



**Productivity Commission Inquiry into  
Price Regulation of Airport Services**

Response to Issues Paper

*July 2006*

Prepared by



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## Executive Summary

When the Commonwealth Government removed airport price controls in 2002 some prophesised doom, or at least all the bad that is rhetorically associated with monopolies. As of July 2006, no substantial body of evidence has emerged to justify those fears.

The airports regime has worked well. There is no policy case to reimpose price controls at Melbourne Airport or other Australian airports at this time.

The airports regime is entirely consistent with Competition and Infrastructure Reform Agreement agreed to by COAG on 10 February 2006. Melbourne Airport would note that in order to be consistent with the pricing principles of that Agreement, it is necessary for the Commonwealth to maintain its policy on the dual till.

Melbourne Airport produces services at or around world's best practice levels. This enables it to set charges that are relatively low by international standards whilst still generating attractive returns for its shareholders. Quality remains high. Whilst Melbourne Airport may be the industry leader, other Australian airports are not far behind in world terms.

The prices Melbourne Airport put in place on 1 July 2002 were part of an overall commercial package. The prices were arrived at after extensive consultation with airline users including the provision of detailed financial information. These prices were accepted by airlines without dispute or any counter offer being made. Further, the price increase was the lowest in percentage and absolute terms of any major airport and prices remain the lowest in Australia and indeed among the lowest in the world.

Melbourne Airport indicated its intention to spend \$142 million over the five year period without seeking addition real price increases. In fact it has spent over \$180 million.

The five largest airports in Australia continue to occupy dominant market positions. It is appropriate that they should remain subject to price monitoring. There are matters with in the current policy that need to be addressed to provide clarity and certainty for all market participants. These are

1. The structure of the monitoring process, and especially the regulatory accounts;
2. Clarity around certain pricing issues; and
3. Provision of an effective dispute resolution framework that provides certainty to all parties, encourages by its design commercial resolution, and has proper regard to the Government's policy.

The following chapters address these issues in detail.

## Glossary

ACCC	Australian Competition and Consumer Commission
ACS	Australian Customs Services
ADJR Act	<i>Administrative Decisions (Judicial Review) Act 1977(Cth)</i>
Airports Act	<i>Airports Act 1997 (Cth)</i>
Airservices	Airservices Australia
ARFF services	Aviation rescues and fire fighting services currently provided at Australian airports by Airservices.
ASK	Available seat kilometres
AUD	Australian dollars
BARA	Board of Airline Representatives of Australia
BTRE	Bureau of Transport and Regional Economics
COAG	Council of Australian Governments
Commission	Productivity Commission
Council	National Competition Council
CTFR	Counter Terrorism First Response – a service provided by the Australian Protective Service
DET	Domestic Express Terminal now decommissioned, built and operated by Melbourne Airport to facilitate the entry of Virgin Blue and Impulse
Direction	Direction 24 made pursuant to Part VIIA
DOTARS	Department of Transport and Regional Services
DORC	Depreciated Optimised Replacement Cost
FAC	Federal Airports Corporation
ICAO	International Civil Aviation Organisation
LCC	Low cost carrier
Minister	The Minister of the Commonwealth responsible for the administration of the Airport Act
MTOW	Maximum take-off weight
NNI	Necessary New Investment
NZD	New Zealand Dollars, 1 NZD = 0.85 AUD
Part IIIA	Part IIIA of the Trade Practices Act
Part IV	Part IV of the Trade Practices Act
Part VIIA	Part VIIA of the Trade Practices Act
Principles	The principles made by the Government relating to airport conduct, including the current review principles and others that might apply in the future.
Regulations	The regulations made pursuant to Part 7 of the Airports Act
RPK	Revenue Passenger kilometres
SDR	Special Drawing Rights, 1 SDR = 2 AUD (approx)
T1	Terminal 1 at Melbourne Airport operated under lease by Qantas
T2	Terminal 2 at Melbourne Airport operated by Melbourne Airport for international services
T3	Terminal 3 at Melbourne Airport operated by Melbourne Airport for domestic operations, primarily used by Virgin Blue and Rex, formerly leased by Ansett
Trade Practices Act	<i>Trade Practices Act 1974 (Cth)</i>
Tribunal	Australian Competition Tribunal

# 1 Melbourne Airport

This chapter provides the Commission with a range of key information about Melbourne Airport's business - it is primarily focused on the aeronautical business and the aviation industry more generally. As the Commission has access to the monitoring reports produced by the ACCC, when making comparisons with other airports the focus is strongly, although not entirely, on similar airports overseas. Melbourne Airport has commissioned two international benchmarking reports by TRL which are included as appendices to this submission.

## 1.1 Corporate structure

Melbourne Airport is the trading name of Australia Pacific Airports (Melbourne) Pty Ltd (APAM). This company holds the airport lease acquired for \$1,307 million for Melbourne (Tullamarine) Airport granted by the Commonwealth Government on 2 July 1997 under the Airports Act and several similar leases that have been subsequently granted over land ultimately needed for the airport.

APAM is wholly owned by Australia Pacific Airports Corporation Pty Ltd (APAC). APAC also has a 90% interest in Australia Pacific Airports (Launceston) Pty Ltd (APAL), the company that holds the airport lease for Launceston Airport granted by the Commonwealth Government on 28 May 1998. The City of Launceston has the remaining interest in APAL. This lease was acquired for \$17 million.

APAC continues to have the same four shareholding entities it had in 1997. Three of these are major Australian funds managers. They invest on behalf of their clients through both listed and unlisted vehicles. The fourth, BAA plc is the world's largest airport operator. It operates seven airports in the UK, two in continental Europe and has interests in other Australian airports in Western Australia and the Northern Territory. BAA was taken over by the Ferrovial group of companies on 26 June 2006.

Table 1.1 show the distribution of equity in APAC at the time of the last review in 2001 and now.

	2001	2006
AMP Capital Investors	49.9%	40.99%
RREEF Infrastructure (a division of Deutsche Asset Management)	25.0%	26.06%
Hastings Funds Management	10.0%	13.13%
BAA plc	15.1%	19.82%

**Table 1.1: Shareholding of APAC**

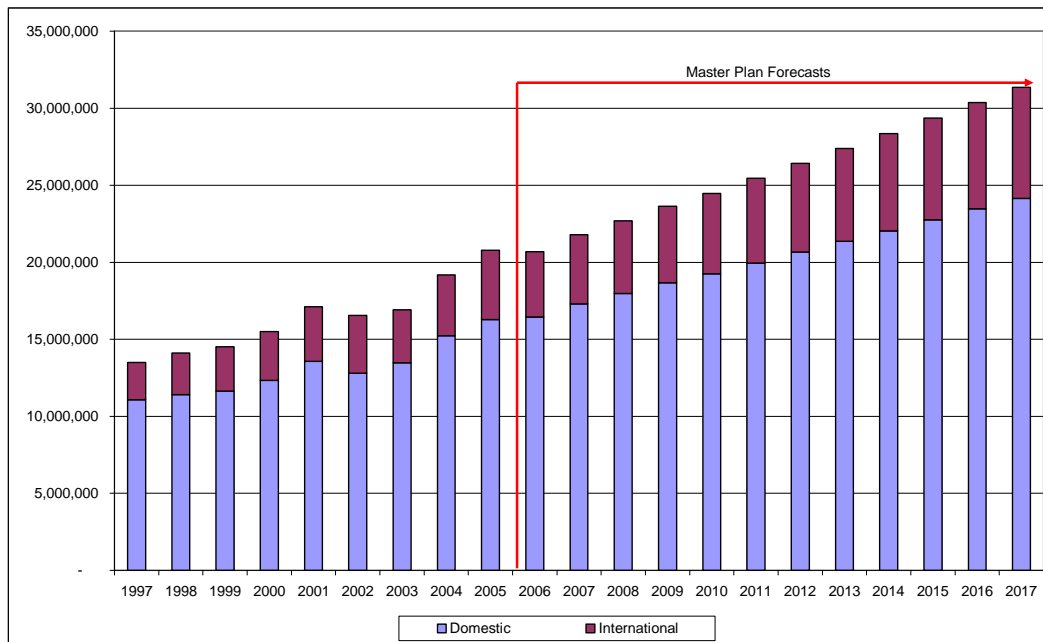
Source: Melbourne Airport

## 1.2 Demand

### *Total passengers*

Since 1997 total passenger numbers through Australian airports have grown on average by 4.7% per annum<sup>1</sup>. In 2004/05, Melbourne Airport’s 20.3 million passengers accounted for 21% of all passenger movements through Australian airports. Melbourne Airport experienced the second highest rate of growth at 5.3%, slightly below that of Brisbane at 5.9%<sup>2</sup>.

The following chart provides long term passenger forecasts for Melbourne Airport.



**Figure 1.1: Passenger throughput of Melbourne Airport**  
Source: Melbourne Airport (2003)

### *Domestic passengers*

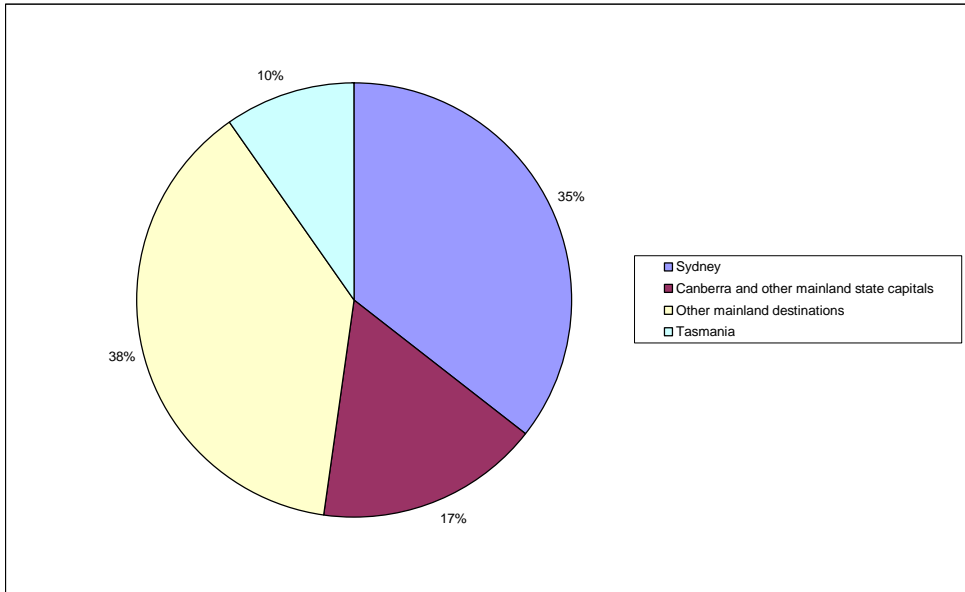
Since 1997 domestic (including regional) passenger numbers through Australian airports have grown on average by 4.6% per annum. In 2004/05, Melbourne Airport’s 16.1 million domestic passengers accounted for 21% of domestic passenger movements through Australian airports. Melbourne Airport experienced

<sup>1</sup> Growth rates in this submission are cumulative average growth rates unless expressly described otherwise.

<sup>2</sup> BTRE (2006)

the third highest rate of growth at 4.7% over that period, slightly below that of Perth at 4.8% but much lower than Brisbane at 6.0<sup>3</sup>. Brisbane’s strong growth is largely due to differential rates of population growth between Victoria and south-east Queensland over the period.

The Australian domestic aviation industry has a highly concentrated route structure<sup>4</sup>. This enables the industry as a whole, both airline and airports, to develop reasonable economies of scale on a route by route basis. The following figure shows that over half of the domestic passengers travelling through Melbourne Airport are on journeys between Melbourne and the other mainland state capitals or Canberra.

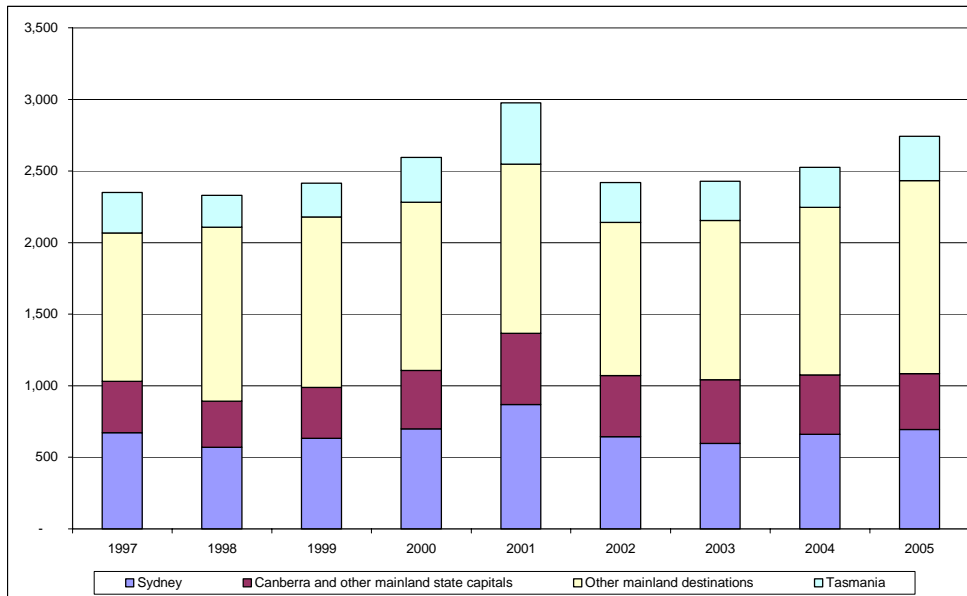


**Figure 1.2: Melbourne Airport arriving and departing domestic passengers 2004-05**  
 Source: Melbourne Airport

In more recent times there has been a slight drift towards non-capital city destinations on the mainland. This is a reflection of the introduction of direct services to a range of holiday destinations on the New South Wales and Queensland coasts since the entry of Virgin Blue, Impulse and more recently Jetstar. That said the next figure shows that supply has remained relatively stable over time.

<sup>3</sup> ibid

<sup>4</sup> See McKinsey (1995, p115-126)



**Figure 1.3: Weekly domestic services to and from Melbourne Airport**  
 Source: Melbourne Airport

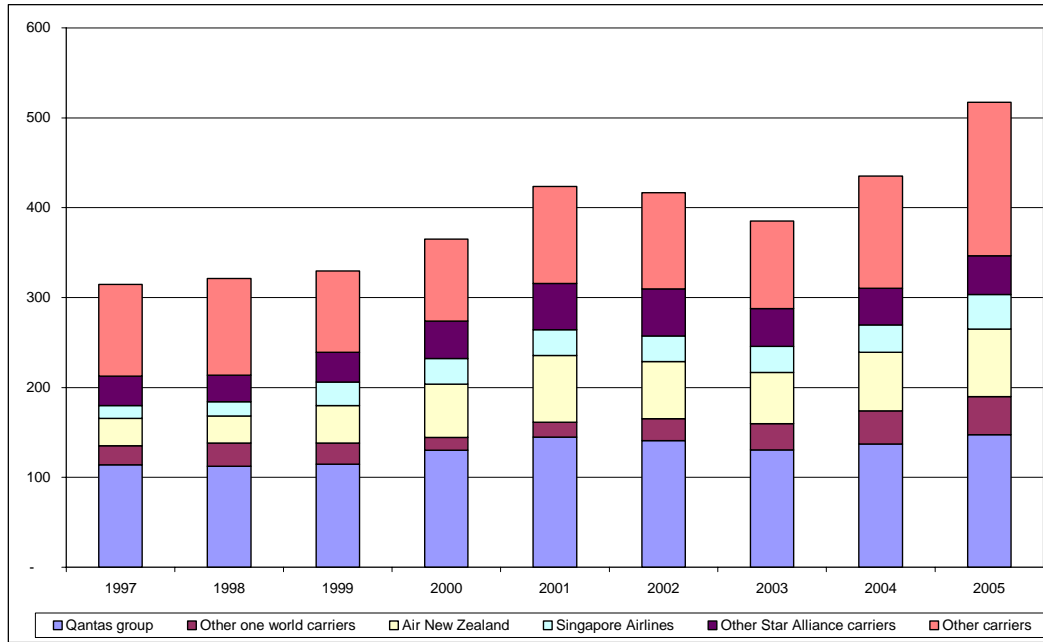
*International Passengers*

Since 1997 international passenger numbers through Australian airports have grown on average by 5.3% per annum. In 2004/05, Melbourne Airport’s 4.1 million international passengers accounted for 21% of international passenger movements through Australian airports. Sydney dominates with 47%. Melbourne Airport experienced the highest rate of growth at 7.7%. This was followed by Adelaide and Brisbane with 5.6%. It should be noted Adelaide accounts for less than 2% of international passenger movements currently<sup>5</sup>.

The rapid growth through Melbourne Airport has largely been attributable to the growth in services by foreign carriers. Most notable has been the significant expansion of Singapore Airlines and to a lesser extent Air New Zealand. Carriers not part of the two major airline alliances – Star and oneworld – have also played an important role. The most notable of these has been Emirates. Qantas on the other hand has provided relatively little additional capacity over this period. One of its major alliance partners, British Airways, left the market, returned and has since left again. The following chart shows the number of services operated by airlines each week.

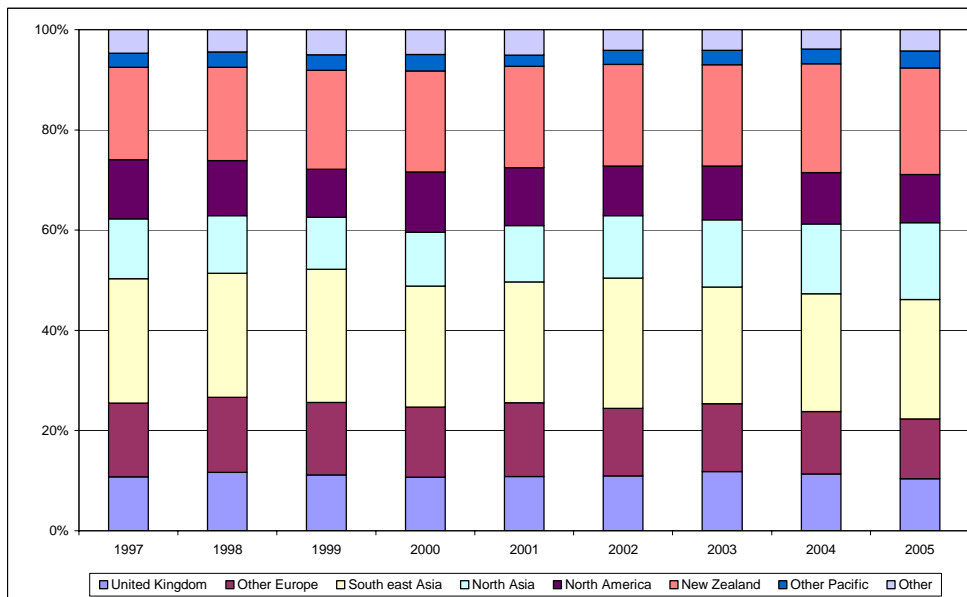
<sup>5</sup> BTRE (2006)





**Figure 1.4: Weekly international services at Melbourne Airport**  
Source: Melbourne Airport

Interestingly, the following chart shows origin-destination patterns have been stable.



**Figure 1.5: Distribution of international passenger origin and destinations**  
Source: ABS Catalogue 3401.0 - Overseas Arrivals and Departures

Melbourne is a largely well established market. Melbourne Airport believes that it will not be able to sustain previous levels of growth without further access rights being provided to international carriers. Indeed, growth has already started to slow. Melbourne Airport therefore continues to be an active proponent of further liberalisation of Australia's international aviation policy, especially as it appears that the additional capacity is servicing well established existing markets. There are airlines prepared to operate services to Melbourne who cannot get rights, at the same time other carriers that have access to rights (such as Qantas and British Airways) chose not to use them. Similarly Melbourne Airport does not support the collusive Tasman Networks Agreement proposed by Qantas and Air Zealand.

Any restriction on international services not only reduces the value of Melbourne Airport's business but it is clear that it inhibits tourism growth in Victoria, Tasmania and possibly South Australia. Any restriction of direct international flights could be expected to hinder economic development more generally<sup>6</sup> and in particular the development of education markets in Melbourne and major regional cities in Victoria. Also, from a social aspect, as Melbourne continues to attract and retain diverse and significant numbers of overseas immigrants, any restriction on international services puts at risk the maintenance of family and cultural ties.

### *Freight*

Since 1997 international freight throughput (by weight) through Australian airports has grown on average by 3.5%. In 2004/05 Melbourne Airport handled just over 200,000 tonnes of international freight that accounted for 29% of all international freight through Australian airports. Sydney accounted for 48%. Melbourne Airport experienced the third highest rate of growth at 2.7%. Both Adelaide and Perth grew at 3.5% although their current market shares are 2% and 8% respectively<sup>7</sup>.

International freight movements (almost exclusively Boeing 747 aircraft) have grown at less than 1%. Whilst significant development of freight terminals has occurred in recent years, Melbourne Airport has not been required to develop any additional freight international aprons nor has it any plans to do so in the near future. This shows the importance of international passenger services to the freight sector and in particular, the importance to freight operators having access to carriers who have well distributed networks in Asia, Europe and North America.

Like international freight, the majority of domestic freight is carried in passenger aircraft. That said Australian Air Express conducts a dedicated freight operation using larger jet aircraft. There are also a number of smaller operators although they operate much smaller aircraft.

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<sup>6</sup> See Mundy (1995, p41)

<sup>7</sup> BTRE (2006)

The quality of data on domestic freight in Australia is poor. Data is not available on domestic freight tonnages that pass through Melbourne Airport. Domestic freighter movements have grown at 6.6%. However, care should be taken as at least part of this growth will reflect the replacement by small operators of capacity provided by Ansett that has not been replicated by Virgin Blue.

Whilst freight is an important part of Melbourne Airport's property business and of the businesses of its airline customers, issues relating to freight are not significant in the terms of the Commission's inquiry. As such, there is little discussion of freight issues in this submission beyond the above.

### 1.3 Efficiency

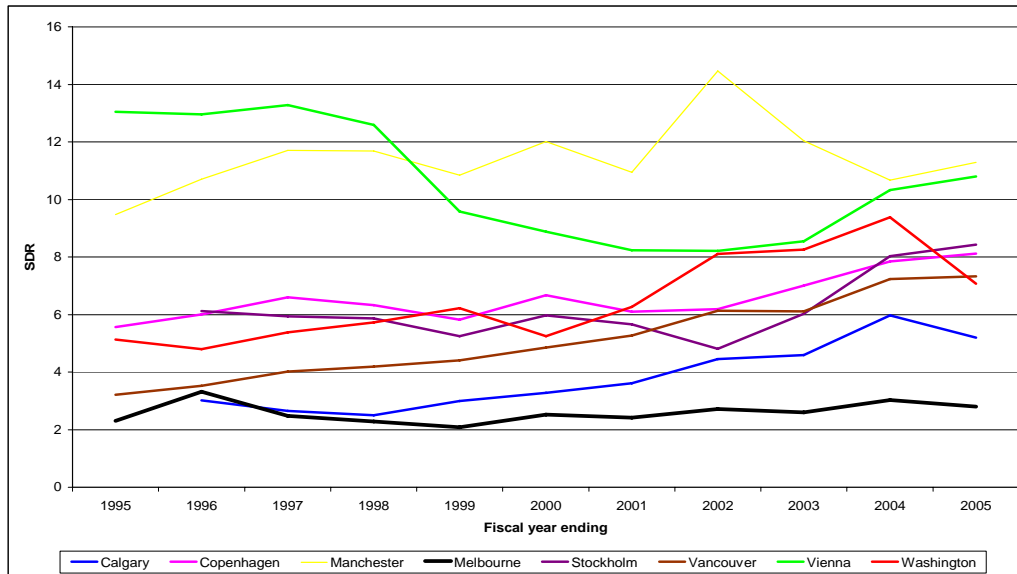
#### *Operating efficiency*

The benchmarking study undertaken by TRL (which appears as Appendix 1 to this submission) compares a range of efficiency indicators for the largest four airports in Australia, Auckland and a range of airports in North America and Continental Europe.

Broadly, the efficiency related conclusions of this study are

- Overall cost levels at the Australian airports are clearly lower.
- There is a general downward trend in staff costs per passenger at the southern hemisphere airports, whereas they are flat or rising in the northern hemisphere airports. There is a similar pattern in terms of staff costs as a percentage of turnover.
- On average, staff productivity rates at the southern hemisphere airports are nearly three times greater than at the northern hemisphere airports. High levels of outsourcing cannot explain this disparity. In turn Melbourne's productivity is one-third higher than the southern hemisphere average.

Despite differences, all Australian airports in the sample significantly outperform their northern hemisphere comparators. Melbourne's relative performance is shown in Figure 1.6



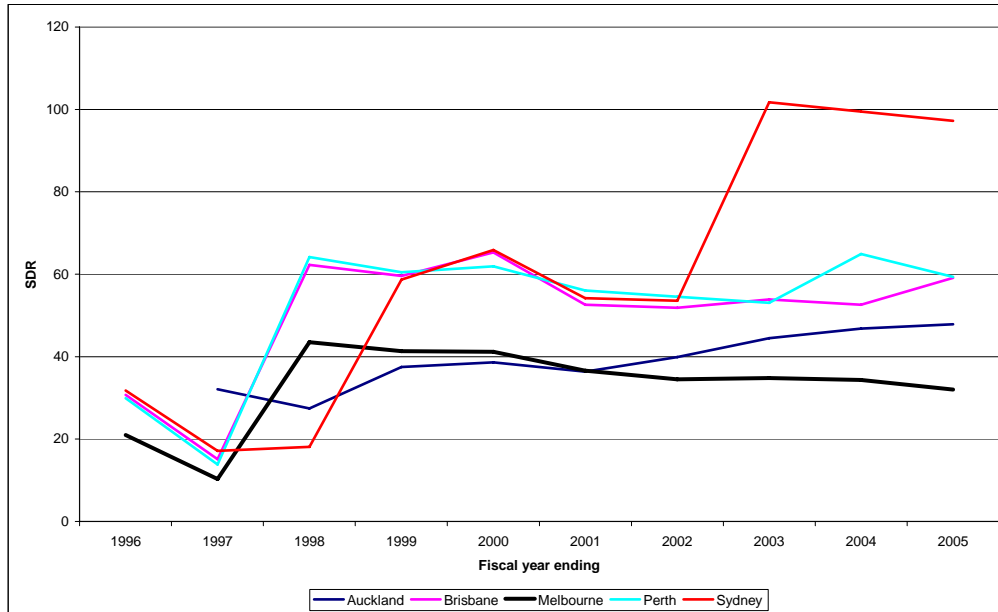
**Figure 1.6: Operating costs per passenger for selected airports**  
 Source: TRL (2006b)

*Capital efficiency*

Given the capital intensive nature of airports, capital efficiency is an important driver of efficient prices. Comparisons within fairly homogeneous regions are useful, but within a broader geographical context some caution needs to be exercised in making comparisons. This is because of widely varying airport construction costs, and hence asset values, around the world. Different asset valuation policies also make comparisons difficult. Some airports revalue assets on a regular basis, while others, and in particular Melbourne, do not.

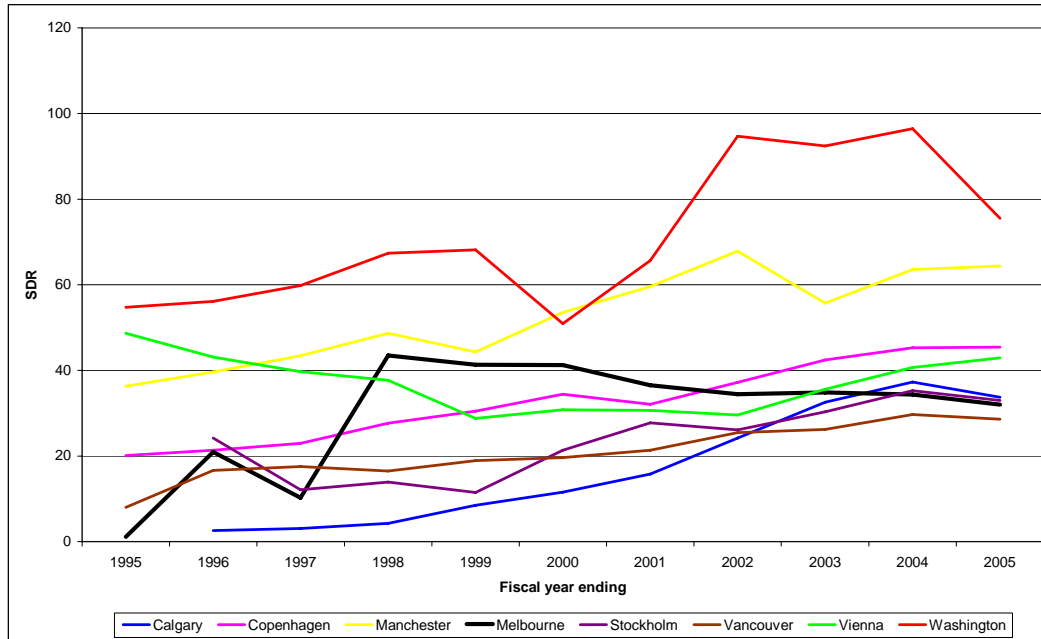
Fixed assets per passenger can be used as an indicator of capital efficiency although this measure needs to be treated with some caution<sup>8</sup>. High levels could be a sign of unnecessary over-investment but alternatively simply reflect unavoidable surplus capacity resulting from the lumpy nature of airport investment or peaky demand. Rapidly growing passenger numbers will have a diluting effect on performance in this measure. Examinations of longer term trends are therefore more instructive although the very long nature of the capital cycle means caution needs to be exercised in reaching conclusions. As this information is not generally published by the ACCC information on both Australian and overseas airports is provided.

<sup>8</sup> It should be noted data reported relates to total airport assets, not just aeronautical assets.



**Figure 1.7: Fixed assets per passenger for Australia airports**  
 Source: TRL (2006b)

Sydney’s heavy investment prior to 2000 stands out. Melbourne’s performance relative to that of Brisbane and Perth reflects a number of factors. First, since it has 24 hour operations its passenger movements are spread more widely during the day allowing it to achieve higher rates of asset utilisation. Its assets are also unquestionably older and in addition it is larger than the other airports in this sample apart from Sydney. It also has one terminal. This reduces the demand for supporting road and car park infrastructure as well as core terminal services and potentially airfield assets such as taxiways. This measure is driven strongly by passenger numbers: Melbourne’s fixed assets in absolute terms were nearly 70% higher than those of Perth. It may also be that Melbourne has had a degree of surplus capacity: this would certainly seem to be the case in the earlier years, when its unit asset levels were close to those of the other, much smaller, airports.



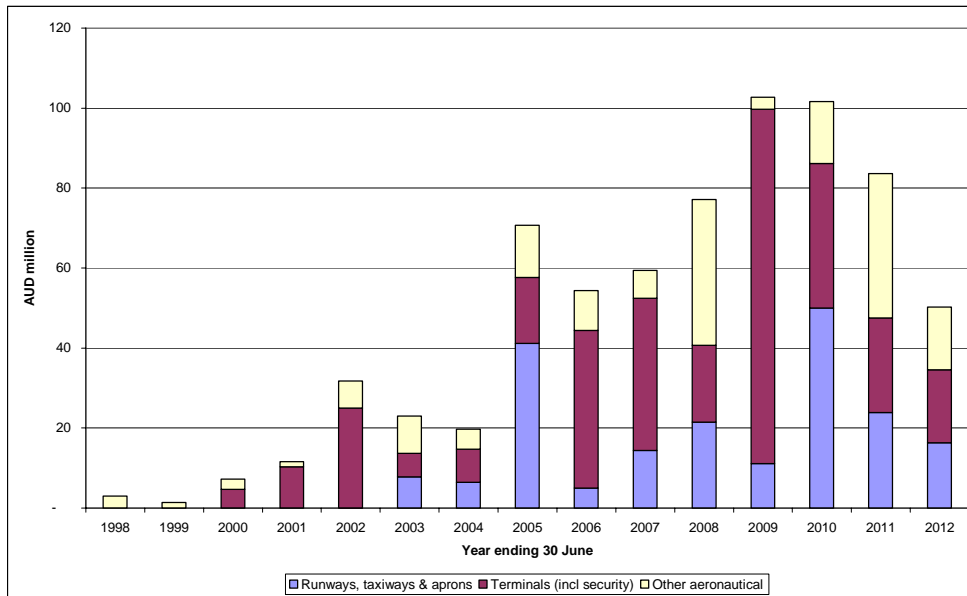
**Figure 1.8: Fixed assets per passenger for selected airports**  
 Source: TRL (2006b)

Unit asset values at the southern hemisphere airports are on average around 25% higher than those of the northern hemisphere airports. Within the northern hemisphere sample there is a rather clearer upward trend. In a number of cases this may reflect high local construction costs, and hence asset values, rather than above-average levels of capital investment. Washington’s performance simply reflects the sharp downturn in its traffic levels caused by its lengthy closure following the September 11 2001 attacks. In comparison, Melbourne has gradually moved down the ranking in this chart.

### 1.4 Assets and investment

Airport assets have extremely long lives – terminals have lives of 40 years whilst parts of the runway structure have, if constructed properly, almost infinite asset lives. Capacity also comes in large increments. It is therefore important to be careful in interpreting information on asset values and investment.

To date, Melbourne Airport has been able to support its growth through utilising surplus capacity and relatively modest terminal capacity augmentation. However to support future levels of activity Melbourne Airport is about embark on a major phase of terminal capacity expansion as shown in Figure 1.9.



**Figure 1.9: Investment in aeronautical assets at Melbourne Airport<sup>9</sup>**  
 Source: Melbourne Airport

The following table provides a breakdown of Melbourne Airport’s assets at the time of the last review and at 30 June 2005 (the last audited balance date).

	2000 (\$m)	2005 (\$m)
Aprons	84	88
Runways and taxiways	152	187
MA Operated terminals	84	103
Services	5	5
Roads	24	32
Land	52	49
Other	28	10
<i>Total aeronautical assets</i>	427	474
Non aeronautical assets	296	345
Goodwill	600	577
<b>Total assets</b>	<b>1,323</b>	<b>1,395</b>

**Table 1.2: Composition of assets at 30 June**  
 Source: Melbourne Airport

Capital expenditure has largely matched depreciation with the exception of:

- The recovery of the Ansett terminal;

<sup>9</sup> Other aeronautical includes unallocated expenditures in later years.

- The development of a second entry taxiway for the east-west runway;
- The widening of the north-south runway to facilitate A380 operations;
- Development of additional gates and parking for T2 including gates to accommodate the A380 (largely after 30 June 2005).
- Implementation of international checked bag screening.

That said Table 1.3 shows that capacity of a number of terminal elements has expanded since 2000.

	2001			2006		
	T1	T2	T3	T1	T2	T3
Check-in desks	27	72 +16 service desks	22 +8 electronic kiosks	20 +12 Bag Drops +12 service desks +30 electronic kiosks	72 + 16 service desks	36 +14 electronic kiosks
Security screening points	3	2	3	4	5	4
Baggage reclaim units	4	4	2	4	4	3
Outwards immigration desks	n.a.	18	n.a.	n.a.	18	n.a.
Inwards immigration desks	n.a.	26	n.a.	n.a.	26	n.a.
Departure lounge seating	-	1800	-	-	2263	-
Parking stands serviced by aerobridges	16	10	11	16	11	11
Parking stands not serviced by aerobridges	5	4	9	5	5	9

**Table 1.3: Terminal element capacity at 30 June<sup>10</sup>**

Source: Melbourne Airport

As far as runway assets are concerned, Melbourne Airport's Master Plan indicates that an additional runway is unlikely to be required in the next fifteen years. However at some time before then it may be necessary to extend the existing east west runway further to the west by up to 700 metres<sup>11</sup>. Current runway capacity is between 30 and 70 movements per hour depending on weather conditions and the mix of aircraft using the runways. In good weather, simultaneous operations are

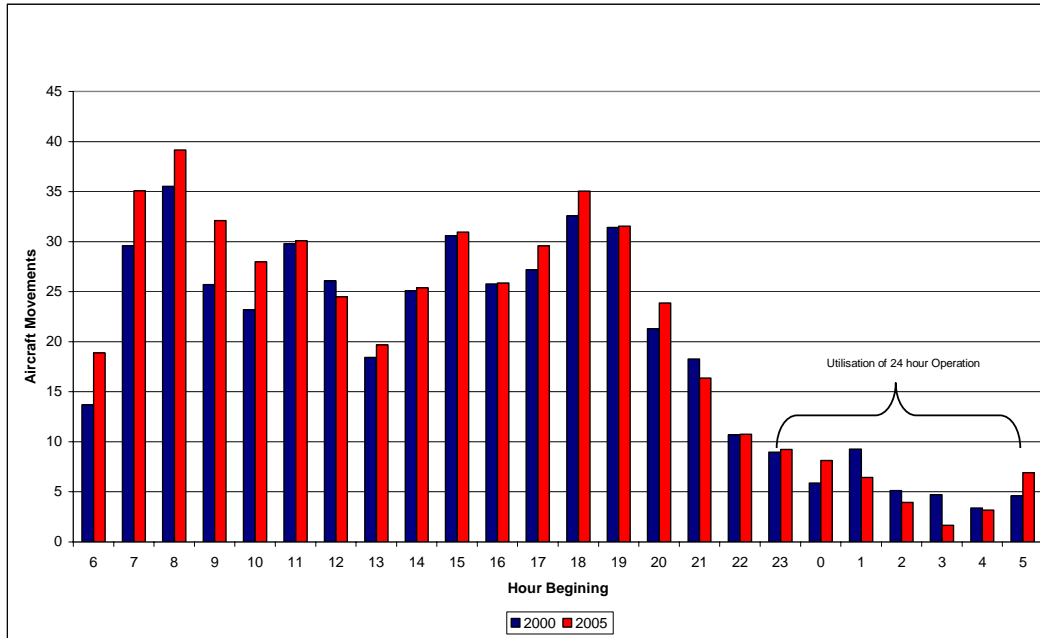
<sup>10</sup> In 2001 the DET was operational. It had 5 parking positions, 12 check-in desks, 275 seats and singular screening points and baggage reclaim units. It was decommissioned in August 2002.

<sup>11</sup> Melbourne Airport (2003, pp37-38)



possible for certain categories of aircraft. There are no restrictions on runway use for environmental reasons<sup>12</sup>.

As shown in Figure 1.10, runway utilisation has increased since 2000 although the rate of increase has been tempered, and therefore runway efficiency enhanced, by an increase in average aircraft size.



**Figure 1.10: Runway at Utilisation at Melbourne Airport**  
Source: Melbourne Airport

### 1.5 Quality

There are two aspects to quality monitoring – the quality perceived by passengers and the quality perceived by airlines<sup>13</sup>. The first is more experiential, the latter tends to impact on airline operating performance. In measurement both are often quite subjective. Both are a function of airport design, maintenance and capacity availability. They also depend on the operational policies of airlines, the conduct of airline staff and the activities of government agencies.

Comparisons of quality between different airports are difficult. In the first instance, the level of quality that an airport provides depends on the requirements of its customers. Increasingly, there is a growing differentiation between the expectations

<sup>12</sup> Melbourne Airport does voluntarily operate noise abatement modes when weather or capacity demands permit

<sup>13</sup> Issues related to surveying other airport agencies such as the ACS are discussed in Section 3.11.

of airlines and indeed the passengers who fly with them. For example, LCCs operating aircraft such as the A320 or B737 often prefer not to use aerobridges.

The perception of quality by passengers is ascertained by surveys. Usually, these involve asking passengers to score various attributes of their experience against a scale. Clearly, comparisons between airports that use different survey methodologies – different questions, different scales – are highly problematic. Indeed, even in Australia, airports have different approaches. Melbourne Airport is fortunate in that it uses the methodology developed by BAA to monitor the quality performance of its airports. Melbourne Airport can therefore benchmark its performance against a range of airports using the same survey methodology.

Figure 1.11 provides information on the overall passenger experience for a number of airports. Clearly, passenger rate and continue to rate Melbourne Airport highly despite tightening terminal capacity and some recent disruption due to works.

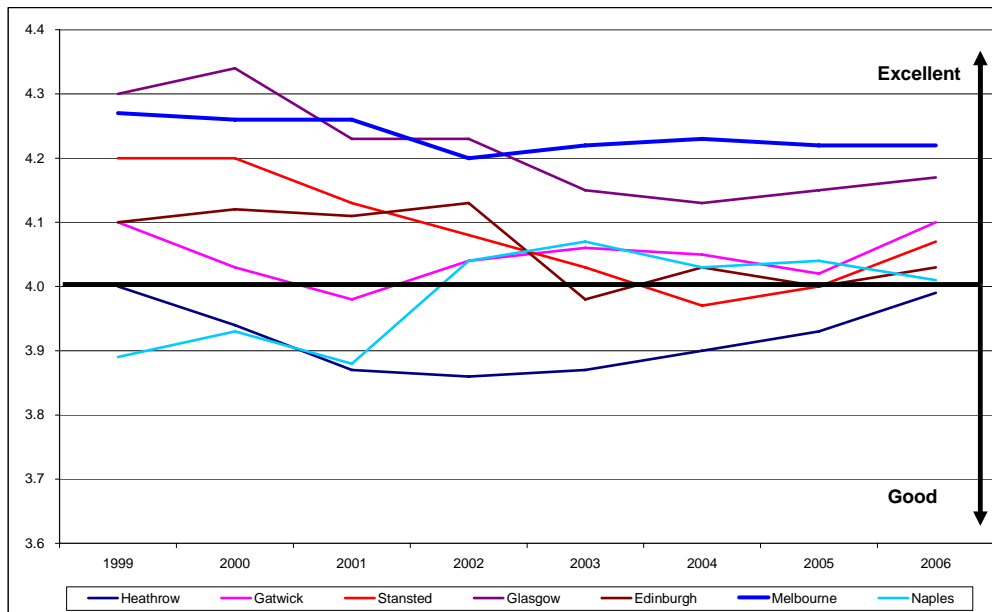


Figure 1.11: Rating of overall passenger experience<sup>14</sup>  
Source: Melbourne Airport

Accurately measuring airline perceptions poses a number of methodological issues. Obviously, sample sizes will be much smaller. Melbourne Airport surveys thousands of passengers each year, the ACCC survey of airlines had eight responses

<sup>14</sup> Variations smaller than 0.1 are not significant.

from international carriers and two from domestic carriers<sup>15</sup>. Melbourne Airport is now surveying every airline annually. Beyond the obvious statistical issues, it is inevitable that such a small survey is capable of being subject to the bias of particular individuals who may not reflect the views of the airline concerned.

Nonetheless, the most recent ACCC survey of airlines did reveal a reduction of quality as perceived by airlines using Melbourne Airport. This is to be expected. Terminal capacity at Melbourne Airport is tightening which inevitably will lead to greater competition for assets by airlines especially during peak periods. To relieve this capacity constraint in a number of key areas, and to ensure the airport is ready for the A380, Melbourne Airport has undertaken a significant capital works program.

Inevitably, not only does this effect the areas being modified it also leads to an increase in utilisation of, and sometimes disruption to, the operations of others. All these factors will put pressure on quality outcomes during the works period. Consultation with the airlines and government agencies has been continuous through this period. Despite this, it is likely that perceptions about consultation may diminish simply because there are more issues about for which individual airlines “don’t get their way” as they would in more capacity rich environments.

## 1.6 Profitability

Given the keen interest in airport assets in Australia, and the fact that many shareholders occupy long term positions on airport company share registers, it is reasonable to assume that the sector as a whole is reasonably profitable.

Important to this inquiry is not so much whether airports are profitable. Rather the issue is whether airports are setting prices excessively above efficient costs of production<sup>16</sup> in relation to those parts of their business where they have significant market power – primarily aeronautical services.

As is discussed in section 3.2, the information that is revealed in the monitoring reports on asset returns tells only part of the picture. High returns on assets may reflect the point in the capacity cycle or large future capital programs in circumstances where current average costs are well below long run incremental costs. On the other hand, low returns might reflect the presence of significant surplus capacity.

Given these factors, it is almost certain that airports will exhibit different levels of return at different times. Further, there can be expected to be persistent differences

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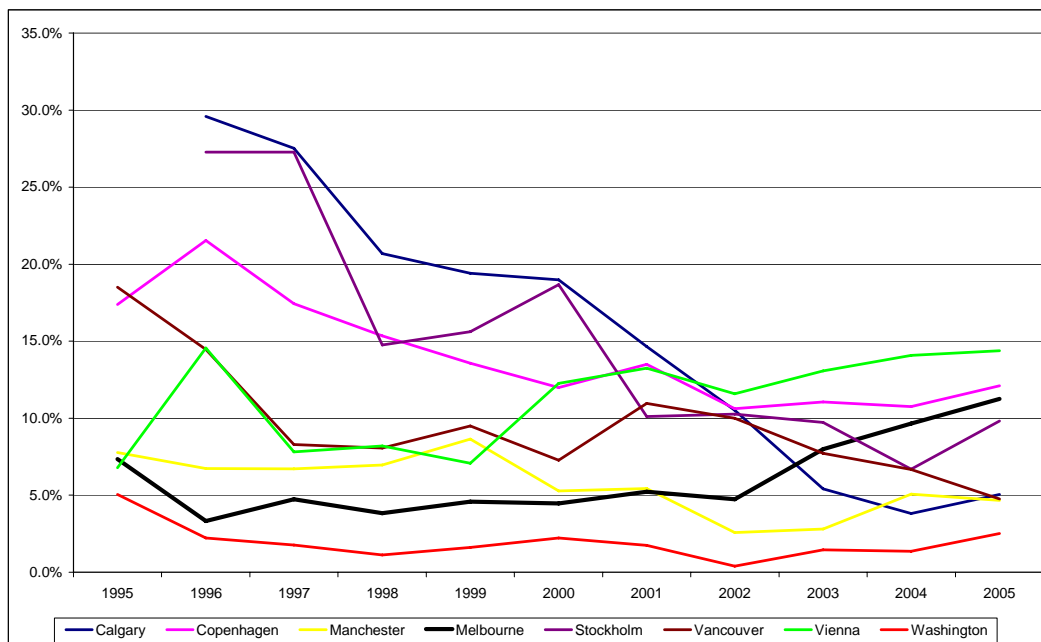
<sup>15</sup> ACCC (2005a, p45)

<sup>16</sup> It is assumed here that following from the issues discussed in Section 1.3 Australian airports are relatively efficient.

in the level of returns reflecting levels of efficiency in airport design and operations, the nature of the markets served and management competency.

Great care must be taken in interpreting the data published annually by the ACCC. This is particularly so as the total purchase price of the airport is not fully reflected in these figures. That said it is probably the case that Melbourne Airport is the most profitable airport in Australia. Further its aeronautical business appears to be currently earning around or slightly above the industries cost of capital on a year-on-year return on assets basis. This is discussed at more length in Chapter 2.

Melbourne Airport’s return on capital employed is broadly consistent with those of comparable airports overseas as shown in Figure 1.12



**Figure 1.12: Return on capital employed at selected airports**  
Source: TRL (2006)

Appendix 3 provides basic return information for Melbourne Airport. It is interesting to note that once the total cost of the airport is considered, the level of return on assets –that is the business purchased from the Commonwealth plus investment since sale less depreciation and amortisation – is 13.2%. This is hardly an excessive level of return in the current environment especially considering the significant period of relatively low returns immediately following sale.

## 1.7 Prices

### *Price discrimination*

There are four basic ways in which airports can price discriminate:

1. Passenger based charges. Assuming that ability or willingness to pay is reflected by the load factor of the aircraft concerned, such charges can be considered to be a form of price discrimination at the aircraft level.
2. Marketing and other incentive arrangements. By targeting particular carriers or market segments, demand will be stimulated by lowering total airline costs.
3. Lower charges for differential service quality. The most common, which is not relevant to Melbourne Airport, is to charge a lower price (however structured) where passengers move between the terminal and the aircraft via bus rather than an aerobridge.
4. Allocation of joint and common costs. An airport may elect as a strategic component of its pricing strategy to seek relatively higher returns in some broad market segments than others. For example an airport may have a very strong domestic base but is seeking to grow its international business. To encourage growth it may structure its prices so that domestic activities make a larger contribution to joint or common costs relative to international ones whilst still targeting its overall cost of capital and each segment covering its own avoidable costs.

Airlines have historically resisted airport efforts to price discriminate and indeed certain ICAO conventions prohibit airport price discrimination that favours home international carriers over foreign carriers irrespective of whether such conduct is efficient.

The capacity of airports to price discriminate is limited to the level of individual flights. It is simply not feasible for an airport to price discriminate at the passenger level as far as aeronautical services are concerned. However it is clear that airlines can and do effectively price discriminate at the passenger level and that the airlines' ability to do so is sufficient to ameliorate the welfare impacts of a significant proportion of any increase in aeronautical charges, especially if such increases are small compared to ticket prices. Further, it is clear that whatever price discrimination airports can undertake does not materially impact economic welfare in a negative way.

*Evolution of Aeronautical prices at Melbourne Airport*

When the lease for Melbourne Airport was granted in July 1997 the following charges were in place<sup>17</sup>:

- A landing charge for all aircraft of \$5.72 per tonne MTOW;
- A CTFR recovery charge of \$0.44 per tonne MTOW; and
- An international terminal charge of \$4.07 per tonne MTOW<sup>18</sup>.

Domestic terminal services were provided under leases granted to Qantas and Ansett. International check-in desks were provided under an arrangement that effectively guaranteed the airport a fixed income irrespective of volume.

This pricing structure remained in place until price controls were removed in 2002. Prices varied according to the CPI-X price cap provisions, NNI pass through and the Government's decision to allow a one-off price increase in October 2001 as a result of the collapse of Ansett in September 2001 which Melbourne Airport deferred to 1 January 2002.

Added to these initial prices, as a result of the NNI arrangements were:

- A cost recovery charge for international passenger screening in July 1999 of \$0.79 per departing passenger;
- A cost recovery charge for international checked bag screening in June 2000 of \$1.65 per departing passenger; and
- A charge for the use of the Domestic Express Terminal in December 2000 of \$1.50 passenger.

The security recovery charges varied in accordance with actual costs and passenger throughput.

After the price increases were approved by the ACCC for Sydney Airport in 2000, it was clear that over time passenger based prices for international services would become the norm. It was also expected this trend to continue through to domestic services. At the time Melbourne Airport had a number of discussions with airlines and their representatives on the issue of charging structures. But given the proximity of review of price controls conducted by the Commission in 2001 and the amount of time and effort that would be involved in getting the ACCC to approve any restructuring, Melbourne Airport decided to defer restructuring until it became clear what would be the future of price regulation arrangements.

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<sup>17</sup> Unless stated explicitly otherwise, all prices discussed in this submission that relate to the provision of services after the introduction of the New Tax System exclude goods and services tax.

<sup>18</sup> There are minimum charges for small aircraft and a 50% discount for helicopters

Melbourne Airport fundamentally restructured its prices on 1 July 2002. This was done as part of its overall settlement with the airlines. It put aeronautical services onto a proper commercial footing and its prices on a sustainable path. The prices - both their structure and their levels - put in place on 1 July 2002 were not, nor have subsequently been, objected to by airlines. Table 1.4 shows the prices established in 2002 and the current prices for the services described:

	1 July 2002	1 July 2006
International passenger charge	\$10.00 per passenger	\$11.12 per passenger
Domestic passenger charge for terminals not operated by Melbourne Airport	\$3.00 per passenger	\$3.38 per passenger
Domestic passenger charge for terminals operated by Melbourne Airport	\$6.30 per passenger	\$7.16 per passenger
Landing charge for freighters	\$6.00 per tonne MTOW	\$6.63 per tonne MTOW
Freighter parking charge	\$25.00 per 15 minutes	\$27.64 per 15 minutes
Airport passenger security recovery charge	\$0.27 per departing passenger	\$0.10 per departing passenger
Airport security recovery charge non-RPT aircraft	\$0.59 per tonne MTOW	\$1.27 per tonne MTOW
International passenger screening recovery charge	\$1.87 per departing passenger	\$3.00 per departing passenger
Domestic terminal screening recovery charge for domestic terminals provided by Melbourne Airport	\$0.42 per departing passenger	\$1.36 per departing passenger

**Table 1.4: Melbourne Airport Aeronautical Prices<sup>19</sup>**

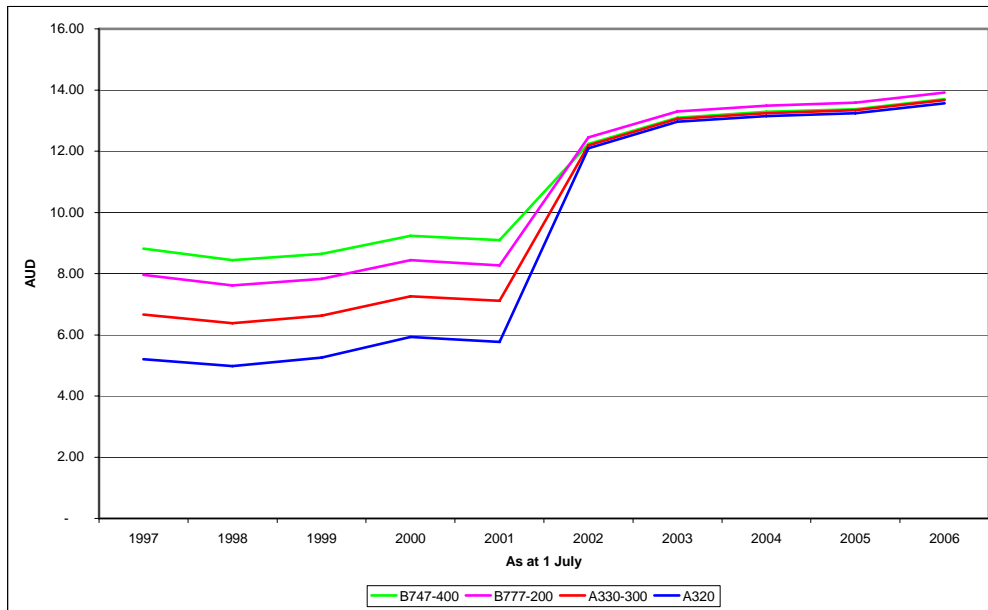
Source: Melbourne Airport

Putting aside security and screening charges (which are a reconciled pass through of actual costs), the 1 July 2002 prices represented an increase of on average \$1.00 per domestic passenger and \$3.00 per international passenger. As reported by the ACCC this represented a price increase across the board of around 35%<sup>20</sup>. Since then prices have risen broadly in line with CPI other than a \$0.07 agreed increase in domestic and international passenger charges to fund a second entry taxiway for the east-west runway and associated works. It should be noted that security costs have been rising much more rapidly than inflation despite increased utilisation of the airport as a whole due to the additional security measures introduced by the Commonwealth.

<sup>19</sup> The two airport security charges are subject to review as a result of the Commonwealth Government's decision to budget fund CTRF effective 1 January 2006.

<sup>20</sup> See ACCC (2006, p14)

The data in Figure 1.13 shows the full cost of international operations at Melbourne Airport including check-in desks, terminal access and all security services since the airport lease was granted in 1997.

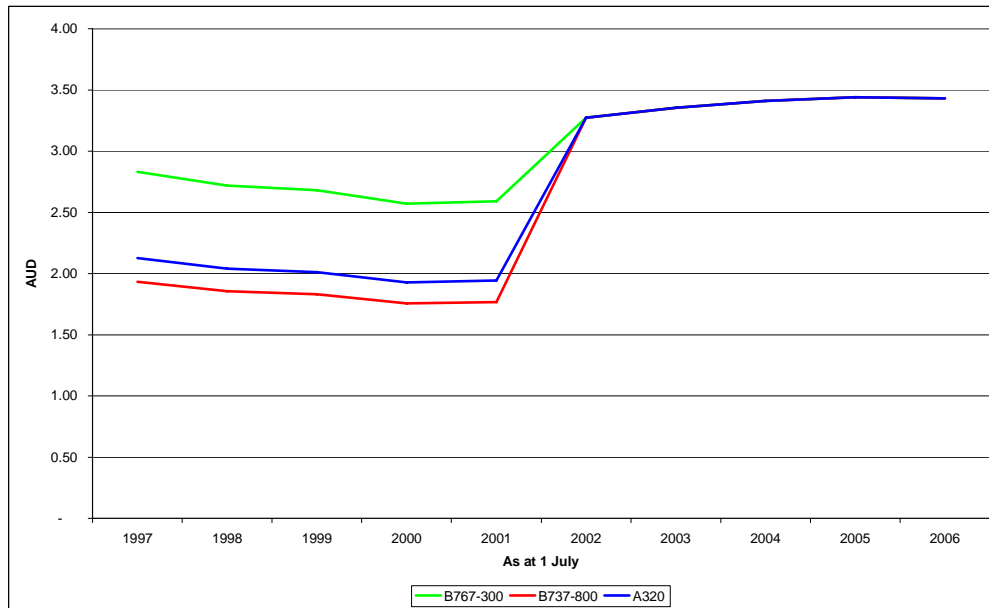


**Figure 1.13: Cost per passenger for international services at Melbourne Airport<sup>21</sup>**  
 Source: Melbourne Airport

Figure 1.14 shows the cost of airfield services at Melbourne Airport since 1997, including CTFR and related general airport security charges. The costs of terminal services are not included.

<sup>21</sup> Assumes 65% load factor and average check-in desk utilisation which varies for different aircraft types. For consistency, CTFR costs have been included although these services will be budget funded effective 1 January 2006.





**Figure 1.14: Cost per passenger for domestic services at Melbourne Airport<sup>22</sup>**  
 Source: Melbourne Airport

### *Airport price comparisons*

Airport charges vary between airports within jurisdictions, and between jurisdictions that have similar patterns of operations and regulatory systems. It is simply disingenuous to argue that because an airport has higher charges that it must be either abusing its market power or be inefficient. Indeed, given the range of factors effecting airport charges as discussed in section 2.2, that two airports have the same charges, even in the same jurisdiction, should be seen as a coincidence or a deliberate outcome of commercial or regulatory policy.

The scope of services provided by airports and their pricing structures varies widely. In an international context, within the broad category of airport services, airport operators often provide a subset of the services used by airlines at an airport. Typically at issue is the extent to which government agencies provide security services (and the cost recovery arrangements if any for these); provision of terminal services by other parties (mainly but not exclusively airlines); ARFF (particularly in relation to Australia) and to a minor degree the provision of ground based navigational aids.

Within countries, there can also be a divergence in pricing structures. For example in New Zealand, Wellington charges on a per passenger basis where as Christchurch charges per landing and the price varies by aircraft type. Even where charging

<sup>22</sup> Assumes 75% load factor. For consistency, CTRF costs have been included although these services will be budget funded effective 1 January 2006.

structures are the same, the scope of costs applicable to each charge can be different. For example, the capital costs associated with international checked bag screening are included in the general international terminal fee at Melbourne Airport, but in a security charge at Darwin.

Aggregation across the activity base of an airport poses further difficulties. The first issue is the basis upon which prices (or average revenues) should be reported. Typically they are reported on a per passenger basis. Where charges are actually levied on a tonnage or aircraft basis this requires assumptions to be made about load factors and sometimes other matters. There is a need to make an assumption about the mix of aircraft using an airport to enable an aggregation of charges across the activity base of the airport. Clearly, the approach to fleet choice will affect the values arrived at and potentially effect the relative position of different airports.

The last decade or so has seen the payment of rebates and marketing incentives by airports to airlines become common industry practice. These are price discounts in effect. But for a range of reasons including commercial confidentiality, appearance of non-discrimination and “keeping the sanctity of posted prices” they are often treated as marketing expenses in airport accounts rather than revenue reductions. They rarely appear explicitly in the reporting of price and volume information to regulators. Clearly, if an airport uses rebates to effectively achieve lower net prices for airlines, it will report higher prices and average aeronautical revenues per passenger than an airport that has achieved the same net outcome by simply setting lower prices.

Given the scope and structure of airport charges, some form of standardisation or aggregation is required to facilitate meaningful comparisons. In doing so, it is important to ensure that it is clearly understood what services are included in the measurement and what assumptions have been made. Where the intention is to compare airports it goes without saying that the scope of services for each airport being considered needs to be as similar as possible. Data is publicly available to make comparisons on three bases:

#### *Average aeronautical revenue*

As part of their regulatory or normal accounting obligations many airports publish a disaggregation of their accounts by aeronautical and non-aeronautical business segments. Information on this measure has been published by the ACCC for many years.

The principal advantage of this approach is it avoids the need to make assumptions about load factors and fleet mix, and relates only to the revenues of the airport operator. This is also one of its major drawbacks. The scope of aeronautical

services provided by airport operators may differ between airports and jurisdictions with the necessary adjustments being difficult to make.

Qantas operates its own domestic terminals at Sydney, Melbourne, Perth, Canberra and Brisbane and a number of smaller locations<sup>23</sup>. Virgin Blue operates its own terminal in Brisbane. These terminals could be expected to account for in excess of 70% of the domestic traffic through Australian airports.

Clearly, the effect of this is to suppress total aeronautical revenue for two reasons

1. The lease income received by the airport concerned from the airline operating the terminal is not classified as aeronautical income. Further, some airports continue to classify the income they receive from their own operation of terminals previously operated by Ansett as non-aeronautical income.
2. A significant proportion of the capital costs and virtually all of the operating and maintenance costs of these terminals are incurred by the airline in question, not the airport. If these terminals were operated by airports, these costs would be recovered through appropriate aeronautical charges. The increase in aeronautical income per passenger would be greater than the lease income because the operating and capital costs incurred by the airline would need to be recovered by the airport.

Further, unlike most airports around the world, Australian airports do not provide ARFF services – these services are provided by Airservices. On the other hand, Australian airports provide, and recover the costs of, the provision of a range of security services which in many other jurisdictions, such as New Zealand, are provided by a state agency and funded from general revenue or by a separate levy on airlines.

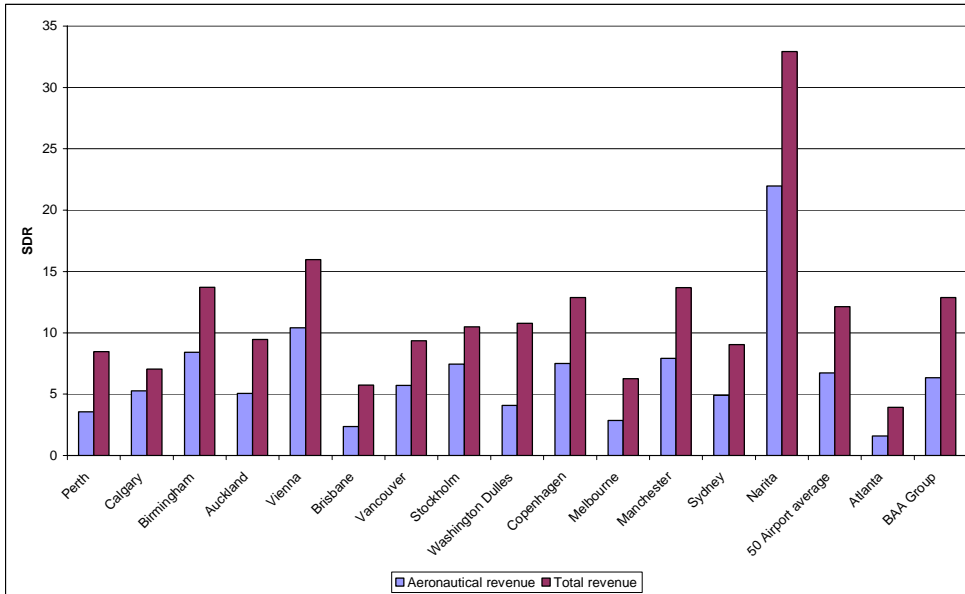
Beyond these methodological or classification issues, there are a number of reasons why aeronautical revenue per passenger may be higher at some airports than others. First, and most obviously, charges may be higher. Reasons for differences in charges are discussed in section 2.2.

Another important reason is differing traffic composition. Airports often provide international services at higher prices than domestic services, reflecting if nothing else the higher costs associated with providing these services. These higher costs in many cases result from international traffic being serviced on a smaller scale, in separate facilities and with more peaky demand.

There are third party sources available that provide similar information on airports in other parts of the world. One is TRL and their data are presented in the graph below in Figure 1.15.

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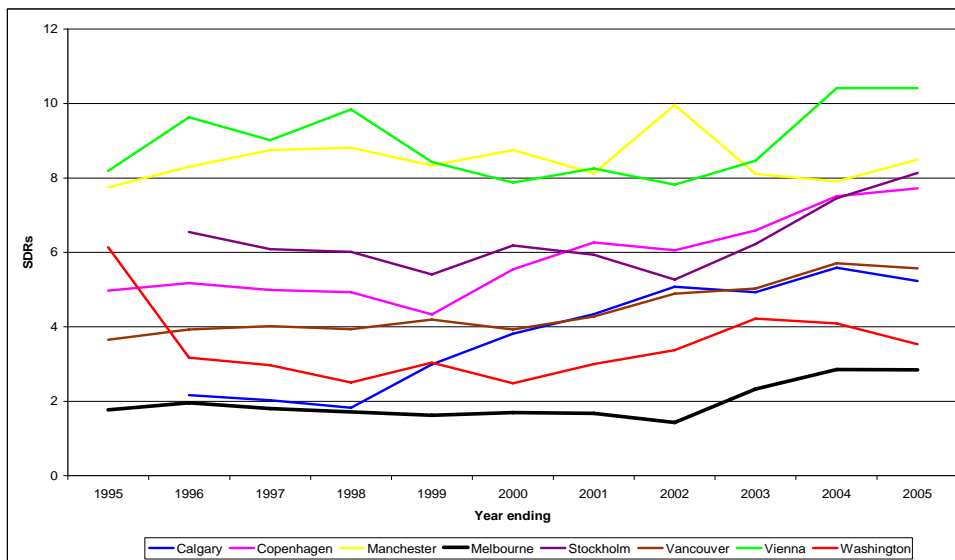
<sup>23</sup> Qantas ceased operating its own terminal in Adelaide in late 2005.



**Figure 1.15: Per passenger revenues for selected airports: 2005**  
Source: TRL (2005a)

This chart shows that aeronautical revenue per passenger at Australian airports is relatively low by world standards. Both Melbourne and Brisbane are among the lowest despite the price increases that occurred in 2002.

Rising levels of aeronautical revenues per passenger have been a general trend around the world over the last decade as demonstrated in the following chart.



**Figure 1.16: Per passenger aeronautical revenues for selected airports**  
Source: TRL (2006b)

### **Operations cost comparisons**

Information is generally available on the prices charged by individual airports. It is possible to combine this information with the operational characteristics of the aircraft (principally its weight and seating capacity) and assumptions about load factors and in some cases parking times and check-in desk use to calculate the cost of an aircraft turn around or the cost of a turn around per passenger.

This approach requires assumptions to be made regarding the operation of the aircraft in question as described above. Usually, these assumptions are common across the aircraft and airports in the sample (although domestic and international services are usually differentiated). Clearly, misleading results will occur if the actual operational outcomes at a particular airport vary radically from the assumptions. However, in comparing Australasian airports, this is not a major issue.

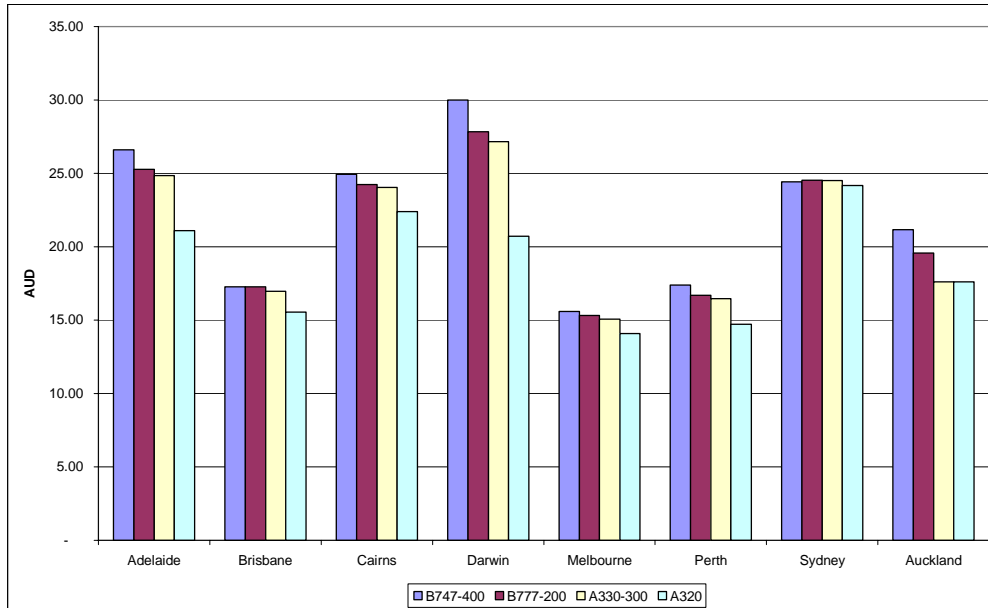
Figure 1.17 shows per passenger costs for aircraft turnarounds that operate, or may operate, international services through Melbourne Airport. It clearly shows that international charges at Melbourne Airport are the lowest of any Australasian airport. The higher charges for larger aircraft at Australian airports, especially the smaller airports, is a reflection of the fact that Airservices Australia now charges a higher tonnage rate for larger aircraft and these differentials are greater at smaller airports.

These calculations included payments made to:

- Airports for the provision of infrastructure services (including check-in desks where known);
- Airservices for ARFF services in Australia; and
- Australian airports for security charges and the New Zealand Aviation security levy (but excluding NZD1.00 collected for the Civil Aviation Authority)<sup>24</sup>.

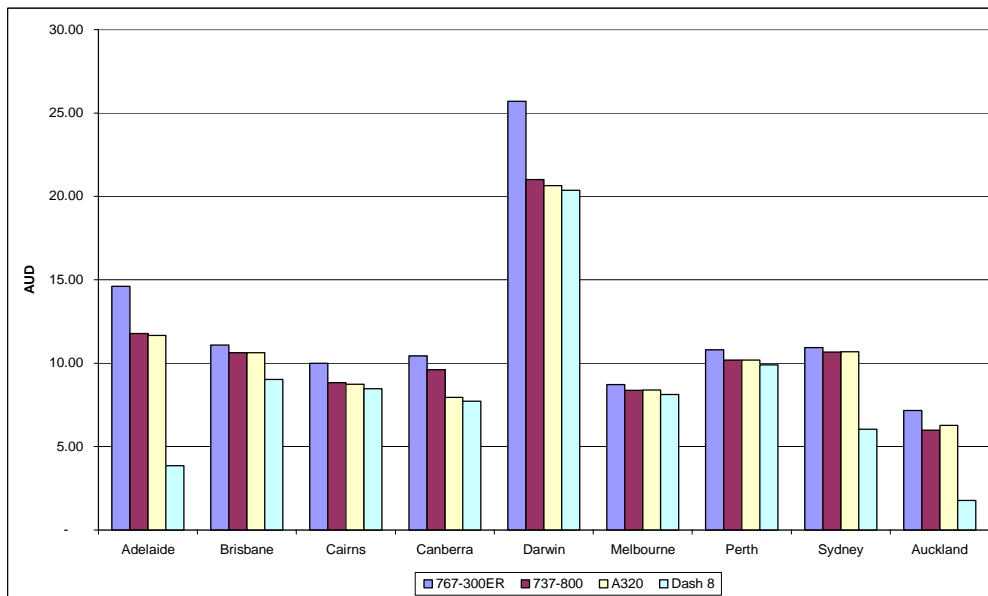
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<sup>24</sup> Some airports have adjust their prices from 1 July to take account of the introduction of budget funding of CTFR whilst others intend to do so in the near future. The data present in Figures 1.17 and 1.18 reflect the prices being charged on 1 July 2006.



**Figure 1.17: Airport cost per passenger of international aircraft operations**  
 Source: Bluestone Consulting, airport websites

Figure 1.18 shows similar per passenger costs for domestic aircraft that operate at Melbourne Airport<sup>25</sup>



**Figure 1.18: Airport cost per passenger of domestic aircraft operations**  
 Source: Bluestone Consulting, airport websites

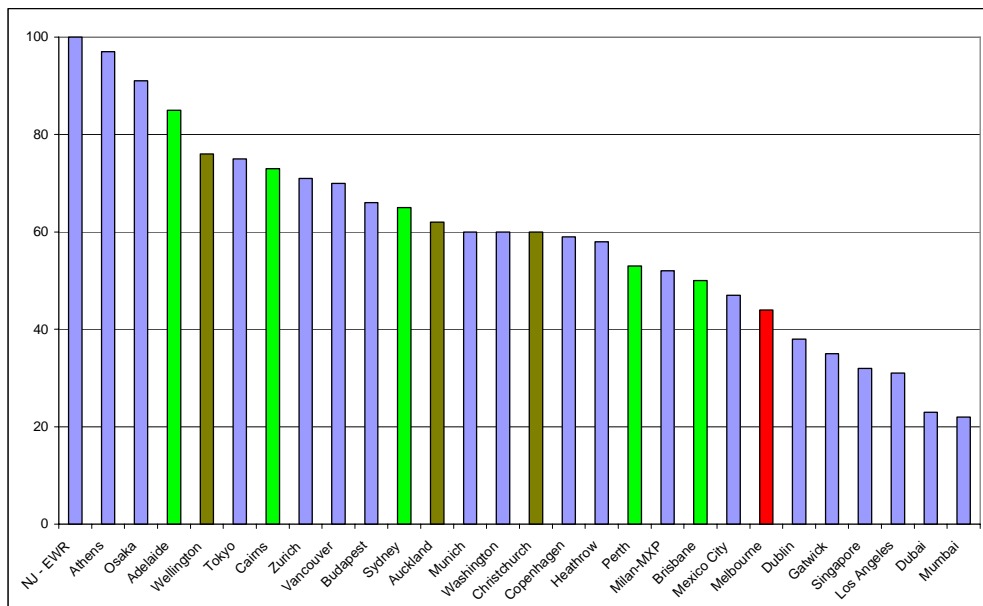
<sup>25</sup> These data assume publicly available prices for common use terminals. This data is not available for Perth - it has been assumed the price is the same as for Melbourne.

Again, Melbourne has lower charges than its competitors except for Auckland (where terminal lease arrangements do not truly reflect economic costs) and for Dash 8's. Those airports that have lower charges for Dash 8s tend to have separate pricing for regional operations. Melbourne Airport does not.

*Airport charges indices*

This approach usually involves calculating the charges for a standard range of services (irrespective of whether they are provided by the airport or other agencies) for a number of aircraft types using common assumptions similar to the approach above. These are then averaged in some way (either via a fleet mix assumption or simple averaging) and converted to a common currency. The index values may be sensitive to exchange rate movements which have nothing to do with airport costs. The most prominent index is that prepared by TRL for international charges. There is no generally used index for domestic charges.

Melbourne Airport has commissioned a report from TRL to include the major international airports in Australia and New Zealand in its index. That report is included in this submission as Attachment 2. The chart below shows that Melbourne Airport has the lowest charges (which include ARFF and terminal navigation) of any airport in Australasia. Melbourne charges ranks (from highest to lowest) 44<sup>th</sup> out of the 58 airports in the TRL report.



**Figure 1.19: Index of International Charges for Selected Airports**  
 Source: TRL (2006a)

The limitations of this approach include inclusion of aircraft that do not (and in some cases cannot – for example B747-400s cannot commercially operate through Wellington) actually use the airport and that the fleet mix used for the averaging will only coincide with that using any given airport by coincidence. Further, the indices represent the cost incurred by airlines using a specified bundle of services rather than those levied by airports themselves.

## 1.8 Non-aeronautical services

Unlike the review conducted by the Commission in 2001, the terms of reference of this inquiry are much more tightly focused on the provision of aeronautical services. Further, it is clear from the terms of reference that the single/dual till question is a policy issue the Government considers was settled at the time of the last review.

That said, other non-aeronautical services are an important part of Melbourne Airport's business and the range of services provided to airlines, passengers and others. Appendix 2 of Melbourne Airport's submission to the last review sets out in some detail the types of activities that constitute non-aeronautical services. If the Commission requires further information on these issues, Melbourne Airport would be happy to respond to any questions.

Appendix 3 shows return on non-aeronautical assets since the time of sale. For reasons set out in Section 3.7 Melbourne Airport does not believe that the ACCC's approach to excluding goodwill from the non-aeronautical asset base is appropriate. When properly accounted for, non-aeronautical returns are by no means excessive. Indeed returns measured on this basis are broadly similar to aeronautical returns.

Melbourne Airport is familiar with the views of the Commission on the role non-aeronautical revenues might have in relation to constraining the use of market power in relation to aeronautical services. From Melbourne Airport's view point, this is really part of a broader proposition. It relates to relatively persistent surplus capacity in elements of both aeronautical and non-aeronautical business segments. This leads to relatively high margins until a capacity constraint is encountered. It therefore encourages the airport to pursue strategies directed at maximising airport throughput. The presence of non-aeronautical revenues associated with passenger numbers (such as car parking and terminal retailing) increases the marginal revenue product of each additional passenger and therefore increases the revenue lost as a result of any demand response to an increase in airport charges.

The issue of locational rents manifests itself in two ways. In relation to many services provided to passengers, whilst appearing high, prices are either set in workably competitive markets or by reference to equivalent sites. It should also be noted that Melbourne Airport facilities operate and experience relatively strong demand 24/7 as compared with suburban shopping centres and CBD car parks, which will increase returns to airport sites as a direct consequence of their location.



Also as the large parcels of undeveloped land attached to a number of major airports are developed over time, non-aeronautical revenues will rise. If airport land is not revalued it is inevitable that the rate of return will rise and such returns are clearly locational in nature.

With the exception of issues about asset classification for regulatory accounting and the scope of the monitoring framework (such as in regard to check-in desks and fuel through put levies), the main area of concern in relation to non-aeronautical services appears to be with car parking.

### *Public Car parking*

Melbourne Airport operates a range of public car parking products:

- Short term multi story car park opposite the terminal complex;
- Undercover long term car parking at the rear section of the multi story car park;
- Two undercover business car parks close to T1 and T3; and
- Open air long term car park connected to the terminals by a 24 hour courtesy bus service.

As the Commission is aware from its previous inquiry, Melbourne Airport faces competition in the car parking markets it operates in. As such, increases in car park prices will generally reflect changing conditions in those markets.

In relation to long term car parking there are seven providers of undercover and open air parking off-airport providing around 4,000 spaces, more than half of which are under cover. In both the undercover and outdoor market segments, Melbourne Airport's prices tend to be higher than its competitors for short stays reflecting proximity to the terminal, but for longer stays there are higher and lower prices available from competitors. Qantas' valet parking product is typically the most expensive product in this segment.

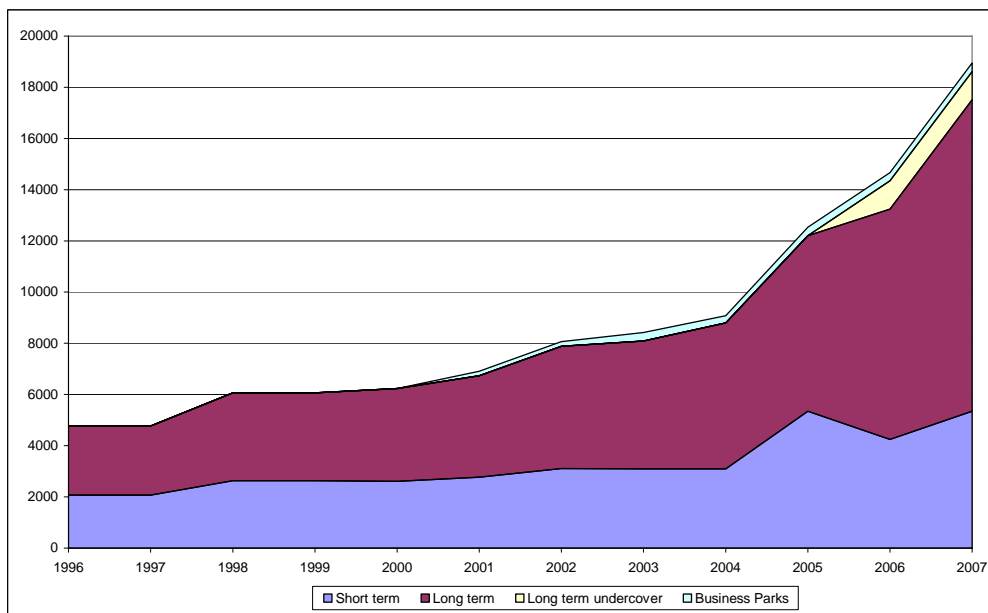
Short term parking faces competition from other modes of ground transport such as hire cars, taxis and Skybus. Substitution between products is not only a function of price but also convenience and other factors such as the vehicle being kept under covered. CBD car park prices are probably the best comparator for short term airport car park prices.

Table 1.5 provides details of short term car parking prices for Melbourne Airport and comparative Melbourne CBD prices.

	Melbourne Airport	CBD Benchmark
0-20 minutes	\$2.00	\$4.64
20-40 minutes	\$6.00	\$11.50
40-60 minutes	\$9.00	\$11.50
1-2 hours	\$15.00	\$23.80
2-3 hours	\$19.00	\$33.75
3-4 hours	\$25.00	\$37.50
4-10 hours	\$30.00	\$37.50
10-24 hours	\$37.00	\$37.50

**Table 1.5: Melbourne Airport short term car park prices**  
 Source: Melbourne Airport

Figure 1.20 shows the expansion of car park capacity at Melbourne Airport. It is clear that rather than holding back supply to maximise rent from existing car park capacity Melbourne Airport has actively invested in car park capacity, investing \$83 million in new capacity and service enhancements since 1997.



**Figure 1.20: Car park capacity at Melbourne Airport**  
 Source: Melbourne Airport

*Other ground access services*

In relation to staff car parking, Melbourne Airport’s commercial staff car park has around 1,700 bays. There are several car parks for the use of Melbourne Airport staff and contractors with around 430 bays. Qantas has its own car park off site with around 1,250 bays and another within the leased premises of its maintenance base with an estimated 1,000 bays. There are a number of other major car parks on leased sites (such as the Airservices facility) which together would contain in excess of 1,000 car parks. Given around 35% of Melbourne Airport’s commercial staff car park is associated by airline use, only about 11% of the available staff car parking

on the airport is used by airlines. Staff car parking currently costs \$70 per month or \$8 per day (both GST inclusive) as compared with \$66 and \$7 respectively in 2002.

Melbourne Airport levies a range of charges on commercial ground transport operators. The most significant of these is for the use of the taxi parking area and associated infrastructure. Currently, the price of \$1.20 (plus GST) which was established in September 2003 remains in place. The Commission should also be aware that under regulations made by the Victorian Government taxi drivers are permitted to pass this onto customers they pick up at Melbourne Airport plus an additional \$0.60 to cover the administration costs drivers incur in paying this charge.

## 2 Policy outcomes

### 2.1 Melbourne Airport and the Review Principles

The discussion in Chapter 1 demonstrates that Melbourne Airport produces services at or around world's best practice levels. This enables it to both set charges that are relatively low by international standards and generate attractive returns for its shareholders. Quality remains high, especially from a passenger perspective although tightening terminal capacity and the impacts of major projects (such as the A380 runway and terminal works) have created challenges.

The prices that were put in place on 1 July 2002 were part of an overall commercial package. This package arrived at after extensive consultation with airline users including the provision of detailed financial information. The prices offered by Melbourne Airport were accepted by airlines without dispute or any counter offer being made. Further, the price increase was the lowest in percentage and absolute terms of any major airport and prices remain the lowest in the country.

As part of the package Melbourne Airport indicated its intention to spend \$142 million over the five year period without seeking addition real price increases<sup>26</sup>. In fact it has spent over \$180 million. The prices were set to see the airport achieve a return on tangible aeronautical assets around a cost of capital based on an asset beta of 0.7. It was also envisaged that by that time, the broad price level would be around long run incremental cost so future real price shocks would be unlikely.

It is Melbourne Airport's view that in the current interest rate environment, the industry's cost of capital (with respect to the aeronautical business segment) is around 11-12% pre-tax. Data contained in Appendix 3 and data published by the ACCC (reproduced below in Table 2.1) shows Melbourne Airport earning slightly higher than this in relation to aeronautical assets. This is for two reasons:

- These data include revenues and cost from T3. However as explained in section 3.8 asset values are not properly stated.
- Melbourne Airport is at a peak of its capacity cycle as discussed in sections 1.4 and 1.5. Allowing only for investment in 2005/06, return on aeronautical assets will fall to around 12%.

It is also important to recognise the importance of the accompanying contractual framework that surrounds the pricing outcomes. Melbourne Airport was the first airport in Australia to enter into contractual arrangements with airlines. For the first time, there was a clear understanding about what services were being provided for what charges and at what standard. Formal consultation and dispute resolution

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<sup>26</sup> Except for security recovery and the \$0.07 increase for the taxiway project mentioned in section 1.7

mechanisms were put in place and both parties clearly understood what data they needed to provide each other. Risk management issues dealing with insurance and indemnity were clarified with both sides placed on an equal footing.

There can be no doubt that Melbourne Airport has fully complied with the Principles established in 2002 and by virtue of its ongoing conduct there is no reason to believe that it will not continue to do so. As such, there is no case to impose any form of regulation on Melbourne Airport beyond that which is currently in place. Melbourne Airport notes that BARA has no issues with its charges, asset valuation approach or level of financial transparency.

## 2.2 An industry-wide perspective

The move to location specific pricing in 1997 means that aeronautical charges will differ across airports. Two key reasons why aeronautical charges may differ between airports are asset utilisation and asset cost.

### *Asset utilisation*

- Scale and peakiness of demand - airports are essentially fixed cost businesses with relatively large indivisible capacity increments. Unit costs therefore will to some extent be a declining function of capacity utilisation
- Homogeneity of demand – for example mixing small and large aircraft leads to lower levels of efficiency than more a homogeneous aircraft mix. Similarly, a pure domestic airport should be cheaper to operate than one processing a mix of domestic and international passengers *ceteris paribus*.
- Level of congestion – once airports become congested they tend to increase their labour forces to manage the congestion. Also, incremental capacity costs rise.

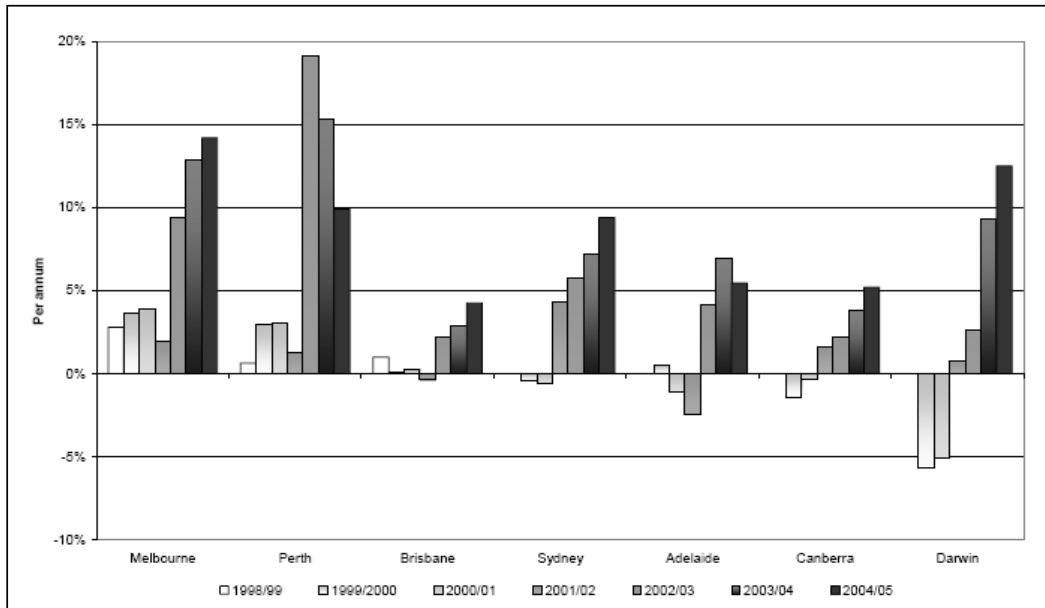
### *Asset costs*

- General cost levels in economy (determining both construction costs and general land values)
- Locational rents associated with location of site (such as proximity to CBD)
- The extent to which the airport site needs to be levelled, drained or reclaimed from bodies of water.
- Incremental expansion costs being higher than the average cost of existing assets.
- Asset age
- Level of quality customers expect
- Level of returns expected by investors in different jurisdictions

In addition to these technical and operational issues, institutional arrangements also affect prices. Some airports have inefficient cost structures, especially larger European and North Asian airports. As discussed in Section 1.3 this is not an issue at airports in Australia. In a number of cases these inefficiencies are allowed to flow through into price structures and have not been driven out because of relative weak institutional arrangements in relation to ownership and/or regulation.

Similarly there are reasons to believe that in some jurisdictions prices are below the true economic cost of provision. It is almost certainly the case that funding arrangements, especially in the United States but also in major third world hubs such as Dubai and Singapore, lead to charges below true cost. Similarly regulatory policy, especially in single till environments, can lead to aeronautical charges being below their true cost because of cross subsidies from other parts of the airport business.

Figure 2.1 produces the ACCC’s estimates of return on tangible assets.



**Figure 2.1: Return on Aeronautical Assets**  
Source: ACCC (2006, p21)

On the basis of these data, given the industry returns mentioned above, there is no evidence to suggest that Australian airports are earning in excess of their cost of capital. By way of comparison, it is interesting to note that returns on the same basis in the container stevedoring industry exceed 20%<sup>27</sup>.

In its submission to this inquiry BARA, whilst drawing attention to a range of conduct issues and potential future pricing policies of a number of airports, has not sought to establish that the current level of returns across the industry is excessive.

It seems that the only evidence of systematic industry wide abuse of market power that might be found in the magnitude of price increases that occurred in mid 2002.

<sup>27</sup> ACCC (2005b, p21)

### 2.3 A potential counterfactual

As discussed in section 1.7 prices at Melbourne Airport increased by around 35% on average on 1 July 2002 – this equated to around \$1 per domestic passenger and \$3 per international passenger. Price increases were greater at other major airports and of course the ACCC itself sanctioned an increase in excess of 90% for Sydney Airport in 2000.

In its last report the Commission observed that “*even if price caps were maintained (in any form) aeronautical charges would still need to rise to encourage long run service provision*”<sup>28</sup>.

It is instructive to consider what might have happened if the Government had accepted Option A as outlined in the Commission’s 2002 report as opposed to Option B. It is Melbourne Airport’s view that the prices it charges today are around the same levels that would have been arrived at under some sort of price control arrangements.

When Melbourne Airport was developing its pricing offer it examined in a preliminary way the magnitude of price increase implied by application of the ACCC’s Sydney decision to Melbourne Airport. This analysis assumed no revaluation of assets. It found that an increase of around 65% would have achieved the target rate of return on a building block basis. As noted by the ACCC, since price controls were removed in 2002, prices at Melbourne Airport have increased by around 50%<sup>29</sup>. Even if the NNI arrangements were continued, increases broadly of this magnitude would still have occurred.

It is acknowledged that this is a very broad conceptual comparison (but the range of outcomes is measured in tens of cents per passenger). But it does seem likely that if a price cap had of been imposed on Melbourne Airport in a way consistent with the Principles that prices charged by at Melbourne Airport would be similar to what they are today – and arrived at far greater cost. However, if a similar approach were to be adopted for those airports that are earning below their cost of capital (assuming they had appropriate asset valuation policies) the prices being charged today may have been higher than they are.

Some additional facts around this counterfactual are much more certain:

- Following the Government’s decision in May 2002, it would not have been possible to establish three price caps for implementation by 1 July 2002 and deal with the Sydney specific proposals. Indeed, given a proper transparent consultative process would have been followed by the ACCC, these new arrangements would have taken at least a year to establish. During that period,

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<sup>28</sup> PC (2002, p357)

<sup>29</sup> ACCC (2006, p15)

investment activity, and possibly even planning for such investment, would have stalled.

- In the absence of substantial legislative reform, the range of non-price matters discussed in section 2.1 would not have been addressed.
- The gaming that plagued the industry on both sides would have continued and may have escalated.
- The attendant regulatory uncertainty would have made the take back of the Ansett terminals highly problematic. As a result the ability of Virgin Blue to expand to fill the void left by Ansett would have been impacted significantly.

It is apparent that airlines, airports and the travelling public have fared much better than they would have under this counterfactual.

## 2.4 The regime going forward

All available empirical evidence points to a group of relatively profitable airports offering good quality services at prices which are competitive by world standards. On these facts alone there is no case for the reimposition of price controls. Moreover, the imposition of such controls would impose significant costs on both airports and airlines. Overall economic welfare would be put at risk from the potential for regulatory underpricing<sup>30</sup>.

The reimposition of price controls would create significant investor uncertainty. It is almost certain that Melbourne Airport's shareholders would defer all non-essential investment (and possibly any expensive preliminary planning and design work) until the price cap arrangements were fully investigated. As discussed above, for what would be consideration of at least five airports, this process could take at least a year once appropriate statutory arrangements, which do not exist today, were put in place – Part VIIA would not suffice these purposes.

The development of competition between airports in domestic markets has created even greater need to avoid inappropriate regulation. Indeed, the failure of the ACCC to properly deal with the pricing of ARFF charges by Airservices<sup>31</sup> is a case of a regulator potentially distorting competition in emerging markets for airport services in the Port Phillip Basin and south-east Queensland. These emerging competitive developments coupled with the ongoing development of commercial

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<sup>30</sup> It is assumed that the Commission is aware of the economic arguments relating to regulatory error. Melbourne Airport's views on this issue and optimal pricing remain as they were at the time of the last review. See Melbourne Airport (2001, pp49-55).

<sup>31</sup> Melbourne Airport fully supports the comments made in relation to this matter in BARA's submission to this inquiry.



relationships within a dynamic aviation industry justify a further review of the type currently being undertaken by the Commission in five years time.

That said, the five largest airports in Australia continue to occupy dominant market positions. It is appropriate that they should remain subject to price monitoring. Melbourne Airport does not believe there is a sustainable case to continue monitoring of Canberra and Darwin and further, that the requirement to produce regulatory accounts under Part 7 of the Airports Act should be removed for all airports other than those subject to the monitoring regime<sup>32</sup>.

The current airports' regime has worked well. It has been the model for ports regimes in South Australia and Victoria. It is also clear that many of the principles that it has established (and have been established by the Commission in relation to infrastructure regulation more generally) significantly influenced the drafting of the Competition and Infrastructure Reform Agreement agreed to by COAG on 10 February 2006. It goes without saying that Melbourne Airport considers the current regime, and the reform proposals contained within this submission, to be entirely consistent with the principles of that Agreement. In particular, Melbourne Airport would note that in order to be consistent with the pricing principles of that Agreement, it is necessary for the Commonwealth to maintain its policy on the dual till<sup>33</sup>. To do otherwise would involve the prices of services diverging from their cost of provision.

There are however tensions in the regime. Melbourne Airport believes that these arise not because of any errors in the current Principles but rather as a result of:

1. The structure of the monitoring process, and especially the regulatory accounts;
2. A lack of clarity around certain issues in the Principles; and
3. The lack of an effective dispute resolution framework that provides certainty to all parties, encourages by its design commercial resolution, and has proper regard to the Principles.

The following chapters address these issues in detail.

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<sup>32</sup> It is not proposed however that these airports should be exempt for the general declaration provisions of Part IIIA as proposed in Chapter 5 for monitored airports.

<sup>33</sup> Both the Terms of Reference and the Issues Paper for this inquiry generally take the continuation of the dual till for granted. Whilst Melbourne Airport remains an ardent supporter of the dual till, it is not discussed at length in this submission. The analysis contained in Chapter 3 of Melbourne Airport (2001) remains valid however Melbourne Airport is happy to discuss any issues the Commission might have in regard to this issue.

### 3 Monitoring Arrangements

This chapter reviews the implementation of the monitoring regime and makes a number of specific recommendations for reform of the monitoring arrangements to ensure that information reporting is consistent with the Principles.

#### 3.1 Compliance costs

Melbourne Airport does not consider the compliance costs of the monitoring regime to be particularly onerous. Most of the information that is required is necessary either for internal management purposes or for meeting information disclosure obligations to airlines.

That said, the regime does involve additional costs in reporting some items that are of little commercial or regulatory meaning (such as information of aeronautical related services and disaggregations of aeronautical services), production in a form specified by the ACCC, reviewing and commenting ACCC draft reports and audit costs. As a rough guide these additional activities would cost in the order of \$150,000 per annum.

#### 3.2 The purpose of monitoring

It is useful to reflect on what is the purpose of the regulatory accounts and the other monitoring data collected by the ACCC. Since the removal of price notification in June 2002, these data have become the primary tool by which the Government gives effect to its airport pricing policy.

The ACCC has expressed concerns regarding the definition of aeronautical services<sup>34</sup> and, among other things, called for stricter accounting separation and appropriate legislative powers to enforce such separation. It is interesting to note that despite the ACCC's concerns, to the best of Melbourne Airport's knowledge issues relating to asset and cost allocation do not appear to have been major areas of contention between commercial parties negotiating airport prices. BARA has not raised this as an issue in its submission to this inquiry.

In expressing this view, the ACCC has noted the views of the UK Commerce Commission on the difficulties of accounting separation in a regulated dual till environment and the observations made by the Commission and the Council about the complementarity of aeronautical and non-aeronautical services. Melbourne Airport does not necessarily disagree with these observations but rather considers they are largely irrelevant in considering how monitoring information should be collected.

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<sup>34</sup> ACCC (2006, pp8-9)

The purpose of the monitoring framework is to provide the Government and other stakeholders with information on that part of an airport's business that has consistently been identified as the one that has the greatest degree of market power – aeronautical services. The information collected is to assist the Government in forming a view whether an airport is complying with the Principles. The purpose is not to set or determine prices – this is the role of airports and their airline customers. In particular, the purpose is not to determine what prices a regulator might set under a non-specified regulatory regime. Melbourne Airport notes that BARA endorses the current information disclosure requirements developed by the ACCC in 2002 as appropriate for public scrutiny but expects a greater level of disclosure in commercial negotiations.

If the Government had legitimate grounds to believe an airport did not comply with the Principles and further action was required, any corrective action might require a more forensic approach to the analysis of not only past but also future costs. If the reimposition of some form of price controls (including arbitration) were ultimately required, one would expect that the regulator would collect the relevant information for this purpose when it was required by the Government to do so. An approach to such situations is set out in Chapter 5.

Melbourne Airport is strongly of the view that any more detailed evaluation of the material provided to the ACCC is not required. Analysis of relationships between prices, profitability, quality and points in the capacity cycle would require much more information than is currently collected, especially in relation to future capital expenditure. The ACCC would inevitably be required to adopt a much more forensic approach and would be placed in the role of a commentator or a de facto regulator. Melbourne Airport would not support such an outcome as it would compromise the light handed approach of the Government. Investigations of these sorts of issues are better handled in periodic reviews by the Commission. Melbourne Airport would support continuing reviews of the industry by the Commission on a five yearly basis.

Aeronautical services can be characterised as those services that airports provide to airlines either directly or indirectly in a way that airports have a significant degree of market power. These services are often produced and consumed jointly and to a lesser extent consumed by airlines in a relatively non-rival way until capacity tightens. It is further observed that airlines and other aircraft operators are the only consumers of these services. This compares with a range of other services airports provide to airlines and other customers such as ground leases for facility sites, offices or staff car parking.

It is important that the definitions ensure that other services are not included in the definition of aeronautical services – be they provided to non-airline consumers or provided to airlines in more competitive markets. If there are concerns about the pricing conduct of airports in relation to such services, then these should be monitored explicitly and separately from those services provided solely to airlines.

The need for such monitoring of itself does not mean that such services should be included within the definition of aeronautical services.

The inclusion of these services in the definition of aeronautical services could be taken to imply that the Government is of the view that the revenues and costs associated with these services should be taken into account in the setting of airline charges. If so this would be the partial implementation of single-till pricing. This is in direct contradiction of the policy the Government has held since it came to office in 1996 – a policy it inherited from its predecessor. Indeed, when the ACCC attempted to adopt such an approach when considering a price notification from Sydney Airport in 2001 Minister Hockey formerly directed the ACCC only to consider revenues and costs associated with aeronautical services which at the time did not include car parks and similar services. Further, to do so would be in direct contravention of the Government’s long held policy of not mandating single till pricing and is inconsistent with the pricing principles established by COAG in February 2006. The single till is not consistent with the COAG Agreement because it involves the consideration of costs and revenues not involved with the production of aeronautical services.

### 3.3 Conduct of the ACCC

There has been a significant improvement in the quality of the production of both the price monitoring report and the quality of service report (discussed in section 3.11).

The Commission expressed a view that regulators conducting monitoring regimes should limit themselves to factual commentary on the information they are publishing<sup>35</sup>. As far as the content of the reports are concerned, the ACCC has largely done this. However, in its press statements the ACCC has tended to focus on price increases since prices notification was removed. In doing so, it rarely reflects on the level of investment that has occurred at some airports, the fact that in many cases these increases were agreed with users and that there are now contractual arrangements in place – all facts that are well known to it.

Nor does the ACCC note that in adopting its policy position the Government, and the Commission<sup>36</sup>, were aware that prices would rise significantly in percentage terms but in dollar terms have been relatively small. One is left to form the view that the ACCC is attempting to portray industry outcomes in the least positive light for its own institutional purposes.

It is clear that the ACCC has never supported the current policy. The ink was hardly dry on the Government’s response to the Commission’s last review when an ACCC Commissioner was making observations about “excessive price increases”. This

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<sup>35</sup> PC (2001a, pp94-95)

<sup>36</sup> PC (2002, pp204-205), PC(2002, p357)

was done without even having had the benefit of the first set of post reform monitoring information, let alone information about future investment plans<sup>37</sup>. The ACCC has never observed that the price increases at Melbourne, Perth and Brisbane were of a lesser magnitude than that it allowed Sydney or that even if the old regime had continued, prices would have increased significantly under the NNI arrangements. Melbourne Airport awaits with interest the ACCC's submission to this review.

### 3.4 Alignment of the Direction and the Regulation

Melbourne Airport supports the alignment of the definitions of aeronautical services under the Regulation made pursuant to Part 7 of the Airports Act and the monitoring requirements under Part VIIA of the Trade Practices Act via Direction 24. The simplest way of doing this is for the Direction to refer directly to the Regulation. If it is desired to monitor prices of certain non-aeronautical services these should be identified separately. Further, to ensure consistency, issues relating to agreements entered into by the FAC should be addressed explicitly in the Regulations.

### 3.5 Treatment of ground access services

Direction 24 defines "landside vehicle access to terminals" as "aeronautical related" where as the Regulation defines "landside terminal access roads ..." as aeronautical services. It should also be noted that "aeronautical related" is not a category contained in the Regulation and as such is not revealed in the regulatory accounts although it is reflected in the monitoring arrangements.

Under its administration of the NNI rules, the ACCC sought to apportion some of the costs of the road network to car parks, car rental and other ground access operators as well as assert that benefits flowed to various other non-aeronautical activities (including retail). This could only ever be done on an arbitrary basis. Since 2002, a general consensus has developed between airports and airlines that the primary purpose of the road network is to support aeronautical activities. That is, the bringing of passengers to terminals, providing service providers access to the airfield and terminals and facilitating freight movements (which of course are dominated by freight carried in passenger aircraft). As a result, the majority of road costs are treated as aeronautical. The principle exception to this is where roads are provided to support non-aeronautical property developments.

Parking areas are provided for a range of ground transport operators (taxis, busses, hire cars). In addition, most airports now provide a range of car parking products (for both staff and the travelling public), which together with the services provided by ground transport operators, are subject to competition from a range of off-airport

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<sup>37</sup> Martin (2002)

car park providers. The markets for ground access services at major Australian airports are sufficiently diverse and competitive not to require any formal monitoring. Any concerns about airports using their market power to frustrate operations of competitors in ground access markets can be properly dealt with under Part IV.

Some parties still have concerns about short term car park prices as well as some ground access prices (especially in relation to taxis). The pricing of these services occurs in workably competitive markets and is affected by assumptions that must be made about the value of access to certain sites in close proximity to terminals. As such, a cost-based analysis of the prices of these services will not reveal the appropriateness of prices (especially if land is not revalued) and the collection of asset and cost data is simply an unnecessary compliance and administrative expense.

If the Commission finds the monitoring of car park prices should continue the need to monitor anything other than prices is questionable. What are most important are changes in car park prices rather than a debate about valuation methodology. If necessary, the ACCC can easily compare prices across airports and if necessary gather price information on competing off-airport sites and like locations in the CBD as has been done in Table 1.5.

***Recommendation:***

- *Revenues associated with ground access services should be treated as non-aeronautical.*
- *Airport roads should be defined as aeronautical assets except where they have a significant role in providing access to sites not involved in aeronautical activities. Parking areas should be treated as non-aeronautical assets.*
- *If considered necessary, airports should be asked to report prices and total throughput on an annual basis for ground access services, including car parks, but not the costs of these services.*

### **3.6 Other aeronautical related services**

It is Melbourne Airport's general view that the "aeronautical related" category contained in the current Direction is redundant. It is noted that this category was much reduced following the adoption of the Productivity Commission's recommendations in 2002.

The current reporting in the absence of the relevant asset and land values provides virtually no meaningful information and Melbourne Airport is not aware of any policy or commercial use of this information since it was first published in 1998.

**Recommendation:**

- *Aeronautical related category in the Direction should be abolished and if appropriate services included in the aeronautical services definition to the extent necessary to ensure consistency with the Regulations.*

**3.7 Treatment of Goodwill**

When airports were sold by competitive tender, the prices that were paid for major airports exceeded the written down value, and even the DORC value, of the assets concerned. The difference between the price and the physical asset value is accounted for as goodwill.

Under the current guidelines, the goodwill is not allocated to either the aeronautical or non-aeronautical business segments. The ACCC justifies its focus on tangible assets as the goodwill (formerly referred to as lease premiums) because it “could reflect the expectation of future price and profit increases that take advantage of the airport’s market power”<sup>38</sup>. The ACCC has not provided any evidence to support this assertion.

An alternative explanation is that airports had reasonable expectations under the tariff basket price cap of increases in earnings from volume growth and increased efficiency in the production of aeronautical services. Further, many airports were sold with significant parcels of underdeveloped industrial land. It was also clear that in virtually all cases under consideration there were significant terminal retailing and car parking opportunities at hand.

In adopting this approach the ACCC is effectively saying that airports are not entitled to earn returns on the full purchase price of their assets. Despite the reasons set out above, Melbourne Airport is comfortable with there being no goodwill allocated to the starting aeronautical asset base. However goodwill cannot simply be wished away by the ACCC because of some ill founded proposition about market power.

It is convenient for the ACCC to remove the goodwill from the non-aeronautical business segment as it artificially inflates returns. This enables it by inference to allege abuse of market power in non-aeronautical areas, especially car parks. It possibly strengthens the argument for a widening of the monitoring framework and, however unlikely, the scope of any future regulatory price setting. It is interesting to speculate what view the ACCC would take on goodwill if it was regulating on a single till basis – would it seek to deny airports the right to earn a return on the total purchase price of the airport?

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<sup>38</sup> ACCC (2006, p12)

**Recommendation:**

- *Any goodwill in airport businesses at the time of sale should be included in the non-aeronautical balance sheet.*

**3.8 Services provided under agreements entered into by the FAC**

Clause 3 of the Direction “carves out” of its aeronautical services definition those services that “on the date the airport lease was granted [were] the subject contract, lease, licence or authority given under the common seal of the FAC”. However, if the airport operator provides such services, they are treated as aeronautical services under the Regulations. Thus check-in desks may be non-aeronautical under the Direction but aeronautical under the Regulations.

As the Regulations require aeronautical services to be “provided” by the airport operator, the services provided by domestic terminals should not be treated as aeronautical services until the airport becomes the operator of those terminals. This was the case when a number of airports, including Melbourne, took back terminals from the Ansett Administrator. The difficulty then arises because the Regulations would now determine these to be aeronautical but the Direction classifies them as non-aeronautical. This is because the services in question were provided under a lease entered into by the FAC that was in place at the time of the grant of the airport lease.

It is clear the primary purpose of this “carve out” was to exclude from the price cap regime the prices of those aeronautical services which airports had no capacity to vary other than in accordance with existing agreements with users. Put another way, there was no need to constrain airport market power in relation to these services via the price cap because they were effectively constrained by contract.

A number of FAC contracts are no longer in place. In such instances airport users are in no different a position in relation to these services than they are with any other aeronautical service. It therefore seems appropriate that they should be included in the price monitoring framework when FAC agreements are replaced for whatever reason.

The difficulty this poses is that revenues generated under the FAC agreements gives rise to commercial valuations of the assets in question typically greater than the depreciated cost of the assets concerned. If the pricing arrangements are rolled over or renegotiated, the relevant revenues will generally yield a return on the book value of the physical assets greater than the airport’s cost of capital. This could lead to pressures to inefficiently reduce aeronautical prices generally (or for that specific service) even though there has been no change in commercial circumstance.

In those rare circumstances where the termination of an agreement made by the FAC leads to a reclassification from non-aeronautical to aeronautical, airports should be



allowed to transfer an amount of goodwill to the aeronautical part of their balance sheet. The amount transferred should represent the difference between the commercial value of the services and the book value of the relevant assets. Indeed, this approach is valid in all circumstances where assets are transferred from the non-aeronautical segment of the balance sheet to the aeronautical segment.

It is acknowledged that this approach is unusual but seeks to find a pragmatic solution to an issue peculiar to this industry and this regime. As such, particular care will need to be taken in developing guidelines for its implementation to ensure that those producing the accounts and those who are auditing them are doing so in a way that accords with the policy intent.

Further, it should be made clear that wherever a service is provided under an agreement in place at the time the airport lease was granted, that service is treated as non-aeronautical for as long as that agreement is on foot or has been extended resulting from an option contained in that agreement.

***Recommendation:***

- *All services provided under agreements with the FAC in place at the time the airport lease was granted should be deemed as non-aeronautical until those agreements expire or are otherwise terminated.*
- *Where non-aeronautical assets are transferred (or have been transferred in the past) to the aeronautical segment of the balance sheet, an amount of goodwill equal to the difference between the current commercial value and the book value should be allocated to the aeronautical balance sheet.*
- *If the above recommendation is to be implemented, the Commission should be consulted on the development of the appropriate accounting guidelines to ensure consistency with the policy intent.*

### 3.9 Fuel

The arrangements put in place between the FAC and the fuel companies just prior to sale give airports access to two income streams, namely:

1. a site rent subject to a market review mechanism; and
2. a right to impose a levy on fuel throughput in recognition of the right the airport has granted to install apron refuelling hydrants and associated reticulation infrastructure.

Site rents subject to market review clearly do not require monitoring or any other form of regulatory intervention.

It is this second component that has been the cause of significant controversy. At the time of sale, the FAC had not utilised this right although it was represented to bidders in the Phase 1 and 2 processes that fuel throughput levies (along with a number of other items) were potential new non-aeronautical revenue sources<sup>39</sup>. Some airports have chosen to exercise these rights, others (including Melbourne Airport) to date have not.

It can be argued the fuel throughput levy is a pure rent in that it does not relate to any identifiable economic cost of either an actual (capital or operating cost) nature or an opportunity cost (nothing is given up to grant this right). This would suggest this revenue is properly associated with the rights the airport operator has to grant access to the aircraft parking areas where the aircraft are refuelled. As such, the levies could be considered an aeronautical revenue stream.

Melbourne Airport has sympathy with the arguments advanced in the immediate post-sale period when fuel levies were activated that they were necessary to cover unforeseen costs associated with the Airport Environment Officer. It is also accepted that for some airports aeronautical prices were so low that additional revenues had to be found outside the price cap to ensure investment, especially in asset replacement and maintenance, occurred. However, these arguments now have little veracity as airports are no longer constrained in their pricing activities other than by market and strategic considerations.

Clearly, different airports have taken different approaches in relation to fuel throughput levies and there continues to be uncertainty about them. Therefore it is most important that the Commonwealth should make clear how in reviewing compliance with the Principles it will treat this revenue stream.

***Recommendation:***

- ***The Commonwealth should make clear whether fuel throughput levies are to be treated as aeronautical or non-aeronautical income.***

### **3.10 Segmentation within aeronautical services**

The definitions of aeronautical services in both the Direction and the Regulations provide sub categories which broadly seek to separate terminal services from airfield services. Since 2002, the ACCC has sought to have airports further segment their accounts to reflect this.

Whilst many assets and some operating costs fall clearly into one category or the other many don't (such as labour costs and services infrastructure including roads).

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<sup>39</sup> Neither Melbourne Airport nor APAC were bidders for Sydney Airport and therefore Melbourne Airport is not able to comment on what bidders in that sale were told.

As a result amounts that are already an allocation between aeronautical and non-aeronautical segments are further allocated on a fairly arbitrary basis.

It is becoming quite common for airports to levy a single charge per passenger for both airfield and terminal services. This reflects the economic reality that consumption of these services is joint and non-separable. Whilst a defensible driver is sometimes available to allocate costs, such allocations have no basis in assessing efficient prices. Excessive segmentation merely seeks to arbitrarily assign joint and common costs to non-separable services.

The purpose of the monitoring reports is to provide evidence (in concert with other sources and considerations) of any systematic non-compliance of the Principles, not to pass judgement on the appropriateness of individual prices on what might be a fairly arbitrary allocation of costs. As such, there seems to be little merit in requiring airports to produce segment information that will never yield any conclusions. Consistent with the overall policy approach, the relative prices of various services are best left to the commercial parties.

***Recommendation:***

- ***Airports should not be required to segment their accounts beyond identifying aeronautical and non-aeronautical components.***

### **3.11 Quality of Service Monitoring**

Melbourne Airport is generally comfortable with the quality of service monitoring report and the way the ACCC handles it. That said, under the contractual arrangements that now exist between Melbourne Airport and its airline customers, the ACCC's activities do not in any way influence the quality of services provided at Melbourne Airport.

Melbourne Airport sees the most value in quality of service to be in tracking changes in quality through time. It seems unlikely that the relative levels of service quality at Australian airports will vary significantly through time unless one undertakes major new developments and differences in numerical score would have little apparent meaning. A move to standardise quality reporting will create discontinuities in some airport quality series. Further, it may cause those airports that have contractual quality arrangements in places, such as Melbourne, to incur greater compliance costs by having to keep two sets of "quality books". On balance, Melbourne Airport does not support a move to a uniform quality monitoring framework.

In its submission to the last review, Melbourne Airport expressed significant concerns about the reliance that the ACCC placed on anecdotal evidence provided

by airlines<sup>40</sup>. Melbourne Airport is pleased that the ACCC has ceased to rely on this sort of evidence.

At the same time Melbourne Airport expressed concerns about unsubstantiated commentary by the ACS. Whilst the anecdotal commentary has been removed, Melbourne Airport believes that the ACS continues to use this monitoring process to either advantage itself in relation to the costs of its operations at the airport or to deal with its own industrial relations issues.

In any event, the purpose of the monitoring regime is to ascertain whether an airport is abusing its market power by way of reducing quality of services. Melbourne Airport provides no services to the ACS in a market context. Rather the ACS is an unaccountable monopoly provider of services at the airport. If anything, it is the performance of all the border agencies that airports and the airlines should be asked to comment upon.

***Recommendation:***

- *The views of the ACS should no longer be sort as part of the quality monitoring survey.*
- *Quality of service indicators should be developed to measure the on-airport services performance of the Australian Customs Services, the Australian Quarantine and Inspection Services and the Department of Immigration.*

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<sup>40</sup> Melbourne Airport (2001, pp40-41)

## 4 The Principles going forward

As discussed in Chapter 2, whilst Melbourne Airport is confident that it has complied with the current Principles. Going forward the regime could be strengthened by further clarification of the Principles as discussed in this chapter.

### 4.1 Level of Returns

#### *Capacity cycles*

At a theoretical level measured return on assets should be negatively correlated with the availability of surplus capacity. As capacity tightens the level of returns assuming prices are fixed will rise and then drop when capacity is augmented. Over time, level of returns on a year by year basis can be expected to fluctuate around the long run cost of capital. If above WACC returns are not allowed when capacity is short it is likely that the cost of capital may actually be forced up<sup>41</sup>.

At a practical level there are a range of capacity elements at airports which become constrained at different times and which have different incremental cost profiles. Further, it is simply not possible to collect information in a monitoring process that would address this issue except in a highly costly and intrusive way. Even then it is unlikely that detailed analytical conclusions could be drawn.

Nevertheless this is an important issue to be taken into account when considering if an airport is charging above long run costs and therefore it is appropriate for this issue to be reflected in the statement of the Principles.

#### *Relative profitability*

Melbourne Airport sees the level of returns established by the ACCC in the NNI arrangements as a reasonable industry benchmark for the five airports it considers should remain subject to the price monitoring. But it is important to note that in acknowledging this industry benchmark it may be the case that over time some airports consistently earn above it and others below reflecting their differing levels of productive efficiency and management acumen.

Airlines would no doubt reject arguments by a relatively inefficient airport that it is appropriate for it to raise its prices because its aeronautical returns were below those of the industry leader. Similarly, it should be expected that the shareholders of more efficient airports should be entitled to earn returns superior to those of less efficient operators.

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<sup>41</sup> For a discussion of this proposition see Melbourne Airport (2001, pp45-48)

This is not to say that industry leaders should be able to earn extortionate returns but rather that any assessment of compliance with the Principles should have some regard to the relative efficiency of an airport's operations.

## 4.2 Asset valuation

The Principles currently state that

“efficient prices broadly should generate expected revenue that is not significantly above long-run costs of efficiently providing aeronautical services (on a dual till basis). Prices should allow a return on (appropriately defined and valued) assets (including land) commensurate with the regulatory and commercial risks involved.”

Clearly, an assessment of the appropriateness of returns requires detailed consideration of the risks inherent in the individual airport business and how they have chosen to share the risk contained in the markets they serve with their airline customers as well as the issues discussed in Section 4.1.

The appropriateness of the definition and valuation of assets, however, can be approached with more objectivity. Despite the inconsistencies between the Direction and the Regulations, there is a fairly well developed understanding between airports and airlines as to what constitutes an aeronautical service. There is a similar consensus as to how costs (operating and capital) incurred in the joint production of aeronautical and non-aeronautical services are to be apportioned.

The issue that is the subject of debate remains the valuation of aeronautical assets, and in particular aeronautical land. Melbourne Airport believes it is an essential outcome of this review that the Principles in future explicitly address how the Government will address asset valuation issues when considering whether an airport has complied with the Principles. This is the area of greatest contention in the current framework and the absence of such a clear statement its greatest weakness.

There are two separate but related issues that need to be considered:

1. How should asset values change through time.
2. How should starting aeronautical assets values be determined.

Before considering these two questions, it is appropriate to outline how Melbourne Airport has dealt with them as part of its overall commercial approach to establishing a long run efficient pricing policy. It should be noted that this approach, including the treatment of starting asset values, has been generally accepted by the airlines.

### **Melbourne Airport's approach to asset valuation**

At the time the airport lease was granted, the land on which the airport is situated was valued at market value for a mixed rural/industrial/commercial use – it was assumed that the difference between the 99 year leasehold value and the freehold value was immaterial. All physical assets were valued on a depreciated engineering replacement cost basis.

Physical assets are depreciated over their effective remaining lives. Melbourne Airport periodically reviews these lives and adjusts depreciation rates accordingly. Land and goodwill is written off over the life of the lease in accordance with the Accounting Standards.

Assets were allocated to aeronautical and non-aeronautical services and any assets providing both types of services (such as terminal buildings) were allocated using standard activity based costing principles.

Since sale, the total value of assets has increased through investment and decreased as a result of depreciation and write-offs. As activity has changed, the allocation of assets between aeronautical and non-aeronautical activities has changed at the margin.

Melbourne Airport in co-operation with the Commonwealth has acquired additional land required for the long term development of the airport. This has been valued at cost and will be placed under leases granted under the Airports Act that have the same expiry date as the main airport lease. The acquisition value will be written off over the life of the relevant lease.

Melbourne Airport has not revalued aeronautical assets, and particular aeronautical land.

### *Asset revaluation*

There is a view that at some point the ACCC endorsed the notion that it was acceptable for prices to be increased as a result of increases in asset values, especially land. Melbourne Airport has not been able to identify any statement made by the ACCC to this effect. In many state regimes, such as the regulation of electricity distribution in Victoria, asset revaluations are not permitted.

It is incorrect to see the ACCC's actions in the Sydney price notification matter in 2000 as an endorsement of revaluations. Rather it is properly viewed as an effort to establish an efficient set of starting prices for Sydney Airport prior to sale, something that was not done for Phase 1 and 2 airports.

The ACCC's most recent statement on asset revaluation was made in December 2004 in relation to charges levied by Airservices. In that decision, the ACCC noted

Airservices agreement to the approach suggested by participants in the ISC that no further asset valuations will be undertaken that would adjust prices within the pricing period or at the beginning of the next cycle. Further to this, Airservices has agreed in principle to track the value of its asset base accounting for its actual capital spend, depreciation and asset disposals

The ACCC endorses this approach and considers that this value of Airservices' asset base can now be used as a reference point for future notifications, taking into account new, efficient investment.<sup>42</sup>

The ACCC has adopted a similar approach for the regulation of electricity transmission revenues<sup>43</sup>.

When considering the airport case, it is helpful to consider the valuation of two subsets of assets – land and other physical assets.

The airport lease is precisely that, a lease – this point is sometimes lost in the debate. Airport companies do not own the airport. Airport lessee companies have acquired the rights to use the sites for purposes allowed under the Airports Act for the term of the lease. When the lease expires, the site is returned to the Commonwealth for zero consideration. Thus, increases in the value in the land over the life of the lease are realised by the freehold title holder, the Commonwealth. In such circumstances, Melbourne Airport does not believe the Accounting Standards permit revaluation.

Melbourne Airport believes that the following is an accurate description of the land held under the airport lease.

When the land has an indefinite economic life, the land element is normally classified as an operating lease unless the title is expected to pass to the lessee by the end of the lease<sup>44</sup>.

Property held under an operating lease is generally not to be revalued. The Accounting Standards make an exception to this rule for “investment properties” held under a lease which can be revalued. The Accounting Standards make clear that investment properties are not for “use in the production or supply of goods or services ...”<sup>45</sup>. It is apparent that aeronautical land is precisely for the production of

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<sup>42</sup> ACCC (2004d, p85)

<sup>43</sup> See ACCC (2004b) and ACCC (2004c).

<sup>44</sup> AASB *Classification of leases*, paragraph 15

<sup>45</sup> AASB *Investment property*, paragraph 5.



aeronautical services and it is clear this is the purpose for which the airport lease is granted.

The Standard notes that where

A payment made on entering into or acquiring a leasehold that is accounted for as an operating lease represents prepaid lease payments that are to be amortised over the lease term ...<sup>46</sup>

To allow land to be revalued for price monitoring purposes would therefore require regulatory accounts to be produced on a different basis to the statutory accounts. This would reduce the transparency of the current framework and increase costs. However, as important these accounting issues are, more important is the economic consideration of this question.

It could be argued that as airport lessees can realise a large part of the value improvement of land subject to the airport lease by putting it under long term commercial lease at prevailing market rates. Given that aeronautical land is substitutable at the margin with non-aeronautical land, the efficient price of aeronautical land is that achieved by the capitalisation of rents of non-aeronautical land adjacent to the airside boundary.

It would follow therefore that not to value land at its market price would create an incentive for the airport lessee company to effectively restrict the supply of aeronautical land as higher value non-aeronautical uses would be more profitable.

This argument, in Melbourne Airport's view, whilst having some attraction from a theoretical economic perspective, has little practical application. The airport lease requires the airport lessee use the site as an airport and to develop the airport site having regard to "the actual and anticipated future growth in, and the pattern of, traffic demand for the Airport Site"<sup>47</sup>.

In most circumstances, this would seem to require the airport to provide for the expansion of its aeronautical facilities and over time this is likely to require more land not less. The effect of this clause is to place the aviation needs of the airport before other competing uses of the airport's land.

Any decision an airport might make to transfer large areas of aeronautical land to non-aeronautical use would need to be consistent with the Master Plan. The associated development would almost certainly trigger the Major Development provisions of the Airports Act.

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<sup>46</sup> AASB *Classification of leases*, paragraph 14.

<sup>47</sup> Clause 12.1 of the Melbourne Airport lease.

In approving a Master Plan section 81(3) of the Airports Act requires the Minister to have regard to, in addition to other matters,

- (a) The extent to which carrying out the plan would meet present and future requirements of civil aviation users of the airport, and other users of the airport, for services and facilities relating to the airport concerned; ...

and

- (d) the views of the Civil Aviation Safety Authority and Airservices Australia, in so far as they relate to safety aspects and operational aspects of the plan

Section 94(3) of the Airports Act requires the Minister to have regard to the above matters when approving a Major Development Plan. In addition, this section of the Act also requires the Minister to have regard to

the effect that carrying out the plan would be likely to have on the future operating capacity of the airport; ...

Taking these obligations placed on the Minister together, along with the purposes of the Act, it is highly unlikely that an airport lessee company would ever be given approval to significantly reduce the aviation capacity of the airport unless there had been a permanent collapse in demand. As any substantial transfer of aeronautical land would necessarily involve a reduction in aviation capacity, it is Melbourne Airport's view that the vast bulk of the land currently put to aeronautical use, and especially that underpinning major terminals and aircraft movement pavements (which clearly cannot be economically moved), has no practical alternative use. In other words, its current aeronautical use is its highest and best use irrespective of the commercial value of any non-aeronautical use. As such, revaluing this land will not improve allocative efficiency but merely result in a transfer from airline shareholders and/or passengers to airport shareholders.

Whilst the argument advanced above relates to the vast majority of aeronautical land, consideration needs to be given to the land at the aeronautical/non-aeronautical boundary. Melbourne Airport contends that providing any land entering the aeronautical asset base is treated like the acquisition of any other asset there is little risk that airports will not invest in new aeronautical land as and when it is required. This means land entering the aeronautical asset base should be valued at its purchase price for new land or its commercial value if it is being transferred from the non-aeronautical asset base. If necessary an amount of goodwill may need to be allocated to the aeronautical asset base when the non-aeronautical land is transferred.

In relation to other physical assets (plant, buildings, services, civil improvements such as runways, aprons, and roads) Melbourne Airport generally supports the approach the ACCC has adopted with respect to Airservices subject to the caveat below. Changes in the valuation of these assets will largely reflect changes in the purchase or construction costs relative to actual historic acquisition or construction cost. Given these assets are effectively sunk these changes in value do not represent

either a change in actual or opportunity costs faced by the airport and as such their reflection in prices does not enhance economic efficiency.

The caveat is that there is potential that at some point in the distant future that certain assets (probably terminal buildings) will have been largely written off but will still be providing services of significant economic value. The danger this causes is that if prices are set solely by reference to the asset base and operating costs, they may over time diverge so much from long run incremental costs that efficient investment may not occur. Empirically, this outcome may be unlikely as new assets will continue to come on line they will replace many older assets will dominate the asset base in value terms. Similarly, from a commercial point of view, it could be expected that as airlines place an economic value on current services and incremental capacity they will ultimately agree to prices that will ensure delivery of new capacity. Nevertheless, policy makers should keep this issue in mind for the future.

### *Establishing starting asset values*

It is important to remember that no explicit value was placed on the aeronautical business by bidders or the Commonwealth at the time of sale – with hindsight this was unfortunate. It has not been uncommon in privatisation processes for bidders to be advised of “deemed” asset values for regulatory purposes. But given the price control regime put in place at the time of sale, it is unlikely such an action would have been seen as necessary when airports were sold. Further, as was acknowledged by the Commission in its 2002 review, the legacy prices that emerged from the FAC’s network wide single till and the post-sale price control framework were not sustainable in a commercial environment<sup>48</sup> and therefore do not form a robust basis for any valuation.

As mentioned above Melbourne Airport valued its assets on a depreciated replacement cost basis at the time the lease was granted<sup>49</sup>. Land was valued at the market prices for a mixed rural, industrial and commercial use assuming that there was little difference between the freehold value and 99 year leasehold. When prices were last negotiated with airlines in 2002 these valuations were not disputed.

It may be the case that some airports did not adopt this approach and could still be carrying assets on some other basis. If this were so pressure to revalue assets may actually be an attempt to properly state acquisition values.

Melbourne Airport believes it necessary for the Government to make a clear position on asset valuations at the time of sale or some other specified point in time.

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<sup>48</sup> PC (2002, pp204-205), PC(2002, p357)

<sup>49</sup> It was not considered appropriate to undertake an optimisation exercise as the asset reconfiguration that would be implied in such an optimisation would be prohibitively expensive.

Given the sale process for Sydney Airport was different to other airports, it may be appropriate to deal with Sydney as a special case.

One option could be to restate asset values on a Depreciated Replacement Cost basis at including land at its fair market value (assuming ongoing use as an airport and other uses consistent with surrounding sites). A similar outcome may also be achieved by allocating an appropriate amount of goodwill to the aeronautical business. In any event, such a restatement should be discussed fully, and hopefully agreed, with the airport's airline customers. Obviously, it will be subject to audit certificate through the normal processes associated with the regulatory accounts. Again, given the novelty of this approach, particular care will need to be taken in the development of the regulatory accounting guidelines.

The benefits of the proposed approach are that it is:

- consistent and transparent across all airports;
- capable of being implemented (in consultation with airlines); and
- not inconsistent with approaches to asset valuation in other industries.

However, in some instances the asset value reached might imply that further increases in aeronautical charges are justified. The acceptability of any increase would need to be assessed in the context of moving more closely to long run efficient prices rather than simply redistributing value between airline and airport shareholders. Where an airport and its airline customers have generally agreed assets values, or indeed even pricing outcomes, no further action should be taken.

#### 4.3 Pricing Structures

The Commission will be well aware of Virgin Blue's general objection to passenger based charges for airside services at Sydney Airport. Melbourne Airport understood these objections when it put its initial pricing offer to airlines in 2002.

In relation to Melbourne Airport's pricing structure, the following observation made by the Tribunal is in Melbourne Airport's view an adequate summary of the situation:

“Mr Pen said that Virgin Blue has accepted these charges [passenger based charges] at other airports as part of wider commercial arrangements with those airports. In particular, in relation to Perth and Melbourne Airports, Virgin Blue was able, in exchange for a passenger based charge, to obtain certainty of price over a long term, commitment to maintain the quality of the airport's services at an acceptable level, and a reduced rate for domestic terminals.”<sup>50</sup>

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<sup>50</sup> ACT (2005) at par 287.

Without disclosing commercial details, what Virgin Blue received was an arrangement that gave it immediate access to additional terminal capacity as a result of Melbourne Airport taking back Terminal 3 from the Ansett Administrator at a cost of \$25 million. Without this Virgin Blue would not have been able to respond to the market opportunities caused by the collapse of Ansett. Virgin Blue gained access to the terminal for a period of 10 years at a known set of prices with significant rights to develop its brand in that terminal.

It is not disputed that moving from weight based charges to passenger based charges shifts the relative charging burden towards lighter aircraft. Figures 1.13 and 1.14 demonstrate Virgin Blue's opposition to passenger charges is entirely understandable. However, there is a total lack of any factual evidence that changes in pricing structures have affected total demand or market share. As such, for a given amount of revenue collected by an airport, the choice of pricing structure simply resolves a distributional question between groups of competing airline shareholders.

Melbourne Airport would further observe that when this question was considered by the ACCC, the Council and the Tribunal no factual evidence was advanced to demonstrate that the imposition of passenger based charges has in anyway restricted competition or impeded growth in any aviation market. Melbourne Airport believes that no such evidence exists. It is Melbourne Airport's view that whilst the charging structure may distribute the charging burden between carriers, it does not materially impact on competition between the incumbents nor is it an issue with potential entry.

Mr Pen's comments show that in circumstances where Virgin Blue confronts a situation where it can source other advantages in a negotiation its objection to passenger based charges diminishes. Virgin Blue's position is not one of high principle or public policy. It is one - a perfectly legitimate one - of pragmatic commercial self interest seeking to maximise its share of industry rents at the expense of its competitors.

Given the Treasurer in his terms of reference to the Commission has directed it to have particular regard to the Tribunal's decision, it is appropriate to make some observations in relation to the Tribunal's findings on this question. It is important however to place the Tribunal's findings in a proper context.

It is clear that the range of commercial issues in question in the Sydney case were quite specific to that airport and that the Tribunal does appear to have been influenced by the specifics.

It is not clear that if the facts in relation to another airport were competently presented to the Tribunal that it would reach the same general position on the relative merits of weight versus passenger based charges. However, having

examined the Tribunal's reasoning, it is Melbourne Airport's view that the Tribunal has fundamentally erred both in fact and in analysis.

Melbourne Airport agrees with the Tribunal's view that efficient pricing requires consideration of the underlying cost drivers of the service in question<sup>51</sup>. However, the Tribunal's decision pays scant regard to the true nature of costs of the provision of airfield services and if presented with the relevant information in a coherent way, it may well have formed a different view.

It appears that the Tribunal has confounded the business models of low cost carriers with the aircraft they use and failed to draw an appropriate analytical distinction between the two. Low cost carriers achieve better utilisation primarily because of their business models. It is wrong to assume that the aircraft they use optimise the efficiency of airport assets and from this appears to have flown a number of erroneous conclusions. The Tribunal is simply wrong in believing that aircraft weight best reflects the cost of the provision of airport services and that smaller aircraft are more efficient users of airport infrastructure<sup>52</sup>. Three issues seem to be of central importance.

### *Damage*

There is a simplistic appeal to the notion that heavier planes must do more damage to airport infrastructure than lighter ones. It follows efficient marginal cost pricing will be achieved if charges are levied on weight. Putting aside the issue of the recovery of capital costs for the moment, it is simply not the case that there is a monotonic or even strictly increasing relationship between an aircraft weight and the damage it does to pavements. As noted by Doganis in 1992:

A large aircraft such as the Boeing 747 has landing gear which produces lower pressure on the runway than some aircraft which are smaller and lighter. Thus the Boeing 747 requires runways of lower strength and imposes lower maintenance costs than some smaller aircraft yet on a weight basis must pay substantially higher landing fees.<sup>53</sup>

Obviously, the damage caused by different aircraft types is an issue of major concern to airport pavement engineers. It has been an area of significant area of applied research. It has been recently determined that Aircraft Classification Numbers (ACNs) were the best available tool for damage cost allocation<sup>54</sup>. ICAO defines the ACN as "a number expressing the relative effect of an aircraft on a

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<sup>51</sup>ACT (2005) Summary at par 15

<sup>52</sup> ACT (2005) at paragraphs 245-257.

<sup>53</sup> See Doganis (1992, p81).

<sup>54</sup> Irish Commission for Airport Regulation (2002, p56)

pavement for a specified standard subgrade strength” and describes their use as “a standard procedure for evaluation of the load rating of aircraft”<sup>55</sup>.

In simple terms, an ACN is a rating based on the equivalent damage caused by, among other things, different weights, bogie configuration, landing gear (or undercarriage) and tyre pressures of aircraft. In general, a higher ACN indicates a more damaging aircraft and, for the same load, more wheels and lower tyre pressures usually result in a lower ACN. Therefore, aircraft weight is not the only determinant of the damage imposed by aircraft on pavements.

The following table sets out ACNs and MTOWs for aircraft that commonly use Melbourne Airport. It should be noted that on this measure, a B777-200 does more damage than a B747-400 despite being 100 tonnes lighter.

Aircraft type	ACN	MTOW (tonnes)
B747-400	77	387
B777-200	90	287
A330-200	69	230
B767-300	65	173
B737-800	44	71
A320-200	41	72

**Table 4.1: ACN and weight of various aircraft**

Source: CASA (2004)

The following table distributes the domestic traffic at Melbourne Airport in 2005 on several bases.

Aircraft type	ACN	MTOW	Passengers
Qantas	51%	57%	52%
Jetstar	11%	12%	10%
Virgin Blue	37%	30%	37%
Rex/O'Connor	1%	1%	1%

**Table 4.2: Distribution of Melbourne Airport Activity 2005**

Source: Melbourne Airport

The analysis indicates that if runway damage should be the driver for distributing the charging burden for domestic runway use, passengers provide a better proxy for damage than does MTOW. If damage were the proper reflection of the marginal cost of provision, then consistent with the reasoning of the Tribunal<sup>56</sup>, pricing on the basis of passengers, at least for domestic airfield services at Melbourne Airport, would better represent the outcomes one would expect in perfectly competitive market.

<sup>55</sup> ICAO (1983, Part 3)

<sup>56</sup> ACT (2005) at para 235.

### *Asset utilisation*

Like all infrastructure services, the costs of providing airport services, and in particular, those associated with aircraft movement (runways, taxiways and aprons), are largely fixed and dominated by the recovery of sunk capital costs. Further, a significant proportion of the operating and maintenance costs are a result of undertaking the necessary inspections and cleaning to keep the runway certified. The asset also deteriorates from exposure to the elements and the efflux of time. As such, it is Melbourne Airport's view that the costs that are truly variable (or marginal) are quite small, probably around 10%. This is especially true in relation to taxiways and aprons, which are not subject to impact on landing and the associated deposition of tyre rubber.

When the question of passenger based charges was before the Council Virgin Blue sought to address a range of issues that suggested that larger (by which we presume heavier) aircraft required more extensive or expensive assets<sup>57</sup>. The Tribunal also considered the demand placed on assets by small and large aircraft<sup>58</sup>. As discussed above, the Tribunal appears to have confounded airline business models and aircraft types in its analysis. As demonstrated below, when these arguments are confronted with the facts of modern aviation operations, they are less than compelling.

It is true that the length of runway at an airport is determined by the aircraft that are going to use it. The type of aircraft that will use an airport is a function of the passengers who use the airport – are there sufficiently many of them to justify the operation of heavier aircraft? And also, where are they travelling? However, it is simply not the case that runway length requirements are solely determined by aircraft size or weight. Table 4.3 provides indicative take off lengths required and MTOWs for a range of aircraft that use, or will use, Melbourne Airport.

Aircraft type	Takeoff length (metres)	MTOW (tonnes)
A380	3,000	550
B747-400	3,500	387
B777-300	3,500	287
A330-200	3,100	230
B767-300	3,100	173
B737-800	3,250	71
A320-200	3,000	72

**Table 4.3: Weight and takeoff lengths of various aircraft**

Source: Aircraft Manufacturers and CASA (2004)

Interestingly, the aircraft that dominates Virgin Blues fleet, the B737-800 requires a longer runway than both the A330-200 and the B767-300 which Qantas uses on main trunk routes in Australia.

<sup>57</sup> Virgin Blue (2003)

<sup>58</sup> ACT (2005) at paragraphs 246-257.



Virgin Blue also claims that heavier aircraft require thicker movement services. Whilst a Cessna may need a thinner pavement than an A380, the thickness of pavement for commercial jet aircraft is not only a function of their weight but also the design of their under carriage<sup>59</sup>. However, at a practical level, in most cases that are relevant to the Commission, aircraft movement pavements will be built to a standard constant depth to ensure maximum flexibility in the future as operational mixes change.

Weight is also a poor predictor of the taxiway infrastructure required by an aircraft. The A340-600 has slightly inferior ground manoeuvring characteristics to the A380 (the latter being much larger and heavier) and is less manoeuvrable than the B747-400 yet the A340-600 weighs 368 tonnes as compared to the B747-400's 389 tonnes.

The extent of taxiway infrastructure is a function of runway congestion as well as aircraft size. When runways start to become congested, airports will augment or even redesign their taxiway systems. The purpose is to reduce the time aircraft spend on runways and the spacing of aircraft on the runway. This is done by improving the way aircraft enter and leave the runway. This benefits aircraft on short turn around cycles on major trunk routes to a much greater extent than long haul aircraft. This is because long haul aircraft are usually less sensitive to delay because they have a greater capacity to make up time en-route. Here, cost is not caused by weight or even aircraft size but the tolerance to delay.

Virgin Blue strongly supported the development of a second entry taxiway for the east-west runway at Melbourne Airport. The purpose of this project was primarily to reduce congestion around the single entry point at the eastern runway threshold especially in the morning departure peak. As such, the major beneficiaries of the project were domestic operators as it improved their on time performance on time sensitive major trunk routes.

On the issue of efficient use of aprons and runways, the Tribunal appears to place particular importance on a paper given by the CEO of Macquarie Airports, Ms Kerrie Mather, at a conference in Singapore in 2004<sup>60</sup>. It is not clear from the Tribunal's decision the underlying basis of the statistics presented by Ms Mather. But it does again appear that in relation to apron and runway efficiency the Tribunal has confused the operational models of low cost carriers with the operation characteristics of aircraft types.

It is not apparent that small aircraft are more efficient users of aprons. For example, it is possible to park two A320 aircraft on the same parking stand as an A380<sup>61</sup>.

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<sup>59</sup> See Doganis (1992, p81).

<sup>60</sup> ACT (2005) at paragraph 256.

<sup>61</sup> It should be noted that providing two aircraft parking positions is slightly more expensive as it requires additional apron markings, aircraft guidance assets and so on.

The A320 in one class configuration has 177 seats whilst in its one class configuration the A380 is expected to have around 800 seats. In other words, on the same area of concrete, it is possible to park a single large aircraft that carries 226% more passengers than two smaller ones.

For a given runway, its throughput will be maximised by minimising the length of time aircraft spend on the runway and the separation between aircraft. The first of these is determined by the speed of the aircraft. Larger aircraft, especially commercial passenger aircraft, get quicker with size. The second, the separation of aircraft, is more complicated. However, putting aside weather conditions, it is generally the case that greater separation is required between large and smaller aircraft than between aircraft of similar size. These taken together mean that runway throughput will be maximised when aircraft size is maximised. Given large aircraft carry more passengers than small ones, then it is clear that the passenger throughput of a runway will generally be maximised by a relatively homogenous fleet of large aircraft.

### *Summary on cost drivers*

The above discussion is not meant to be a conclusive argument about optimal airport asset utilisation. There are other operational, design and market issues that come into play.

However it allows us to focus on the question of the distribution of charges levied on different aircraft relative to their main cost drivers and in particular the aircraft used in the Australian domestic market. Table 4.2 shows that passenger numbers at Melbourne Airport better approximate the damage caused by landing aircraft. The B737-800 requires a longer runway than the two wide bodied aircraft Qantas uses on domestic routes and therefore, according to Virgin Blue's argument, presumably its aircraft lead to the incurrence of greater fixed costs. Therefore it seems that at least in the case of these two aircraft, passenger based charges better approximate the distribution of both marginal costs and fixed cost.

The analysis also demonstrates that there are very good arguments to suggest that airport asset utilisation might not be maximised by the use of small aircraft. It therefore throws serious doubt on the general application of the conclusion of the Tribunal that "smaller aircraft operated by LCCs brought about a more efficient use of airport facilities"<sup>62</sup>. Any arguments that LCCs bring about more efficient use of airport assets must spring from their business models rather than the notion that smaller planes which they happen to use are generically more efficient.

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<sup>62</sup> ACT (2005) at paragraph 254.

### *Load factors*

Virgin Blue has also argued that passenger based charges discriminate against it, and LCCs more generally, because they operate on higher load factors than traditional full service carriers. The argument was that passenger based charges were inefficient, or at least inequitable, because aircraft carrying more passengers would pay more than an identical one carrying less.

The Tribunal's decision seems to have accepted on face value the fact that LCCs operate on higher load factors. The following table provides data on the activities of the major Australian domestic carriers for the month of April 2006.

	Passengers (‘000s)	RPKs (‘000,000s)	ASKs (‘000,000s)	Revenue Seat factor (%)	Average distance travelled (kms)
Qantas	1,324	1,916	2,354	81.4	1,447
Qantas Link	299	193	271	71.1	645
Jetstar	556	624	819	76.2	1,122
<i>Qantas group</i>	<i>2,179</i>	<i>2,723</i>	<i>3,444</i>	<i>79.4</i>	<i>1,254</i>
Virgin and Pacific Blue	1,148	1,322	1,728	76.5	1,152

**Table 4.4: Australian Domestic Airline Statistics, April 2006**

Source: Qantas (2006), Virgin Blue (2006)

It is conceded that Virgin Blue's argument to the Tribunal was about load factor (passenger per available seat) and that revenue seat factor does confound this with the distance passengers travel. However, given the similarity of operations, revenue seat factor is a close proxy for load factor (especially if Qantas Group is considered). These data show that Virgin Blue in fact has a lower load factor than Qantas. Indeed the better representative of the traditional LCC Jetstar has an even lower load factor than Virgin Blue despite operating on significantly short stage lengths – shorter stage lengths are usually considered to be associated with higher load factors.

Melbourne Airport does not believe that this month is an isolated case. If indeed Qantas operates on higher load factors, and given the discussion about aircraft operations above, then there is very little left of Virgin Blue's arguments that passenger based charges damage its or indeed any LCC's ability to enter and compete in the Australian domestic market.

### *Dynamic efficiency*

The issue of dynamic efficiency is untouched in the Tribunal's decision. The global experience of airports is that it is becoming increasingly difficult to expand the footprint of their operations yet passenger growth is unrelenting. It is passenger growth that is ultimately driving demand and therefore airport costs. As has been

the case with the A380, the challenge of aircraft development will be dominated by meeting passenger demand within the existing airport infrastructure. This appears to mean that aircraft will need to get larger. As such, charging structures that encourage larger aircraft are more likely to encourage dynamic efficiency.

*In conclusion on the Tribunal*

Melbourne Airport is therefore of the view that whilst the consideration of the Tribunal contributes to the debate, it should not be used of itself as a basis for forming a policy position on the structure of airport charges. Only theoretical arguments were advanced to the Tribunal. There is no market evidence to support them in their conclusion that passenger based charges are damaging to competition or demand. Further, the arguments advanced regarding efficiency are at very best highly problematic.

There has been material advanced to suggest passenger based charges favour full cost operators over LCCs. Melbourne Airport is not aware of Jetstar ever expressing a preference for weight based charges even though it would appear that its business model is the best example of the traditional LCC model operating in Australia today. As discussed above, it seems to Melbourne Airport that the most legitimate basis for Virgin Blue's preference for weight based charges is that given the aircraft it has chosen to use it provides a distribution of the charging burden more favourable to its shareholders.

A balanced view might be that at the end of the day, more pervasive forces than pricing structures are driving demand, airline competition and airport efficiency. All charging structures are doing is distributing rent between the shareholders of companies operating in an industry that appears to struggle to support more than two participants. In such circumstances, there seems little point in the Principles addressing this issue.

## 5 Dispute resolution

The agreements that Melbourne Airport has entered into with its airline customers cover a wide range of matters. Many of those, but not all, are subject to formal dispute resolution mechanisms. Those which are not subject to dispute resolution are typically related to decisions taken by the airport in relation to operational or regulatory issues or which may impact on the amount of capital shareholders are required to commit. In particular, all issues in relation to the setting of prices during the life of the agreements are subject to dispute resolution.

For all practical purposes, it is unlikely that airlines will enter into agreements unless they contain adequate dispute resolution mechanisms. However, it is not the settling of disputes within agreements that is of policy concern. Rather, it is those situations where the differences between the parties are so intractable that no agreement can be reached or that airlines, whilst continuing to pay for services believe the conduct of the airport concerned is outside the Principles laid down by the Government.

Further, it is Melbourne Airport's view that the absence of formal (executed) agreement between an airport and its airline customers is not of itself a justification for policy intervention.

There will be times where some airlines agree and some do not about issues involving the provisions and pricing of common use services and facilities. There will be times where an airport for its own legitimate business reasons pursues a course of action (within the bounds of the Principles) which will have differential impacts on its customers, and possibly detrimental impacts on some. These should only be of concern if they impact significantly on the conditions of competition between airlines. In such cases where the purpose is to damage competition, or an airport has an understanding with another airline, it is Melbourne Airport's strong view that these are issues rightly dealt with under Part IV.

Melbourne Airport agrees with little of what the ACCC has to say about airport regulation. There is however on one point of strong agreement – the resolution of the dispute between the Virgin Blue (and subsequently Qantas) and Sydney Airport has taken absurdly long. Not only has it had the obvious impacts on the parties involved, it has to some extent poisoned airport-airline relationships more generally. It also may encourage the sort of strategic behaviour that the removal of prices notification (and especially the NNI processes) has to a large extent eliminated. Further, the quixotic nature of the Tribunal's decision throws little light on how it might assess an application for declaration of another airport. This creates uncertainty in the minds of investors, especially those contemplating approval of large airport investment programs.

Assuming the amendments to Part IIIA currently before the Parliament are passed in accordance with the recommendations of the Senate Economics Legislation Committee, Melbourne Airport would consider the arbitration provisions of Part

III A adequate “last port of call” for the resolution of intractable disputes. These provisions are much more efficacious and accountable than the notification procedures in Part VIIA which even if applied may not be able to achieve a satisfactory resolution of the dispute.

Melbourne Airport is aware that the Commission and the Government have been reluctant to pursue an industry specific access regime for airports. However, irrespective of the merits, two things are true of the Sydney case:

1. That airlines have had to wait far too long to discover whether they will gain access to arbitration; and
2. There is significant uncertainty as to whether an airport fully compliant with the government’s review Principles will not be declared.

This situation is unsatisfactory for all concerned. Melbourne Airport remains a strong supporter of price monitoring but believes that the interests of all parties will be better served by the establishment of an industry specific dispute resolution mechanism consistent with the Principles.

The development of an “industry specific” regime for airports actually represents the development of a more robust prices monitoring regime. The principles applied and the lessons learned could in turn be used in adopting lighter forms of price regulation in other industries, especially those which are vertically separated.

This regime need only apply to the five largest airports in the country<sup>63</sup>. Secondly, it should not be concerned with an airport denying access for a number of reasons including:

- The vertically separated nature of the aviation industry means the incentive to deny competitors in other markets access to facilities does not exist<sup>64</sup>;
- In the presence of significant surplus capacity in at least one airport infrastructure element and passenger related non-aeronautical revenues, airports have a strong incentive to maximise passenger throughput which is incompatible with denying access; and
- The airports in question are clearly firms with market power. Conduct with the purpose of affecting competition in downstream markets (in particular the market for air travel) would breach section 46 of the Trade Practices Act. If in doing so it had an understanding with one particular airline, or group of airlines, it would also run foul of section 45.

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<sup>63</sup> It is noted that the sixth, Cairns, is subject to the general application of the Queensland Competition Act and that Act provides mechanisms for complaint to the relevant minister

<sup>64</sup> This view was shared by the Commission at the time of the last review. See PC(2002, p356).

Further Melbourne airport believes that a competent airport operator could avoid declaration by demonstrating that declaration would not lead to increased competition in another market but still pursue pricing policies that contravene the Principles. Such an outcome would seriously undermine the credibility of this regime.

Given

1. the levels of investment being contemplated by Melbourne Airport and others in the next decade;
2. the legitimate interests of airlines to have access to dispute resolution when the Principles are not adhered to; and
3. the uncertain nature of the current jurisprudence,

it is highly desirable that a clear mechanism leading to arbitration is provided.

Set out below is a proposal for dispute resolution. It has a known and relatively certain timeframe while ensuring that an airport that complies with the pricing principles cannot be declared. The five airports concerned would not be subject to declaration under the general provisions of Part IIIA in relation to aeronautical services as defined in the Regulations. It is acknowledged that the implementation of this regime will require legislation amending the Airports Act<sup>65</sup>.

It will involve the Minister in the process of determining whether an airport should be exposed to arbitration by the ACCC. This is currently the case under Part IIIA although it is proposed that the Minister responsible for the Airports Act, rather than the Treasurer (or delegate) should be involved. The reason for this is that the Minister (and the relevant Department) will be better informed of industry issues and hence better equipped to respond to what is acknowledged to be a fairly tight timeframe.

In addition to reducing time frames and increasing certainty these proposals also seek to

- reduce gaming from both sides;
- encourage commercial rather than regulatory settlement; and
- minimise costs (including those arising from the risk of regulatory error) for all parties.

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<sup>65</sup> It is likely that consequential amendments might be required to other legislation, especially the Trade Practices Act.

## 5.1 A new arbitration process

A dispute arises if an airline, or group of airlines, has not been able to reach a commercial agreement with an airport and believes that an airport is proposing to pursue (or is pursuing) a course of action that is inconsistent with the Principles

The process starts by the airline writing to the Minister requesting a formal prices inquiry under Part VIIA be conducted. The complainants would also be required to provide a copy of this letter to the airport concerned. Such a letter (or accompanying materials) must set out to the Minister's satisfaction:

- Evidence that the complainants had engaged in serious good faith negotiations that have no reasonable prospect of reaching an acceptable outcome;
- What particular matters that are in dispute and how they constitute a contravention of the Principles; and
- A proposed resolution of the dispute that would be acceptable to the complainants including a demonstration of how such a resolution is consistent with the Principles. The complainant will need to evidence that such a counter offer has been put to and rejected by the airport concerned.

Within 14 days of receipt of such a letter, the Minister would confirm that the airport concerned had received a copy. The Minister would ask the airport to advise of any other customers who would have a legitimate interest in the matter and in particular who would be disadvantaged by the proposed resolution. During this period the Minister would also need to be satisfied that the complaint contains all the relevant information, the counter offer is capable of acceptance and is not vexatious.

Once the Minister is so satisfied the airport concerned will have 21 days to respond in writing to the complaint, accept the airline counter offer or submit the matters in dispute to commercial arbitration. Other affected commercial parties would be invited to provide a view during this period. If the airport concerned accepts the counter offer or is prepared to enter into binding commercial arbitration on the matters of concern (and obviously subject to the Principles) and if this is not acceptable to the complainant, then the Minister will not proceed with the complaint.

Having received the views of the airport and other affected parties, the Minister would have a further 21 days to determine if there is prima face evidence that the proposed conduct may contravene the Principles, the complainants have acted in good faith and the dispute is unlikely to resolve itself. If the Minister believes any of these are not the case, there will be no further action.

If on the other hand, the Minister were satisfied an inquiry under Part VIIA would be ordered. Whilst such inquiries have in the past been undertaken by the ACCC, this part of the Trade Practices Act provides that a person other than the ACCC may



undertake the inquiry. Consistent with the general principle of separating regulatory policy from regulatory decision making, and particularly those found in Part IIIA, it would not be appropriate for the ACCC to conduct this inquiry. This is because the ACCC is the ultimate arbitrator and as such may be seen to have an incentive to reach conclusions, or make recommendations, that would be biased to declaration. Indeed, given the discussion in section 3.3 the presumption of such bias would not be unreasonable. In Melbourne Airport's view suitable bodies would include the Council (or its successor), the Commission or a suitably qualified individual, or panel of individuals.

The inquiry would be directed to consider the conduct proposed by the airport. The inquiry would be directed to have regard to:

- The Principles;
- Only those matters in dispute except to the extent any others are relevant to consideration of the matters in dispute;
- The extent to which the counter offer complies with the Principles; and
- The impact that acceptance of the both the proposed conduct and the counter offer would have on the interests of the commercial interests of parties not subject to the dispute.

Obviously, by effect of Part VIIA the airport will not be able to increase prices during the inquiry.

The inquiry will be directed to report within 90 days. In accordance with part VIIA a copy of the report will be sent to the airport when it is sent to the Minister. If the report concludes that the Principles have not been contravened, no further action will be taken. If the report concludes that the Principles are likely to be contravened then the airport has 28 days to accept the counter offer of the airlines, come to some other agreement with the airlines or submit to binding commercial arbitration. In either case the report would be published 28 days after receipt by the Minister.

If the dispute remains unresolved or not subject to commercial arbitration, then the Minister will declare the aeronautical services (as defined in the Regulations) of the airport concerned. This declaration should occur under the Airports Act so as to ensure that the ACCC in conducting any subsequent arbitration is required not to make any decision that is inconsistent with the Principles (and of most concern to airports the principle of the dual till). Otherwise it would conduct the arbitration in accordance with the arbitration provisions of Part IIIA.

It is noted that decisions up to the point of declaration are not subject to merits review although decisions would be subject to the normal processes of the ADJR Act. Decisions by the ACCC in arbitration are subject to merit review by the Tribunal. This is deliberate. At all times up until declaration the airport concerned

has commercial options at its disposal to resolve the matter – either acceptance of the counter offer or accepting commercial, rather than regulatory, dispute resolution.

At any stage during the process that the airport elects to accept the counter offer or commercial arbitration – arbitration subject to the Principles – and the complainant refuses then the process is terminated. This is designed to ensure that the process is not gamed by airlines – there can be no reason other than gaming why airlines would prefer arbitration by the ACCC over binding commercial dispute resolution.

It might be observed that the airport in question has all the options during this process. However, it does give airlines access to the ACCC in six months (subject to administrative review) if a commercial resolution is not found. This is compared to the over three years it took from Virgin Blue's initial application until the Tribunal's decision in December 2005 which even now is the subject of administrative review.

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## Appendix 1 - TRL benchmarking report



# **BENCHMARKING INTERNATIONAL AIRPORT PERFORMANCE**

## **MELBOURNE AIRPORT**

### **FINAL REPORT**

**JUNE 2006**

## EXECUTIVE SUMMARY

- Within this report, the performance of Melbourne airport is compared with that of the similar sized airports at Auckland, Brisbane, Calgary, Copenhagen, Manchester, Perth, Stockholm, Sydney, Vancouver, Vienna and Washington Dulles. The data used cover the period 1994/95 – 2004/05.
- Overall cost levels at the Australian airports are clearly lower than those of the other airports in the sample.
- There is a general downward trend in staff costs per passenger at the southern hemisphere airports, whereas they are flat or rising in the northern hemisphere airports. There is a similar pattern in terms of staff costs as a percentage of turnover.
- On average, staff productivity rates at the southern hemisphere airports are nearly three times greater than at the northern hemisphere airports. There is no evidence that this disparity can be explained by high levels of outsourcing. In turn Melbourne's productivity is around one-third higher than the southern hemisphere average.
- The southern hemisphere airports produce on average a higher Return on Capital Employed than the northern hemisphere airports. Melbourne's return has been the highest among the Australian airports for the past three years.
- There has been a clear upward trend in income from aeronautical charges at the Australian airports since price regulation was replaced by price monitoring. Even so, on average the northern hemisphere airports derive nearly twice as much revenue from aeronautical charges as those in the southern hemisphere.
- The southern hemisphere airports have consistently outperformed those of the northern hemisphere in terms of both EBIT and EBITDA.
- Similarly, the net cash generated by the southern hemisphere airports has outperformed those of the north.
- Unit asset values at the southern hemisphere airports are higher than those of the north. This may reflect relative asset age, surplus capacity and the fact that all of the Australian airports' assets were restated on a more commercial basis at the time of privatisation and some, but not Melbourne's, have been revalued since.
- Capital expenditure levels at the southern hemisphere airports have been lower than those at the northern hemisphere airports. This may reflect lower levels of construction costs and the relatively lumpy nature of airport investment.

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- Within this sample, it appears that the Australian airports are generally the most efficient in cost and staff productivity terms, and derive the lowest levels of revenue from their airline users. They are also the most profitable airports in the sample. Within this sample, therefore, they may be regarded as representing industry best practice.

## BENCHMARKING INTERNATIONAL AIRPORT PERFORMANCE

### 1. INTRODUCTION

The Transport Research Laboratory (TRL) is pleased to present this report on international airport operational and financial performance. The report was requested by Melbourne Airport, which wished to gain a detailed independent perspective on the level of its own performance compared to that of other airports in the Pacific Rim region and elsewhere in the world. It is understood that the report is likely to be submitted to the Australian Productivity Commission during its review of airport prices regulation in Australia expected to take place during 2006.

The performance of Melbourne is compared with the following airports, which are shown alongside the reference codes used in the charts in this report:

Airport	Airport Identifier	Total Passengers 2004/05 (000s)
Auckland	AKL	11,256
Brisbane	BNE	15,885
Calgary	CAL	9,173
Copenhagen	CPH	19,000
Manchester	MAN	26,736
Melbourne	MEL	20,780
Perth	PER	6,655
Stockholm	STO	16,254
Sydney	SYD	28,288
Vancouver	YVR	15,726
Vienna	VIE	14,786
Washington Dulles	WAS	22,648

The sample of airports has been selected on the basis of two criteria:

- They are all located in OECD countries
- They all operate on a scale comparable with those of the Australian airports.

These criteria were intended to ensure that there was a reasonable level of comparability within the sample. OECD country membership ensures that the costs of operation are broadly similar, to a much greater extent than would be the case if airports in, say, Africa had been included. The scale of operations is also relevant because it is often felt that airports achieve economies of scale as they grow larger. This is a complex issue, and one to which there is not a straightforward answer, but this complexity is avoided by selecting a sample which is reasonably homogenous in terms of throughput.



The time series of data used is from f/y 1994/95 to 2004/05 in all cases except Auckland (from f/y 1996/97) and Calgary and Stockholm (from 1995/96).

The performance measures produced are:

- Aeronautical revenue per passenger
- Total costs per passenger
- Staff costs per passenger
- Other operating costs per passenger
- Staff costs as a percentage of operating plus staff costs
- Passengers per employee
- Return on capital employed
- EBIT as a percentage of turnover
- EBITDA as a percentage of turnover
- Net cash generation per passenger
- Fixed assets per passenger
- Capital expenditure per passenger.

The report is divided into two main sections:

- A description of TRL's expertise in the field of airport performance comparisons, and its methodological approach;
- A discussion of the position of Melbourne Airport in respect of the performance measures listed above compared to the other airports in the sample.

## 2. TRL's EXPERIENCE IN THE ASSESSMENT OF AIRPORT PERFORMANCE

TRL's relevant experience rests primarily with its Head of Aviation, Peter Mackenzie-Williams, who has produced this report. Peter joined TRL in 1998, having worked since 1989 with Travers Morgan (TM - later Symonds Travers Morgan). From 1990 onwards Peter was responsible for the authorship and production of the annual publication *Review of Airport Charges*<sup>66</sup> and, from 1997 onwards, for the annual *Airport Performance Indicators*. Following Peter's move to TRL in 1998 the intellectual property vested in this work was acquired by TRL, and the production of both publications has continued under the same authorship.

### *Airport Performance Indicators*

The decision to introduce this publication was taken in the light of a number of approaches from financial institutions interested in gaining a broader understanding of the financial performance of airports than was conveyed by the *Review of Airport Charges*. The publication provides a range of operating and financial performance measures which gives airport operators, analysts and other interested parties an indication of how well various airports are performing on a comparative basis. This work is much broader in its scope than the work on airport charges.

The work relies on data extracted from the published audited Report and Accounts of a range of airports around the world, supplemented in some cases by additional information requested from the airports. The overall approach taken is similar to that used in *Review of Airport Charges*, with financial measures being first calculated in units of local currency and then converted to a single unit of currency (Special Drawing Rights – SDRs).

A particular difficulty related to comparisons of airport performance is caused by the fact that the range of activities undertaken by different airports varies considerably. For example, a number of airports included in our sample perform their own ground handling services or operate their own car parks, but many do not. A number of airports' Report and Accounts cover the activities of a national civil aviation administration, which as well as operating the airports perform other functions such as the provision of air traffic control services. If this difficulty is not addressed, a number of performance measures, especially those related to staff numbers, are likely to be distorted.

The approach which is taken to deal with this problem is to identify those activities which do not constitute what can be regarded as being core to the operation of an airport, and to adjust the relevant data by deducting all revenues, costs and staff numbers associated with the additional activities. At the same time it is reasonable to assume that if the airport did not itself carry out functions such as the operation of car parks it would appoint a concessionaire to do so, and that the concessionaire

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<sup>66</sup> This work was described in a previous report for Melbourne Airport.

would pay the airport a fee. In these cases a notional fee is added back to the airport's revenues so as to allow like-with-like comparisons to be made with airports where a concessionaire is actually in place.

### ***Related work***

A number of individual commissions have been carried out drawing on the general methodological approach of the two publications already described. These have included work for BAA which examined pricing structures and relative levels of charges at airports which had undertaken major new infrastructure projects. Work has also been carried out for the Civil Aviation Authority of Fiji, assessing the relative levels of both airport and en-route navigational charges in a regional context. In 1999 a report was produced for Sydney Airport which commented on Sydney's relative levels of charges and operating performance, which was used as part of the airport's draft aeronautical pricing proposal submitted to the ACCC.

During 1993 and 1994, Peter Mackenzie-Williams was co-author and technical leader of a piece of work carried out by Travers Morgan on behalf of the Australian Bureau of Industry Economics (BIE). The BIE wished to examine the value for money received by the Australian travelling public using air services, and it also sought to examine the performance of Australian aviation infrastructure services against best international practice. TM's input to the production of the BIE report<sup>67</sup> was to carry out a study on international best practice at airports. This included a number of productivity measures which were subsequently used in *Airport Performance Indicators*, together with a number of customer-oriented measures, including relative levels of airport landing charges.

In 2002, TRL was commissioned by IATA to produce a study intended to identify examples of airport best practice. This work was based on a time-series of data for a sample of 30 major international airports, and used a simple proportional scaling approach to combine performance in six key performance indicators so as to produce a single measure of combined performance.

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<sup>67</sup> International Performance Indicators – Aviation. Research Report 59, Bureau of Industry Economics, August 1994.

### 3. RESULTS OF THE PERFORMANCE ANALYSIS

#### Introduction

In this section we set out the results of our analysis of performance by the sample of airports listed at the start of the report. Given that the analysis covers a period of eleven years' performance by twelve airports, we have for ease of graphical presentation divided the results into two categories, namely Melbourne and the southern hemisphere airports, and Melbourne and the northern hemisphere airports.

Graphs illustrating the airports' performance within each measure are included. These are presented with a 'tall' vertical scale so as make differences in performance levels as clear as possible. The graphs are divided vertically to mark the Phase 1 privatisations in July 1997, and the cessation of price regulation in July 2002.

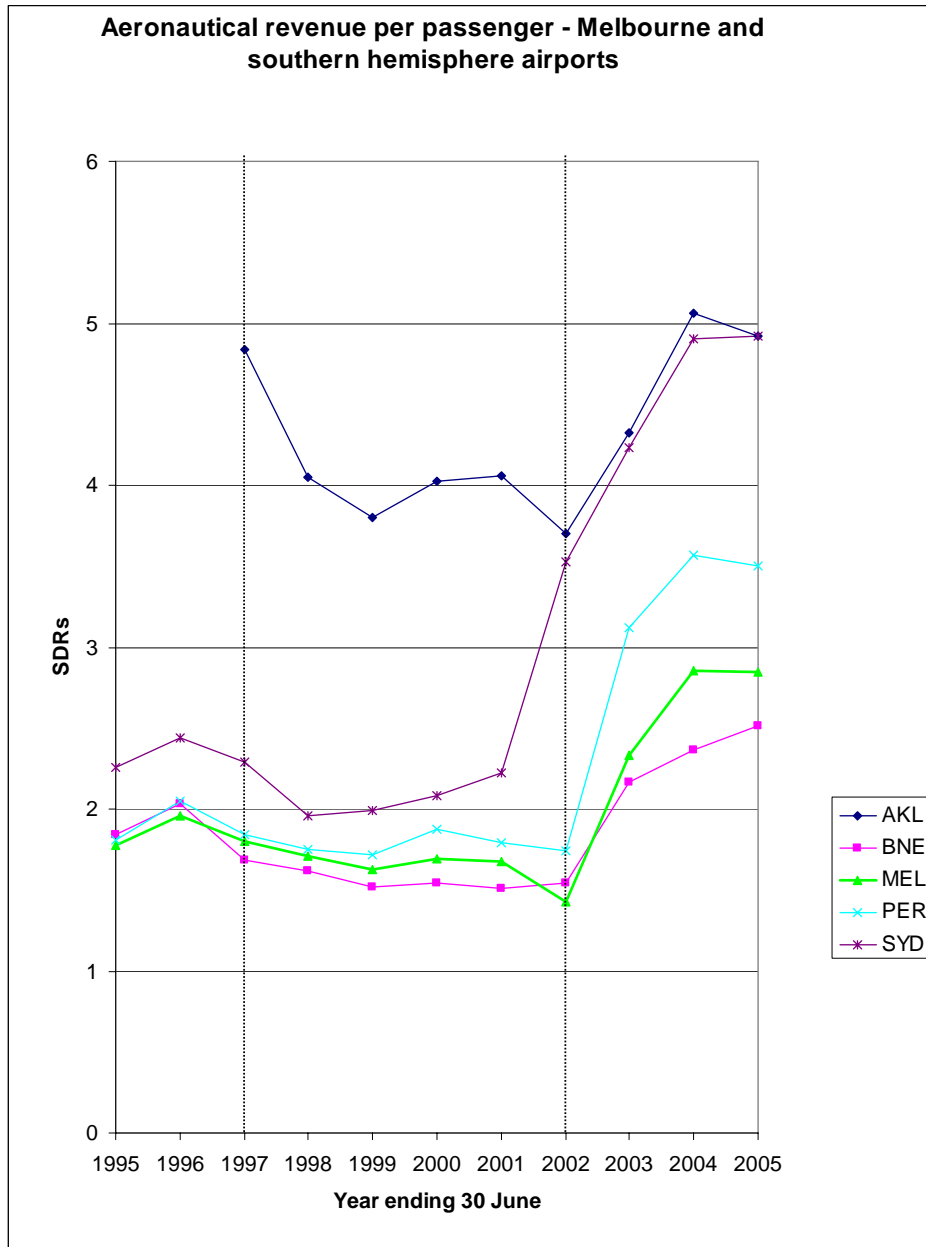
The results are summarised in Table 1 below. Throughout this section, financial measures are presented in both SDRs, as used in our published work, and in Australian Dollars.

**Table 1: Summary of results**

	Aeronautical revenue per passenger		Total costs per passenger	
	SDRs	AUDs	SDRs	AUDs
S Hemisphere average	3.74	7.85	3.71	7.79
N Hemisphere average	7.02	14.74	8.32	17.47
Overall average	5.65	11.87	6.40	13.44
Melbourne	2.85	5.99	2.81	5.90
	Staff costs per passenger		Other operating costs per passenger	
	SDRs	AUDs	SDRs	AUDs
S Hemisphere average	0.54	1.13	1.40	2.94
N Hemisphere average	2.63	5.52	3.30	6.93
Overall average	1.76	3.70	2.51	5.27
Melbourne	0.36	0.76	1.51	3.17
	Staff costs as a percentage of operating and staff costs		Passengers per employee	
	Percent		Passengers	
S Hemisphere average	25.4%		88,780	
N Hemisphere average	41.4%		30,666	
Overall average	34.8%		54,881	
Melbourne	19.4%		120,814	
	Return on capital employed		EBIT as a percentage of turnover	
	Percent		Percent	
S Hemisphere average	9.1%		52.0%	
N Hemisphere average	7.6%		26.2%	
Overall average	8.2%		37.0%	
Melbourne	11.3%		55.1%	
	EBITDA as a percentage of turnover		Net cash generation per passenger	
	Percent		SDRs	AUDs
S Hemisphere average	70.1%		2.60	5.46
N Hemisphere average	47.6%		1.41	2.96
Overall average	57.0%		1.91	4.01
Melbourne	70.1%		1.94	4.07
	Fixed assets per passenger		Capital expenditure per passenger	
	SDRs	AUDs	SDRs	AUDs
S Hemisphere average	59.11	124.14	2.88	6.05
N Hemisphere average	46.22	97.07	4.09	8.59
Overall average	51.59	108.34	3.58	7.52
Melbourne	32.03	67.27	2.45	5.15

### Aeronautical revenue per passenger

This is a simple measure of the level of revenue earned by airports from landing charges, aircraft parking charges and passenger-related charges. This revenue source will be affected by price regulation, as applied in Australia between the time of the first airport privatisations and 2002, and it may also be affected by competitive pressures from other airports.



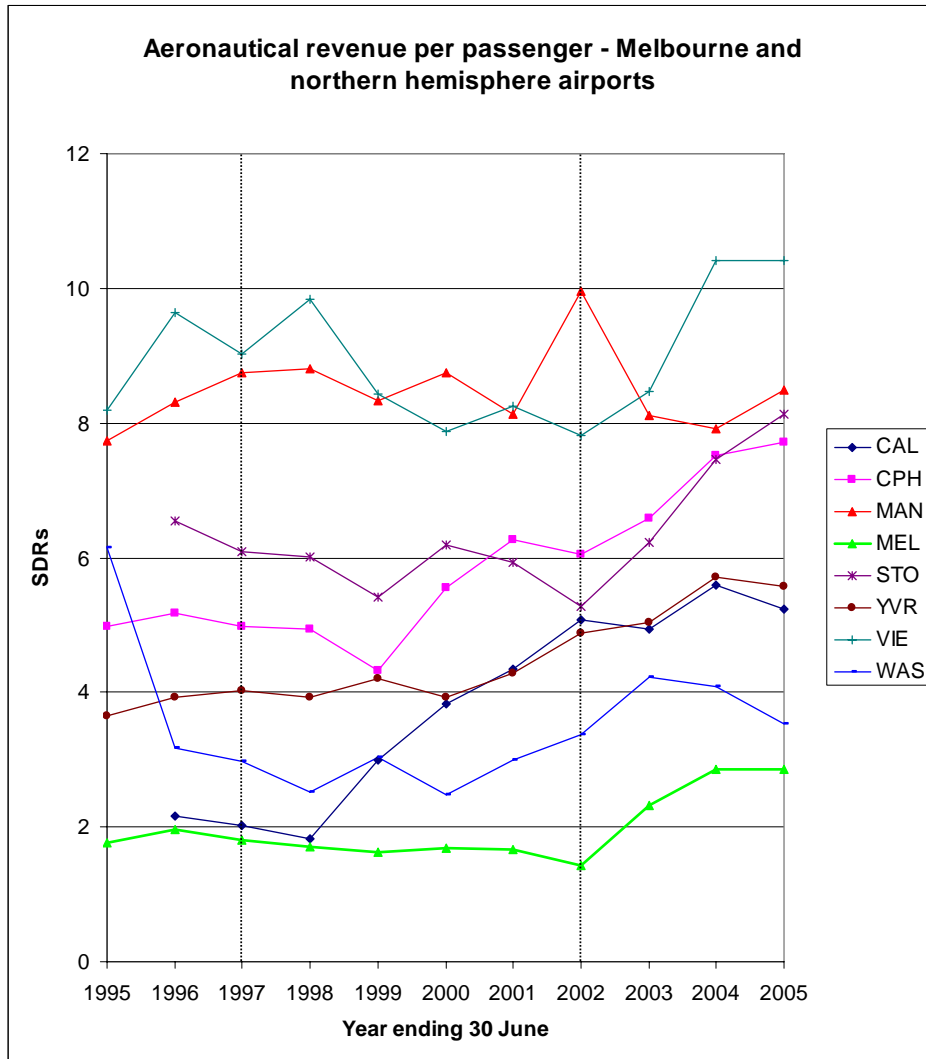
Performance at the three smaller Australian airports was closely matched throughout the period leading up to, and immediately after, privatisation. This reflects the fact that at that time aeronautical charges were common-rated at the main Australian airports, so that any differences in unit aeronautical revenues were due to differences in aircraft size and the numbers of passengers per aircraft.

The price regulation which accompanied the Phase 1 privatisations does not appear to have made a significant difference to levels of unit aeronautical revenue. This suggests that the real reductions in prices were balanced in overall revenue terms by increases in passenger numbers – indeed the price control formulae resulted in price reductions in nominal terms in some years. The slightly rising trend of Sydney between 1998 and 2001 may reflect the fact that it was in a practical sense subject to a form of nominal price control.

Within the southern hemisphere sample, there has been a very clear upward trend in Australia since 2001/02. Increases at Sydney have been particularly marked, and its performance level now matches that of Auckland, which outperformed the other airports in the group by a substantial margin up to 2002.

At least three factors account for these increased revenues.

1. In the case of the Phase 1 airports, price increases that occurred both immediately before and after the removal of price controls in June 2002. In the case of Sydney, where the largest increase occurred, this was a result of an extensive inquiry by, and with the approval of, the regulator.
2. Increasing security charges leading to significant increases in aeronautical charges, since the costs were passed directly to the passengers.
3. The return of the former Ansett terminals to the airport operators except in Brisbane. This meant that rents paid by airlines for terminal accommodation, and also the recovery of the costs Ansett previously incurred in operating those terminals, is now reflected in aeronautical revenue.



There is again an upward trend at most of the airports, although it is less pronounced than in the case of the Australian airports. The European airports clearly generate higher levels of revenue, while Melbourne consistently produced lower levels than this sample.

In the context of the northern hemisphere airports, it can be seen that although Melbourne’s aeronautical revenue per passenger has risen it remains at a lower level than the rest of the sample. There was a general upward trend post-2001, mainly due to security charges, and Melbourne’s performance during this period was not significantly different to that of the rest of the sample.

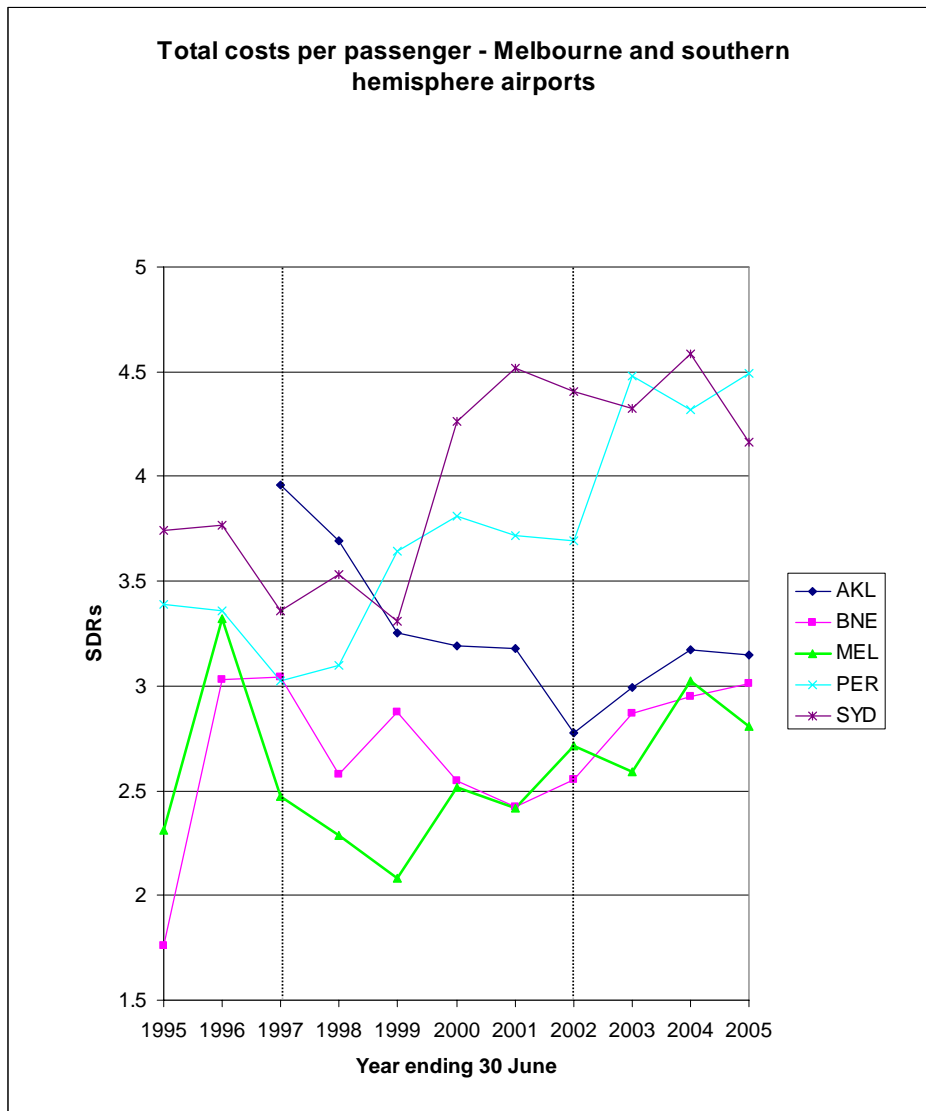
It should also be noted that a number of the other airports in the sample were subject to various forms of price control. Manchester was subject to a fairly stringent CPI-



X formula; Vienna was subject to a formula based on passenger numbers, and Copenhagen was subject to extended periods of price freezes.

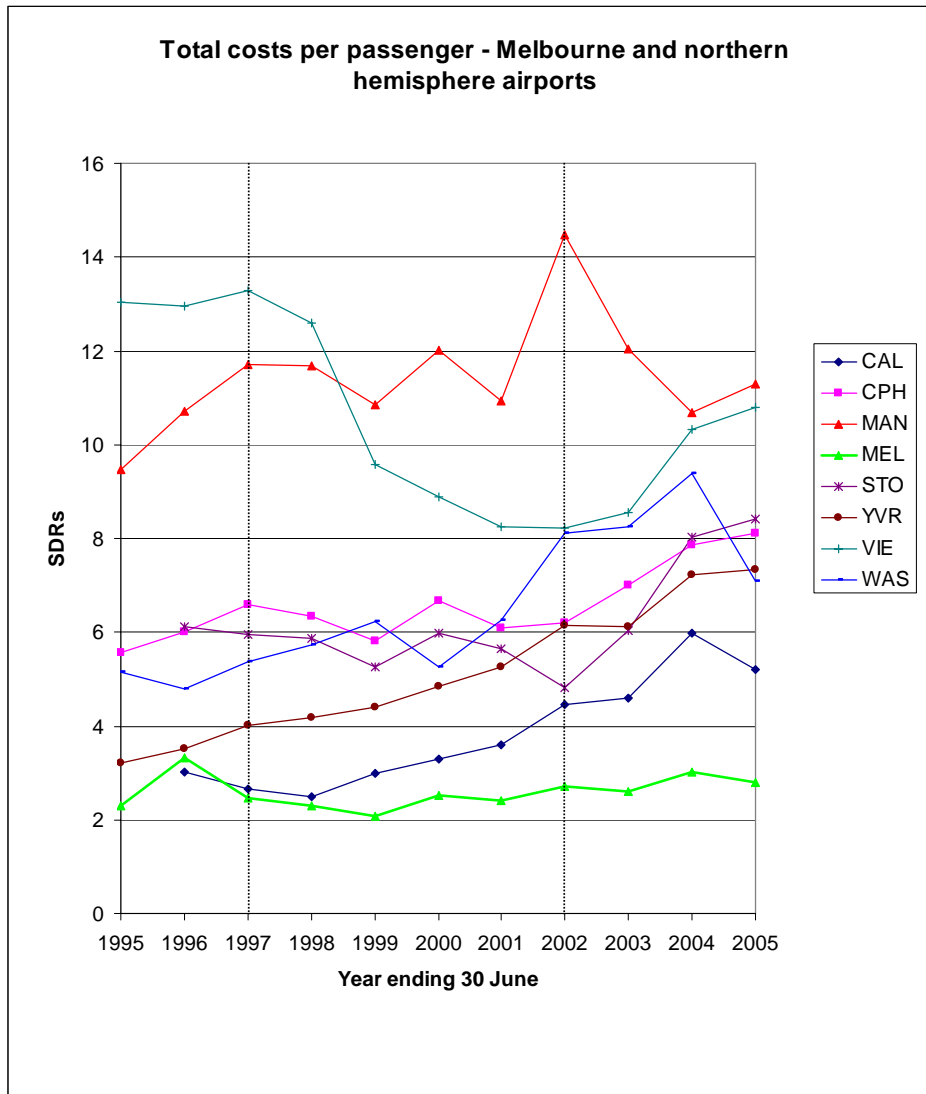
### Total costs per passenger

This measure presents a picture of total operating expenditure, including depreciation but without financial costs or tax, on a per passenger basis.



Within the southern hemisphere group, Melbourne and Brisbane have produced the lowest cost figures throughout the period, with Melbourne incurring the lowest costs in eight of the eleven years. For all of the Australian airports apart from Sydney, there has been a rising trend since around 2000. It is probable that this is largely due to increasing security costs and to lesser extent the take back of Ansett terminals. Since the airports are permitted to pass security costs on to airline users *in toto* their addition to the cost base does not affect profitability in absolute terms. In the case

of Sydney there was a rising cost trend from 1998 onwards: the earlier start to this trend can probably be attributed to the additional expenses incurred in respect of the 2000 Olympics.



Compared to the northern hemisphere group, Melbourne cost levels have been significantly lower than all others except Calgary and Vancouver in the early years of the study period. Costs at the Canadian airports rose steadily through most of the period, largely due to the imposition of ground rents by Transport Canada. The Canadian airports are established on a not-for-profit basis and in overall financial terms this rent is offset by a relatively benign tax regime.

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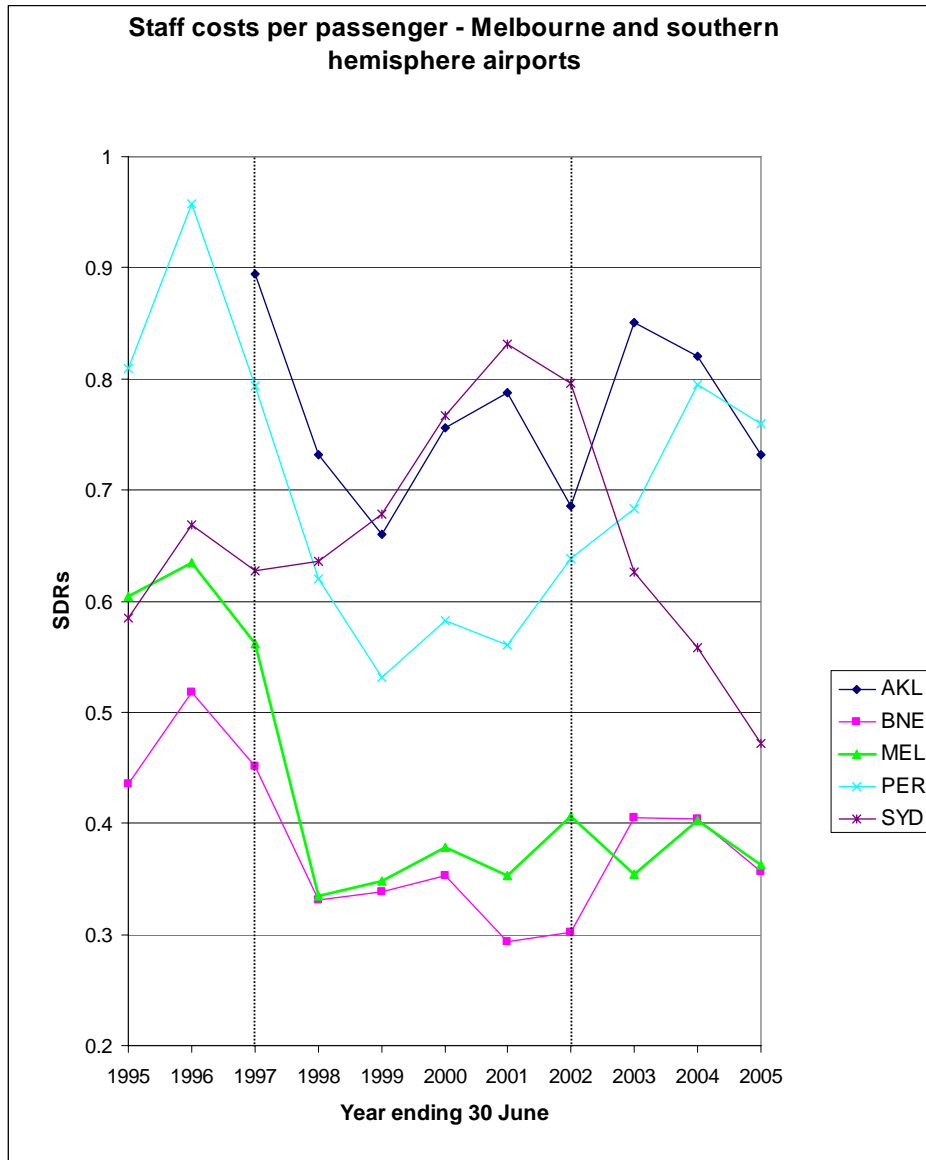
In the context of this sample, Melbourne's costs have remained relatively stable throughout the period, compared to a much stronger growth trend at the other airports.

### **Staff costs per passenger**

Since our airport performance benchmarking work began, Australian airports have had conspicuously lower staff costs and staff numbers than airports in almost all other parts of the world, with the Canadian airports again coming closest to matching Australian performance levels. For a number of years we felt that this difference must be due to the fact that the domestic terminals at the Australian airports were operated by the main domestic airlines, and we used an adjustment factor to build back notional staff costs and staff numbers to simulate a situation in which the terminals were operated by the airports themselves.

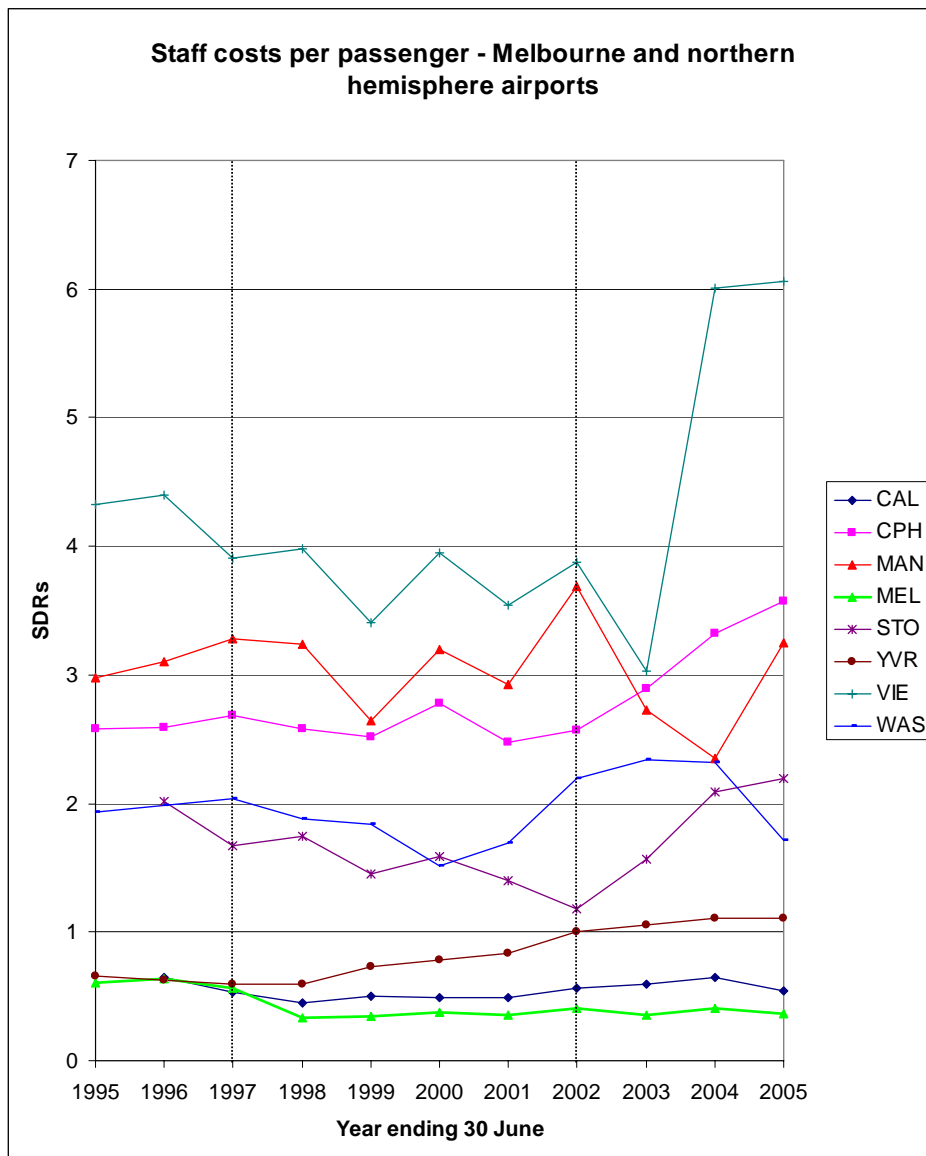
With the demise of Ansett and the operation of its Sydney, Melbourne and Perth terminals by the airport operators the position emerged that in fact airport operator staff levels hardly changed. The conclusion to be drawn from this seems to be that fundamentally different operating practices exist at Australian airports compared to much of the rest of the world. If the difference was due to a large degree of outsourcing then this might be expected to be reflected in a situation in which total costs at Australian airports were more comparable with their international peers, but the preceding analysis of total operating costs shows this not to be the case.

It is worth noting that the Australian airports in general showed a downward trend in unit staff costs during much of this period. In the case of the Phase 1 privatised airports this occurred mostly in the period up to 1998/99, whereas in the case of Sydney there have been reductions in each year since 2001/02.



Against this background, Melbourne and Brisbane have again been the two airports in the southern hemisphere group with the lowest cost levels; in this case Brisbane’s costs were lower than or equal to those of Melbourne in all but one year. Staff costs at the Phase 1 airports were falling before the point of privatisation, while Sydney’s rose until around 2000, again due to the Olympics and also, due to costs incurred in the process leading up to its later privatisation.

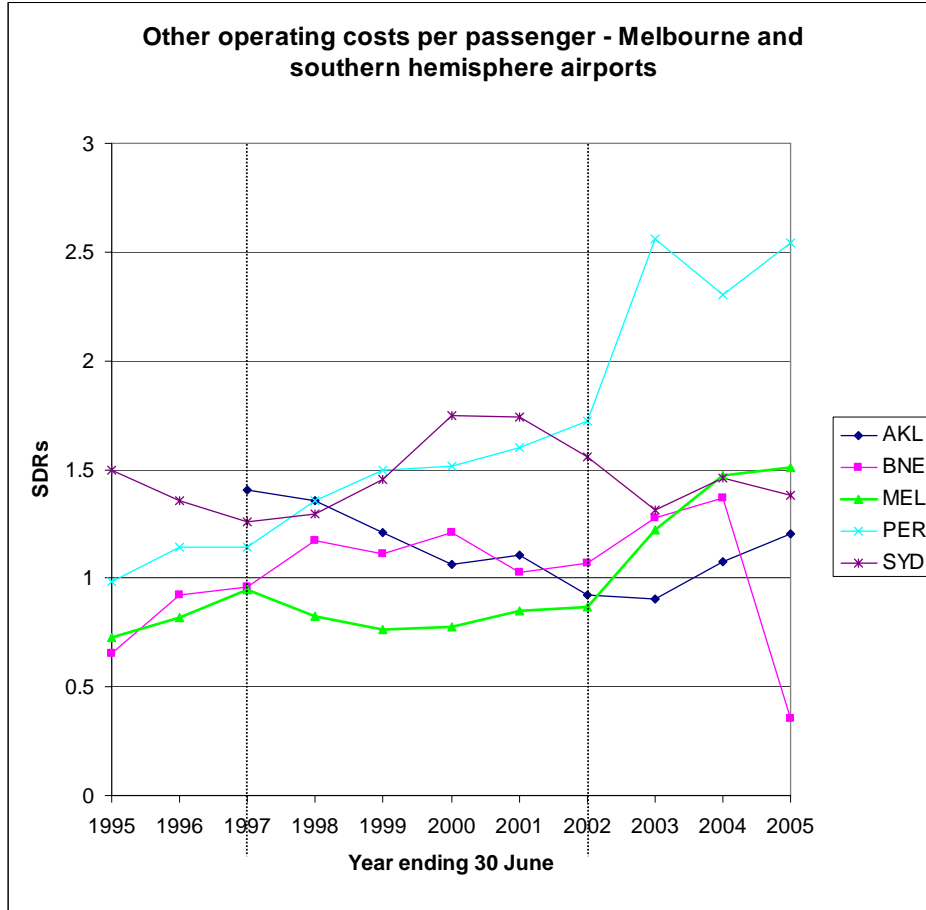
We understand that Melbourne’s staff costs were reduced in October 2001 by the outsourcing of the airport planning and development function. Security operations and their associated labour costs have also been outsourced.



Compared to the northern hemisphere group, Melbourne was again lower than all airports except in relation to the Canadian airports during the period 1994/5 – 1996/7. Since then a fairly constant gap has been maintained compared to Calgary, the airport with the next lowest level of costs. Within this group, Melbourne’s staff costs appear to have been essentially constant.

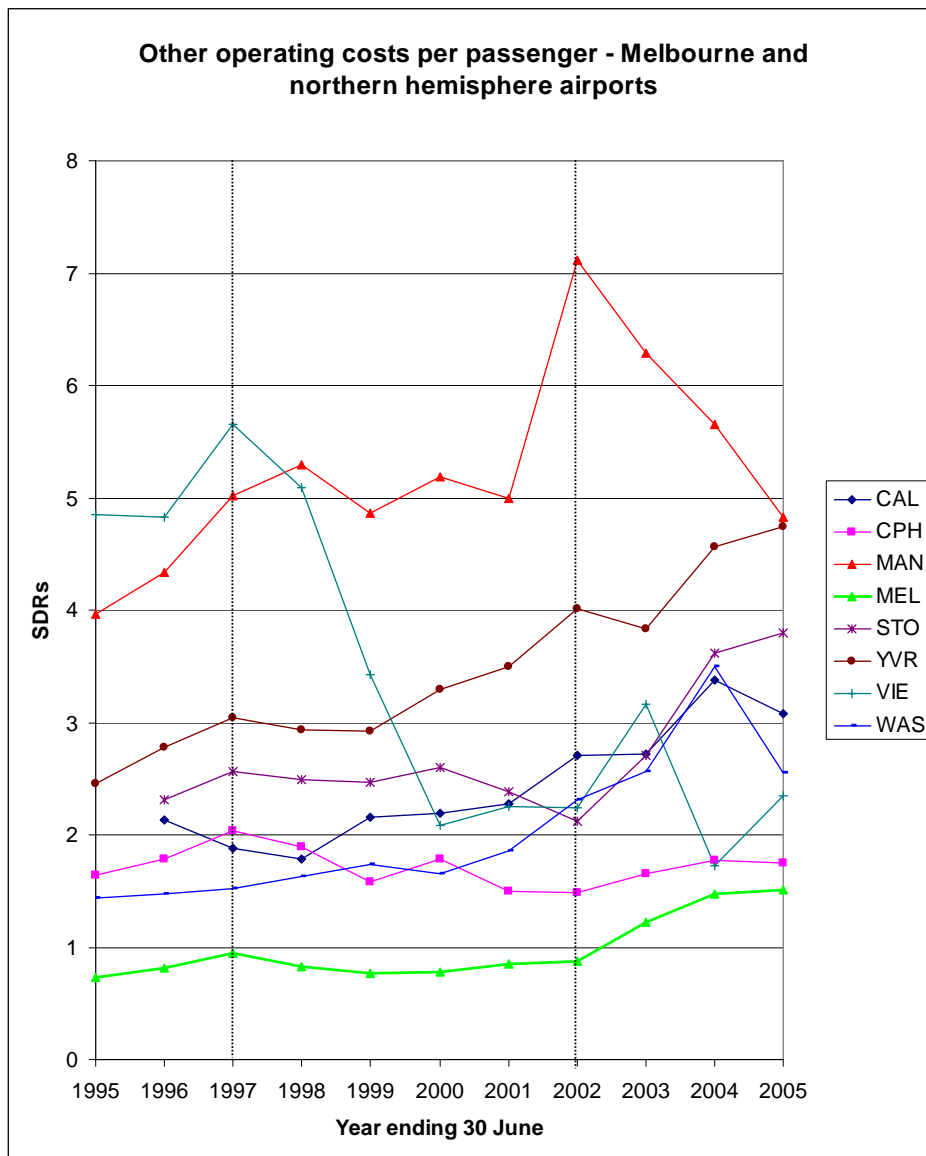
### Other operating costs per passenger

This cost category covers all operating cash outflows (ie excluding depreciation) apart from staff related expenses. It might therefore be expected to highlight areas where low levels of staff cost can be accounted for by high levels of outsourcing.



Although Melbourne ranked lowest in this measure for much of the period under review, its costs have risen for each of the past three years at a time when Brisbane and Sydney have trended downwards. However, this result needs to be put into the context of the fact that it ranks lowest in the sample in terms of both total costs and staff costs per passenger. It is noted that in recent years Melbourne Airport has experienced a heightened level of development work which is largely outsourced.

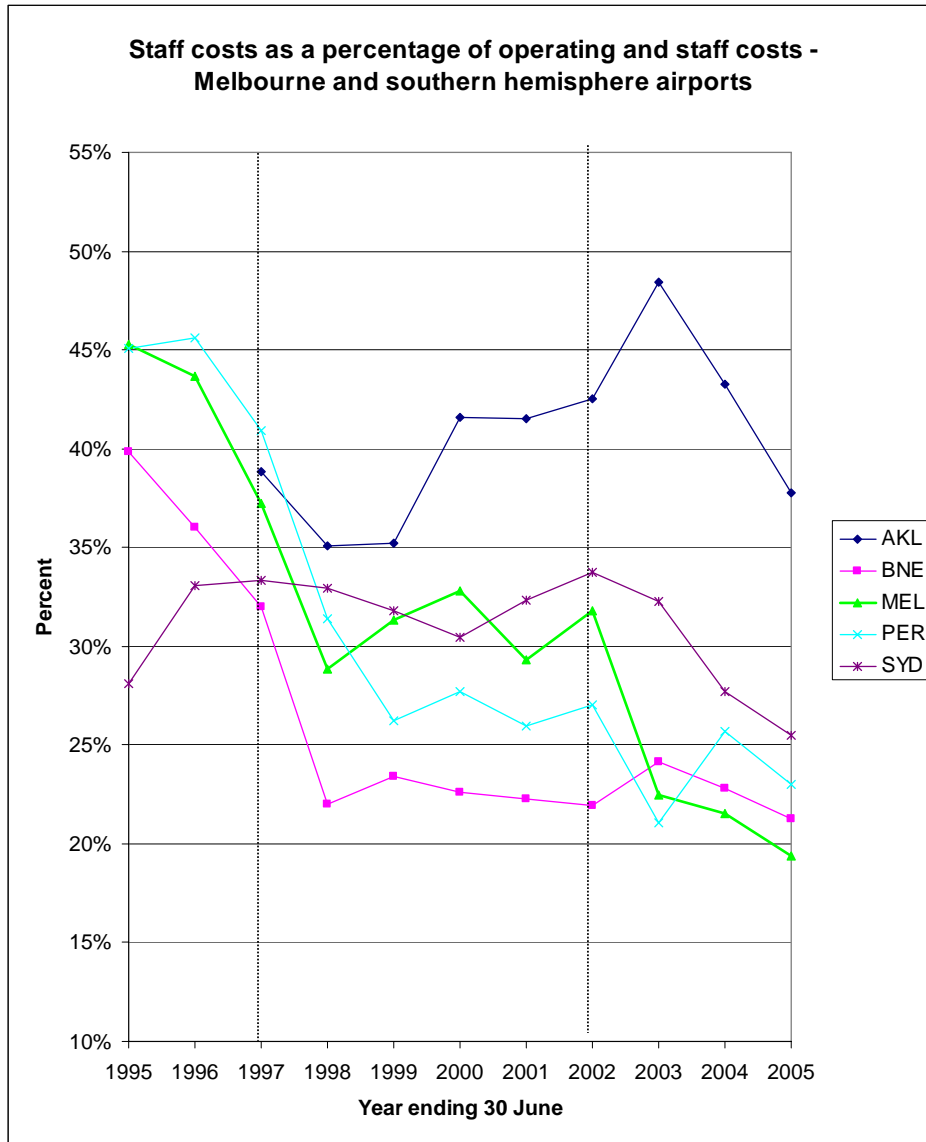




Compared to the northern hemisphere group, Melbourne has remained consistently in lowest position in this measure, although with the increases which have taken place in the past three years its cost levels are approaching those of Copenhagen, the next lowest ranking airport. Vancouver’s position in this measure does suggest that its good performance in terms of unit staff costs is partly due to outsourcing, and the same applies to a lesser extent in the case of Calgary.

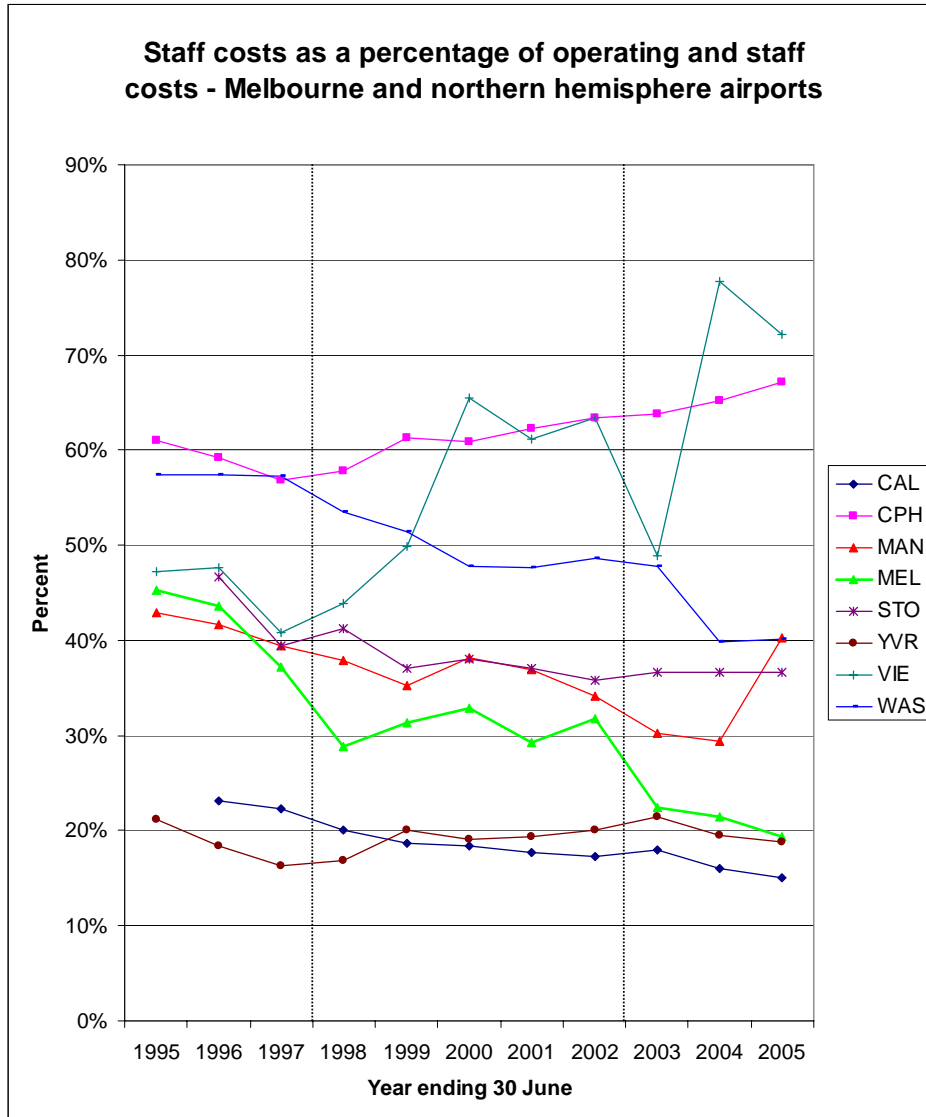
### Staff costs as a percentage of operating and staff costs

This measure is intended to demonstrate the proportion of cash outlays which is accounted for by personnel expenses, and helps to identify those airports where staff costs have a particular influence in driving up day-to-day cash expenditure. Assuming increasing staff productivity over time compared to a more linear relationship between air traffic growth and the consumption of utilities and maintenance, a falling trend in this measure might be expected.



The proportion of staff costs to overall cash expenditure has clearly trended downwards at the southern hemisphere airports. The main decreases at the Phase 1

airports were again in the pre-privatisation years, while the improvement in Sydney’s performance has mainly taken place in the past three years. Melbourne’s proportion has been the lowest within this group for the past two years. Comparison with the preceding charts shows that the decreases in the latter part of the period are likely to have been caused by increasing security costs pushing up other operating costs, rather than by falling staff costs.

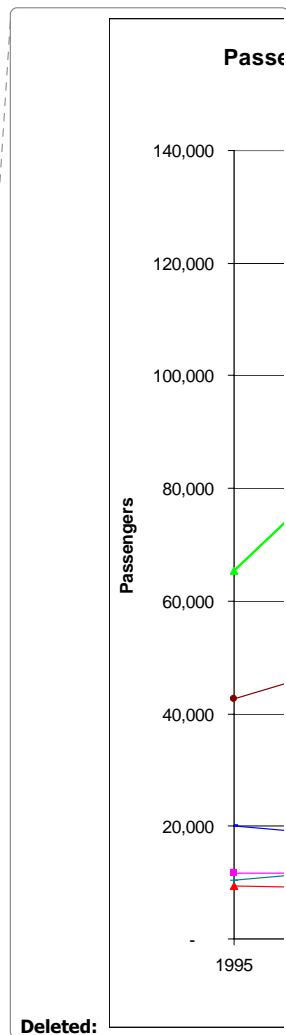
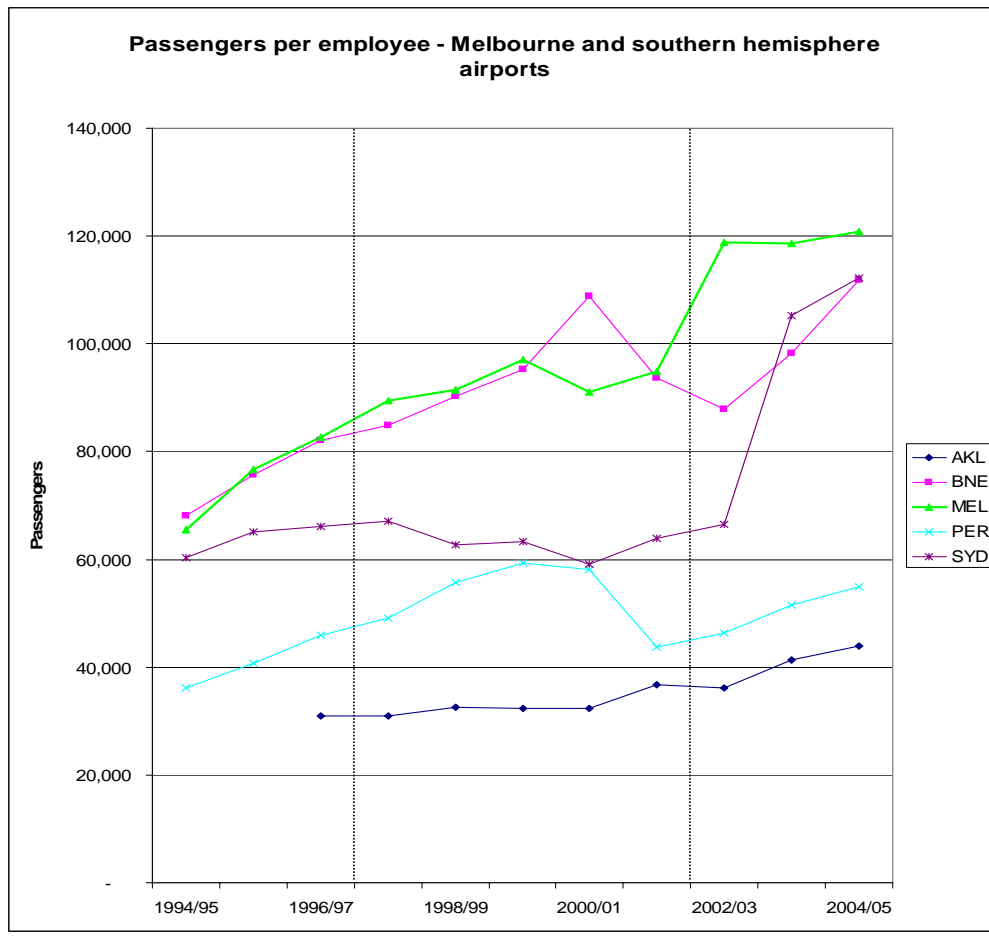


There has also been a general downward trend at the northern hemisphere airports with the exception of Copenhagen, Vienna and, latterly, Manchester. In this case the Canadian airports achieve a lower proportion than Melbourne, which gives some credence to the possibility that they are more reliant on outsourcing. However,

Melbourne has achieved a much more significant reduction in this measure than the Canadian airports.

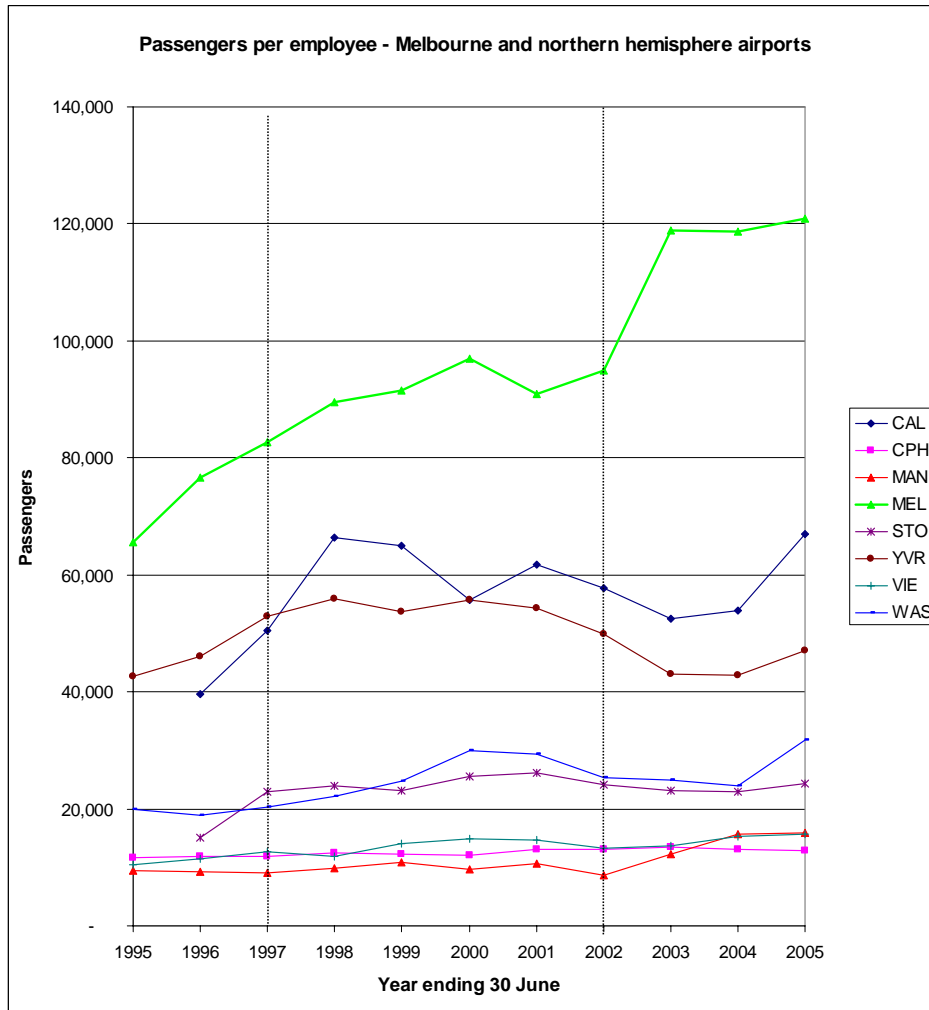
**Passengers per employee**

This measure is a very clear indicator of staff productivity. High productivity levels may indicate flexible working practices or high levels of outsourcing. In principle, low levels of productivity may be inevitable in cases where the airport layout results in some degree of staff duplication, as may be the case with multi-terminal airports where the terminals are not located close to each other. Again in principle, a rising trend over time could be expected as long as increasing economies of scale in staff time were still being achieved as traffic increases.



In general, the southern hemisphere airports conform to the expectation of a rising trend over time. Melbourne achieved the highest productivity in nine of the eleven years, with Brisbane coming closest to matching it in most years. Auckland’s performance has consistently been at a lower level than at the Australian airports:

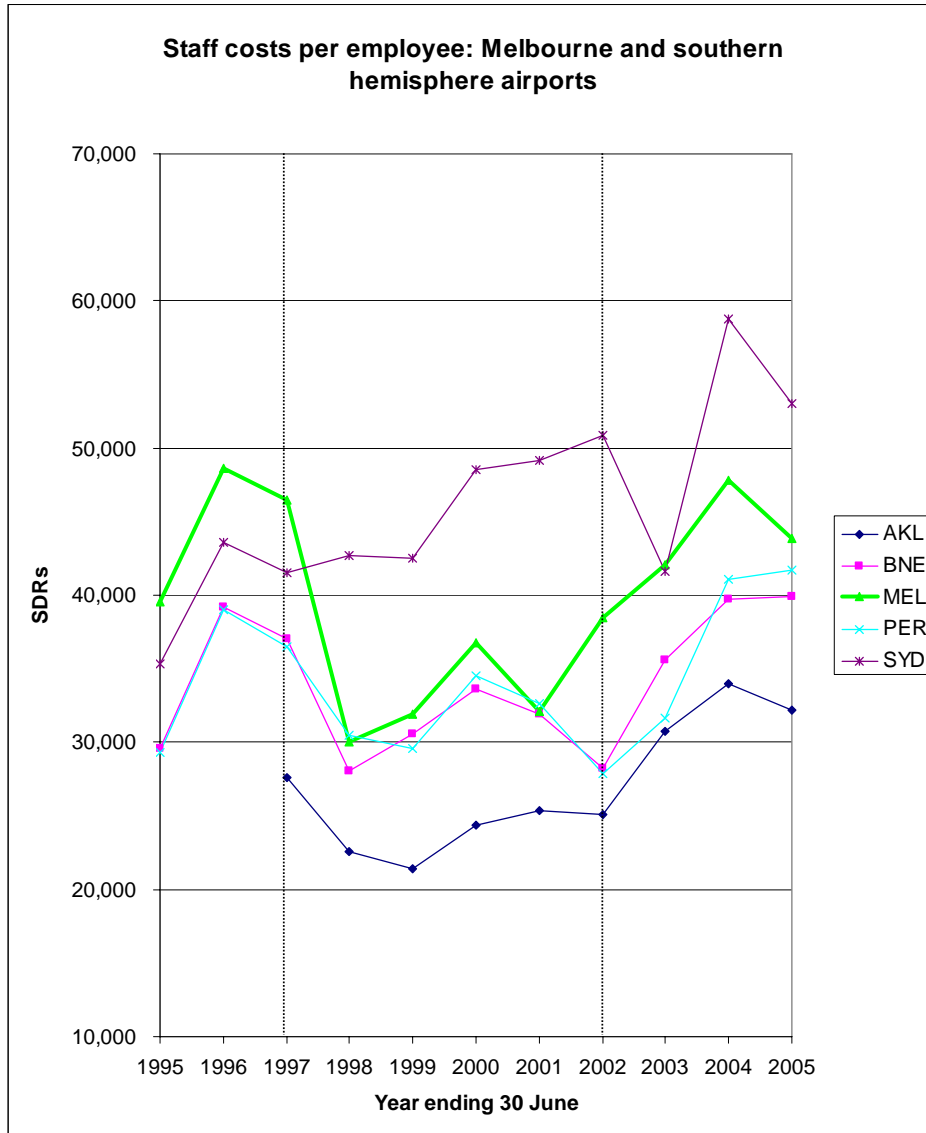
while its size may account for the difference in performance compared to the larger Australian airports, its traffic throughput was 69% greater than Perth's in 2004/05.

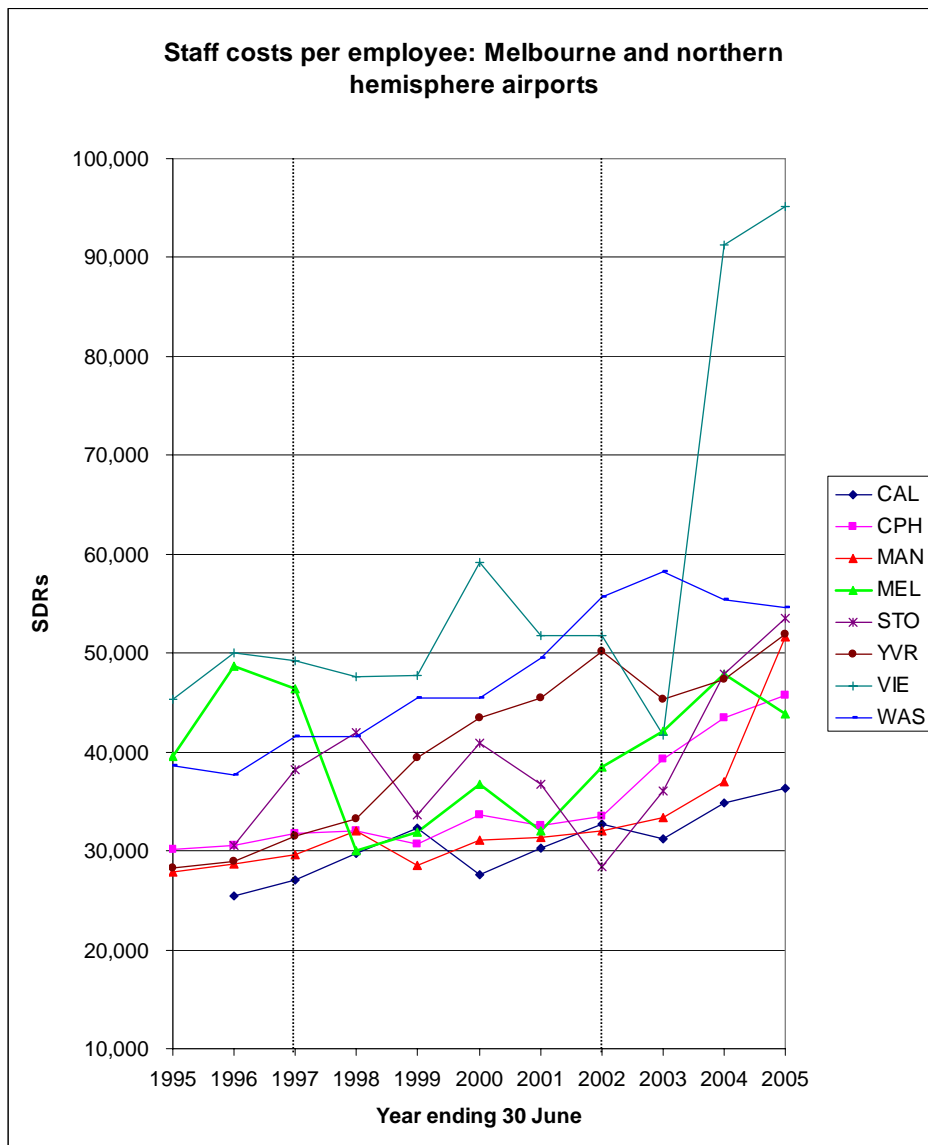


Compared to the northern hemisphere airports, Melbourne has performed significantly better than the Canadian airports throughout the period, with the latter themselves maintaining a clear advantage in comparison with the other airports in the sample. In this case it is much more difficult to identify a clear upward trend, with a number of the airports achieving a flat or even falling trend line for much of the period: for example, Vancouver's performance peaked in 1997/98, while Calgary only bettered its 1997/98 performance in 2004/05. All airports apart from Melbourne experienced a drop in productivity in the industry downturn following the September 11 2001 terrorist attacks.

The disparity in performance between the southern and northern hemisphere airports leads to the conclusion that the differences in staff costs are due to very relaxed staffing policies (or high levels of unionisation), assuming that wage differentials

are not the cause. The following two charts demonstrate that southern hemisphere per capita wage rates are indeed comparable with those in the northern hemisphere. This has been the case throughout the study period and in fact Melbourne's pre-privatisation wage rates appeared high in comparison with those in the northern hemisphere.

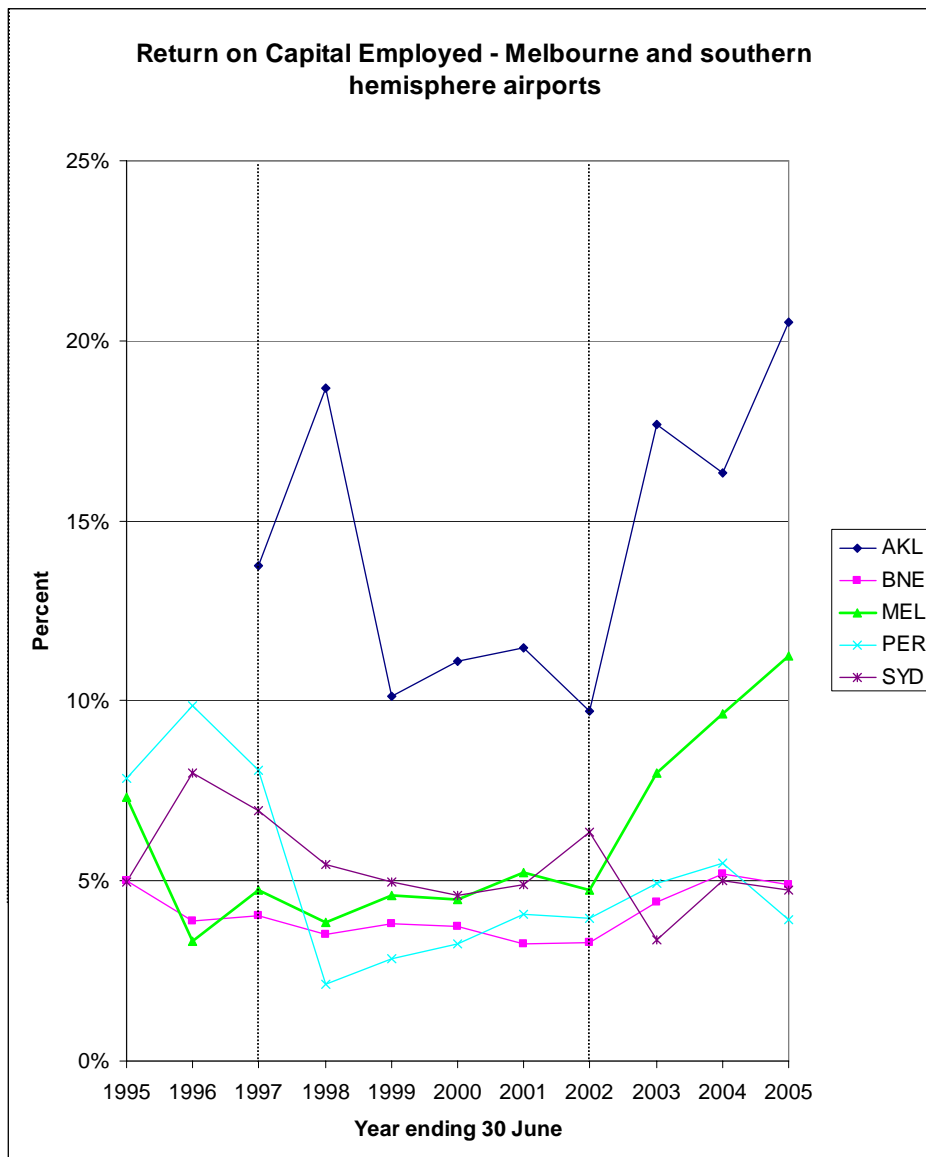




### Return on capital employed (ROCE)

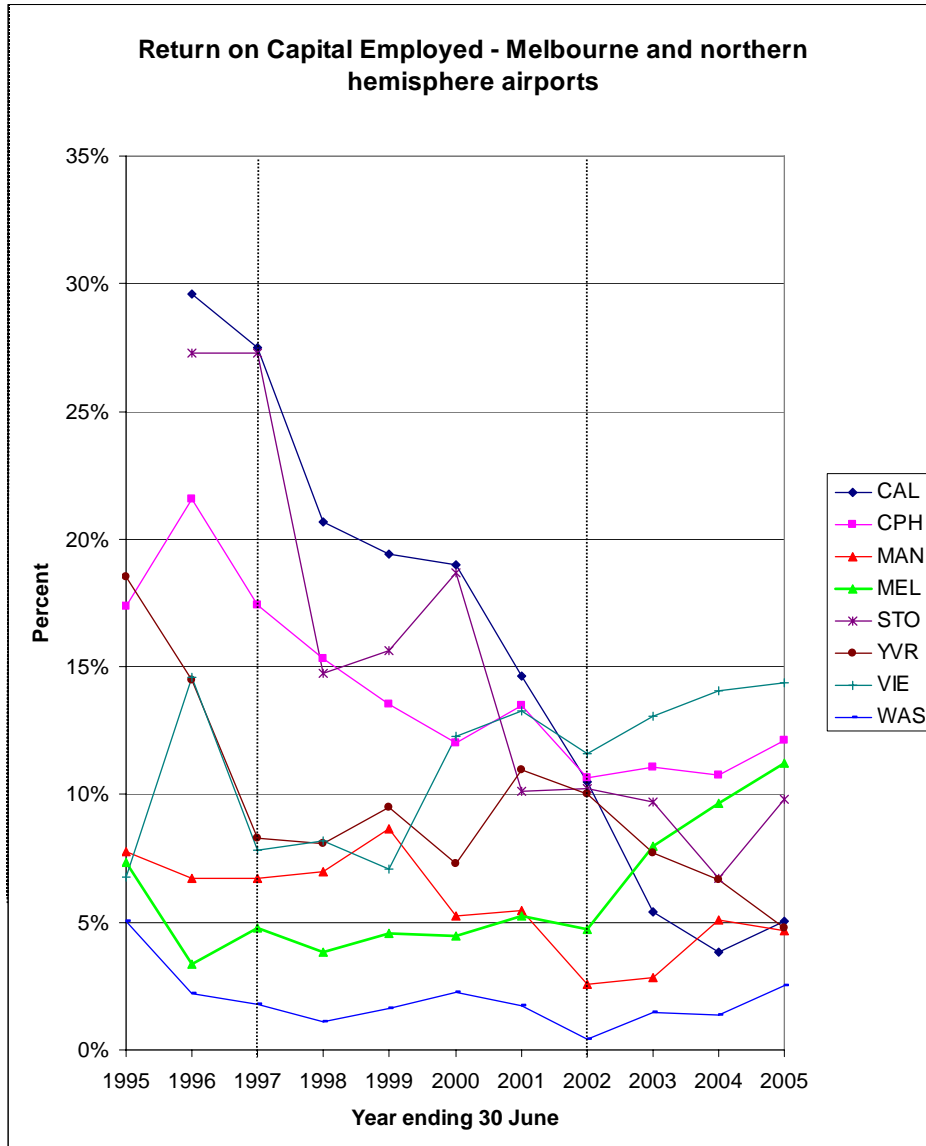
This table is calculated by the division of operating profits before interest and tax by total capital including debt. Apart from the level of operating profit, this measure may be affected by:

- High levels of capital expenditure driving up debt and high dividend payments which take funds out of the balance sheet will reduce ROCE;
- Low asset valuations and low levels of issued share capital will increase ROCE.





Within the southern hemisphere group, Auckland has clearly outperformed the Australian airports throughout the period. Performance at the latter was closely matched for much of the period, although Melbourne has outperformed its compatriot airports over the past three years.

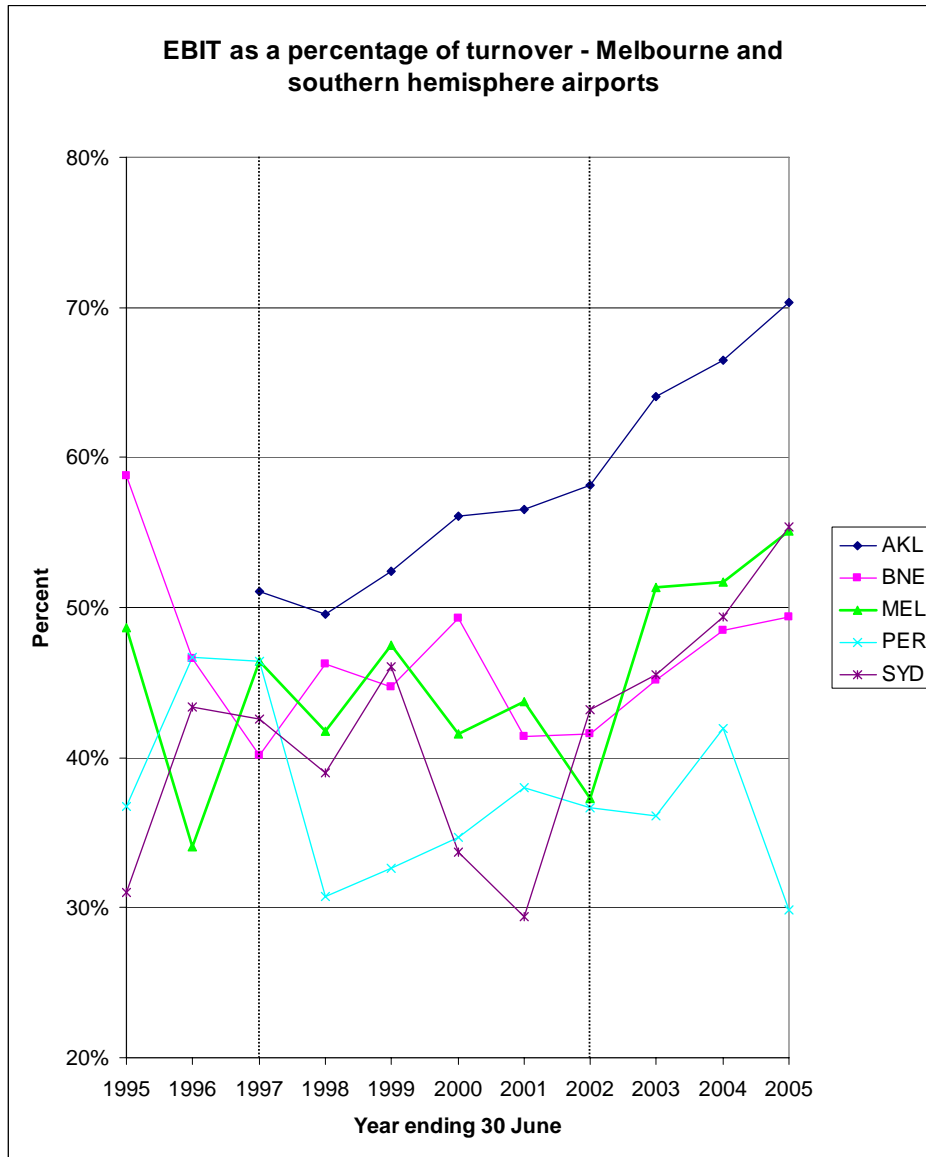


In the case of the northern hemisphere airports there is a much more diverse range of performance than in the case of the southern hemisphere airports, and in a number of cases the general trend was downwards. The Canadian airports’ performance fell as a result of the effect of the increases in ground rent to which reference has already been made. Manchester’s falling returns may reflect the gradual effect of the

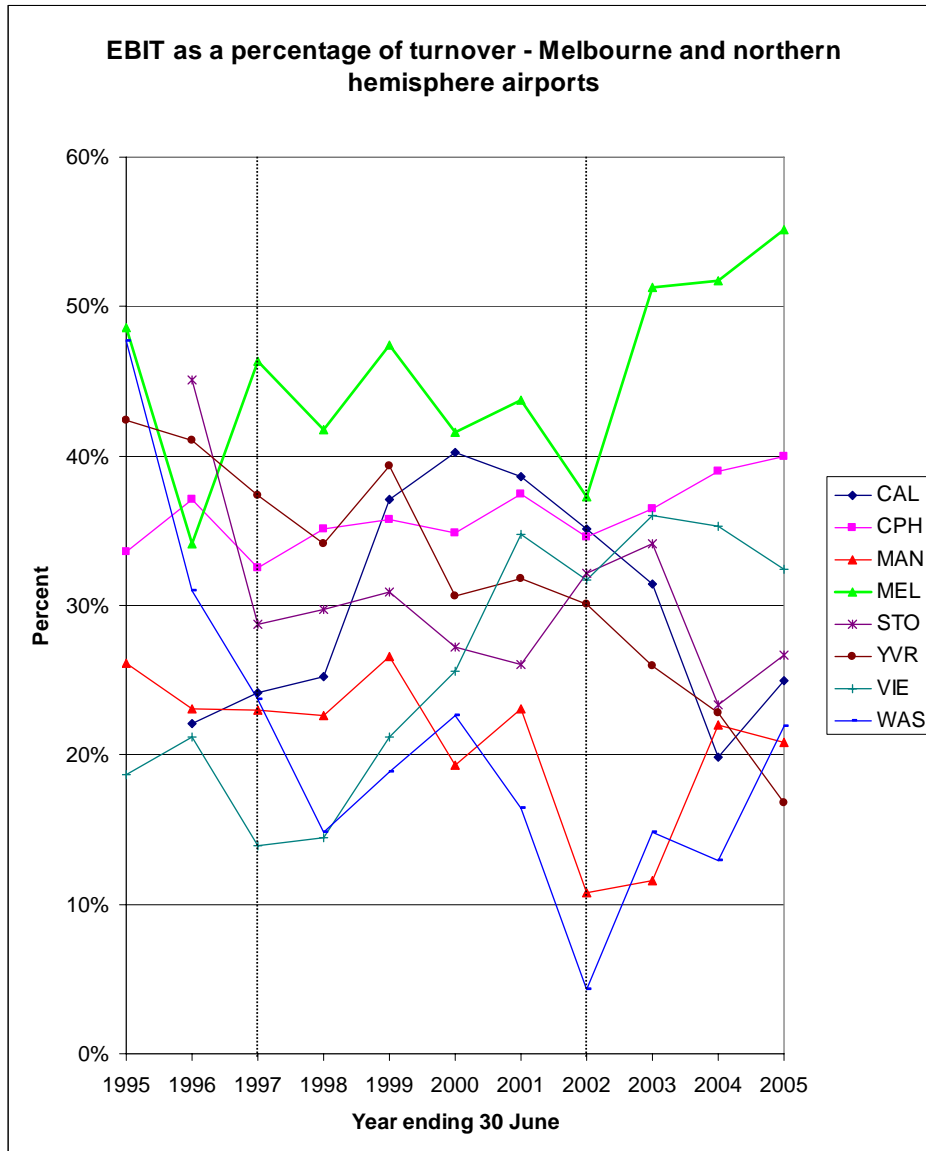
imposition of a regulatory pricing formula aimed at allowing increases in aeronautical charges at rates of less than inflation. Washington's relatively poor performance reflects the system of setting airport rates and charges in the US, which is effectively intended to prevent airports from operating at normal commercial levels of profitability.

### EBIT as a percentage of turnover

EBIT is a straightforward indication of operating profit, and shows the financial contribution of operations allowing for depreciation but without financial costs.



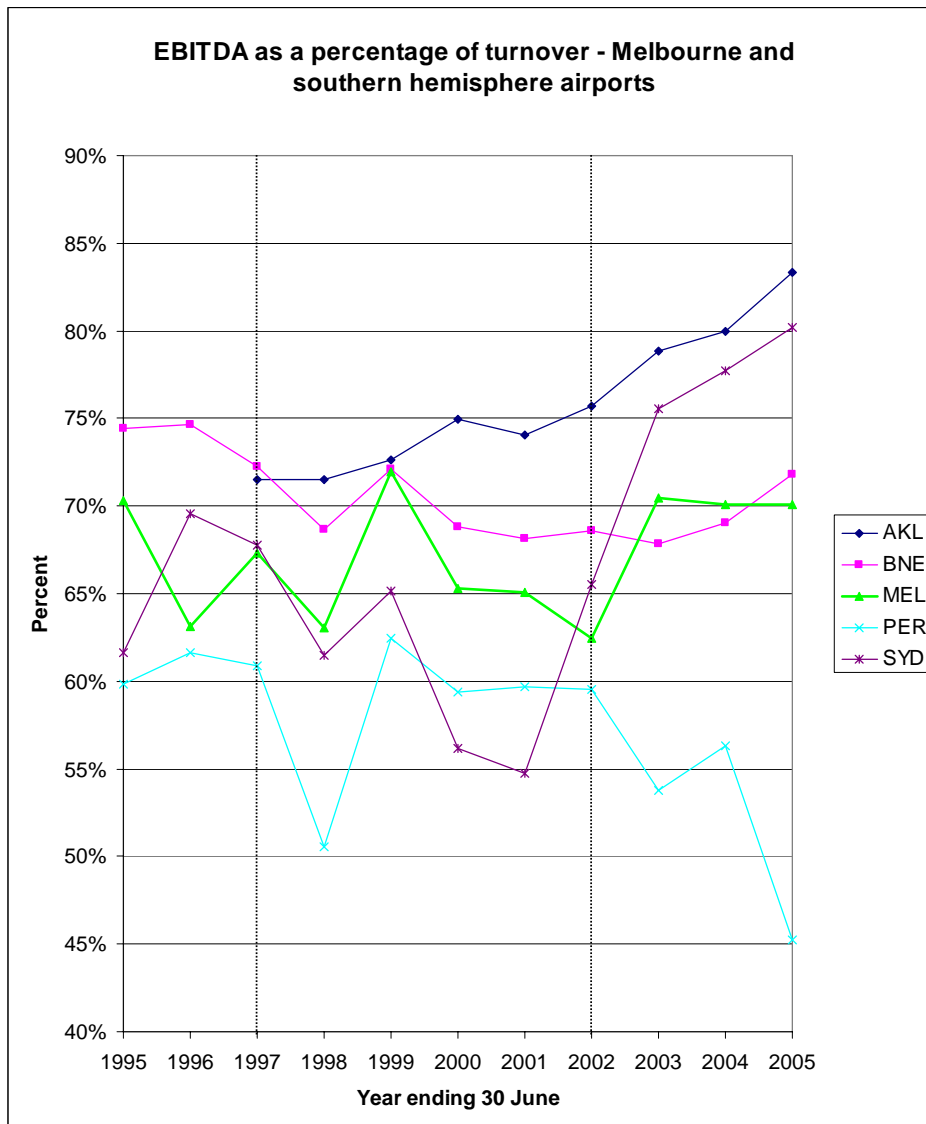
The average for the southern hemisphere airports is relatively high, with 30% of turnover representing the lower threshold. Within this group Melbourne has performed in the upper half of the performance range. Sydney's performance has increased sharply since privatisation.



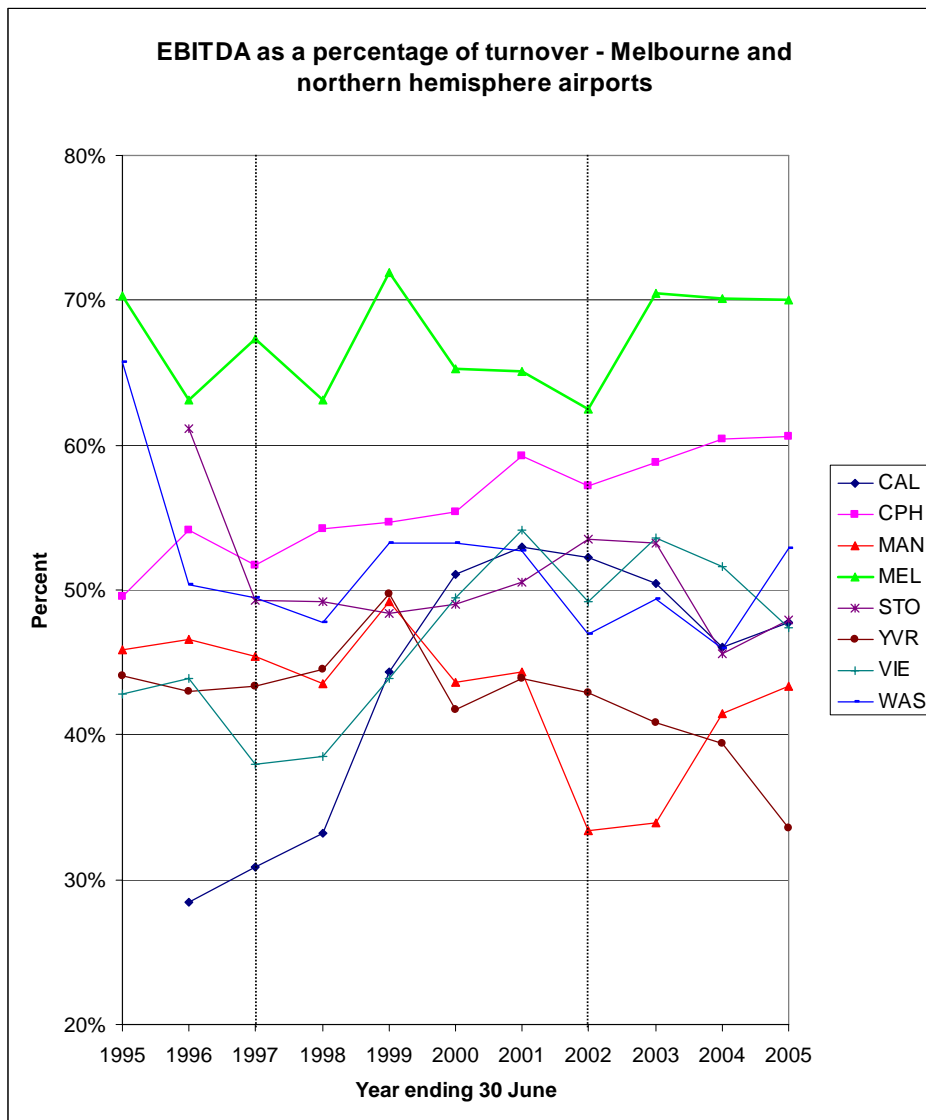
The range of performance of the northern hemisphere airports is lower, with most falling within a range of 10% - 40% compared to 30% - 60% in the case of the southern hemisphere airports. Washington's poor performance again reflects the pricing and profitability philosophy which is applied to US airports. Melbourne has outperformed this group in all years except one.

### EBITDA as a percentage of turnover

This measure adds back depreciation to EBIT to give an indication of the cash result from day-to-day operations, again without the effects of financial results.



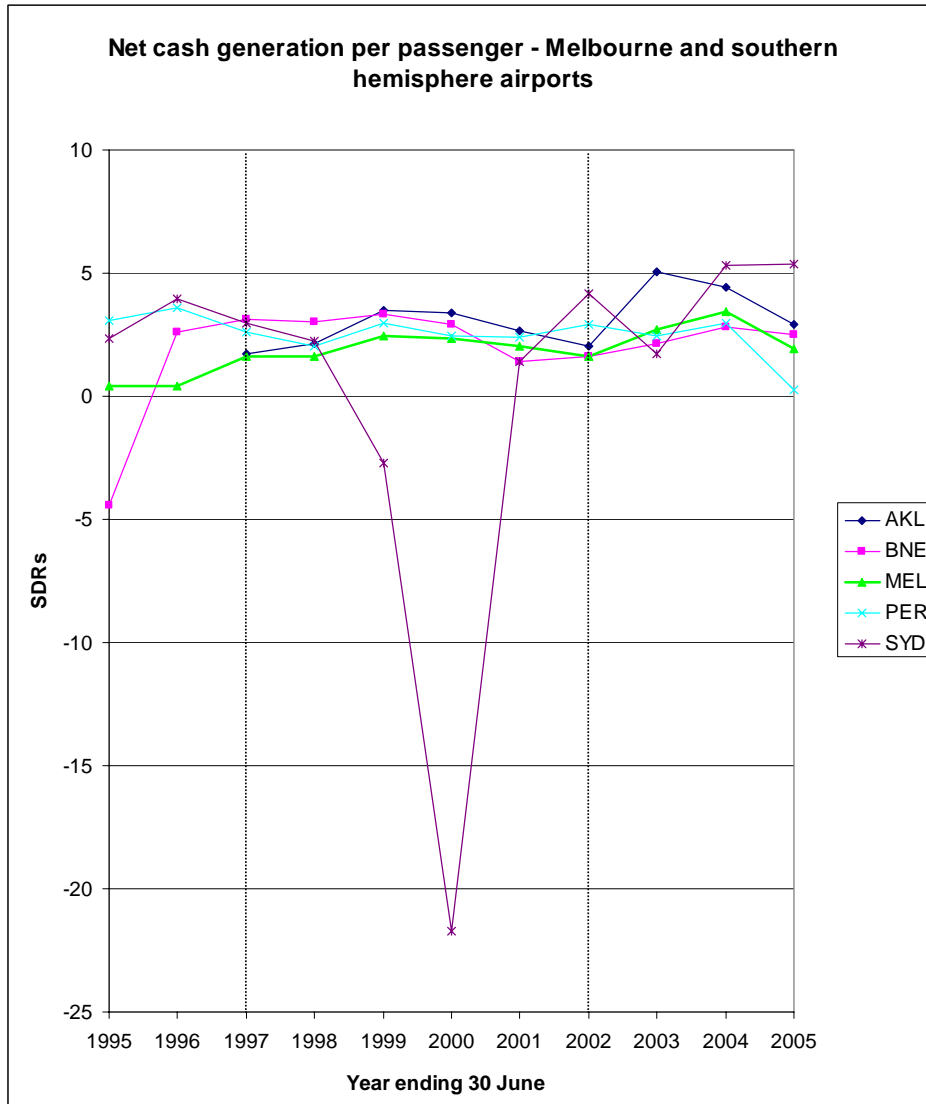
In this measure there is less of a difference between the results of the Australian airports and Auckland, reflecting higher levels of depreciation following a period of relatively high capital investment. Melbourne’s performance in 2004/05 exactly matches the sample’s average. Compared to its relative performance in EBIT, its EBITDA performance relative to Sydney and Brisbane has been lowered by its relatively low levels of depreciation, reflecting the age of its assets and a more efficient single terminal complex.



Unsurprisingly the northern hemisphere range is again lower, at 30% - 60% compared to 50% - 80% in the case of the southern hemisphere sample. Melbourne has again outperformed this sample.

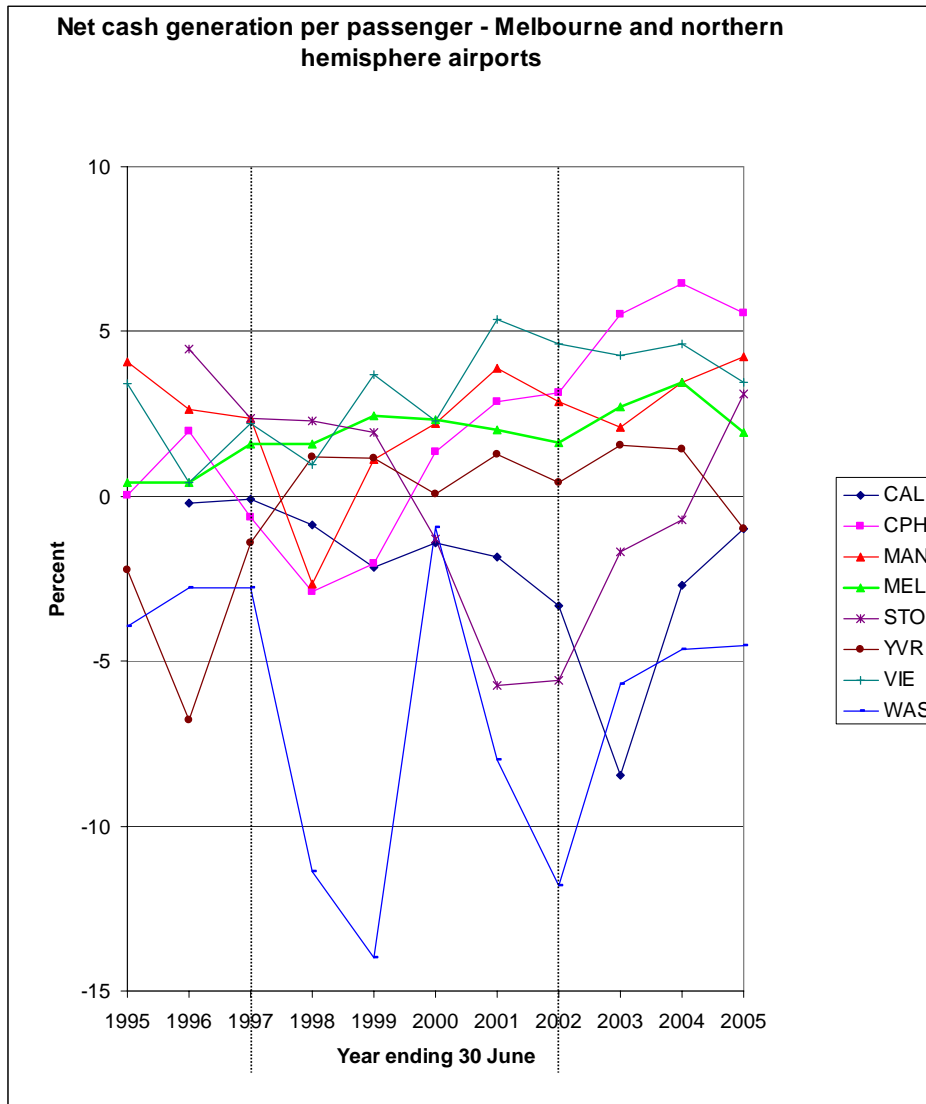
### Net cash generation per passenger

This measure adjusts operating profit by adding back non-cash depreciation and deducting capital expenditure, providing an indication of net cash flow. It is another measure of financial self-reliance, with poorly performing airports tending to have high levels of debt gearing. Low or negative performance levels are not unusual: given the generally healthy financial performance of the airport industry they are usually an indication of a period of heavy capital investment.



This chart is dominated by the effects of Sydney’s very heavy investment programme leading up to the 2000 Olympics. Auckland’s performance is again less distinguishable from that of the Australian airports than was the case with EBIT.

Melbourne’s performance has remained within the lower half of the sample range in this measure.



Compared to the northern hemisphere group, Melbourne has performed in the top half of the sample, although its 2004/05 level was only slightly higher than the average for the overall sample of twelve airports. Copenhagen’s performance has increased steadily since the late 1990s, but most airports have seen fairly erratic changes. As already noted, in most cases this is likely to have been caused by capital investment programmes, although most airports’ performance dipped in 2002/03 following the general industry downturn of the previous year.



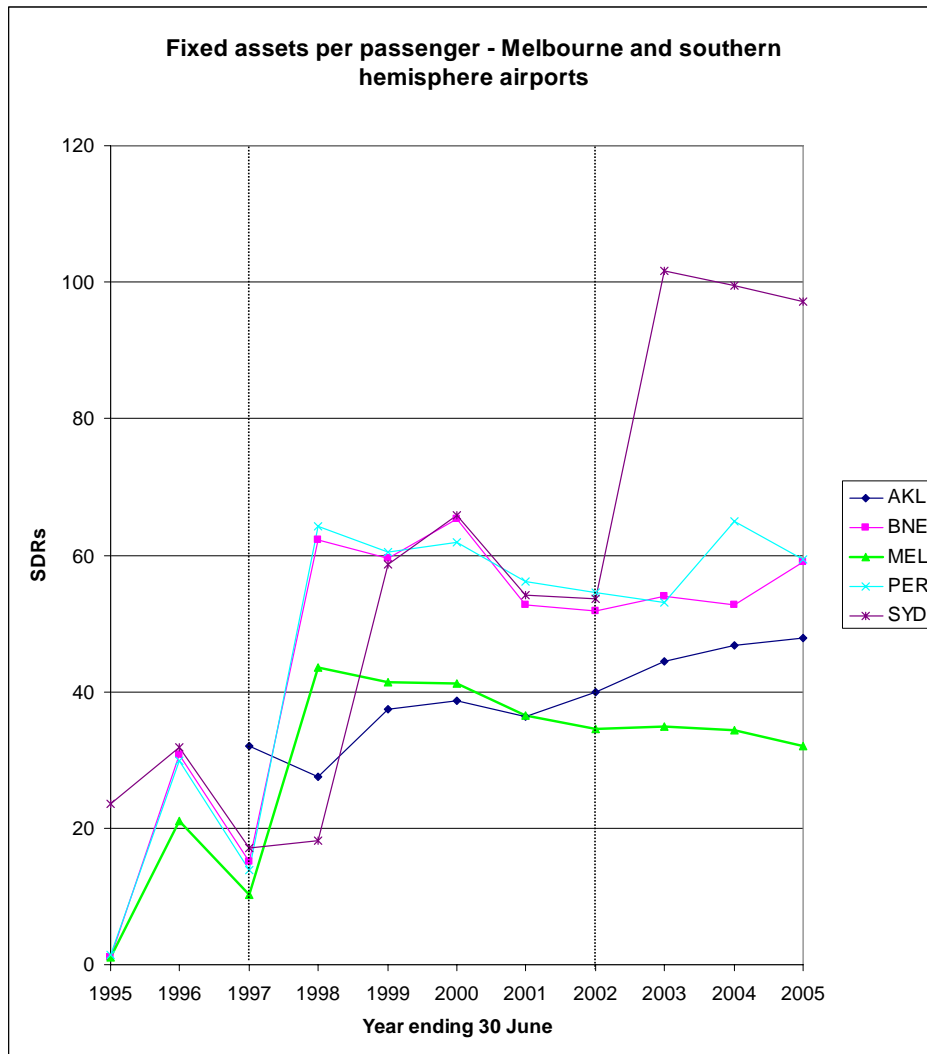
### **Fixed assets per passenger**

This is a measure of capital efficiency. A characteristic is that the peaky nature of airport infrastructure investment can drive the measure up quite sharply, and relative levels are affected by the relative age of assets.

Comparisons within fairly homogeneous regions (as with the southern hemisphere group here) are useful, but within a broader geographical context some caution needs to be exercised in making comparisons, because of widely varying airport construction costs, and hence asset values, around the world. Different asset valuation policies also make comparisons difficult, with some airports revaluing assets on a regular basis, while others, and in particular Melbourne, do not. Rapidly growing passenger numbers will of course also have a diluting effect on performance in this measure.

This measure needs to be treated with some caution. High levels of asset values can be a sign of unnecessary over-investment or may simply reflect unavoidable surplus capacity resulting from the lumpy nature of airport investment.

Unit asset values at the southern hemisphere airports are on average around 25% higher than those of the northern hemisphere airports. This may reflect relative asset age, surplus capacity and the fact that all of the Australian airports' assets were restated on a more commercial basis at the time of privatisation and some, but not Melbourne's, have been revalued since.

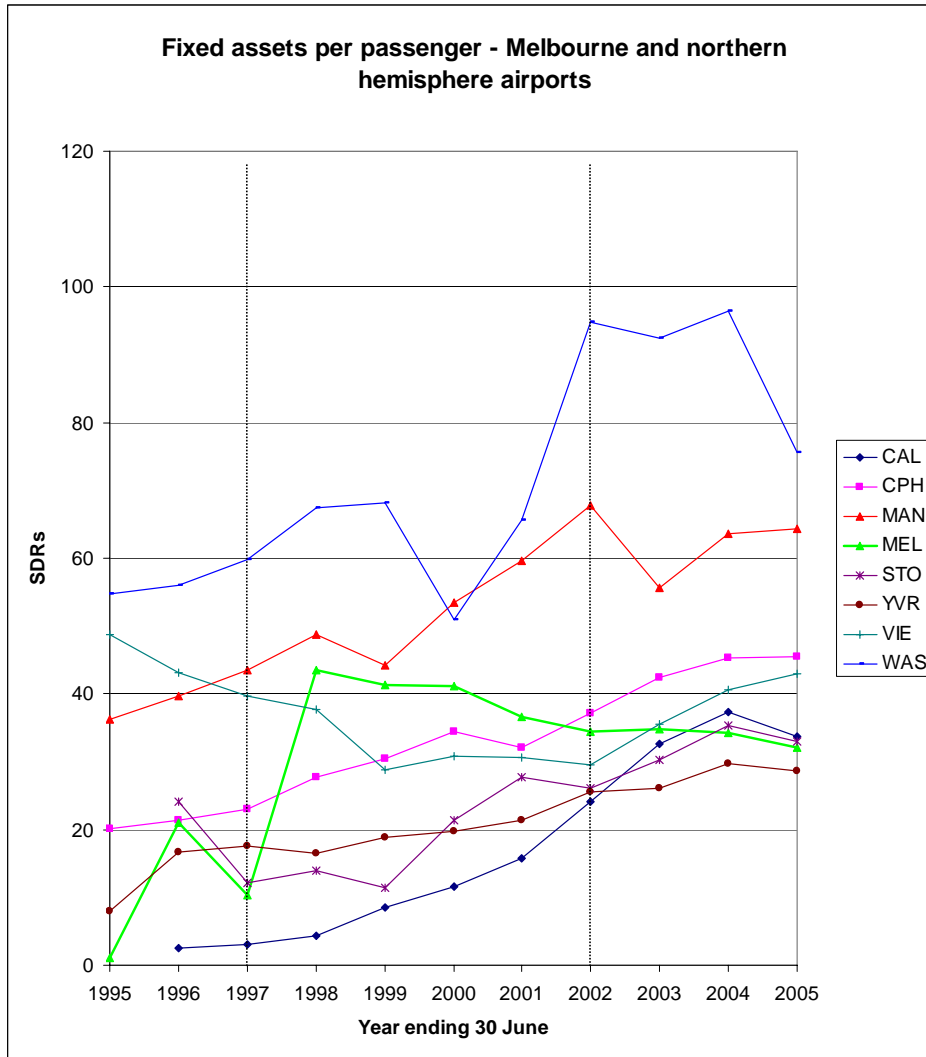


This chart illustrates clearly the extent to which the Australian airports’ assets were undervalued at the time of their administration by the FAC. Sydney’s heavy investment prior to 2000 again stands out.

Melbourne’s performance relative to that of Brisbane and Perth reflects a number of factors. First, since it has 24 hour operations its passenger numbers mean that per passenger measures are spread more widely. Its assets are also unquestionably older and in addition it is larger than the other airports in this sample apart from Sydney. It also has one terminal which reduces the demand for supporting road and car park infrastructure as well as core terminal services and potentially airfield assets such as taxiways. This measure is driven strongly by passenger numbers: Melbourne’s fixed assets in absolute terms were nearly 70% higher than those of Perth. It may also be that Melbourne has had a degree of spare capacity: this would certainly seem

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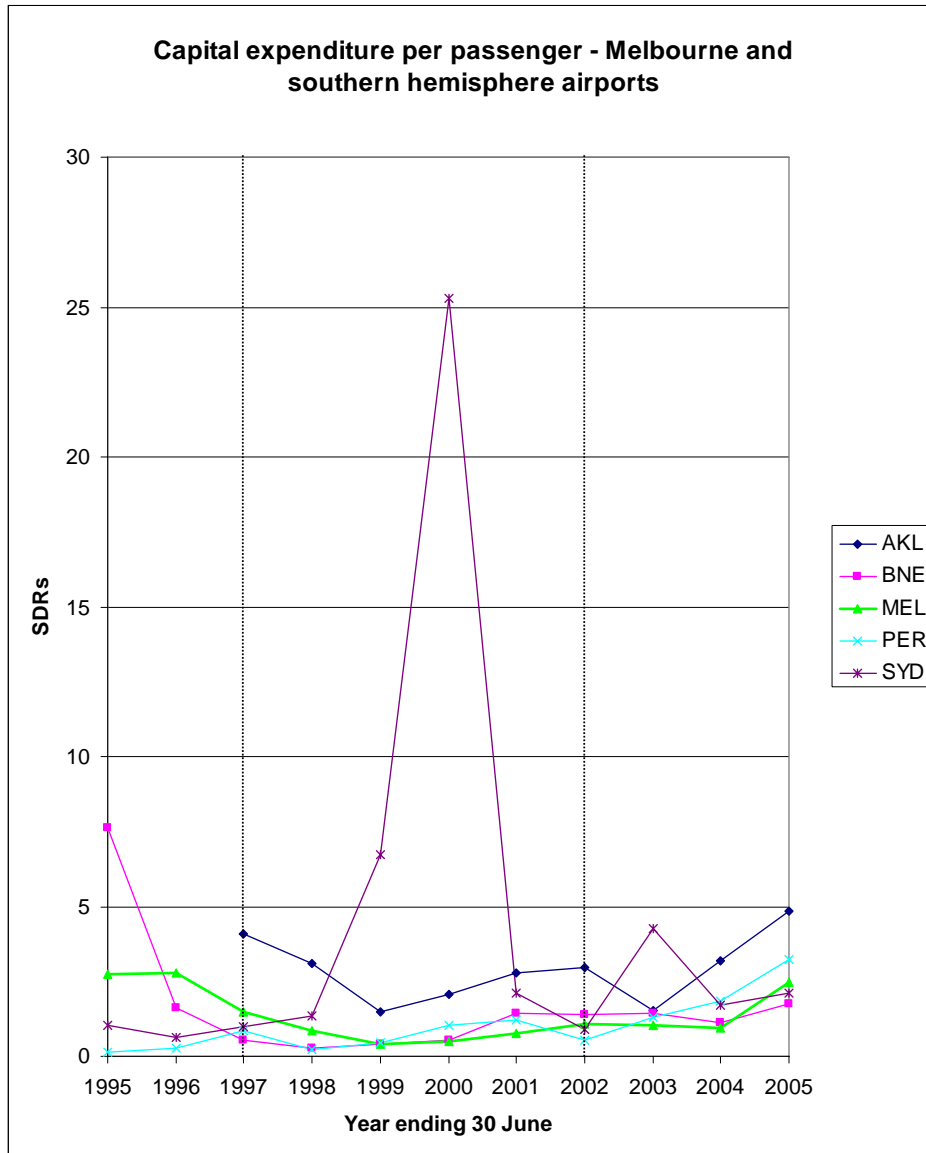
to be the case in the earlier years, when its unit asset levels were close to those of the other, much smaller, airports.



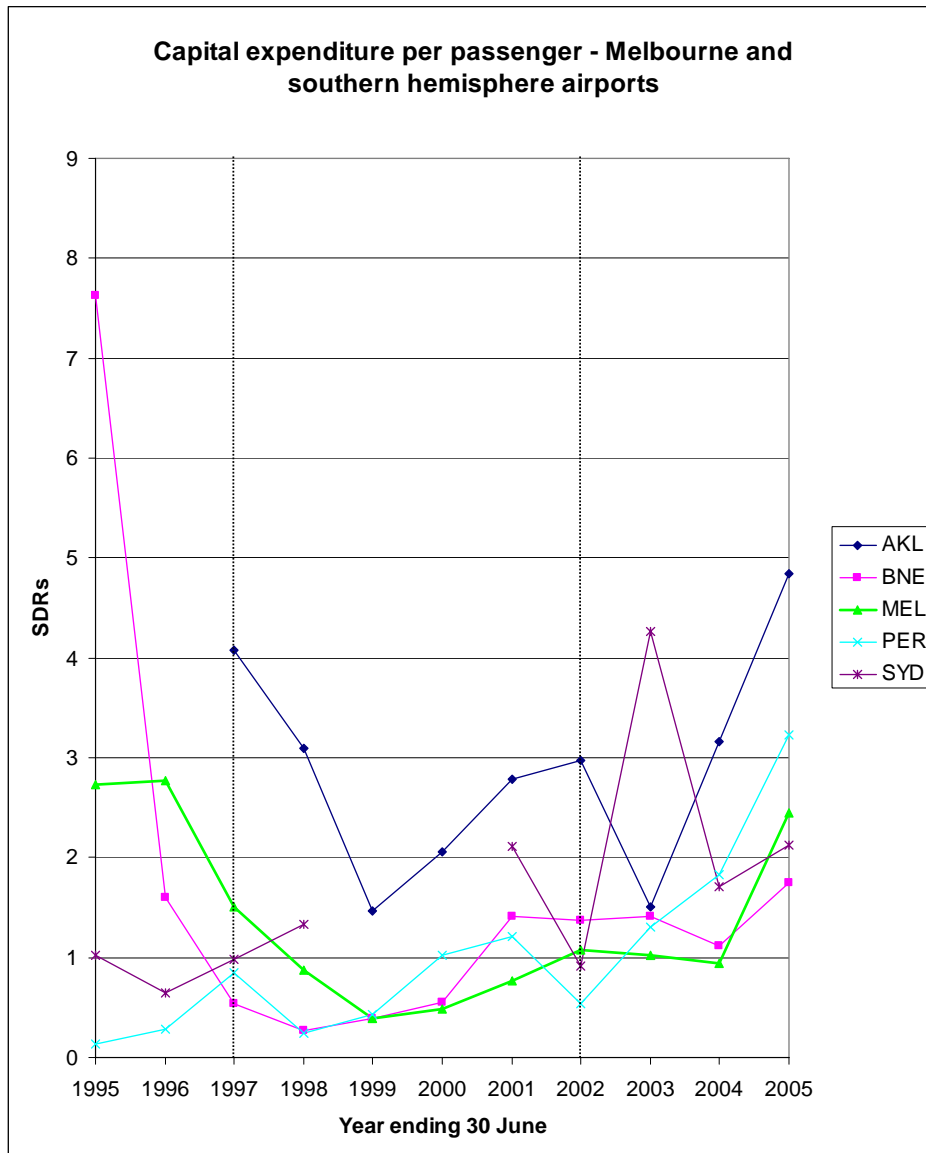
Within the northern hemisphere sample there is a rather clearer upward trend. In a number of cases this may reflect high local construction costs, and hence asset values, rather than above-average levels of capital investment. Washington’s performance simply reflects the sharp downturn in its traffic levels caused by its lengthy closure following the September 11 2001 attacks. In comparison, Melbourne has gradually moved down the ranking in this chart.

### Capital expenditure per passenger

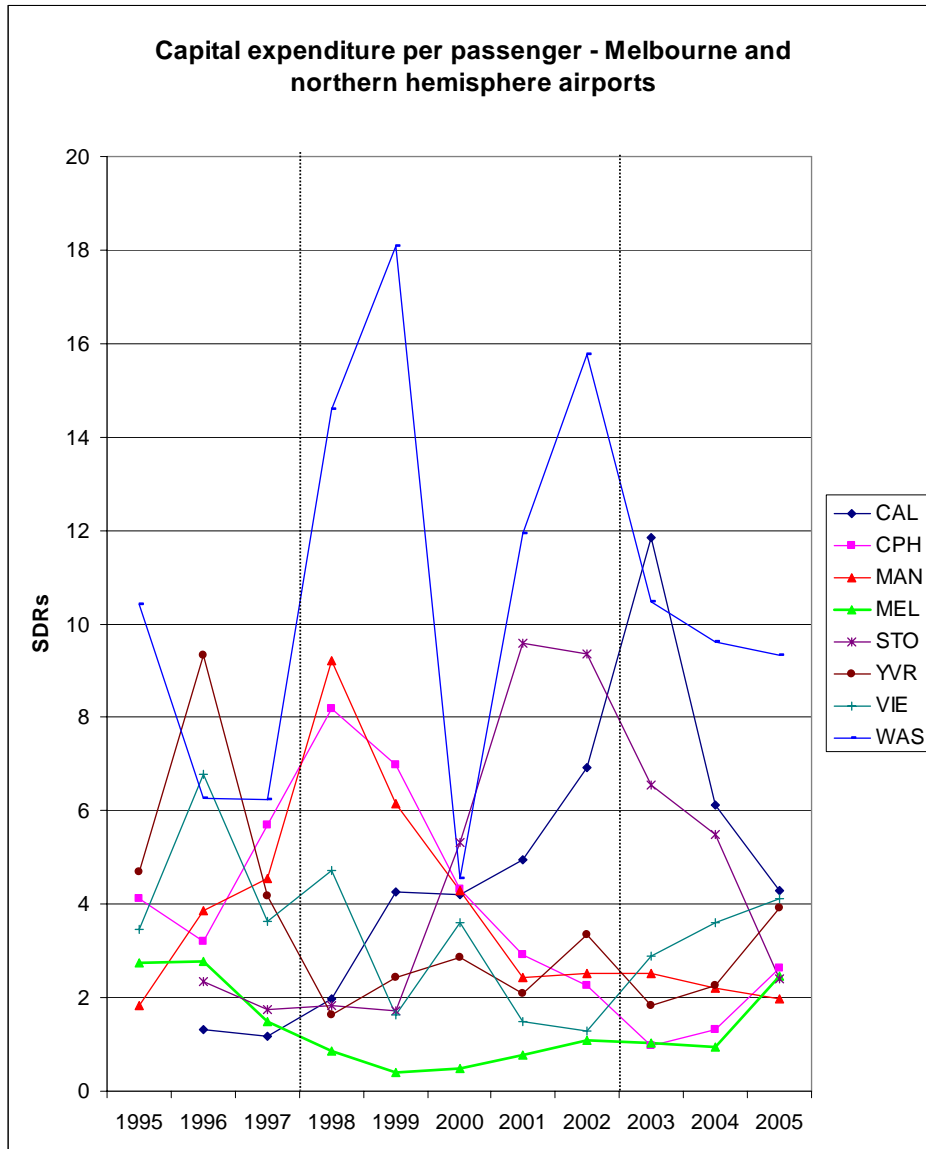
This measure can be expected to match growth in fixed assets per passenger reasonably closely. The difference in the average levels for the two groups does seem to indicate that regional differences in construction costs will tend to affect this measure. Again it needs to be treated with some caution, since it can be relatively volatile, due to the lumpiness in infrastructure investment and the durability of the assets.



This chart is again dominated by Sydney’s very heavy investment prior to the 2000 Olympics. A clearer picture of performance at the other airports can be gained by removing Sydney’s results for 1998/99 and 1999/2000, as follows:



By flattening the scale in this way it is possible to identify a modest upward trend in investment by the Australian airports since 2000/01. Even within this period Sydney underwent another significant tranche of investment, while Auckland’s investment has exceeded that of the other airports in the group for the past two years.



It is not easy to find any particular trend in this chart, which reflects the fact that airport infrastructure investments tend to come in large tranches, punctuated by longer periods in which investment levels are much more modest. Again, Washington’s post-2001 performance reflects its significant traffic downturn at that time. In comparison to this group, Melbourne’s results have been at or around the bottom of the range.

## Appendix 2 -TRL price report



# COMPARISON OF INTERNATIONAL AIRPORT CHARGES

MELBOURNE AIRPORT

FINAL REPORT (REVISED)

FEBRUARY 2006



## AERONAUTICAL CHARGES IN AUSTRALIA AND NEW ZEALAND

### 1. INTRODUCTION

The Transport Research Laboratory (TRL) is pleased to present a report on aeronautical (airport) charges in Australia and New Zealand. The report was requested by Melbourne Airport, which wished to gain a detailed independent perspective on the level of its international charges compared to those at other airports in the Pacific Rim region and elsewhere in the world. It is understood that the report is likely to be submitted to the Australian Productivity Commission during its review of airport prices regulation in Australia expected to take place during 2006.

The report is divided into four main sections:

- A description of TRL's expertise in the field of airport charges and airport performance comparisons;
- A description of the charges included in the assessment contained in this report;
- A discussion of the position of Melbourne Airport's charges in a regional context;
- A discussion of the position of Melbourne Airport's charges in the context of the rankings contained in TRL's publication *Review of Airport Charges*.

## 2. TRL's EXPERIENCE IN THE ASSESSMENT OF AIRPORT CHARGES AND AIRPORT PERFORMANCE

TRL's relevant experience rests primarily with its Head of Aviation, Peter Mackenzie-Williams, who has produced this report. Peter joined TRL in 1998, having worked since 1989 with Travers Morgan (later Symonds Travers Morgan). From 1990 onwards Peter was responsible for the authorship and production of the annual publication *Review of Airport Charges* and, from 1997 onwards, for the annual *Airport Performance Indicators*. Following Peter's move to TRL in 1998 the intellectual property vested in this work was acquired by TRL, and the production of both publications has continued under the same authorship.

### *Review of Airport Charges*

This work compares airport charges at a sample of 50 airports around the world. The charges taken into account are landing charges, aircraft parking charges, any passenger-related charges and terminal navigation charges. The applicable costs for one landing and one departure are calculated for each of a sample of eight aircraft operating on international services at each airport. The costs are then converted to a single unit of currency (Special Drawing Rights – SDRs) and presented in numerical ranking.

While the first three of these charge types are imposed by airport operators, terminal navigation charges are not, being imposed by the relevant air traffic control service provider. The inclusion of the charges in our calculations is intended to ensure comparability with those airports where the service provider does not impose a charge direct to the airlines for its service, but charges the airport operator instead.

In such cases it is assumed that the landing charge imposed by the airport includes an element intended to recover the cost of the service. The provision of an air traffic control service is clearly essential to any airport operation and the cost of that service is relevant to any consideration of the cost of operating into an airport, regardless of how that cost is recovered from the airlines as end users.

The inclusion of terminal navigation charges emphasises an underlying principle of the Review, which is to ensure that all comparisons are made on a like-with-like basis. There are other examples of services which may be charged for in different ways at different airports. Some airports provide their own security services, and it may be assumed that their passenger-related charges are designed to recover the associated costs. At other airports security services are provided by an external agency, such as a police force, and in these cases a separate security charge is levied, usually payable by the airlines. The inclusion of these charges in our calculations ensures comparability with those airports which incur their own costs of security provision. In the case of the Australian airports Rescue and Firefighting charges are imposed by the air traffic service provider, who also collect noise levies

on behalf of the Commonwealth Government. Elsewhere in the world both of these charge categories tend to be imposed by the airport itself.

It is also important to determine whether a charge relates to the recovery of the direct or external costs of providing the airport infrastructure or not: if it is not, it is not included in our calculations. The main examples of charges which are not included for this reason are passenger departure taxes. In many cases these are of no benefit at all to the airport, even though it may be the responsibility of the airport to collect them. In such cases the charge is simply a tax imposed on travellers, the revenues from which are remitted directly to the national exchequer. These are of no more benefit to the airport than highway tolls which passengers may need to pay in order to reach the airport, and on this basis we do not include them in our calculations.

The sample of airports included in the Review is intended to provide geographic representation for most world regions, and is not selected on the basis of covering the 50 busiest or largest airports by any measure. The aircraft sample is intended to represent aircraft of 100 seats or more which are commonly found at many of the world's international airports. The aeronautical charges included in the calculation are specifically for international services, corresponding with the exclusion of smaller aircraft types which are typically used mainly on domestic services.

A standard set of assumptions relating to aircraft weights and passenger numbers is used for each airport calculation. The number of passengers assumed is based on the average international passenger load factor (percentage of seats filled) reported by the inter-governmental International Civil Aviation Organisation (ICAO) for the previous year.

We take account of charge variations such as peak/off-peak pricing where these exist at a particular airport, either on the basis of actual data provided by the airports or on the basis of ratios of use estimated from available information such as airline timetables. We also take account of noise surcharges and discounts which vary according to aircraft noise emission levels.

The publication takes account of charges in force in the middle of each year, in principle on 1 July.

The charges information used as a basis for the calculation of the Index is invariably provided by the airports included in the Review. Occasionally the information is not received in time for use in the calculations, and in these cases reference is made to information contained in the *Airport and En-Route Aviation Charges Manual* produced by the International Air Transport Association (IATA).

Over the sixteen year period since its production began, the Review has gained a high level of acceptance in the airport and airline world. Its findings have been referred to regularly in the annual Report and Accounts of a number of airport

operators, including those of BAA (operators of London Heathrow, London Gatwick and other UK and international airports), the former Federal Airports Corporation of Australia (FAC), the Vancouver International Airport Authority in Canada and Luftfartsverket, the operator of Sweden's airports.

BZW, advisers to the Australian Government on the sale of the first tranche of operating leases on Australian airports, requested that reference be made to the Review during the sale process which took place in 1996/7. The Charges Index for 1996 together with details of the Review's methodology were included in the public set of information made available to prospective investors. In addition, the UK Monopolies and Mergers Commission made reference to the Review in two of its five-yearly reviews of the regulatory formulae governing charges at BAA's London airports.

The Review is recognised by IATA as being a reliable source of information on airport charges comparisons, and TRL and IATA frequently co-operate through exchanges of charges data. Similarly, the Airports Council International, the world's principal airport trade association, has commented favourably on the methodology employed in the Review, particularly relating to the representative balance of airports included in the sample. Peter Mackenzie-Williams is a member of the ACI World Economics committee.

### ***Airport Performance Indicators***

The decision to introduce this publication was taken in the light of a number of approaches from financial institutions interested in gaining a broader understanding of the financial performance of airports than was conveyed by the *Review of Airport Charges*. The publication provides a range of operating and financial performance measures which gives airport operators, analysts and other interested parties an indication of how well various airports are performing on a comparative basis. This work is significantly broader in its scope than the work on airport charges.

The work relies on data extracted from the published audited Report and Accounts of a range of airports around the world. The airports included in this work partly overlap those which are covered in the *Review of Airport Charges* but for various reasons the samples differ. The overall approach taken is similar, with financial measures being first calculated in units of local currency and then converted to SDRs.

A particular difficulty related to comparisons of airport performance is caused by the fact that the range of activities undertaken by different airports varies considerably. For example, a number of airports included in our sample perform their own ground handling services or operate their own car parks, but many do not. A number of airports' Report and Accounts cover the activities of a national civil aviation administration, which as well as operating the airports perform other functions such as the provision of air traffic control services. If this difficulty is not

addressed, a number of performance measures, especially those related to staff numbers, are likely to be distorted.

The approach which is taken to deal with this problem is to identify those activities which do not constitute what can be regarded as core to the operation of an airport, and to adjust the relevant data by deducting all revenues, costs and staff numbers associated with the additional activities. At the same time it is reasonable to assume that if the airport did not itself carry out functions such as the operation of car parks it would appoint a concessionaire to do so, and that the concessionaire would pay the airport a fee. In these cases a notional fee is added back to the airport's revenues so as to allow like-with-like comparisons to be made with airports where a concessionaire is actually in place.

### ***Related work***

A number of individual commissions have been carried out drawing on the general methodological approach of the two publications already described. These have included work for BAA which examined pricing structures and relative levels of charges at airports which had undertaken major new infrastructure projects. Work has also been carried out for the Civil Aviation Authority of Fiji, assessing the relative levels of both airport and en-route navigational charges in a regional context. In 1999 a report was produced for Sydney Airport which commented on Sydney's relative levels of charges and operating performance which was used as part of the airport's draft aeronautical pricing proposal submitted to the ACCC.

During 1993 and 1994, Peter Mackenzie-Williams was co-author and technical leader of a piece of work carried out by Travers Morgan on behalf of the Australian Bureau of Industry Economics (BIE). The BIE wished to examine the value for money received by the Australian travelling public using air services, and it also sought to examine the performance of Australian aviation infrastructure services against best international practice. TM's input to the production of the BIE report<sup>68</sup> was to carry out a study on international best practice at airports. This included a number of productivity measures which were subsequently used in *Airport Performance Indicators*, together with a number of customer-oriented measures, including relative levels of airport landing charges.

In 2002, TRL was commissioned by IATA to produce a study intended to identify examples of airport best practice. This work was based on a time-series of data for a sample of 30 major international airports, and used a simple proportional scaling approach to combine performance in six key performance indicators so as to produce a single measure of combined performance.

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<sup>68</sup> International Performance Indicators – Aviation. Research Report 59, Bureau of Industry Economics, August 1994.

### 3. THE CHARGES INCLUDED IN THE ASSESSMENT CONTAINED IN THIS REPORT

#### Calculation of the Index

The Index of charges is calculated from the charges which would be imposed on a sample of eight different aircraft types making one landing and one departure at each airport. The aircraft vary in size from around 115 seats (the Boeing 737-500) to around 380 seats (the Boeing 747-400), and the sample is intended to cover a range of types commonly used on international services around the world. The charges used for the calculations are for international rather than domestic services in cases where airports have different levels of charges for the two categories of flight.

In our published work, the sample of 50 airports covers a broad geographical spread, but with a predominance in Europe, North America and Australasia. It is not intended to represent the fifty busiest airports by any particular measure, either globally or regionally, but to cover a broad spectrum of different approaches to airport pricing in a variety of public- or private sector operating environments under different regulatory regimes. However, the sample includes virtually all airports worldwide which handle in excess of 10 million international passengers.

The charges are calculated in the currency in which they are levied, which is the local currency in all cases except three: Budapest (which entered the European Union in 2004 but is not yet in the Eurozone) charges in Euros while Moscow, Sao Paulo and Warsaw charge in US Dollars. The aggregated charges for the eight aircraft types are then converted to a single unit of currency, the Special Drawing Right (SDR) and ranked from highest to lowest.

#### Aircraft weights

In order to ensure that our calculation of charges is equalised for all airports, it is necessary to define a standard set of weights for each aircraft type. We use for this purpose the relevant maximum weights as published by each aircraft manufacturer, and their defined weights are shown in Table 1 below.

(i) *Table 1: Aircraft weights*

Aircraft	MAW	MTOW	MLW	MZFW
		(Metric tonnes)		
Boeing 737-500	52.6	52.4	49.9	46.7
Boeing 737-300	56.7	56.5	51.7	47.6
Boeing 737-400	63.1	62.8	54.9	53.1
Airbus 320-200	73.9	73.5	64.5	62.5
Boeing 757-200	109.3	108.8	89.8	84.4

Airbus 300-600	171.4	170.5	140.0	130.0
Boeing 767-300	187.3	186.9	145.2	133.8
Boeing 747-400	398.3	396.9	295.8	251.7
Total for sample	1,112.6	1,108.3	891.8	809.8
Source: <i>Flight International</i> Commercial Aircraft of the World				

*Note: all weight-related charges in the sample of airports included in this study are based on Maximum Take-off Weight (MTOW). Elsewhere in the world they can be based on Maximum All-up Weight (MAW), Maximum landing Weight (MAW) or Maximum Zero Fuel Weight (MZFW).*

## Passenger numbers

The number of passengers which we assume are being carried in each aircraft type also needs to be defined for the purposes of calculating passenger charges. The number of seats fitted in aircraft of the same type can vary considerably, and the percentage of those seats which are filled may also vary year on year. In order to define the number of seats to be used as a basis for our calculations, we derive an average from the actual seating capacities of ten different operators of each type. A sample of operators is selected either on the basis of the number of each aircraft type which they operate, or on the basis of their fleet being used primarily for international services.

The number of passengers is then defined by the average passenger load factor for international services worldwide in the previous year, as reported by ICAO. The figure for 2004 was 73.8%, up a little from 73% in 2003, and showing a good improvement over the level of 70% achieved in 2001. The change reflects a return to more robust traffic growth following the airline industry downturn triggered by the events of September 11 2001 and the SARS epidemic.

Prior to the events of 2001, a gradual increase had been seen since the early 1990s, reflecting the growing effectiveness and sophistication of computer reservation systems. The 2004 average load factor is the highest reported by ICAO since publication of *Review of Airport Charges* began in 1990.

The range of seat numbers for each aircraft type, derived average capacities and the derived assumed number of passengers per aircraft are as shown in Table 2 below.

Table 2: Aircraft seat capacities and assumed passenger loads

Aircraft	Range of capacities	Average Capacity	Assumed passenger occupancy
Boeing 737-500	96- 131	115	85
Boeing 737-300	110 – 148	133	98
Boeing 737-400	143 – 167	152	112
Airbus 320-200	140 – 180	162	120
Boeing 757-200	160 - 227	190	140
Boeing 767-300	193 – 326	247	182
Airbus 300-600	261 - 361	274	202
Boeing 747-400	351 - 403	382	282
Total		1655	1221
Sources: <i>Flight International</i> World Airliner Census <i>JP Airline-fleets International</i> 2005/2006			

## Aircraft parking



Aircraft parking charges are generally based on the length of time that an aircraft is parked. For the purposes of our calculations we assume that the aircraft types used on short-haul services are parked for two hours, while the two aircraft types used for long-haul services, the Boeings 767-300 and 747-400, are parked for four hours.

### **General comments on the Australia/New Zealand charge structures**

The structure of aeronautical charges at the Australia/New Zealand airports is unusual in that only Auckland has a traditional landing charge based on aircraft weight. At all of the Australian airports plus Wellington there is a single charge, payable on a per passenger basis, which takes the place of a traditional combination of a landing charge and a per passenger charge.

The thinking behind this model is that it shifts some market risk from the airlines to the airports. With a traditional landing charge the airline is charged irrespective of the passenger load, which means that in times of passenger traffic downturn there is a fixed price per landing to be paid, even though airline revenue per landing may have diminished significantly. However, at this stage this model has little application outside of the Australia/New Zealand region.

Within the sample, the main exception to the general pattern of charges is Christchurch. Here there are fixed charges based on aircraft type, which do not vary at all according to passenger loads. This model is (as far as we are aware) unique in the world, having been introduced around ten years ago.

The charges used in the case of Adelaide are those which were introduced in mid-October 2005, following the opening of its new terminal. The charges used in the case of the New Zealand airports reflect changes made to government security charges with effect from 1 October 2005. The charges used in the case of the other Australian airports were in all cases those in force at the time of carrying out this study: these have mostly been in force since July 2005. The charges used in the main sample of airports are also those in force in July 2005.

The main features of the charging structures are set out below.

#### **Adelaide**

Charges for aircraft landing, insurance and international passenger facilitation are payable on a per arriving and departing passenger basis. Security charges are payable on a per departing passenger basis. There is no specific parking charge for commercial aircraft. Terminal navigation and rescue and firefighting charges are imposed by AirServices Australia, based on the aircraft's MTOW. Noise levy charges are imposed by the Commonwealth Government and collected by AirServices Australia, based on a formula related to the aircraft's Assessed Noise Level (ANL).

## **Auckland**

There is a traditional landing charge based on the aircraft's MTOW per landing. There is a structure of aircraft parking charges but these are not included in our calculations because the charges only apply after the aircraft has been parked for six hours. There is an Airport Development charge, payable by departing international passengers. There is a Terminal Services charge, payable by arriving and departing passengers using any of the international terminal facilities. This varies depending on whether passengers do or do not use airbridges. We have assumed that all passengers do use airbridges. In addition, there are a security charge and a CAA levy payable per departing passenger. Aerodrome Service and Approach Service charges are imposed by Airways New Zealand, based on a combination of a flat rate per landing plus an additional charge based on aircraft MTOW.

## **Brisbane**

There is an international passenger service charge imposed per arriving and departing passenger. Charges for Australian Protective Service, passenger screening, checked bag screening and additional security are all charged on a departing international passenger basis. Aircraft parking charges only apply "outside of scheduled services turnarounds". Terminal navigation and rescue and firefighting charges are imposed by AirServices Australia, based on the aircraft's MTOW.

## **Cairns**

An international passenger service charge applies to arriving and departing passengers. International passenger CUTE and security charges are imposed on departing passengers only. There is a structure of aircraft parking charges but these are not included in our calculations because the charges only apply after the aircraft has been parked for six hours. Terminal navigation and rescue and firefighting charges are imposed by AirServices Australia, based on the aircraft's MTOW.

## **Christchurch**

There are separate fixed charges, based on aircraft type, for airfield use and terminal use, per aircraft departure. There is no separate specified aircraft parking charge. Aerodrome Service and Approach Service charges are imposed by Airways New Zealand, based on a combination of a flat rate per landing plus an additional charge based on aircraft MTOW. In addition, there are a security charge, a baggage reconciliation charge and a CAA levy payable per departing passenger.

## **Melbourne**

There is an international passenger terminal charge for passenger aircraft imposed per arriving and departing passenger. There are passenger security and passenger screening charges payable per departing passenger. There is a structure of aircraft parking charges but there are no charges for commercial passenger aircraft. Terminal navigation and rescue and firefighting charges are imposed by AirServices Australia, based on the aircraft's MTOW.

### **Perth**

An airfield usage charge and an international passenger terminal charge are both applied to arriving and departing passengers. There are baggage handling system, security recovery, passenger screening and checked bag screening charges payable per departing passenger. Aircraft parking charges apply per aircraft per day in excess of a two hour stay, so this is included in our calculations in the case of the two long haul aircraft types which are assumed to be parked for four hours. Terminal navigation and rescue and firefighting charges are imposed by AirServices Australia, based on the aircraft's MTOW.

### **Sydney**

There is a passenger services charge applied per arriving and departing passenger. There is a bussing/off stand discount which is taken into account in our calculations. An aircraft parking charge is applied per 15 minutes, with no free time. Terminal navigation and rescue and firefighting charges are imposed by AirServices Australia, based on the aircraft's MTOW. Noise levy charges are imposed by the Commonwealth Government and collected by AirServices Australia, based on a formula related to the aircraft's Assessed Noise Level (ANL).

### **Wellington**

Landing charges are payable on a per arriving and departing passenger basis. There is also an international passenger departure charge. There is a structure of aircraft parking charges but these are not included in our calculations because the charges only apply after the aircraft has been parked for six hours. Aerodrome Service and Approach Service charges are imposed by Airways New Zealand, based on a combination of a flat rate per landing plus an additional charge based on aircraft MTOW. In addition, there are a security charge, a baggage reconciliation charge and a CAA levy payable per departing passenger.

#### 4. THE POSITION OF MELBOURNE AIRPORT'S CHARGES IN A REGIONAL CONTEXT

For the sample of nine airports included in this study, the charges calculated using the methodology described in the previous section are shown in Table 3 below. The charges are shown in absolute terms in SDRs, and indexed against the highest ranking airport, which is Adelaide. The calculated amounts in each charge category are shown in local currency at Annex 1.

	Total charges in SDRs	Index
Adelaide	36,834.6	100.0
Wellington	33,030.1	89.7
Cairns	31,452.2	85.4
Sydney	28,042.4	76.1
Auckland	27,056.2	73.5
Christchurch	25,822.1	70.1
Perth	23,148.3	62.8
Brisbane	21,504.1	58.4
Melbourne	19,092.1	51.8

Within this sample, Melbourne airport is ranked lowest, with total charges which are little more than half of those at the most expensive airport.

Relative levels of airport charges may be influenced by many factors, including ownership structure and the competitive and regulatory environment in which they operate. The sample of airports in this study is relatively homogenous in these respects, and this being so a relatively close (inverse) relationship between the size of the airport in passenger throughput terms and its charge levels might be expected. This is because the high level of fixed costs in airport operations will tend to mean that small airports need to charge more than large airports in order to achieve adequate levels of cost recovery.

Against this background, it is not particularly surprising to find Adelaide and Cairns as the most expensive of the Australian airports, since they are the smallest within this sample in terms of passenger numbers. The disparity between the levels of charges at Sydney and Melbourne is more surprising, given that Melbourne's traffic levels are around 28% lower than those at Sydney. However, relative levels of capital expenditure at the two airports in recent years could have an influence on these results.

The sample of eight aircraft used to calculate the total charges are, as already discussed, those used in the publication *Review of Airport Charges*, and as such it is

possible to relate the results above directly with those in the published work. This is done in Section 5 below. However, we recognise that in the case of the Australian airports there is a larger proportion of long-haul traffic in the international traffic mix than the proportion implied by the sample of eight aircraft. As a sensitivity test to examine the situation in a hypothetical all long-haul traffic mix compared to the results above, we have therefore extracted the charges calculated for the Boeing 747-400. These are shown in Table 4 below.

<b>Table 4: Index of charges at the regional sample of eight airports, for Boeing 747-400 only</b>		
	Total charges in SDRs	Index
Adelaide	9,773.4	100.0
Cairns	8,007.9	81.9
Wellington	7,606.1	77.8
Auckland	7,025.0	71.9
Sydney	6,905.3	70.7
Christchurch	6,484.7	66.4
Perth	6,187.8	63.3
Brisbane	5,523.2	56.5
Melbourne	4,837.1	49.5

The results of this test are that all of the rankings remain unchanged with the exception of Wellington and Cairns, which exchange positions, and Auckland and Sydney where the same applies. Melbourne's indexed position in relation to Adelaide reduces, but not significantly so. These results are not in themselves surprising, since aircraft weight has no influence on charges at the Australian airports except in the case of the charges imposed by AirServices Australia.

## **5. THE POSITION OF MELBOURNE AIRPORT'S CHARGES IN THE CONTEXT OF THE RANKINGS CONTAINED IN TRL'S PUBLICATION *REVIEW OF AIRPORT CHARGES***

The calculated charges for the sample of airports in this study have also been introduced into the Index of charges contained in the 2005 edition of *Review of Airport Charges*, so as to put them into an international context. The sample of 50 airports included in the publication already contains Sydney, which ranks in 14<sup>th</sup> position in the sample. If Melbourne Airport were included in the main sample it would rank in 37<sup>th</sup> position out of 50.

Table 5 below shows the Index of charges including the eight additional airports, expanding the sample to 58, and indexing to the most expensive airport in this sample, New York Newark. This indicates that Adelaide's charges are not only high in a regional context, but also in an international context. However, some caution needs to be used in relating charges at the smaller regional airports with those in a sample of large international airports, for the reasons discussed in the previous section. On the other hand the passenger levels at Melbourne means that comparison can reasonably be made with a number of the airports in the main sample with smaller passenger throughputs, including for example Johannesburg, Vancouver and Washington.

AIRPORT	TOTAL SDRs	INDEX	PASSENGERS (000s)*	
			International	Total
1 New Jersey-EWR	43322	100	8,858	31,947
2 Toronto	42933	99	15,998	28,616
3 Athens	42000	97	8,469	13,641
4 Osaka	39433	91	10,110	15,112
5 New York-JFK	38307	88	17,429	37,518
6 Adelaide	36835	85	291	5,182
7 Moscow	33565	77	8,905	12,865
8 Paris-CDG	33547	77	46,300	51,260
9 Wellington	33030	76	556	4,594
10 Tokyo	32444	75	26,595	31,057
11 Cairns	31452	73	1,074	3,571
12 Frankfurt	31166	72	43,478	51,098
13 Zurich	30925	71	16,506	17,282
14 Vancouver	30183	70	7,740	16,089
15 Amsterdam	30049	69	42,321	42,541
16 Budapest	28537	66	6,433	6,445
17 Sydney	28042	65	8,973	26,983
18 Chicago	27341	63	10,767	75,534
19 Vienna	27163	63	14,176	14,786
20 Auckland	27056	62	6,023	10,944
21 Prague	26366	61	9,508	9,645
22 Munich	26053	60	17,880	26,815
23 Brussels	26007	60	15,541	15,595
24 Berlin	25945	60	5,280	11,048
25 Washington	25849	60	4,649	22,660
26 Christchurch	25822	60	1,378	5,421
27 Stockholm	25717	59	10,694	16,364
28 Copenhagen	25610	59	17,307	18,966
29 Warsaw	25604	59	5,200	6,085
30 Dusseldorf	25560	59	11,535	15,256
31 Lisbon	25363	59	8,347	10,705
32 London-LHR	25083	58	60,184	67,344
33 Dallas/Fort Worth	24495	57	5,079	59,412
34 Oslo	24033	55	7,420	14,865
35 Miami	23624	55	13,980	30,165
36 Seoul	23182	54	23,621	24,235
37 Perth	23148	53	1,870	6,441
38 Milan-MXP	22595	52	14,964	18,555
39 Rome	22436	52	15,077	28,119
40 Brisbane	21504	50	3,387	15,360
41 San Francisco	21243	49	7,562	32,248
42 Sao Paulo	20716	48	13,611	13,727
43 Mexico City	20217	47	7,895	22,994
44 Melbourne	19092	44	4,101	20,267
45 Helsinki	18652	43	7,891	10,727
46 Johannesburg	18560	43	6,665	15,341
47 Madrid	17499	40	19,818	38,705
48 Jeddah	17088	39	6,753	12,391
49 Dublin	16567	38	16,372	17,138
50 Bangkok	15457	36	25,825	37,960
51 Taipei	15216	35	17,722	20,084
52 London-LGW	15190	35	27,456	31,461
53 Singapore	13927	32	28,606	30,354
54 Hong Kong	13666	32	36,287	36,712
55 Los Angeles	13219	31	16,469	60,689
56 Kuala Lumpur	12294	28	12,484	21,059
57 Dubai	9780	23	20,869	21,712
58 Mumbai	9371	22	5,353	15,179

\*Passenger statistics for 2004, source Airports Council International

## Annex 1

### Charges calculated by charge category in units of local currency

	Landing charges	Parking charges	Passenger charges	Terminal Navigation Charges	Total charges in SDRs	SDR exchange rate	Total in SDRs	Index
Adelaide	7,984.0	-	50,122.2	12,667.9	70,774.0	1.9214	36,834.6	100.0
Wellington	25,006.1	-	40,305.2	3,866.9	69,178.2	2.0944	33,030.1	89.7
Cairns	4,776.8	-	49,194.1	6,461.4	60,432.3	1.9214	31,452.2	85.4
Sydney	5,246.4	2,800.0	39,406.3	6,428.0	53,880.7	1.9214	28,042.4	76.1
Auckland	13,135.5	-	39,804.6	3,726.5	56,666.5	2.0944	27,056.2	73.5
Christchurch	8,987.5	-	41,195.8	3,898.6	54,081.9	2.0944	25,822.1	70.1
Perth	3,036.7	54.0	31,821.7	9,564.6	44,477.1	1.9214	23,148.3	62.8
Brisbane	1,950.6	-	32,906.0	6,461.4	41,317.9	1.9214	21,504.1	58.4
Melbourne	1,551.6	-	30,222.2	4,909.8	36,683.6	1.9214	19,092.1	51.8



## Appendix 3 – Basic Financial Performance

### Aeronautical business

	1998	1999	2000	2001	2002	2003	2004	2005
Revenue	53	53	55	63	66	101	121	137
Operating expenses	(25)	(25)	(25)	(31)	(41)	(42)	(48)	(55)
<b>EBITDA</b>	<b>28</b>	<b>28</b>	<b>30</b>	<b>33</b>	<b>25</b>	<b>59</b>	<b>73</b>	<b>82</b>
Depreciation	(14)	(15)	(15)	(16)	(17)	(19)	(18)	(19)
<b>EBIT</b>	<b>14</b>	<b>13</b>	<b>16</b>	<b>17</b>	<b>8</b>	<b>40</b>	<b>55</b>	<b>64</b>
Fixed Assets	463	445	429	415	427	425	421	474
<b>Return on Assets</b>	<b>2.9%</b>	<b>2.9%</b>	<b>3.7%</b>	<b>4.0%</b>	<b>1.9%</b>	<b>9.5%</b>	<b>13.0%</b>	<b>13.4%</b>

### Non-aeronautical business

	1998	1999	2000	2001	2002	2003	2004	2005
Revenue	91	101	112	128	131	137	158	178
Operating expenses	(20)	(21)	(22)	(28)	(29)	(36)	(32)	(35)
<b>EBITDA</b>	<b>71</b>	<b>79</b>	<b>90</b>	<b>99</b>	<b>102</b>	<b>101</b>	<b>126</b>	<b>143</b>
Depreciation and Amortisation	(12)	(17)	(19)	(13)	(12)	(14)	(26)	(22)
<b>EBIT</b>	<b>59</b>	<b>63</b>	<b>71</b>	<b>87</b>	<b>90</b>	<b>87</b>	<b>100</b>	<b>121</b>
Fixed Assets and good will	885	891	894	912	898	905.5	903	922.4
<b>Return on Assets</b>	<b>6.7%</b>	<b>7.0%</b>	<b>8.0%</b>	<b>9.5%</b>	<b>10.0%</b>	<b>9.6%</b>	<b>11.1%</b>	<b>13.2%</b>

### Total business

	1998	1999	2000	2001	2002	2003	2004	2005
Revenue	144	153	167	191	197	237	279	315
Operating expenses	(45)	(46)	(47)	(59)	(70)	(77)	(80)	(90)
<b>EBITDA</b>	<b>99</b>	<b>107</b>	<b>120</b>	<b>132</b>	<b>127</b>	<b>160</b>	<b>199</b>	<b>225</b>
Depreciation and Amortisation	(26)	(31)	(33)	(28)	(29)	(33)	(44)	(40)
<b>EBIT</b>	<b>73</b>	<b>75</b>	<b>87</b>	<b>104</b>	<b>98</b>	<b>127</b>	<b>155</b>	<b>185</b>
Fixed Assets and good will	1,348	1,336	1,323	1,327	1,325	1,331	1,324	1,396
<b>Return on Assets</b>	<b>5.4%</b>	<b>5.6%</b>	<b>6.6%</b>	<b>7.8%</b>	<b>7.4%</b>	<b>9.5%</b>	<b>11.7%</b>	<b>13.2%</b>