

Economic benefits of Heathrow Expansion

Introduction

This note provides the reasoning behind Heathrow's estimate of the economic benefits of airport expansion. The effects that drive this benefit are inherently difficult to quantify, and necessarily rely on a degree of judgement. We recognise that different analysts may come to different views of the precise magnitude. Nevertheless, there is sufficient evidence to give us confidence that the benefits must be at least of the order of £100 billion in terms of discounted present value to GDP over future years.¹

This amount divides roughly equally between:

- £50 billion of GDP resulting from the catalytic impact of additional aviation hub connectivity through trade and FDI into and out of the UK, allowing greater productivity and investment in the UK economy
- £50 billion from the stimulation to the UK economy from the direct, indirect and induced expenditure that would result from Heathrow expansion.

Catalytic effects

The clearest economic benefit of Heathrow expansion will come from the catalytic effects from the facilitation of international trade (both imports and exports) and foreign direct investment (both into and out of the UK). International trade and FDI allow greater specialisation and scale in sectors where the UK has comparative advantage, based on a greater integration in the global economy. This will unambiguously raise productivity and output.

Heathrow expansion will also affect tourism into and out of the UK. However, here the relevant effect will be the stimulation to the economy only from the net balance, with little impact on productivity.

These catalytic effects (trade, FDI and tourism) were modelled by PwC for the Airports Commission's Interim Report, using two different implementations of a Computable General Equilibrium (CGE) model, with the conclusion that the current lack of airport capacity is losing the UK economy £30-45 billion in terms of discounted present value to GDP over future years.

Frontier Economics, on behalf of Heathrow, also modelled these effects using a separate approach, and estimated that a third runway at Heathrow would boost UK GDP, starting from £765 million in 2025, and building to £2.33 billion in 2030 and £3.59 billion in 2040.²

¹ Consistent with the approach of the Airports Commission, we take to the discounting period to be 2021-2080, and use the HMT Green Book real discount rate of 3.5% to 2045, and 3.0% thereafter.

² "Employment impacts from growth at Heathrow", Frontier Economics, May 2014.

The Frontier Economics results imply over £50 billion benefit in terms of the discounted present value to GDP over future years – just above the top end of the range estimated by PwC.

Direct, indirect and induced impacts of an expanded Heathrow

In addition to the catalytic effects on UK productivity from greater trade and FDI, an expanded Heathrow, with a bigger operation and employing more people, will directly create additional economic activity in the UK. This, in turn, will have further indirect and induced effects on the economy.

Frontier Economics, on behalf of Heathrow, also modelled these effects using survey evidence of Heathrow's direct employment effects, analysis of likely future scale economies and a standard input-output table analysis. This estimated that a third runway at Heathrow would boost UK GDP, starting from £1.10 billion in 2025, and building to £7.16 billion in 2030 and £14.71 billion in 2040.³

The Frontier Economics results imply over £200 billion benefit in terms of the discounted present value to GDP over future years.

Whilst the catalytic effects are unambiguously incremental to UK GDP (since they are generated by increases in the productivity of the economy), the additional expenditure from direct, indirect and induced economic activity relies on activating resources that are currently not contributing to economic activity. Conservatively, even if only a quarter of this demand feeds through into a net increase in UK economic output, there will still be a net benefit of over £50 billion in terms of the discounted present value to GDP over future years.

Overall impact on GDP

Adding together the catalytic effects (£50 billion in GDP NPV), with a conservative estimate of the net impact of the direct, indirect and induced effects of Heathrow's additional economic activity (£50 billion in GDP NPV), gives a total impact of at least £100 billion in GDP NPV.

Other effects

In addition to GDP effects, capacity constraints at Heathrow also cause costs to users of airports (e.g. delays caused by congestion). The Airports Commission's analysis suggests that the costs of failing to address these issues could amount, over a sixty-year time period, to £18-20 billion of costs to users and providers of airport infrastructure.

Another way of measuring the economic benefits of Heathrow expansion is the overall welfare benefit from the reduction in air fares. Frontier Economics estimate that an expansion of Heathrow, and the consequent increase in capacity, would result in a reduction of air fares of

³ "Employment impacts from growth at Heathrow", Frontier Economics, May 2014.

£145 per return passenger by 2030.⁴ A third runway at Heathrow would allow an additional 11 million departing passengers by 2030 and 22 million by 2040. The welfare benefit, assuming a linear demand curve, can be approximated by applying half of the £145 to the additional departing passengers that would use an expanded Heathrow every year. This gives an annual welfare gain rising to £1.5 billion by 2030, and £3.2 billion by 2040, with a discounted present value to 2080 of around £45 billion.

⁴ "Heathrow Congestion Premium", Frontier Economics, April 2014.