup>



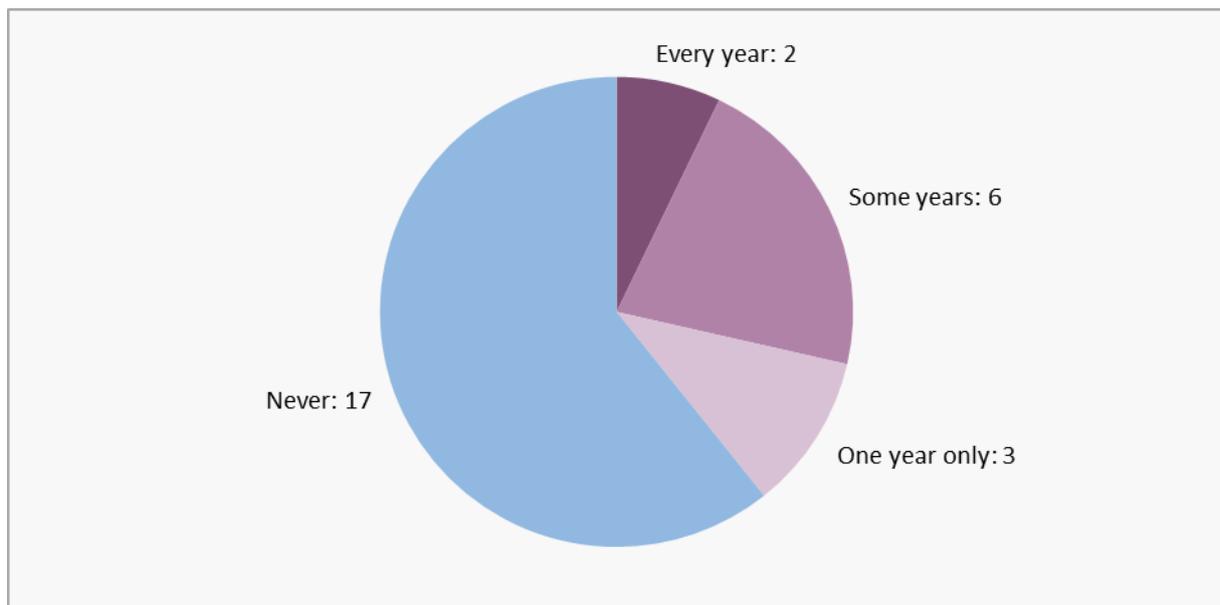
<sup>26</sup> Sources: Company Annual Report and Financial Statements, 2015; 2015 national country averages (based on location of operational headquarters) taken from [https://stats.oecd.org/Index.aspx?DataSetCode=AV\\_AN\\_WAGE#](https://stats.oecd.org/Index.aspx?DataSetCode=AV_AN_WAGE#)

## Industrial relations

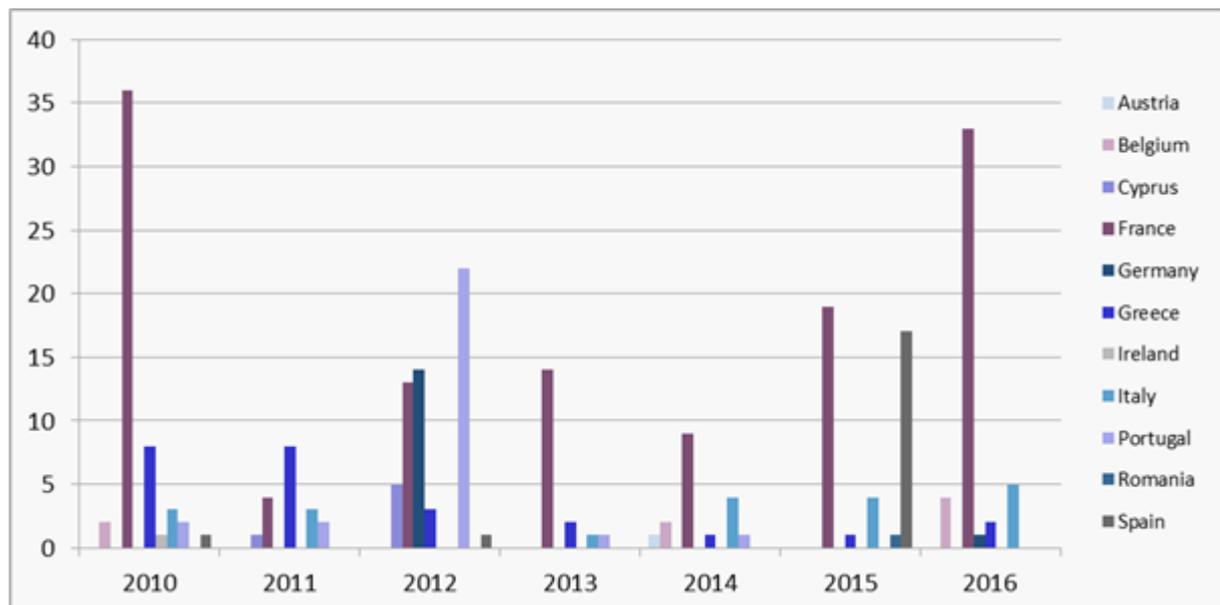
The PwC/A4E report ignores the context and causes of the industrial action it claims to analyse.

All the industrial action referred to by the report took place in a minority of European countries – and was moreover highly concentrated within this group. Most EU member states experienced no ATC strike action over the entire period covered by the PwC/A4E report, and just two saw strike action every single year. **Approximately half of the “strike days” it reports occurred in one country, France. The vast majority of other incidences occurred in Greece, Italy, Portugal and Spain.**

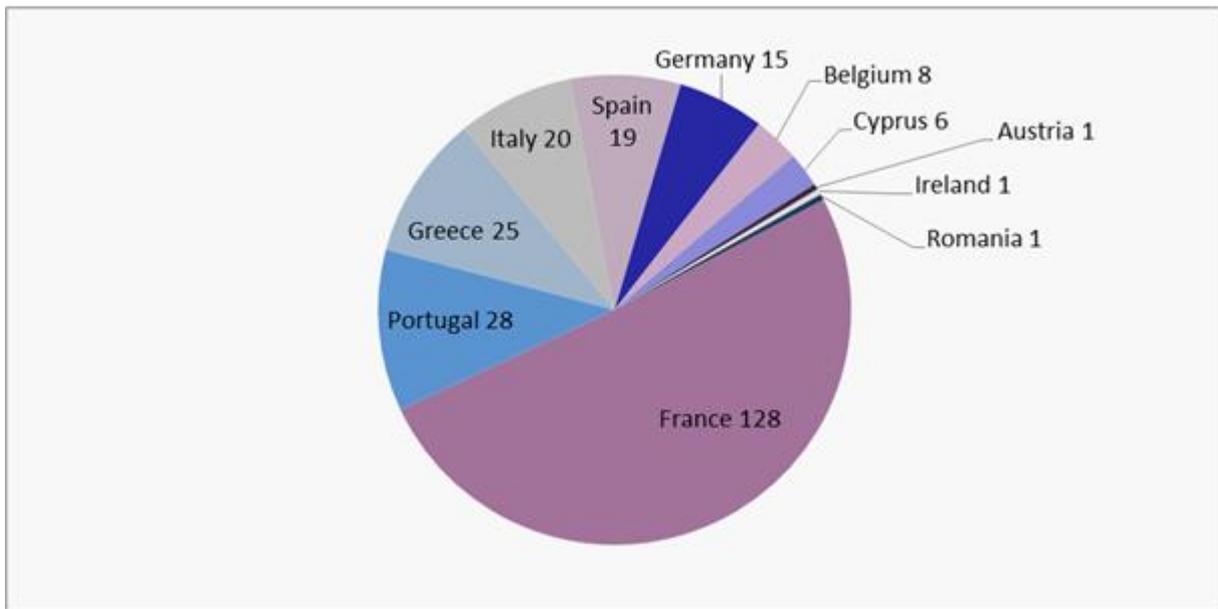
*EU member states experiencing ATC strike action, 2010-2016*



*Days of strike action, 2010-2016*



*Total days affected by ATC strikes, 2010-15<sup>27</sup>*



## France

France is a country with a particularly high level of industrial action across the economy in the 2009-15 period,<sup>28</sup> indicating that factors that go beyond the aviation sector but are specific to France are an important part of the story. In 2016, for example, a key cause of industrial action in many sectors and industries has been controversial and widely opposed reductions to employment rights under the so-called "El Khomri law".

Air traffic control officers in France are civil servants like the other workers of DGAC (Direction Générale de l'Aviation Civile). The PwC/A4E report does not distinguish industrial action taken in relation to issues specific to air traffic control from action taken in the context of wider disputes between civil service unions and the government of the day, of which there have been many over the period covered by the document.<sup>29</sup> For example, in recent years French civil servants' pensions have been reviewed twice, a key cause of "strike days" over the period entirely out of the control of ANSP managers.

French air traffic control union USAC-CGT estimates that more than half of the strike action covered by the PwC/A4E document arises from disputes that are outside the scope of the French air navigation service provider.

In addition there are long-running issues around staffing levels and investment in equipment that unions argue are affecting passenger safety.

The number of employees in French DGAC which include DSNA, the entity in charge of air traffic management in France (including its Overseas territories) has been reduced by

<sup>27</sup> Based on the dates given in the A4E/PwC report.

<sup>28</sup> <https://www.etui.org/Topics/Trade-union-renewal-and-mobilisation/Strikes-in-Europe-version-3-July-2016>

<sup>29</sup> It may be that PwC/A4E would prefer to see French air traffic services privatised – perhaps including A4E airlines as shareholders – but this clearly not their decision to make.

13% over the last 10 years.<sup>30</sup> “You can't reduce staff numbers while the technology remains backward”, in the words of one anonymous controller interviewed by the press.<sup>31</sup>

Unions point out that while staffing levels have fallen, controllers have had to deal with radar screens blacking out, faulty collision warning systems and flight path calculators from the 1980s. According to Gauthier Sturtzer of USAC-CGT, “The main reason we're seeing these strikes is because of cost-cutting by ANSPs with incoherent social dialogue processes”.

It should be noted that a minimum service regime is already in place in France, meaning that overflights are managed in the event of industrial action.

### **Greece, Italy, Portugal, Spain**

Industrial relations have been put under severe strain in all four countries over the period covered by the PwC/A4E document as a result of controversial austerity drives related to the Eurozone crisis that began in 2010.<sup>32</sup> These policies have been subject to growing criticism over recent years, on grounds of both social justice and economic and fiscal effectiveness including by originally supportive bodies such as the IMF itself.<sup>33</sup>

Specific issues and situations that have resulted in ATC industrial action during the period include:

- in Greece, ATC strike days were at their highest in 2011, when union members took action along with large numbers of other workers in protest at severe cuts to salaries and jobs demanded by the IMF.<sup>34</sup> Greek air traffic controllers see themselves as fighting for safety standards in the face of understaffing, lack of equipment and inadequate maintenance. They have also pressed for the separation of the ANSP from the Regulator to improve transparency and access funding for upgrades and staffing<sup>35</sup>

<sup>30</sup> Figures supplied by French air traffic control union USAC-CGT.

<sup>31</sup> <http://www.thelocal.fr/20160321/french-air-traffic-controllers-versus-ryanair-whose-side-are-you-on>

<sup>32</sup> <https://www.etui.org/Topics/Trade-union-renewal-and-mobilisation/Strikes-in-Europe-version-3-July-2016>; see also <http://www.eurofound.europa.eu/observatories/eurwork/comparative-information/impact-of-the-crisis-on-industrial-relations>

<sup>33</sup> ‘IMF Concedes It Made Mistakes on Greece’, *Wall Street Journal*, 5 June 2013 <http://www.wsj.com/articles/SB10001424127887324299104578527202781667088>; see also ‘Successful Austerity in the United States, Europe and Japan’, IMF Working Paper, <https://www.imf.org/external/pubs/cat/longres.aspx?sk=26116.0>; ‘Troika a barrier to new IMF fiscal faith’, *Financial Times*, 11 October 2012 <https://www.ft.com/content/ddaa6c4a-13bf-11e2-8260-00144feabdc0>

<sup>34</sup> <http://www.wsj.com/articles/SB10001424052970203388804576612261343333114>. IMF Director Christine Lagarde is reported to have subsequently described 2011 as a “lost year” in admission of the failure to design a viable and sustainable strategy for managing the impact of the Eurozone crisis on Greece’s economy and public finances. <https://www.theguardian.com/business/2013/jun/05/imf-admit-mistakes-greek-crisis-austerity>

<sup>35</sup> <http://www.atceuc.org/uploads/docs/atceuc-newsletter-6.pdf>

- in Italy most strikes have concerned long-running industrial tensions around the Government's preparations of its air traffic control provider ENAV for part-privatisation<sup>36</sup>
- in Portugal, the imposition on air traffic control workers of cuts to pay and conditions as part of an austerity package demanded by the "Troika" to deal with the Eurozone crisis was a major reason behind the particularly high number of strike days in 2012<sup>37</sup>
- in Spain, the treatment by navigation service provider Enaire of a worker who reportedly refused to exceed his maximum workable hours, and other workers who supported him, even after they were exonerated by courts, was a major reason behind the particularly high number of strike days in 2015 that account for most of the industrial action in Spain over the period<sup>38</sup>

**France and the four economies most affected by the Eurozone crisis together account for 87% of the strike days that PWC identify between 2010 and 2016.**

It is clear that a constructive approach to resolving the issues behind the nationally troubled industrial relations in these countries would have a far greater impact than any attempt to curtail the employment rights of air traffic controllers across the continent.

The PwC/A4E document gives no attention to these issues, nor to the role that different industrial relations frameworks, and decisions from governments and ANSP managements, may have played in minimising or avoiding strike action in other European countries.

## Human rights and the economic role of trade unions

Article 11 of the European Convention on Human Rights enshrines the individual's "right to form and to join trade unions for the protection of his [or her] interests".<sup>39</sup> The Charter of Fundamental Rights of the European Union states that:

*"Workers and employers, or their respective organisations, have, in accordance with Union law and national laws and practices, the right to negotiate and conclude collective agreements at the appropriate levels and, in cases of conflicts of interest, to take collective action to defend their interests, including strike action."*<sup>40</sup>

<sup>36</sup> <https://www.ft.com/content/4466b51a-869c-11e3-aa31-00144feab7de>;  
<https://www.ft.com/content/8bce55e6-6e7d-11e5-aca9-d87542bf8673>;  
<https://www.ft.com/content/b7f54dc8-4f82-11e6-8172-e39ecd3b86fc>;

<sup>37</sup> <http://portugalresident.com/air-traffic-controllers-threaten-strike-over-budget>;  
<http://portugalresident.com/strikes-cause-massive-disruption-to-air-travel>

<sup>38</sup> <http://www.airtrafficmanagement.net/2015/06/spanish-controllers-declare-4day-srike-action/>;  
<http://spanishnewstoday.com/partial-spanish-air-traffic-control-strikes-to-go-ahead-of-11th-and-12th-july-21807-a.html>; <http://www.thelocal.es/20150608/air-traffic-controllers-begin-strike-across-spain>

<sup>39</sup> [http://www.echr.coe.int/Documents/Convention\\_ENG.pdf](http://www.echr.coe.int/Documents/Convention_ENG.pdf)

<sup>40</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2007:303:0001:0016:EN:PDF>

Moreover Article 153(5) of the Treaty on the Functioning of the European Union explicitly excludes the right to strike from the provisions over which the Union has competence to legislate.<sup>41</sup>

Nor should it be assumed that curtailing employees' freedom to take strike action is a simple route to improving efficiency and competitiveness, in the aviation sector or on an economy-wide basis. There is a wealth of international evidence that the overall effect of free and independent trade union representation is beneficial to industries and economies.<sup>42</sup> In the UK, Government-commissioned research has identified evidence that effective employee representation generates significant savings through reduced illness, injury, and turnover, as well as general productivity gains worth billions to the economy as a whole.<sup>43</sup>

In the aviation sector, trade unions have played a central role in ensuring aviation workers have the skills needed to harness new technologies, and highlighting issues such as fatigue that can pose a risk to passenger safety.

The European Commission's aviation strategy highlights the importance of "active and comprehensive social dialogue in industrial relations", particularly in the face of airlines' attempts to "reduce operating costs" through new business and employment models.<sup>44</sup>

Recently unions have worked together with the Civil Air Navigation Services Organisation to produce a *Toolbox for Successful Social Dialogue* to help employers make the most of these benefits.<sup>45</sup>

As this document states:

*"Partnership and cooperation are key to achieving the effective management of relations between employer and trade unions. The objective of such a partnership is a shared vision, which carefully balances both the success of the company and the good treatment of its employees. It is essential to bear in mind that the workforce is part of the solution, not part of the problem."*

Strong, independent, employee representation is critical to managing change, raising productivity and protecting safety standards in air traffic control and the aviation sector as a whole. Proposals to limit trade union rights of air traffic control professionals would be utterly against the spirit of essential initiatives such as this.

Undermining air traffic workers' independent voice could threaten safety standards while making it harder for the industry to modernise and move forward.

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<sup>41</sup> <http://www.lisbon-treaty.org/wcm/the-lisbon-treaty/treaty-on-the-functioning-of-the-european-union-and-comments/part-3-union-policies-and-internal-actions/title-x-social-policy/420-article-153.html>

<sup>42</sup> See for example 'What do unions do?', Richard B. Freeman, 2005, <http://www.law.harvard.edu/programs/lwp/2005June.pdf>; 'What Do Unions Do At The Large Scale? Macro-Economic Evidence From A Panel Of Oecd Countries', Dimitrios Asteriou and Vassilis Monastiriotis, 2004; <http://www.ucema.edu.ar/publicaciones/download/volumen7/asteriou.pdf>

<sup>43</sup> <http://webarchive.nationalarchives.gov.uk/20090609003228/http://www.berr.gov.uk/files/file36336.pdf>

<sup>44</sup> [http://ec.europa.eu/transport/modes/air/aviation-strategy\\_en](http://ec.europa.eu/transport/modes/air/aviation-strategy_en)

<sup>45</sup> <https://www.canso.org/sites/default/files/ATM%20SP%20joint%20statement%20BTS%20090916.pdf>; <http://www.etf-atm.org/WP/wp-content/uploads/2016/03/brochure-etf-toolbox-march-2016.pdf>

## Conclusion

Aviation unions and the staff they represent agree at least with the initial premise of the PWC report that air travel is vital to European economies – boosting productivity, creating jobs, and raising growth potential. As the PWC study affirms,

*"air transport and efficient connectivity is a vital and fundamental attribute of the production, distribution and consumption of goods and services in today's EU and its Member States that citizens and businesses expect -- and around which they organise their lives. Reliable connectivity is, therefore, both a social and economic good."*

This is also the premise of the European Commission's Aviation Strategy, which states that

*"Aviation is a strong driver of economic growth, jobs, trade and mobility for the European Union. It plays a crucial role in the EU economy and reinforces its global leadership position"<sup>46</sup>*

As the Strategy goes on to say:

*"The main challenge for the growth of European aviation is to reduce the capacity and efficiency constraints, which are seriously impeding the European aviation sector's ability to grow sustainably, compete internationally, and which are causing congestion and delays and raising costs"*

The best way to meet these challenges is to deliver the investment in staff, technology and infrastructure needed to improve airline performance and expand capacity.

At the same time we must address the underlying causes behind poor industrial relations in some countries, rather than making crude attacks on employees and their rights that could be detrimental to productivity and safety.

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<sup>46</sup> [http://ec.europa.eu/transport/modes/air/aviation-strategy\\_en](http://ec.europa.eu/transport/modes/air/aviation-strategy_en)

## **Prospect**

Prospect's 141,000 members are engineers, scientists, managers and specialists in areas as diverse as agriculture, broadcasting, defence, education and children's services, energy, environment, heritage, shipbuilding, telecoms and transport. Prospect's aviation group covers over 4,000 members working across the aviation industry, in roles ranging from air traffic control to aircraft engineers.

**[www.prospect.org.uk](http://www.prospect.org.uk)**

## **ETF**

The European Transport Workers' Federation (ETF) represents more than 270,000 civil aviation workers from 81 trade unions located in 42 European countries. We are a recognized social partner and the only representative of aviation workers across all sub-sectors (air traffic management, aircrew, ground handling, maintenance, etc.).

**[www.etf-europe.org](http://www.etf-europe.org)**

## **ATCEUC**

European Air Traffic Controllers European Unions Coordination (ATCEUC) was created in 1989 and is currently composed of 32 professional and autonomous trade unions representing more than 14,000 Air Traffic Controllers throughout Europe. ATCEUC is a recognized social partner in air traffic management.

**[www.atceuc.org](http://www.atceuc.org)**