

# Response to BIS Oxford Economics Note

Prepared for Auckland International Airport Limited

Submitted by InterVISTAS Consulting Inc.

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## Introduction

This note has been produced by InterVISTAS Consulting Inc. (InterVISTAS) and is in response to the BIS Oxford Economic (BISOE) note, “Response to Airport Comments – Report Produced for BARNZ”, dated 12 September 2023.

We have provided responses to the four main critiques raised in the BISOE note:

- Data driven approach vs literature review.
- Route-level vs national-level elasticities.
- Airline revenue management and allocation of price increases.
- Airline response to an effective tax.

## Data Driven Approach vs Literature Review

BISOE states that its analysis relies on direct estimates of the price (fare) elasticities rather than use elasticities based on a literature review as was the case for the InterVISTAS analysis for Auckland Airport. BISOE argues that its approach is more accurate, in part because “air-travel markets have changed significantly over the last decade.” (page 3). We view that the body of research on air fare elasticities developed over several decades is highly relevant as this establishes known elasticities values used within the industry and the market and economic factors that can affect these elasticities. Many of the studies we have cited have been used elsewhere in recent times to evaluate aviation demand responses. For example, the 2007 IATA study referenced both by ourselves and BISOE has been used by researchers examining the impact of recent EU policy.<sup>1</sup> In addition, our literature review encompassed studies published as late as 2022,<sup>2</sup> and therefore does reflect the current conditions in air markets including the development of low cost carriers.

The reports by BISOE also contains a literature review in support of their analysis. However, it is not possible to evaluate the elasticities estimated and used by BISOE as the publicly available reports submitted redact any information on the analysis undertaken and the estimated price elasticities. Therefore, the assertion by BISOE that its own analysis is somehow more accurate cannot be substantiated.

## Route-Level vs National-Level Elasticities

The BISOE note argues for the use of route-level rather than national-level elasticities, the former implying a greater demand response to price changes than the latter. We agree with BISOE that the appropriate fare elasticity is a function of the choice set available to the consumer and discuss this at length in our report for Auckland Airport. To give an example, a fare increase by an individual airline will likely result in a strong demand response for that airline as consumers can switch to other, cheaper airlines (assuming multiple airlines are available). However, if all airlines increase their fares (e.g., due to cost increase), the demand response is likely to be less strong as consumers cannot switch airlines to avoid the fare increase (there will still be a demand response as consumers can switch modes, not travel or seek other alternatives). Similarly, if a fare increase applies to all routes from an airport, as would be the case for Auckland Airport, the demand response will be proportionately less than if the fare increase is applied to just one route (passengers cannot substitute routes from that airport to avoid the fare increase).

Our selection of elasticities is based on the realistic choice set available to passengers travelling through Auckland Airport. The airport serves the largest population centre in New Zealand as well as the country’s

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<sup>1</sup> “Effects of the Fit for 55 Package on the Dutch Aviation Sector”, CE Delft for the Ministerie van Infrastructuur en Waterstaat

<sup>2</sup> Oxera (2022). “Assessment of the Impact of the Fit for 55 Policies on Airports.” [https://www.oxera.com/wp-content/uploads/2022/06/Impact-assessment-of-Fit-for-55-policies-on-the-aviation-sector\\_final\\_080622.pdf](https://www.oxera.com/wp-content/uploads/2022/06/Impact-assessment-of-Fit-for-55-policies-on-the-aviation-sector_final_080622.pdf).

business and financial centre. The airport is also a hub for Air New Zealand and Jetstar. It is the best located and most well served airport for domestic and international passengers wanting to travel to/from the city of Auckland. In 2023, 64% of domestic capacity started or ended at Auckland Airport (80% of jet services and 44% of regional turboprop services).<sup>3</sup> The nearest alternative airport to Auckland with any overlapping service is Hamilton Airport, 135 kms away, but it offers a more limited range of domestic routes at lower frequencies (largely Wellington, Christchurch and Palmerston North).<sup>4</sup> For example, it offers 3-4 times daily service to Christchurch, compared with over 20 times per day at Auckland. Other alternative airports, such as Rotorua and Tauranga are even more distant (approximately 235 kms and 205 kms respectively) and have a smaller range of services. Using these alternative airports can also impose additional costs due to passengers having to travel further to reach the airport.

In 2023, Auckland Airport accounted for 77% of seat capacity to international destinations and 95% of seat capacity to non-Australian destinations.<sup>5</sup> As a result, there are limited options for international passengers to travel to an alternative airport in New Zealand (largely Christchurch or Wellington), assuming that switching destinations is a possibility.

The limited availability of substitutes is something raised by BISOE itself in its own report:

*“OE comments that substitution effects in the New Zealand and Auckland context are limited given geographical factors.”<sup>6</sup>*

BISOE argues that the potential for mode shift is substantial by showing travel data for the *United States* (a detail omitted in the chart header). This data is irrelevant to their argument being made for two reasons. Firstly, the U.S. has a very different population distribution and geography to New Zealand. It is possible for a large proportion of Americans to travel long distances on high-speed highways with few physical barriers. Driving from Auckland to Wellington takes 7-8 hours (without stops) compared with a 70 minute flight time; driving to anywhere on the South Island would also require a ferry crossing. Secondly, the fact that some or even a majority of travellers choose to travel by car infers little about the price sensitivity of those choosing to travel by air. The reasons for mode choice go beyond price – convenience, trip purpose, travel group size and needs, etc.

It is worth clarifying that the InterVISTAS analysis does not imply that passengers are unresponsive to fare changes, far from it. For example, the elasticities applied to domestic passengers ranged from -0.80 to -0.83. In other words, a 10% fare increase results in an 8.0% to 8.3% decline in domestic traffic. We fully recognise that consumers will be able to respond to fare increases by switching modes or airports, seeking alternative destinations or by not travelling at all.<sup>7</sup> However, our view is that the route level elasticities are inappropriate and will overstate the traffic impact given the relatively limited alternatives available to consumers (as discussed above). The situation at Auckland is considerably different to much larger markets such as London which are able to sustain multiple, reasonably proximate airports with overlapping services (Heathrow, Gatwick, Stansted, Luton, London City).<sup>8</sup>

Finally, BISOE states that these estimated elasticities are conservative (page 6: “Comparisons against average elasticities based on literature reviews suggest that our elasticities are closer to the lower end of the typical expected range of average elasticities.”). However, as stated before, the details of their analysis are redacted and therefore it is hard to draw any conclusions about the differences in our approaches.

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<sup>3</sup> Source: Cirium Diio Mi schedule data.

<sup>4</sup> Seasonal service to Sydney and the Gold Coast in Australia is planned for 2025.

<sup>5</sup> Source: Cirium Diio Mi schedule data.

<sup>6</sup> Chapter 6, page 40, “Flight Price Elasticity Study: Domestic Markets”, Oxford Economics, 21 May 2024.

<sup>7</sup> Similarly, airlines may move capacity to airports with lower airport charges.

<sup>8</sup> Even in the case of London, there is not perfect substitutability between airports – many of the long-haul services at Heathrow are not replicated at other London airports.

## Airline Revenue Management and Allocation of Price Increases

The BISOE note states that “allocating price increases to passengers is another key point of contention” (page 7), in relation to how airline revenue management might allocate the cost increase between different categories of passengers. We would note that while we discuss this topic in our submissions, it is not material to the demand impact modelling calculations by InterVISTAS as this analysis was based on fare averages.

Our key point was that airlines engage in sophisticated revenue management in order to maximise profits, and this will determine how and to what extent the cost increase is passed onto passengers. Revenue management means that pricing is not primarily cost-based and is instead driven largely by competitive factors and willingness to pay by behavioral passenger groups. Therefore, the allocation of any cost increase, if it is passed through to the passenger (pass-through is discussed further in the next section), is a function of market dynamics and passenger willingness to pay. This is something raised by Skylark Consulting in its review of BISOE’s elasticity analysis (included in the BISOE report):

*“typical airline pricing behaviour means increasing airport charges may not directly result in the expected loss of traffic. This is because airlines are aware that higher fare classes are relatively inelastic, and so they have a tendency to pass cost increases on to those classes in a disproportionate manner. Taken to the extreme – as a thought experiment – cost increases passed solely to the highest fare class are likely to result in higher cross-fare substitution and a lower level of aggregate traffic loss than if fares are increased uniformly across all fare classes.”<sup>9</sup>*

BISOE discusses the removal of business class seats on domestic services as evidence of high price sensitivity in higher-fare customers. We note that Air New Zealand removed business class seats from domestic service in 2002, over 20 years ago.<sup>10</sup> At the time, the airline was restructuring having narrowly avoided bankruptcy (and returning to majority government ownership). As such, this provides no evidence for BISOE’s argument – a business decision made over two decades ago provides no information around the fare sensitivity of domestic passengers today. Business (or first) class travel offers a different product to economy class, with generally greater comfort, more space and higher service levels (e.g., on-board meals). It can be anticipated that passengers were unwilling to pay a significant premium for this service on relatively short domestic flights and so it was determined to be more profitable for the airline to add more economy class seats to the aircraft. Therefore, BISOE’s assertion that there is a narrow range of elasticities within domestic passengers and any increase will be passed on evenly (in terms of \$ increase) across all fare categories is based on no meaningful evidence.

In fact, different behaviour can be observed by examining fares offered by Air New Zealand for domestic flights in March and April of 2024, shown in the table below (provided by Auckland Airport). This data was published by Air New Zealand online and collected by Auckland Airport over time.<sup>11</sup> Average fares are shown for each fare basis code (P through Y). This code helps identify the rules applicable to the fare. For example, cheaper fares in code P are generally made available first for more price sensitive passengers willing to book well in advance of the flight. In contrast, the Y fare code has a much higher fare that is charged to high willingness-to-pay passengers who may be booking closer to the time of the flight.<sup>12</sup> As can be seen, the range of fare levels is wide, based in part on passenger willingness to pay: the Y fare is over five times the P fare. Between March 5, 2024 and April 23, 2024, domestic air fares increased 15% overall. What is interesting to note is that all fare

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<sup>9</sup> Chapter 6, page 39, “Flight Price Elasticity Study: Domestic Markets”, Oxford Economics, 21 May 2024.

<sup>10</sup> Jetstar New Zealand has not provided business class seats on domestic services.

<sup>11</sup> <https://www.airnzagent.co.nz/domestic-long-term-fares> - Air New Zealand no longer publishes this airfare information on this web page.

<sup>12</sup> The fare codes presented to booking passengers will depend on how the flight fills up over time (the booking curve). Simply put, the cheaper fare codes will be “closed off” once bookings reach a certain level and fare codes presented will get progressively higher as the flight fills up.

categories increased largely proportionally – between 14-17%. So, while the Y fare increased by \$56, the P fare increased by only \$11.

This contradicts BISOE’s argument that fare increases will be applied uniformly. In fact, this analysis shows that, in practice, the opposite can and does occur.

#### Average Domestic Fare on Air New Zealand by Fare Basis Code – Direct Services

Fare Category:	P	K	X	G	S	L	T	W	V	Q	H	M	B	Y
Direct Fare - 5 March 2024	\$67	\$77	\$91	\$106	\$124	\$144	\$165	\$188	\$213	\$239	\$266	\$294	\$326	\$364
Direct Fare - 23 April 2024	\$79	\$89	\$105	\$123	\$144	\$166	\$191	\$217	\$245	\$275	\$306	\$339	\$376	\$420
Difference	\$11	\$11	\$14	\$17	\$20	\$22	\$25	\$29	\$32	\$36	\$40	\$45	\$50	\$56
% Increase	17%	14%	15%	16%	16%	16%	15%	15%	15%	15%	15%	15%	15%	15%

Source: www.airnzagent.co.nz, data collected by Auckland Airport.

### Supply Response (Airline response to an effective tax)

This section of the BISOE note is largely making the same argument as the previous section, that cost increases will be passed on to all passengers and fare categories by the same \$ amount. As we have observed in the last section, airline behaviour counter to this has been observed.

What BISOE seems to fail to consider is whether in fact airlines will pass on the entire cost increase to passengers. As we document in our report, there is empirical evidence that airlines do not always pass on full cost increases.<sup>13</sup> Due to market conditions, cost pass-through can be as low as 43%.<sup>14</sup> This is consistent with economic theory around markets with imperfect competition. This was also raised in the Skylark Consulting review of BISOE’s work:

*“airlines may also choose to absorb some or all additional costs and accept the loss of margin as the cost of retaining traffic.”<sup>15</sup>*

As we note in our report for Auckland Airport, there are various and often opposing factors that might affect the level of pass-through.<sup>16</sup> Based on the literature on this topic and the competition and congestion conditions at Auckland Airport, it was determined that a pass-through of 60% was the minimum that might be expected. In our analysis, we modelled a scenario with a 60% pass-through, which as might be expected, results in a smaller demand response than full pass-through. However, we recognised that there could also be a supply-side response to higher airport costs, e.g., airlines might choose to reduce capacity on less viable routes rather than lift air fares to pass on the increased airport charges. While not directly modelling the supply response, we also provided results at 100% pass-through, which may be more reflective of the impact of a possible long term supply side response. That said, it is not clear that airlines would pass through 100% of the increase in airport charges through to every ticket, and thus the 100% pass-through would be the most aggressive estimate of the overall impact from increased charges.

<sup>13</sup> Section 4.3, “Potential Future Demand Impacts from Increased Airport Charges”, InterVISTAS Consulting Inc, February 2023.

<sup>14</sup> “Assessment of ICAO’s global market-based measure (CORSIA) pursuant to Article 28b and for studying cost pass-through pursuant to Article 3d of the EU ETS Directive”, ICF for the European Commission, Sept 2020.

<sup>15</sup> Chapter 6, page 39, “Flight Price Elasticity Study: Domestic Markets”, Oxford Economics, 21 May 2024.

<sup>16</sup> “Potential Future Demand Impacts from Increased Airport Charges”, InterVISTAS Consulting Inc, February 2023.



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