COSTS AND BENEFITS OF DECLARING AIRSIDE SERVICES AT SYDNEY AIRPORT

A Submission to the National Competition Council

Prepared on behalf of Sydney Airport Corporation Limited

Prepared by NERA

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Sydney

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1 INTRODUCTION

NERA has been asked by Sydney Airport Corporation Limited (SACL) to provide a report that addresses two preliminary findings of the National Competition Council (NCC or Council) in its draft recommendation to declare the Airside Service at Sydney Airport. These two findings are set out in the NCC’s recently released draft recommendation on the Application by Virgin Blue for Declaration of Airside Services at Sydney Airport, June 2003 (the Draft Recommendation).

SACL has asked NERA to consider the NCC’s claim that the negative consequences for downstream ‘competition’ of an exploitation of market power is exacerbated by the likely differential impact on Virgin Blue (and other low cost carriers) because: ¹

- Airside Service charges constitutes a higher proportion of the final passenger fares for Virgin Blue;
- Virgin Blue carries a higher proportion of more price sensitive passengers;
- Virgin Blue is likely to operate at lower margins per route thereby making them more commercially vulnerable to increases in airport charges; and
- the result of increased charges is likely to be a fall in the number of passengers and a possible exit or contraction in the number of services offered on Sydney routes such that competition on Sydney routes would be adversely affected.

These claims are addressed in Section 2 of our report.

SACL has also asked NERA to estimate the likely costs and benefits associated with the declaration of the Airside Service at Sydney Airport.

Section 3 of our report contains our analysis of the likely costs and benefits of declaration.

¹ NCC, Application by Virgin Blue for Declaration of Airside Services at Sydney Airport Draft Recommendation, June 2003, Para 6.145
2 Differential Impact on Virgin Blue

The NCC’s assessment of section 44G(2)(a) of the Trade Practices Act relies on conclusion that increased aeronautical charges at Sydney Airport will:

- worsen a perceived dominance by Qantas in passenger services and may cause Virgin Blue to exit some routes; and
- have a differential impact on competitors, which is relevant to the decision to declare the Airside Service at Sydney Airport.

We are unconvinced of the first position and disagree with the second.

2.1 Differential Impact on Virgin Blue

A consistent theme in the Council’s Draft Recommendation is that any increase in aeronautical charges by SACL will have a greater impact on Virgin Blue than on Qantas. To support this claim the Council makes a number of factual claims about the domestic aviation industry, that appear not to be supported by any evidence. The NCC’s contentions include:

- that Virgin Blue has lower average fares;
- that Virgin Blue has more price elastic customers;
- that low cost carriers, such as Virgin Blue, operate on lower margins; and
- that higher landing charges will result in higher prices for the most price sensitive customers.

In any case, as we explain in section 2.2, the existence of some differential impact on one competitor is not, of itself sufficient to establish that declaration will promote competition in the market as a whole. Establishing the validity of these contentions is particularly important, since they provide the main foundation for the Council’s conclusion that any increase in charges for the Airside Service at Sydney Airport will be detrimental to competition in the domestic passenger market.

2.1.1 The Council’s factual claims

The Council makes a number of factual claims that are not yet supported by anything other than anecdotal evidence from Virgin Blue. This is particularly important if the Council’s decision to declare the Airside Service at Sydney Airport is to rely on these factual claims.
In chapter 6 of the NCC’s Draft Recommendation, the Council asserts two key facts about the Australian aviation market:\footnote{2}{Ibid, Paragraph 6.145, page 72.}

- that aeronautical charges are a greater proportion of Virgin Blue final passenger fares; and
- that Virgin Blue carries a higher proportion of price sensitive passengers.

Both claims are based on Virgin Blue’s original application to the NCC and relate to the relative position of Virgin Blue and Qantas. We consider each of these claims below.

2.1.1.1 Proportion of Final Fare

For SACL’s aeronautical charges to be a higher proportion of average Virgin Blue fares, implies Virgin Blue must have lower average fares than Qantas. A sample of fares\footnote{3}{NERA research, undertaken during the week commencing 4 August 2003.} between Sydney and Melbourne, one month out, showed Virgin Blue offering fares that range from $65 to $194 one-way and varying depending on the flight time and the requirement for a flexible ticket. During the same period Qantas’ web-based fares ranged from $83 to $332 one-way and also varying according to the flexibility of the ticket.

However, a simple comparison of fares is not in itself sufficient to draw the conclusion that Virgin Blue’s fares are lower on average. First, and most importantly, published fares give no indication of the number of passengers that are travelling on any particular fare category.

Second, published fares are often not the same as the fares paid by passengers on full service airlines. Full service airlines offer fares that may include Sydney to Melbourne as a leg on a longer journey, and so the portion of such a fare that is attributed to the Sydney to Melbourne leg would not be captured by published fares. Furthermore, full service airlines generally operate frequent flyer programs, which result in passengers being carried at very low yields. To secure sales to large businesses and governments, full service airlines also provide rebates, resulting in the final fare being lower than the published fare for these passengers.

Finally, airlines generally consider information on what fares passengers are paying as highly commercially sensitive. It is therefore highly unlikely that either Virgin Blue or Qantas knows the other’s average fare on any particular route.

For the Council to assert that Virgin Blue has on average lower fares requires an in-depth study of route yields, and to our knowledge, no such study has ever been carried out in Australia.
2.1.1.2 Virgin Blue's Passenger Mix

The second claim is that Virgin Blue's passengers are more price sensitive than Qantas'. Again, this information would not be readily available to either Virgin Blue or Qantas. Both airlines offer fares that cater for discount, economy and business passengers, however the mix of passengers would be unknown to any one but the airline that carries them.

As with average fares, for the Council to assert that Virgin Blue carries more price sensitive passengers requires an in-depth study of Virgin Blue and Qantas passengers.

2.1.2 Virgin Blue's Vulnerability

The Council also makes the claim that low cost carriers are likely to operate on lower margins per route (in order to offer lower fares) making them more commercially vulnerable to increases in airport charges.4

This is clearly not the case for Virgin Blue since it continues to make strong profits, increase its fleet size and expand the number of routes it is servicing.

Virgin Blue's strength is that it operates as a low cost airline not a low margin airline. Virgin Blue achieves a lower cost structure by:

• utilising full economy class flights that increases the number of seats on a flight;
• providing in-flight catering on a pay as you go basis;
• using pay-as-you go lounges; and
• no frequent flyer programs.

According to press statements by Virgin Blue, it is one of the most profitable airline's in the world. In May 2003, Virgin Blue declared a profit of $158 million5 which equates to $4.9 million per route.6 Richard Branson in his press conferences stated that its EBITDAR per plane is the highest in the world at $US5.3 million per plane compared to $US4.4 million for Qantas.7

Virgin Blue has also been aggressively expanding services in Australia. Table 2.1 below shows that routes that it has started in the last twelve months.

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6 Virgin Blue operates 32 routes as of the 14 June 2003.
Table 2.1: Virgin Blue’s new routes

<table>
<thead>
<tr>
<th>Date of New Route</th>
<th>City Pair</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 August 2002</td>
<td>Melbourne – Hobart</td>
</tr>
<tr>
<td>17 October 2002</td>
<td>Sydney – Maroochydore</td>
</tr>
<tr>
<td>12 December 2002</td>
<td>Brisbane – Rockhampton</td>
</tr>
<tr>
<td>12 December 2002</td>
<td>Brisbane – Perth</td>
</tr>
<tr>
<td>12 April 2003</td>
<td>Adelaide – Broome</td>
</tr>
<tr>
<td>12 April 2003</td>
<td>Brisbane – Whitsunday Coast</td>
</tr>
<tr>
<td>1 May 2003</td>
<td>Melbourne – Maroochydore</td>
</tr>
<tr>
<td>5 June 2003</td>
<td>Sydney – Alice Springs</td>
</tr>
<tr>
<td>6 June 2003</td>
<td>Sydney – Canberra</td>
</tr>
<tr>
<td>14 June 2003</td>
<td>Sydney – Darwin</td>
</tr>
</tbody>
</table>

Virgin Blue’s financial strength and growth is consistent with the international trend of low cost carriers achieving significant growth at the expense of traditional full service airlines. For example, Ryanair, Europe’s largest low cost carrier continues to make record profits and expand capacity while traditional airlines like British Airways struggle. In North America, United Airlines and Canadian Airways are currently in bankruptcy protection and American Airlines lost US$357 million in the three months to June 2003. In contrast, JetBlue a US low cost carrier, continues to add capacity.

2.1.3 Role of price discrimination

The Council also claims that increases in aeronautical charges will result in higher prices for the most price sensitive customers. This is not necessarily true since airlines have the capacity and incentive to price discriminate to minimise the impact of aeronautical charges.

The provision of air services can be characterised as a jointly produced service, or in other words, conditional (leisure) fares are produced jointly with unconditional (business) fares. As a rule when products are jointly produced, their individual supply is determined by joint demand. In this situation a uniform change in marginal costs (e.g., increased per passenger aeronautical charges) will tend to result in any price increases being concentrated amongst those jointly produced services with the least price sensitivity. This principle is illustrated by the example in Appendix A.

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Sourced from various press releases, available on the Virgin Blue website.
The only condition to this rule is that all fares must be greater than the marginal cost of filling the seat on the scheduled flight. The marginal cost is likely be determined by:

- per passenger taxes and airport charges;
- the additional fuel that will be burned to carry the weight of the passenger;
- air meals provided on the flight;
- fare-specific selling costs; and
- any passenger-specific expenses such as passenger insurance.

The marginal cost of an additional passenger on a scheduled flight is unlikely to be more than $20. It is also apparent that Virgin Blue faces lower marginal costs than Qantas. Virgin Blue’s current service does not provide air meals, it operates modern planes that are likely to be more fuel efficient, while its web-based sales system is likely to result in lower sales costs. In any event the marginal cost of selling an empty seat is likely to be significantly lower than the lowest Virgin Blue fare of $65.9

2.2 Competition Not Competitors

One of the key criteria of Part IIIA is whether or not declaration will promote competition in a market other than the market for the declared service. It is not a study of whether or not declaration will affect a particular competitor in a downstream market. The Council concedes that its analysis blurs this distinction and concentrates on the impact of SACL aeronautical charges on low cost carriers and in particular Virgin Blue. The Council states:10

“The Council, recognises that as the current Domestic Passenger Market is made up of only two national carriers, namely Qantas and Virgin Blue, it may be difficult to differentiate the effect of conduct on the market generally and on individual competitors specifically.”

This focus on competitors rather than competition distorts the NCC’s analysis and so the basis for its Draft Recommendation.

On a broad interpretation of the market the analysis should focus on competition in domestic passenger market. This is the market definition applied by the Council to conclude that section 44G(2)(a) was satisfied.11 We note that, the Council left open the use of a

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9 Virgin Blue lowest fare between Sydney and Melbourne, Brisbane, Adelaide, Perth, Canberra or Cairns.
11 Ibid, paragraph 6.38, p 47.
n/e/r/a

narrower market definition, on the possibility there may be separate discount, leisure and business passenger markets.

While we very much doubt the narrower market definition to be valid, on either of the potential market definitions, the method of analysis should remain the same. That is, will access (or increased access) through declaration promote competition within the market, be that the domestic passenger market or within narrower discount, leisure and business markets.

Both Virgin Blue and Qantas are established domestic airlines that compete in all segments of the domestic passenger market. It follows that Airside Service charges must increase to such an extent that it results in one of the airlines no longer offering services or significantly reducing services to the relevant market. In our view, the likelihood of this outcome has not been established by the NCC.

2.3 Conclusion

The Council relies on Virgin Blue’s competitive vulnerability, to conclude that an increase in charges for Airside Services at Sydney Airport above competitive levels would adversely affect competition in the domestic passenger market.

However, a cursory analysis suggests that a number of facts relied on by the Council in drawing its preliminary conclusions about Virgin Blue’s vulnerability are either unsubstantiated or incorrect. Furthermore, the Council’s approach of focusing on competitors rather than competition distorts its analysis of whether access (or increased access) to Airside Services at Sydney Airport would materially increase competition in the domestic passenger market.
3 ESTIMATED COSTS AND BENEFITS OF RE-REGULATION

In the NCC’s Draft Recommendation, the Council assesses whether the costs of forgoing the current light-handed regulatory approach are outweighed by the benefits of declaration. The Council was unable to be affirmatively satisfied that the likely costs outweighed the potential benefits from declaration, although it noted the paucity of evidence available to it at the time of publishing its draft recommendations.

A cost benefit analysis was the basis for the Council’s preliminary evaluation of s. 44G(2)(f) of the TPA. This requires that the Council be satisfied that:

“Access (or increased access) to the service would not be contrary to the public interest.”

In the following sections we assess the likely net benefits of lower future air travel prices if they were to flow from declaration and compare them with the direct and indirect costs of regulating the Airside Service at Sydney Airport.

3.1 Benefits of Declaration

The Council has formed the preliminary view that SACL has both the ability and the incentive to exercise market power in the future. It follows that the benefits of declaration relate to the extent that declaration constrains SACL from increasing its prices and therefore avoids the costs associated with fewer passengers flying to Sydney Airport.

To calculate the cost of SACL exercising any market power it may possess, we have addressed the following questions:

- What are the likely changes in aeronautical charges at Sydney Airport given the current light-handed regulatory framework and the presence of non-aeronautical revenues?
- How do increases in aeronautical charges translate into higher air travel prices?
- How do increases in airfares affect passenger movements to Sydney Airport?
- What is the expected annual change in passenger numbers flying to Sydney Airport as a result of SACL increasing aeronautical charges? and
- What are the associated net costs of lost passenger movements?

We address each of these questions in the sections below.
3.1.1 What are the likely changes in aeronautical charges?

The NCC’s Draft Recommendation found that SACL has the incentive to increase prices above competitive levels, as they are not constrained by either non-aeronautical revenues or the threat of re-regulation. The Council concludes that prices may increase to a level such that they are:

“above competitive levels but below a level that was so high that the threat of re-regulation risked becoming a reality.”\(^{12}\)

Without actually specifying what this level is, the Council notes that a price increase in the magnitude of 100 per cent would likely attract criticism from the ACCC.\(^{13}\)

We disagree with the Council’s preliminary conclusion that the threat of re-regulation does not restrain SACL. Government policy is clear with:

“the objective being to facilitate efficient outcomes through commercial negotiations under the regulatory umbrella of price monitoring and a credible threat of re-regulation.”\(^{14}\)

The success of the current light-handed regulatory approach will depend on the credibility of the threat to re-regulate and the ability of the government to identify prices that are above competitive levels.

In the current light-handed regime, the government is informed of changes in SACL prices and service quality through the compulsory disclosure requirements. Furthermore, SACL’s two domestic aeronautical customers are in a position to inform government and the public in general of any SACL prices they consider are above competitive levels.

Professor Forsyth states that transparency in prices and services combined with the threat of re-regulation can constrain prices to competitive levels. In his submission to the Productivity Commission, Professor Forsyth states:

“The threat to regulate is not the same as actual regulation, but its impacts on the firm may well be much the same. The regulated firm does not know what behaviour on its part will induce the regulator to impose formal regulation.”\(^{15}\)

It follows that this uncertainty constrains SACL, since only prices that are equal to or less than competitive prices will assure SACL of continued light-handed regulation. SACL

\(^{12}\) Ibid, paragraph 6.215, p89.

\(^{13}\) Ibid, paragraph 6.207, p87.

\(^{14}\) Ibid, paragraph 10.24, p120.

\(^{15}\) Forsyth, P., Airport Price Regulation: Rationales, Issues and Directions for Reform, March 2001, p17.
would also expect that the higher its aeronautical charges are the greater is the probability of
the Airside Service at Sydney Airport being re-regulated.

Light-handed regulation was introduced to Australian domestic airports from 1 July 2002.
Since that time, there has been no suggestion that SACL has priced above competitive levels.
This outcome is consistent with Professor Forsyth contention that results from light-handed
regulation can be similar to those achieved from actual regulation.

The experience in New Zealand of light-handed regulation of airports suggests that if above
market returns do occur prices will only be marginally higher than those that could be
expected under formal price regulation. The Commerce Commission conducted an inquiry
into the three main New Zealand international airports during 2001-02. The Commerce
Commission identified that Auckland Airport’s 2001 prices were between 4.6 to 13.0 per cent
above its assessment of efficient prices.16 Wellington Airport’s 2001 prices were 0.1 to 10.4
per cent above the Commission’s determination of efficient prices.17 Christchurch Airport’s
prices were considered to be below competitive levels.18

The Commerce Commission criticised these prices on the basis that they represented
significant above market returns for the Auckland and Wellington airports. Auckland
Airport’s prices resulted in a return on capital that was 34.1 per cent above the Commerce
Commission’s point estimate for the efficient return on capital. Wellington Airport’s return
on capital was 9.7 per cent above the point estimate for the efficient return on capital.19

Notwithstanding our view that the current light-handed regulatory regime has constrained
prices at Sydney Airport to competitive levels, for the purposes of this cost/benefit test we
consider a rise in prices to 25 per cent above competitive levels to be well beyond any price
level that SACL could sustain without re-regulation. This price increase would represent a
return on capital that is approximately 50 per cent above a competitive market return.20

3.1.2 How do changes in aeronautical charges affect the total cost of air travel?

The extent to which aeronautical charges change the total cost of air travel depends on:

• the extent that increased charges are absorbed by airlines; and

16 Commerce Commission, Final Report, Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch
International Airports, 1 August 2002, page 228.
18 Ibid, page 309.
19 Calculated by NERA using 2001 prices. The actual return on capital for Auckland Airport was 11.28 percent and
11.52 per cent for Wellington Airport.
20 Based on the return on capital representing around half of SACL’s ‘allowable’ regulated revenues.
the way in which airline yield management systems distribute the increases to passenger fare classes.

As a conservative estimate, we have assumed that airlines will pass through the full increase in aeronautical fees to the domestic passengers. More likely, airlines will in fact absorb some proportion of any increase.

The extent that changes in aeronautical charges will affect final passenger fares will depend on:

- the per passenger aeronautical charge by SACL; and
- the average business and leisure fares from Sydney airport.

SACL currently uses a per passenger aeronautical charge of $2.88 (excluding security and GST).

There are two sources for estimates of the average fare to Sydney. They are:

- a report submitted by MTAA Superannuation Fund from Access Economics, which estimated that the average domestic fare would be around $444 per round trip (or $222 per passenger movement), including GST;21 and
- the Bureau of Transport & Regional Economics, Avline January 2003 publication states that, in November 2002, the lowest one-way discount fare generally available was $95.50 for Sydney-Melbourne and $254 for Sydney-Perth, while the economy one-way fares were $199 for Sydney-Melbourne and $589 for Sydney-Perth.22

It is conservative to assume that the average one-way fare leisure fare, in/out of Sydney is $100, and one-way business fares would average $200. Based on the assumption in section 3.1.1 of a 25 per cent increase in aeronautical charges, a straight pass through to all fare classes would result in an increase of 0.72 per cent on average leisure airfares, and 0.36 per cent on average business airfares.

However, as demonstrated in section 2.1.3 this is unlikely to occur as airlines would seek to minimise, through price discrimination, the impact of any increase in SACL’s aeronautical charges. In Appendix B, we describe a simple airline price discrimination model developed to test this hypothesis. This model changes fares so that airlines fully recover the increase in SACL aeronautical charges. The results of the model are illustrated below in Table 3.2.

21 The MTAA Superannuation Fund Submission to the Productivity Commission Inquiry into Airport Regulation, March 2001, p63.
22 Return fares have been halved to estimate the one-way ticket price.
Although this is a simple model, it demonstrates that airlines would benefit from using price discrimination to pass through increases in SACL aeronautical charges. Airlines would reduce the extent of passenger losses if their yield systems accounted for differences in final ticket prices, and the different price sensitivities of business and leisure passengers. The model demonstrates that an airline would minimise its losses if it collected the increase in SACL aeronautical charges from just business travellers.
**Table 3.2: Results of Airline Discrimination Model**

<table>
<thead>
<tr>
<th>Change both fares by $0.72</th>
<th>Change in Business pax</th>
<th>Change in Leisure Pax</th>
<th>Change in Business fares</th>
<th>Change in leisure fares</th>
<th>Lost Profits</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2,306</td>
<td>-138,693</td>
<td>$0.72</td>
<td>$0.72</td>
<td>$11,510,536</td>
<td></td>
</tr>
<tr>
<td>Same percentage change in fares</td>
<td>-4,305</td>
<td>-129,444</td>
<td>$1.34</td>
<td>$0.67</td>
<td>$11,130,395</td>
</tr>
<tr>
<td>Same percentage change in business and leisure passenger numbers</td>
<td>-8,451</td>
<td>-110,407</td>
<td>$2.64</td>
<td>$0.57</td>
<td>$10,353,691</td>
</tr>
<tr>
<td>Minimise lost profit</td>
<td>-33,402</td>
<td>0</td>
<td>$10.43</td>
<td>$0.00</td>
<td>$6,012,408</td>
</tr>
</tbody>
</table>
3.1.3 How do increases in airfares affect passenger numbers?

Most studies on the price sensitivity of air passengers address the topic of international rather than domestic travel. The paucity of economic studies is partly due to the lack of data on the purpose of domestic travel as well as difficulties in gathering domestic fare data.

Analysis by Frontier Economics\textsuperscript{23} assumes an average price elasticity of \(-1\), i.e., a one per cent increase in average airfares will result in a one per cent decrease in passenger movements. Frontier’s assumption relies on estimates reported by Battersby and Oczkowski (2001).\textsuperscript{24} Battersby and Oczkowski reported price elasticities for travel from Sydney to Melbourne, Brisbane and Coolangatta, which range from \(-0.81\) to \(-1.63\) for full economy and \(-0.10\) to \(-1.11\) for business. It is worth noting that the Sydney-Melbourne route, the largest domestic city pair, was relatively insensitive with elasticities of \(-0.81\) and \(-0.10\) for economy and business travel respectively.

We adopt a price elasticity of \(-0.60\) for business passengers and \(-1.37\) for leisure passengers, which is the average business and leisure elasticities in the Battersby and Oczkowski study.

3.1.4 Calculating the likely change in passenger numbers

The change in passenger numbers will depend on the number and composition of domestic passengers flying to and from Sydney Airport.

Statistics reported by DOTARS show that in 2001/02 Sydney Airport had 15.1 million domestic passenger movements.\textsuperscript{25} Premium passengers comprised 7.11 per cent of the domestic passenger market in 2001-02.\textsuperscript{26}

Applying the parameters contained, in sections 3.1.1 to 3.1.3, and the principle of price discrimination by airlines, our analysis shows an increase in aeronautical charges of 25 per cent would result in business airfares increasing by $10.43 or 5.21 per cent. As a result business travel to Sydney Airport would fall by 33,402 passenger movements a year or 3.11 per cent. Because the optimal way to recover the increase in aeronautical charges would involve an increase in premium business fares, there is no increase in leisure fares and no loss of leisure passengers. This represents a modest 0.2 per cent decrease in total passenger movements to Sydney Airport.

\textsuperscript{23} Frontier Economics, Virgin Blue Application for Declaration of Airside Service at Sydney Airport Profit Maximising Monopoly Prices for the Airside Service, June 2003, p10.


\textsuperscript{25} AVSTATS Table 92: Schedule Regular Public Transport Airport Traffic Data 1990-01 to 2000-2001 Sydney: Total Domestic Passengers 2000-01.

\textsuperscript{26} AVSTATS, Time-series tables, ‘Airline industry monthly summaries, 1984-2003.
3.1.5 Net Costs of Lost Passengers

Increases in prices for air travel will invariably result in lost value to consumers. However, it is important when calculating the net cost that these losses are offset by the savings society accrues from no longer providing these services.

If the aviation industry is subject to constant returns to scale then the long-run marginal cost of providing passenger services will equal the current average fare.

In the case of the airline industry there is little reason to presume anything but a validly competitive market. The domestic passenger market is now characterised by aggressive competition in prices and services, as well as participant entry and exit. Similarly, there is little reason to believe that fares are currently different from the average cost of providing that service. It is therefore reasonable to assume that the long-term cost savings of a passenger not flying is equal to our assumed airfares of $200 for business passengers and $100 for leisure passengers.

The values estimated in sections 3.1.1 to 3.1.4 were that:

- SACL aeronautical charges increase by $0.72;
- the average business class fare is $200 and $100 for leisure passengers;
- the price elasticity for business passengers is -0.6 and -1.37 for leisure passengers; and
- airlines will minimise the impact of the increase in SACL charges through price discrimination and place all the increase on business travellers, resulting in business fares increasing on average $10.43.

Using these values and accounting for the change in SACL aeronautical charges and the price elasticity of passengers who no longer fly, the average value air travel forgone is $205.22.

The net cost of SACL increasing aeronautical charges is therefore equal to the number of passengers no longer travelling multiplied by the difference between the value of forgone travel by passengers less the long-run cost of providing that service. We estimate that this will be in the order of $174,191 in the first year, \((33,402)(205.22 - 200)\). Although the net cost of $174,191 may appear to be low, those business passengers who no longer fly all valued air services at less than $10.42 more than the cost of providing the service. This net loss is illustrated in Diagram 3.1 as the shaded triangle ABC.
Diagram 3.1: Net Cost of Lost Passengers

3.2 Costs of Regulation

The first step in evaluating the cost of regulation is to identify all costs associated with declaration. For the purposes of our cost benefit test, these costs would be then need to be reduced by the cost of the current light-handed regulatory regime.

Declaration of the Airside Service at Sydney Airport under Part IIIA of the TPA, would create the right of airlines and SACL to seek binding arbitration by the Australian Competition and Consumer Commission (ACCC) if negotiations fail. The process for a binding agreement between an airline and SACL can involve up to four distinct stages, ie:

- commercial negotiations between the individual airlines and SACL;
- binding arbitration by the ACCC;
- application for review of the ACCC to the Australian Competition Tribunal; and
- appeal on questions of law to the Federal Court.
Under the current light-handed regime access to Sydney Airport is arranged through commercial negotiations. SACL is required to notify the Federal Transport Minister of any changes in aeronautical charges.

Since in both instances SACL and the airlines will be required to undertake commercial negotiations, the net cost of declaration will be the direct costs to all parties of ACCC arbitration plus the indirect costs of SACL operating in a regulated environment.

In the following sections we have estimated the likely future direct and indirect costs of declaration.

### 3.2.1 Direct Regulatory Costs

Access regulation gives rise to a range of direct costs that must be set against its benefits. These include:

- administrative costs for government;
- direct costs for businesses to provide information and prepare arguments in the course of an arbitration; and
- compliance costs on SACL of any decision.

The Commerce Commission of New Zealand considered direct costs of regulation in its 2002 inquiry into Airfield Activities. Direct costs considered by the Commerce Commission included:

- litigation and consultation costs by airlines and airports;
- the cost to airlines and airports of the Commerce Commission inquiry; and
- the regulator’s costs for the inquiry and the estimated cost of administering the decision.

The Commission estimated that the direct costs of price control for a single airport to be NZ$1.1-NZ$2.2 million in a review year, and NZ$0.5 – NZ$1.1 million in other years split evenly between the regulator and market participants. Over a five-year regulatory period the annual average is between NZ$0.62 – NZ$1.32 million per year for one airport.

Estimates of the cost of declaration in Australia are limited by the relatively few cases of declaration. In the two cases where declaration has occurred no arbitration has taken place.

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28 Ibis, page 179.
Given that Virgin Blue already has access to the Airside Service, and has declined to withdraw its application for declaration, it seems reasonable to assume that arbitration is a highly likely proposal. Any arbitration is likely to take a similar form to the ACCC airport review of 2001.

For the May 2001 review of Sydney Airport, SACL estimated that its direct compliance costs were in the order of $3.0 million. The May 2001 review involved SACL undertaking both commercial negotiations and direct submissions to the ACCC. SACL estimated that its direct costs were evenly spread over the two work streams. It is therefore, reasonable to assume that SACL’s direct net cost of declaration will be $1.5 million in the year of arbitration.

ACCC does not provide an estimate of its costs in making a determination, however, as a guide the New Zealand Commerce Commission estimated that the regulator would spend an amount equal to the market participant’s costs, which was $1.5 million. The only published ACCC cost information is the six specialist consultancies commissioned for the May 2001 review of Sydney Airport, at a cost over $250,000. In addition, the ACCC would have incurred staff and overhead costs in the publishing of its three reports and in conducting two public discussion forums. It is reasonable to assume that the ACCC would spend $1.5 million to arbitrate any conflict between access seekers and SACL.

In addition, the May 2001 review Sydney Airport also attracted 35 submissions from other interested parties including airlines, other Australian airports, and air transport associations.

Conservatively, the direct cost for an initial arbitration to all participants would be in the order of $3.0 million. In addition, both the ACCC and SACL would have ongoing oversight and compliance costs. Guided by the New Zealand Commerce Commissions decisions, the likely ongoing costs of regulation are approximately 50 per cent of the costs incurred in a review year.

Therefore, the net direct cost of declaration is likely to be in the order of $3 million in the year of any arbitration with ongoing monitoring and compliance cost of approximately $1.5 million a year. Assuming a 5-year determination period the average net annual cost is in the order of $1.8 million per year.

3.2.2 Indirect Regulatory Costs

Potentially the greatest risks associated with of re-regulating Sydney Airport are the indirect costs associated with regulatory failure. The Productivity Commission concluded that due to the severe informational problems facing regulators there is “ever-present” risk of regulatory failure. The risks of re-regulation include:

constraining the scope for Sydney Airport to deliver and price aeronautical services efficiently;
• reduced incentives to invest in facilities to provide new essential services or to maintain existing services; and
• wasteful strategic behaviour by both SACL and airlines.

The principle consequence of these risks is on the investment behaviour by SACL, and in particular any investment in a second Sydney airport. The second Sydney airport represents a significant future investment with DOTARS estimating the costs of the second airport to be in the range of $4 billion to $5.8 billion for an airport capable of handling 30 million passengers per year.³¹

Sydney will require a second airport when the current airport at Kingsford Smith is no longer able to accommodate airline traffic and becomes constrained. Expectations of when Sydney Airport will become constrained are based on:

• projections of future passenger growth;
• the ability of SACL to utilise landing slots which is limited by their 11pm to 6am curfew and 80 movement-an-hour cap; and
• expected changes in technology, such as increased aircraft size.

SACL’s recently released, ‘Preliminary Draft Master Plan 03/04’, forecasts that Sydney Airport will be able to handle all projected traffic for the next 20 years. This includes an increase in passenger movements to 68.3 million in 2022/23 from 26.4 in 2000/01.

We have modelled two scenarios of indirect costs. In the first re-regulation results in the second Sydney airport being built one year earlier than expected. This can occur if declaration results in SACL receiving an above market return on their assets or if declaration causes inefficiencies that result in Sydney airport becoming constrained one year earlier than under the current light-handed regime.

In the second scenario we have measured the cost of SACL delaying the construction of the second Sydney airport due to declaration not providing sufficient returns.

3.2.2.1 Second Sydney airport built one year early

The cost of a second Sydney airport being built one year earlier is that society invests in the airport earlier than would have been the case had the Airside Service at Sydney Airport not been declared. This is equal to the opportunity cost of the funds invested in the second

Sydney airport for the year. In a competitive capital market the opportunity cost of these funds will equal the return on capital invested in the second airport.

For our estimate we have used the following parameters:

- declaration results in bringing forward by one year the construction of a second Sydney airport from 2023/24 to 2022/23;
- the $4.0 billion cost in real terms of a second Sydney airport;
- the real cost of funds is 6.8 per cent;\(^{32}\) and
- the nominal cost of funds is 8.87 per cent.\(^{33}\)

The analysis suggests that the cost of bringing forward by one year the construction of a second Sydney airport is $272 million in 2022/23.\(^{34}\) The net present value of construction in 2003/04 is $83 million,\(^{35}\) which equates to average annual cost of $7.3 million.\(^{36}\)

3.2.2.2 Second Sydney airport built one year later

The cost of a delay in the construction of the second Sydney airport will depend on the economic cost of Sydney airport being constrained. The economic cost is equal to the forgone economic activity that would have been generated but for the constrained airport.

For our estimate we have used the following parameters:

- declaration results in delaying by one year the construction for a second Sydney airport from 2023/24 to 2024/25;
- the cost in lost economic activity is equal to double the cost of a second Sydney airport, which is $4.0 billion in real terms;\(^{37}\)
- the real cost of funds is 6.8 per cent; and
- the nominal cost of funds is 8.87 per cent.

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\(^{32}\) Based on a real weighted cost of capital of 6.8 per cent as determined in the May 2001 review of Sydney Airport, page 200.

\(^{33}\) Based on a real weighted cost of capital of 6.8 per cent and assumed inflation rate of 1.98 per cent as determined in the May 2001 review of Sydney Airport, page 200.

\(^{34}\) $4 billion cost of the second airport multiplied by the real cost of funds.

\(^{35}\) $272 million discounted by the real cost of funds.

\(^{36}\) $83 million multiplied the nominal cost of funds.

\(^{37}\) The economic cost estimate is consistent with the DOTARS EIS estimate of the economic benefits of a second airport at Badgerys Creek.
The result is that delaying by one year the construction of a second airport will cost $544 million in lost economic activity in 2024/25. The net present value of the lost economic activity in 2003/04 is $146 million, which equates to average annual cost of $12.9 million.

3.2.2.3 Conclusion

The potential indirect costs of declaration, and so the re-regulation of Sydney Airport, are significant. If regulatory failure results in a one-year movement in the construction of the second Sydney airport the average annual cost would be in the range of $7.3 million to $12.9 million. Therefore, even if the Council determines that declaration results in five per cent chance of regulatory failure the expected cost is in the range of $365,000 to $645,000 per year.

3.3 Conclusion of the Benefits and Costs of Declaration

The current light-handed regime has successfully constrained aeronautical charges at Sydney Airport to competitive levels. For the purpose of our cost benefit analysis we have assumed that SACL increases aeronautical charges by 25 per cent. This represents a return on capital that is approximately 50 per cent above competitive levels, which would certainly lead to criticism from Virgin Blue, Qantas and the government, and more than likely result in re-regulation.

However, if SACL did raise aeronautical charges by 25 per cent, it is likely that airlines would concentrate price increases to their highest and least price sensitive passengers. A full pass through of the increased charges would result in a fall of approximately 33,400 passenger movements to and from Sydney Airport at an annual net cost of $174,190.

The net benefit of declaration is the potential to constrain SACL from increasing aeronautical prices to above competitive levels. However, this comes at significant cost and risk. The direct costs of declaration of Sydney Airport are in the order of $1.8 million per year. However, this is overshadowed by the costs associated with the risk of regulatory failure, that are in the range of $7.3 to $12.9 million per year. Therefore, even a five per cent risk of declaration causing a retiming of the second Sydney Airport will lead to an expected cost of $365,000 to $645,000 per year.

Our findings that the cost of regulation far outweigh any anticipated benefit is consistent with the Productivity Commissions findings that regulation of Australian airports was unwarranted.38

4 CONCLUSION

The Council’s preliminary conclusion to recommend declaration of Airside Services at Sydney Airport is unsound. The Council’s analysis of the effects of increased charges for Airside Services at Sydney Airport on competition in the domestic passenger market is based on unsubstantiated and incorrect details of the Australian aviation market. In addition, the likely direct and indirect costs would far outweigh any of the anticipated benefits associated with declaration.
APPENDIX A - EXAMPLE OF PRICE DISCRIMINATION

A simple example of price discrimination can demonstrate that an increase in marginal costs of a jointly produced service will result in price increases to the least price sensitive good. Imagine that airlines face two separate demand functions:

- a perfectly inelastic demand ('business' demand) for unconditional fares of X seats per hour; and
- a perfectly elastic demand ('leisure' demand) for conditional fares at a price of $Z per seat, i.e., it is possible to sell as many unconditional seats as desired at $Z but it is not possible to sell any seat at a higher price.

Let it also be the case that in order to provide the scheduling demanded by those wanting unconditional fares, each plane has (1-A)% of capacity (Q) on average available for conditional fares. That is, on average, consumers of unconditional fares account for A% of capacity required to provide the unconditional service. This means that for every one unconditional fare there is jointly produced \[\frac{1}{(1-A) - 1}\] conditional fares.

If the airline industry is competitive then competition will force average fares to equal average cost per seat in the long run. Let us assume that average cost per seat such that:

\[
\text{Average costs} > \$Z > \text{marginal cost}^{39}
\]

It is easy to show that, given the above demand conditions, airlines will charge a price of $Z per seat for conditional fares and will make, on average, (1-A)\times Q seats available at such fares.

However, because the airline makes a 'loss' (relative to average cost) on all conditional fares it must charge above average cost for all unconditional fares by enough to break even. This simply reflects the fact that those who demand the level of scheduling and flexibility associated with unconditional fares must pay the cost of providing such services that cannot be recovered from other fare classes.

This results in the following price structure:

\[
P_{\text{Conditional}} = \$Z
\]

\[
P_{\text{Unconditional}} = \frac{AC \times Q - (1-A) \times Q \times \$Z}{A \times Q}
\]

\[^{39}\text{Average cost is long run avoidable costs associated with removing the flight/route from the schedule. Marginal cost is the marginal cost of filling an empty seat on a scheduled flight.}\]
Appendix A – Example of Price Discrimination

\[ \frac{AC}{A} - \left( \frac{1 - A}{A} \right) \times Z \]

In words, the price of an unconditional ticket is made up of two components:

\( \frac{AC}{A} \) = the price that would hold if there were no contributions to fixed costs from conditional fares; less

\( \left( \frac{1 - A}{A} \right) \times Z \) = the average contribution to fixed costs from unconditional fares.

The higher the ‘excess’ capacity required to provide the demanded unconditional schedule, i.e., the higher is proportion of conditional passengers (1-A), the higher the price for an unconditional fare.

The proceeding analysis has not relied on any assumption regarding costs except that:

Average costs > $Z > marginal cost

That is, unconditional fares make some contribution to fixed costs, but not sufficient to recover average costs without relying on unconditional fares.

It is plain that any increase in marginal costs that did not cause marginal costs to rise above ‘$Z’ will have no impact on unconditional fares but will be more than fully reflected in unconditional fares. This is because it does not make commercial sense to attempt to pass through an increase in marginal costs to the unconditional fare as it will result in too drastic a loss of sales and a loss in contributions to fixed costs from this fare class.

Any firm that attempted to fully pass on the increase in marginal costs to conditional fares would lose so much custom they would, in order to cover average costs, have to increase unconditional fares by more that if they had simply left conditional fares constant.

Therefore, in this example any increase in marginal cost would be fully passed through to unconditional (‘business’) fares.
APPENDIX B - SIMPLE AIRLINE YIELD MODEL

The simple airline yield model demonstrates that it is rational for airlines to account for passenger characteristics when deciding how to pass through any potential increases in SACL aeronautical charges.

In this appendix we have modelled four potential airline pricing responses. They are:

A. The airlines increase all fares by the same amount equal to the increase in the SACL aeronautical charges.

B. The airlines account for the differences in fares so that they increases all fares by the same proportion.

C. The airlines account for differences in price responsiveness of passengers and change prices so that both business and leisure traffic change by the same proportion.

D. The airlines attempt to minimise their losses but still collect the cost of the increase in the SACL aeronautical charges.

The model relies on a number of inputs, ie:

- passenger movements into and out of Sydney Airport, are based on DATORS data for Sydney airport in 2000/01;\(^{40}\)
- the proportion of business and leisure passengers is based on the national average of premium passengers in 2001/02;\(^{41}\)
- the change in SACL aeronautical charges is 25 per cent in line with our estimate in section 3.1.1;
- average business class fares of $200 and average leisure class fares of $100 are consistent with our estimate in section 3.1.2; and
- elasticities for business of −0.60 and leisure of −1.37 is consistent with our estimate in section 3.1.3.

The model was constrained to ensure that fares are increased so that airlines fully recover the increase in SACL aeronautical charges. The results of our model is listed below.

\(^{40}\) AVSTATS Table 92: Schedule Regular Public Transport Airport Traffic Data 1990-01 to 2000-2001 Sydney: Total Domestic Passengers 2000-01
A - Straight pass through to all passenger fares

### Airline Yield Management Model

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Passengers</td>
<td>15,100,000</td>
</tr>
<tr>
<td>Proportion of business passengers</td>
<td>7.11%</td>
</tr>
<tr>
<td>Proportion of Leisure passengers</td>
<td>92.89%</td>
</tr>
<tr>
<td>Number of business passengers</td>
<td>1,073,610</td>
</tr>
<tr>
<td>Number of Leisure passengers</td>
<td>14,026,390</td>
</tr>
</tbody>
</table>

#### Fares

- **Business**: $200
- **Leisure**: $100
- **Weighted Average Fare**: $107

#### Elasticities

- **Business**: -0.60
- **Leisure**: -1.37

#### Yield management system

<table>
<thead>
<tr>
<th>Description</th>
<th>Dollars</th>
<th>Per cent</th>
</tr>
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<tbody>
<tr>
<td>Change in business fares</td>
<td>$0.72</td>
<td>0.36%</td>
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<tr>
<td>Change in leisure fares</td>
<td>$0.72</td>
<td>0.72%</td>
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</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
<th>Per cent</th>
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</thead>
<tbody>
<tr>
<td>Change in business passengers</td>
<td>-2,306</td>
<td>-0.21%</td>
</tr>
<tr>
<td>Change in leisure passengers</td>
<td>-138,693</td>
<td>-0.99%</td>
</tr>
</tbody>
</table>

- **Total lost passengers**: -140,999
- **Lost revenue**: -$14,330,517
- **Marginal Cost**: $20.00
- **Lost Profit**: -$11,510,536
- **Total revenue raised by airlines**: $10,770,481
- **Total cost of charges**: $10,770,481
B - Discriminate to pass same percentage change in fares

### Airline Yield Management Model

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<tr>
<td>Business</td>
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<th>Yield management system</th>
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<tr>
<td>Change in business fares</td>
<td>$1.34</td>
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<tr>
<td>Change in leisure fares</td>
<td>$0.67</td>
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<tr>
<td>Change in business passengers</td>
<td>-4,305</td>
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<tr>
<td>Change in leisure passengers</td>
<td>-129,444</td>
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<tr>
<td>Lost passengers</td>
<td>-133,749</td>
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<tr>
<td>Lost revenue</td>
<td>-$13,805,377</td>
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<tr>
<td>Marginal Cost</td>
<td>$20.00</td>
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<tr>
<td>Lost Profit</td>
<td>-$11,130,395</td>
</tr>
<tr>
<td>Total revenue raised by airlines</td>
<td>$10,775,701</td>
</tr>
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C - Discriminate to result in same percentage change in passenger numbers

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**Fares**

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**Elasticities**

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<td>0</td>
<td>0.00%</td>
</tr>
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</table>

| Lost passengers | -33,402 |
| Lost revenue    | -$6,680,453 |
| Marginal Cost   | $20.00  |
| Lost Profit     | -$6,012,408 |
| Total revenue raised by airlines | $10,847,950 |
| Total cost of charges | $10,847,950 |