

# REVIEW OF H7 FINAL PROPOSALS FOR OPEX

July 2022

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*In this note we critique the CAA's / CTA's approach of (i) applying a frontier shift assumption of 1% per annum; and (ii) applying a bespoke price series for people costs.*

## SUMMARY

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Frontier shift:

- CTA's approach prioritises regulatory precedent over evidence. Precedent is a useful guide, but not sufficient in itself. When discussing inflation or price trends we would not simply apply the figures that were used at the last price control. We should analyse the most recent evidence and come to a well-considered view.
- CTA's own TFP analysis does not support its 1% decision. CTA produces a number of TFP estimates. The results for 'Transportation and storage', which would seem most relevant for Heathrow, are particularly low and sometimes negative (-0.4% to 0.4%).

Labour cost forecast:

- For RIIO-ED2, CEPA has recommended applying a weighted average approach for labour costs. A more bespoke approach would also seem reasonable for Heathrow.
  - CTA apply a glidepath to the OBR labour cost index. However, this glidepath is ultimately a judgment with no commentary provided, and a construct that appears to ignore real-world events. The sector is experiencing a significant resourcing crunch which is not taken into account.
  - Recent evidence from web-scraping suggests a price trend higher than the OBR forecast.
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## INTRODUCTION

For its Final Proposals for opex, the CAA has based its forecast on work carried out by CEPA and Taylor Airey (CTA).<sup>1</sup> We have been commissioned by Heathrow to review the CTA analysis, focusing on two areas:

- The decision to apply a **frontier shift** assumption of 1% per annum; and
- The decision to apply a bespoke price index for **people costs**.

We discuss these two points in turn.

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<sup>1</sup> <https://publicapps.caa.co.uk/docs/33CAP2366I.pdf>

## COMMENTS ON FRONTIER SHIFT ASSUMPTIONS

### CTA'S APPROACH PRIORITISES PRECEDENT OVER EVIDENCE

CTA note that: *"The 1% productivity target has also been the long-term regulatory precedent for airport price controls at the CAA. We think it is therefore incumbent on HAL and its advisors to comprehensively demonstrate that a 1% target is not achievable in the H7 period. Based on the representations made by HAL and Frontier Economics in response to IPs, we do not consider that this bar has been met"*

We disagree with CTA's view on the role of regulatory precedent. Clearly, precedent is a useful resource when producing forecasts and it can help provide a steer to navigate through challenging issues. But it should be used as a guide, and not used as the default assumption. CTA's view would seem to suggest that a 1% figure should be used in perpetuity regardless of the evidence. When producing a passenger forecast, or estimating the WACC, or discussing inflation and price trends, we do not simply apply the figures that were used at the last price control. There is no logic other than expediency in omitting productivity from this list. We should analyse the most recent evidence and come to a well-considered view, especially when the underlying parameter in question does change over time. CTA's approach is therefore unreasonable and prioritises precedent over evidence.

## CTA'S TFP ANALYSIS DOES NOT SUPPORT ITS 1% DECISION

CTA present the table below when setting out their reasoning for applying the 1% figure.

**FIGURE 1 CTA'S TFP ANALYSIS**

*Table 10.1: Average annual growth in total factor productivity, illustrating the impact of using a shorter time horizon, as proposed by HAL's advisors, versus a longer time horizon*

Sector	EU KLEMS		ONS	
	1995-2016	2009-2016	1995-2021	2009-2021
Professional, scientific, technical, administrative and support service activities	1.3%	1.9%	0.2%	-0.2%
Transportation and storage	0.4%	0.2%	0.1%	-0.4%
Information and communication	2.8%	1.9%	7.3%	5.5%
Electricity, gas, steam and air conditioning supply	-3.1%	-5.5%	0.2%	-1.1%
Water supply; sewerage; waste management and remediation activities	-0.6%	0.8%	-3.7%	-1.7%
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.6%	2.1%	-0.2%	0.9%
<b>Unweighted average</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.7%</b>	<b>0.5%</b>
<b>Unweighted average (excl. electricity, gas, steam and air conditioning supply)</b>	<b>0.9%</b>	<b>1.4%</b>	<b>0.8%</b>	<b>0.8%</b>

Source: CEPA and Taylor Airey analysis of EU KLEMS and ONS data

Source: CTA <https://publicapps.caa.co.uk/docs/33/CAP2366L.pdf>

However, it is not clear how the evidence above was actually used to support the 1% assumption. We would note the following points:

- **Time period:** The analysis based on ONS data covers a longer time horizon, up to 2021, whereas the analysis based on EU KLEMS data only extends up to 2016. Therefore, the results based on the ONS data are arguably more relevant and up to date. We would highlight that for most of the sectors - including 'Transportation and storage' - the results based on the ONS data are much lower than those based on the EU KLEMS data, with all sample averages well below the 1% figure proposed by CTA.
- **Weighting:** some of the sectors included in the table above are clearly more relevant than others when trying to evidence an appropriate level of frontier shift for Heathrow.<sup>2</sup> 'Transportation and storage' would appear the most relevant, and indeed the UK SIC code

<sup>2</sup> CTA note that in our previous work for Heathrow as part of its response to the Initial Proposals, we described these sectors as being comparable to Heathrow. However, we would clarify that the background was that we recommended that rather than relying on economy-wide estimates of ongoing efficiency, it would be more appropriate to consider sector-specific estimates which are more comparable to Heathrow. We referred to a First Economics report which included TFP estimates in a range of sectors including 'transportation and storage' amongst others.

'Transportation and storage'<sup>3</sup> includes the following subcategories which collectively would seem to cover large parts of Heathrow's cost base:

- Code 51101: Scheduled passenger air transport
- Code 51102: Non-scheduled passenger air transport
- Code 51210: Freight air transport
- Code 52230: Service activities incidental to air transportation
- Code 52102: Operation of warehousing and storage facilities for air transport activities of division 51
- Code 52242: Cargo handling for air transport activities of division 51

We would note that all of the results for 'Transportation and storage' (i.e. whether based on ONS or EU KLEMS, and across all time horizons considered) are significantly lower than CTA's 1% figure, and the results based on the ONS data over the period 2009-2021 is actually negative.

However, 'Electricity, gas, steam and air conditioning supply' and 'Water supply; sewerage; waste management and remediation activities' would seem less relevant, or likely represent only a small share of Heathrow's overall cost base. In principle, it would be reasonable to weight the results, where the weights reflect the breakdown of Heathrow's cost base into those categories. However, as it stands the 'unweighted' results would seem to place too little weight on 'Transportation and storage'.

- Outliers: CTA removed 'Electricity, gas, steam and air conditioning supply' from their unweighted sample average. However, there is no real discussion as to why they came to this decision. Presumably it is because the results included a particularly large negative number (-5.5% based on the EU KLEMS data for 2009-2016) which drags down the unweighted sample average. However, by the same token, would it not be reasonable to also exclude 'Information and communication' which has some very large positive numbers in the results using the ONS data (i.e. +7.3% using the 1995-2021) in the ONS data? If that was also removed from the analysis it would turn the unweighted average results based on the ONS data negative. As noted, this approach could be improved by

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<sup>3</sup> <https://www.siccode.co.uk/section/h>

applying Heathrow-specific weights to the different sectors, which we would expect would move the results closer towards the much lower figures for ‘Transportation and storage’.

**FIGURE 2 OUTLIER IMPACT**

	EU KLEMS		ONS	
	1995-2016	2009-2016	1995-2021	2009-2021
Professional, scientific, technical, administrative and support service activities	1.3	1.9	0.2	-0.2
Transportation and storage	0.4	0.2	0.1	-0.4
Information and communication	2.8	1.9	7.3	5.5
Electricity, gas, steam and air conditioning supply	-3.1	-5.5	0.2	-1.1
Water supply; sewerage; waste management and remediation activities	-0.6	0.8	-3.7	-1.7
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.6	2.1	-0.2	0.9
Unweighted average	0.23	0.23	0.65	0.50
Unweighted average - excluding Electricity, gas, steam and air conditioning supply	0.90	1.38	0.74	0.82
Unweighted average - excluding Electricity, gas, steam and air conditioning supply and Information and communication	0.43	1.25	-0.90	-0.35

Source: Frontier edits to CTA analysis

Note : All figures in %

- ONS MFP estimates: Elsewhere in the CTA report, they note that “*Multi-Factor Productivity (MFP) estimates from the ONS suggest that productivity rates have returned to pre-pandemic levels. MFP is a measure of productivity growth that takes account of capital and quality adjusted labour growth. Average MFP rates across all sectors was 0.6% from 2010-2019 (data is available until 2021)*”. CTA does not comment on this result, but it casts further doubt on the reasonableness of their 1% figure. In other words, the 1% figure goes well beyond the average MFP estimate of 0.6%, even though the TFP evidence suggests that ‘Transportation and storage’ has experienced outturn productivity gains significantly below the sample average, and even negative based on the most recent data. If anything, we might expect this to result in a lower than average figure applied to Heathrow, rather than a higher than average one.

Finally, CTA note that “*On balance, we consider these factors tip the balance towards placing weight on longer term evidence to inform Heathrow’s ongoing efficiency target.*” However, there is limited discussion on how this evidence was actually analysed and weighed up. There appear to be few estimates reported in the CTA analysis which are greater than 1% but plenty which are lower than 1%, with some particularly low and sometimes negative figures for ‘Transportation and storage’, which would seem most relevant for Heathrow. Therefore, it is not clear how the final decision to apply an assumption of 1% amounts to a balanced view.

## CTA’S TFP ANALYSIS IGNORES REAL WORLD ISSUES

As set out in more detail in the next section on labour costs, the aviation sector is currently in the midst of a major resourcing crunch, and there has been no shortage of negative media stories for the industry as a whole in the UK. Heathrow’s passenger volumes fell from 80 million in 2019 to around 20 million in 2020 and 2021, with Heathrow (and other airports and airlines) forced to make a large number of redundancies over the period to remain solvent.

Now that Heathrow is in a significant ramping-up phase it is having to take on thousands of new workers, many of whom may not have worked at Heathrow, or in the UK aviation sector more generally, prior to the pandemic. (UK unemployment is currently at a 50 year record low<sup>4</sup>, meaning workers made redundant in the UK aviation sector have generally moved on to other sectors, and it may be challenging to attract them back.) Based on our discussions with Heathrow, we understand that the average worker at the airport over H7 will likely have significantly less experience than the average worker during Q6. It is not unreasonable to expect that this will have an impact on productivity levels – and we note that this will also be faced by other (unregulated) airports and airlines in the UK too. These are factors outside of Heathrow’s control (or the sector more widely), meaning it should not necessarily be viewed as relative inefficiency at Heathrow per se, but a degree of unavoidably inefficiency introduced into the aviation sector as a whole. This could be a significant headwind which casts further doubt on the reasonableness of applying a frontier shift assumption which is significantly more stretching than average productivity in the UK (e.g. 0.6% based on the ONS MFP estimate), and significantly more stretching than the estimates for ‘Transportation and storage’ in particular (e.g. potentially as low as -0.4% based on ONS TFP data).

## COMMENTS ON PEOPLE COST FORECAST

### OBR’S ‘AVERAGE EARNINGS’ SERIES

We agree with CTA that when comparing the OBR’s two separate labour cost forecasts, ‘Average Earnings’ and ‘Wages and Salaries’, the ‘Average Earnings’ series is likely to be a more representative view of the *average* trend in the UK. As noted by CTA, the ‘Wages and Salaries’ series could potentially be distorted by the fact that it also includes volume effects.

However, the key issue is whether this average trend is appropriate for Heathrow, especially during a significant resourcing crunch for the sector.

### RECENT PRECEDENT FROM ENERGY

We would note that CEPA is also currently advising Ofgem on the RIIO-ED2 price control for electricity distribution network operators. For the recent Draft Determinations<sup>5</sup>, CEPA recommended Ofgem apply a weighted average price trend for labour costs, which is:

- 33% of the ‘Average Earnings’ OBR forecast – i.e. the same forecast used by the CAA;
- 33% of a sector specific forecast for ‘Civil Engineering Labour’; and

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<sup>4</sup> <https://www.thetimes.co.uk/article/unemployment-drops-to-50-year-low-of-3-7-lkdpv5xgr>

<sup>5</sup> RIIO-ED2 Draft Determinations – Core Methodology Document

- 33% of another sector specific forecast for 'Electrical engineering labour'.

This is shown below.

**FIGURE 3 WEIGHTED AVERAGE APPROACH FOR RIIO-ED2**

**Table 67 Proposed RPE input price indices and weightings**

Index	Weightings
Labour costs (general and specialist)	100%
AWE: Private Sector Index: Seasonally Adjusted Total Pay Excluding Arrears (K54V)	33%
4/CE/01 Civil Engineering Labour	33%
BEAMA Electrical engineering labour	33%
Materials costs	100%
3/58 Pipes and Accessories: Copper	25%
3/59 BCIS PAFI Pipes and Accessories: Aluminium	25%
3/S3 Structural Steelwork - Materials: Civil Engineering Work	25%
FOCOS Resource Cost Index of Infrastructure: Materials	25%

Source: RIIO-ED2 Draft Determinations – Core Methodology Document

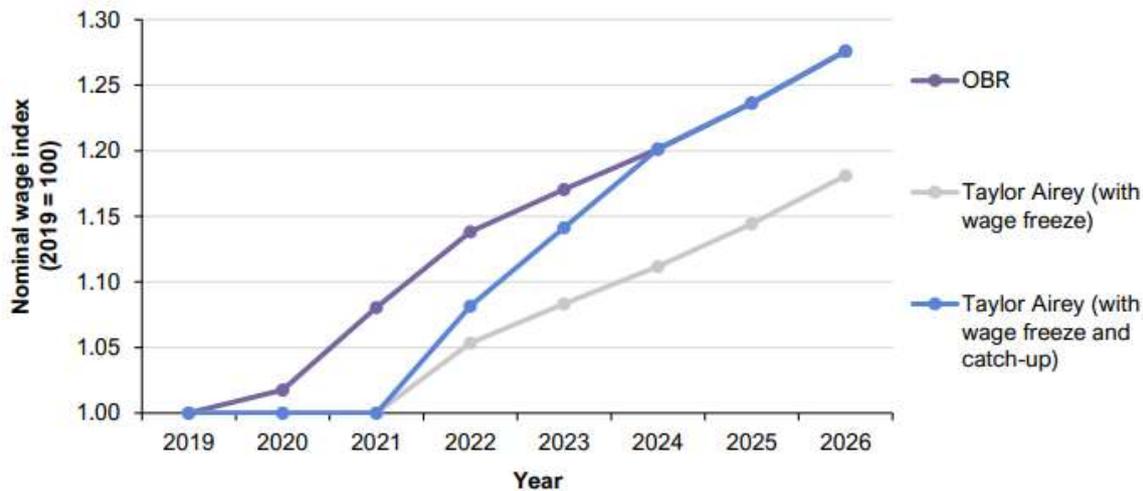
It is not clear why CEPA would consider applying a bespoke forecast for energy, but not for aviation, especially when the aviation sector is quite clearly in the midst of a resourcing crunch meaning that average economy-wide figures may not be appropriate. The work for Ofgem provides useful precedent that it is appropriate to consider a price trend more tailored to the specific sector in question (which, following on from the discussion earlier, might also suggest that a sector-specific approach could also be used for TFP in the context of frontier shift).

**CTA’S GLIDEPATH IS INCONSISTENT WITH THE CURRENT RESOURCING CRUNCH**

First, CTA are not actually allowing the OBR forecast in full. As shown below, they assume that following a wage freeze at Heathrow in 2019, 2020 and 2021, there will be a gradual glidepath to the OBR forecast (shown by the blue line).

## FIGURE 4 CTA'S PEOPLE COST GLIDEPATH

Figure 9.2: Taylor Airey wage index for projecting people costs



Source: Taylor Airey analysis, OBR

CTA justify this glidepath by noting that *“We consider that such pay freezes and pay cuts are unlikely to immediately be reversed in the first year of the price control, 2022, and instead, that it may take a number of years for the impacts of the pandemic to unwind as the business goes through its annual salary and remuneration settlements.”* They also note that: *“While HAL is subject to competitive labour market pressures, aspects of the management of its people costs are within its control... We might expect that... where feasible, manage the underwinding of the sector pay freezes over time across its new and existing staff base”*

CTA’s decision is ultimately a judgment with no rationale provided for the precise glidepath, and a construct that appears to ignore real-world events. There is currently no shortage of news stories highlighting that the sector is experiencing a significant resourcing crunch and it will need to quickly ramp-up its operation at a time when UK unemployment is at a 50 year record low. By applying a glidepath below the OBR trend for a number of years, the CTA approach effectively implies that relative to 2019, workers at Heathrow will receive a relative pay decrease compared to the UK average. Given that the sector will need to attract workers in a tight labour market, the CTA trend seems unlikely to achieve that outcome.

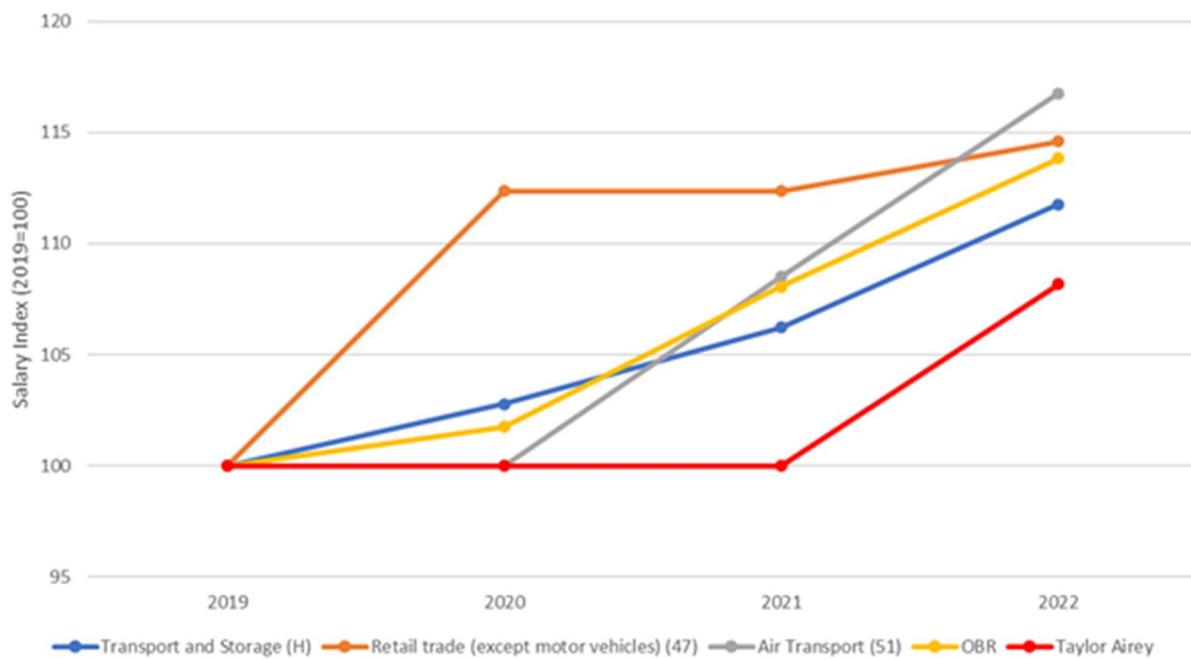
### ADDITIONAL EVIDENCE FROM WEB-SCRAPING

In line with CEPA’s approach in the energy sector of proposing a weighted average price trend, we have sought to identify an aviation-sector-specific price trend.

The chart below shows how advertised nominal wages in the ‘Retail’, ‘Transport and Storage’ and ‘Air Transport’ UK SIC code sectors have changed from 2019 to 2022 compared to the

CTA and OBR price trends. The data is based on ‘LabourInsight UK’<sup>6</sup> which web scrapes information from millions of job adverts each month, including the salary and associated SIC code. For each job listing we take the lower end of the advertised salary range and have applied an average for each sector each year.

**FIGURE 5      SECTOR-SPECIFIC FORECASTS**



Source: Frontier analysis based on LabourInsightUK data

The results show that for all three sectors the increase in average pay has been significantly higher than the trend proposed by CTA, with the trend for ‘Air Transport’ significantly higher than the OBR data in 2022. This suggest that the CTA trend is significantly too low compared to recent market developments.

<sup>6</sup> <https://labourinsight.burning-glass.com/uk/>