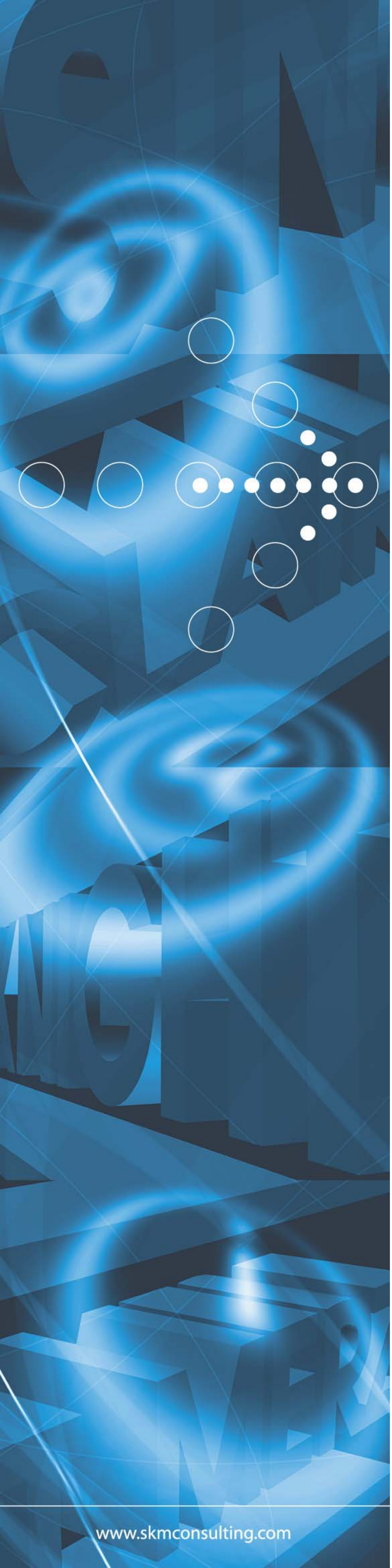

Melbourne Airport Economic Impact Study

Public Report

March 2003

SINCLAIR KNIGHT MERZ

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Report

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Foreword

1.1 Foreword from the Chief Executive Officer, Melbourne Airport

I am pleased to present the Melbourne Airport Economic Impact Study.

A dynamic gateway to the world, Melbourne Airport is a major contributor to economic activity in terms of employment, commerce, trade and tourism.

Melbourne Airport is home to around 150 businesses employing over 10,000 people on site. It is the only airport in the country to record an increase in international passenger traffic every year for the past five years and is fast emerging as Australia's major air trading hub.

Unhampered by the constraints faced by many other airports, especially in relation to operating times and space, Melbourne Airport's growth over the last five years has outstripped the national average.

This study measures and communicates the extent of employment and economic benefit provided to the regional, state and national economies from Melbourne Airport's high level of productivity.

The study highlights the importance of Melbourne Airport's strategic advantages including twenty-four hour curfew free operation, large expanses of land available for development, convenient location, excellent infrastructure links and diverse passenger mix.

Increased passenger numbers indicate Victoria remains a strong travel and tourism market. The information in this study will help inform future development at Melbourne Airport and ensure that we continue our strong growth well into the future.

Chris Barlow
Chief Executive Officer
Melbourne Airport

1.2 Foreword from the Minister for State and Regional Development.

Since its establishment in 1970, Melbourne Airport has played a highly significant role as a key feature of Victoria's transport infrastructure and as a driver of the State's economic development.

The Study confirms the economic contributions made by the Airport as a major employer and draws a number of interesting conclusions about how the key strengths of its business operations have a wider economic impact and serves to enhance Victoria's standing as the national supply chain leader.

I commend Melbourne Airport for the development of such a valuable document, which will be an important tool in promoting further growth and improvement of the Airport's operations, related businesses and economic development.

The Hon John Brumby MP
Minister for State and Regional Development

1.3 Brief overview of Economic Benefit Study

This economic impact study, prepared by Sinclair Knight Merz, the Centre for Policy Studies at Monash University and Intervistas Consulting presents the extent of employment and economic value which is induced by Melbourne Airport at the local, state and national levels.

The study is an important document for both Melbourne Airport and its stakeholders, as it indicates the value that the airport contributes to production, consumption and employment and highlights the specific strengths of the airport which enable this value to be created.

The study combines the findings of three levels of research: micro-level studies of specific airport activities, a census of airport employment and activity and general equilibrium modelling of a number of different scenarios – all of which combine to produce a picture of the fundamental importance and worth of the airport as a facilitating piece of infrastructure to the local state and national economies.

Executive Summary

The objective of this Economic Impact Study is to determine and communicate the extent of employment and economic value which is induced by Melbourne Airport's high level of productivity.

In order to communicate the results effectively, economic impacts are considered at various levels of activity - at the local, state and national scales – utilising various complementary economic research techniques. Our method is detailed in the next section.

Key findings of the economic impact study include:

1) In September 2002, 10,300 people were employed at Melbourne Airport in some 9,000 equivalent full time positions, earning an estimated $525 million in wages.
2) Efficiency gains put in place at Melbourne Airport (which have resulted in higher factor productivity) have contributed significantly to jobs and production in Victoria. Productivity improvements include more efficient use of capital, such as runway space and other fixed assets, as well as increased labour productivity through management and organisational improvements since 1997/8. By 2002, these improvements have generated an estimated 5,000 additional jobs and added over $500m to Gross State Product, above what would have been achieved with average industry-wide productivity.
3) The lack of a night time curfew on operations is a major strength of Melbourne Airport which in 2002/3 is estimated to contribute $127 million in real state product and 2,680 jobs. By 2006/7, it is expected that the absence of a night time curfew will contribute $286 million in production and over 4,000 jobs.
4) Forecasts for Melbourne Airport point to continued growth in international and domestic passenger numbers as well as an increase in the number of aircraft landings. The impact of these growth forecasts on the Victorian economy, in terms of increased tourism, domestic passenger transport and freight transport, will be significant. By 2006/7, if Melbourne Airport grows at the upper growth rate of around 1% above base, employment across Victoria is forecast to be nearly 2,000 positions greater as a result, and employment within the airport district would be nearly 750 positions higher. By 2010-11, higher growth at the airport is estimated to result in an additional 5,100 jobs across the state and nearly 1,500 across the airport district.
5) Other investigations carried out have found:
   - Each domestic flight between Melbourne and Sydney requires some 125 labour hours to operate, shared between the airline and supporting agencies such as air traffic control, Airport Management and fuel and cargo contractors. Over the course of a year, a domestic Melbourne-Sydney route requires labour equal to that supplied by 821 equivalent full time positions
   - International flights generate more employment per landing or takeoff than domestic flights. A frequent Melbourne-Los Angeles flight operated by an international carrier requires 303 hours of labour at Melbourne Airport each time it turns around, requiring an equivalent of 62 EFT positions each year.

- *Melbourne Airport's success over recent years has generated a large amount of employment and production which would not have otherwise occurred*

The main findings from this report are that Melbourne Airport's success over recent years has generated a large amount of employment and production which would not have otherwise occurred. In order for this favourable situation to continue, the strengths of the Airport should continue to be supported and government policy should be mindful of the strengths and impacts of Melbourne Airport. Specifically, the report recommends that the State and Federal Governments should continue to support Melbourne Airport:

- by ensuring its ability to operate without a curfew;
- by monitoring development around the Airport to ensure that urban growth in the area remains sympathetic to the airport's long term interests;
- by continuing to support general aviation airports within the Melbourne basin which, by providing facilities for small general aviation aircraft, allows Melbourne Airport to avoid the inefficiencies that occur when general aviation is mixed with high capacity jet services;
- by continuing to support the development of complementary road and rail infrastructure to the airport, improving the attractiveness of the airport as a freight hub and;
- by continuing to support tourism to Melbourne via direct and indirect promotion of Melbourne and Victoria to international markets.

2. Introduction

2.1 Study Purpose

The purpose of the Melbourne Airport Economic Impact Study is to determine and express the contribution that this vital piece of infrastructure makes to the local, regional and national economy as an employer and facilitator of commercial activity.

As described below, the continued prosperity of the open, modern economy of Victoria requires efficient and reliable air links to the rest of the country and overseas markets. This study presents the range of the Melbourne Airport's impact and outlines the airport's fundamental competitive advantages which need to be safeguarded if these positive impacts to persist and grow.

2.2 Objectives of the Economic Impact Study

The objective of this Economic Impact Study is to determine and communicate the extent of employment and economic value which is induced by Melbourne Airport's high level of productivity – a process last undertaken for the airport operator, then the Federal Airports Corporation, in 1987.

In order to communicate the results effectively, economic impacts are considered at various levels of aggregation - at the local, state and national scales – utilising a variety of complementary economic research techniques. The method used is detailed in the next section.

An allied objective of this study is to measure and communicate how the economic impact generated by the airport would be affected by challenges to the airport's favourable competitive position. Until now the competitive position of the airport has enabled it to prosper and serve the interests of the Victorian and National economies. The implication of challenges, such as the imposition of a night-time curfew (similar to that in force at Sydney Airport) are modelled and reported in detail.

2.3 Brief description of method

In order to meet these objectives, the economic impact study has proceeded on three parallel fronts. First, a broad census of airport businesses was completed to determine the extent and type of employment generated on and off site by businesses with a close association with the airport.

Second, a series of interviews and field assessments of individual aircraft operations (aircraft movements) was completed to determine the marginal and average employment impacts which are generated with each type of airport activity. This "micro-level" perspective of economic impact is particularly useful for communicating the induced economic impact of airport activities to the public, who find the description of impacts 'per passenger flight' more comprehensible than the aggregated effects of all airport operations.

The third method applied to this study involved the development of a computable general equilibrium (CGE) model of the local, state and national economies, including Melbourne Airport, which was able to calculate the direct and indirect changes throughout these economies from changes to airport operating constraints. More detail about these three approaches is provided in Section 5.1 below.

2.4 Summary of Key Findings

Key findings of the economic impact study are as follows,

- In September 2002, Melbourne Airport employed some 10,300 people in some 9,000 equivalent full time positions. The largest business type by occupation was Australian airlines which account for more than two thirds of the total, followed by air traffic control (9.3%) other government agencies (4.5%) and retail (4.1%).
- Each domestic flight between Melbourne and Sydney requires some 125 labour hours to operate, shared between the airline and supporting agencies such as air traffic control, airport management and fuel and cargo contractors. Over the course of a year, a frequent Melbourne-Sydney flight requires labour equivalent to 821 equivalent full time (EFT) positions across all industries.
- International flights, which carry more passengers and freight per flight, generate a higher amount of employment for Melbourne Airport per landing and takeoff. A frequent Melbourne-Los Angeles flight requires 303 hours of labour at Melbourne Airport each time it lands, and generates an equivalent of 62 EFT positions each year.
- Efficiency gains put in place at Melbourne Airport since 1997/8 have, by 2002, generated an estimated 5,000 additional jobs and added over $500m to Gross State Product, compared with the 'base case' productivity for the industry elsewhere. With these productivity gains, it is expected that in 2006/7 the airport will induce an additional $665 million in production value and almost 5,000 jobs for Victoria.
- If Melbourne Airport achieves it high target growth rate (some 1 percentage point above the base or median estimate) it would add an additional $130 million to Gross State Product in 2005-6 and $400 million by 2010-11. With these higher growth rates, employment across Victoria would be nearly 2,000 positions higher in 2005-6 relative to the base case and employment within the airport district would be almost 750 positions higher.
- The lack of a night time curfew at Melbourne Airport contributes to employment and production for the local area, Victoria and the country overall. In 2002/3, the employment facilitated by Melbourne Airport's 24 hour operation is estimated to be 800 jobs locally, 2,680 jobs state-wide and 1,071 jobs nationally.[1] Furthermore, the lack of curfew contributes some $1.07 billion to national product, $127 million or 0.4% to state product and $45.5 million to the local value of production
- The overall economic impact of tourism to Victoria has been estimated to be 5.2% of Gross State Product, or $8.52 billion each year. Domestic and

- *Tourism produces some 5.2% of GSP and employs some 6.2% of the workforce.*

1 The national figure is after the effect of some employment redistribution towards Victoria.

international tourists spent a combined $11 billion in Victoria in 1998[2] and tourism is estimated to employ 144,000 people, or 6.2% of the total Victorian workforce.[3] The convenient and efficient air links provided by Melbourne Airport facilitate around $1 billion in domestic tourist revenues each year. Total spending by international tourists in Victoria is estimated at an additional $1.5 billion, the vast majority of which is facilitated by air links between Melbourne and other Australian capital cities and overseas points of origin.

[2] Source: The Economic Contribution of Tourism Victoria to the state of Victoria, December 2001, Access Economics Pty Ltd, quoted from Tourism Victoria, Strategic Plan 2002-2006.

[3] Ibid.

3. Melbourne Airport – Background

3.1 Overview

Melbourne Airport is the major gateway to the state of Victoria and southern Australia for air passengers and airfreight. Since its inauguration in 1970, the airport has become a fundamentally important piece of infrastructure for the internationally focussed city of Melbourne. The airport facilitates a broad range of economic activities within the state and beyond and provides its host city with a crucial platform for domestic and international commerce.

- *In 2001/2 Melbourne Airport handled 16.5 million passengers and 331,000 tonnes of international and domestic airfreight via 156,000 aircraft movements (Annual Report)*

In the 2001/02 financial year, Melbourne Airport handled 3.41 million international and 12.81 million domestic passengers (for a total of 16.5 million) and 331,000 tonnes of international and domestic airfreight via 156,000 aircraft movements.

Over the last 5 years, Melbourne Airport has experienced faster growth in international passenger movements than has Sydney, Perth or Brisbane. The buoyant growth of international passenger numbers moving through Melbourne Airport supports the Victorian airfreight industry, as up to 85% of the freight moved through Melbourne Airport is carried in the cargo holds of international passenger aircraft.

- *Melbourne Airport supports the direct employment of some 10,000 people and the indirect employment of thousands more offsite and in allied industry sectors.*

The airport supports the direct employment of some 10,000 people in a variety of economic sectors including retail, aviation, air traffic control, air and road transport, airport management, security and hospitality. Many thousands more are employed off-site at businesses affiliated with the airport (such as freight forwarders, airline back-office staff and others) and still thousands more are employed in industries which supply labour and materials to the airservices sector.

As noted in Section 5 of this report, the ability of Melbourne Airport to operate above average efficiency levels has generated an estimated 880 jobs nationally and increased GDP by some $300 million in 2001/2 (see page 26).

Without an efficient airport, employment across the state would be some 5,000 positions lower, local employment would be 175 positions lower and GSP would be an estimated $536 million lower (see page 26).

Furthermore, if a night time curfew were to be applied to Melbourne Airport, Victorian employment would fall by an estimated 6,330 places by 2006/7 and employment within the local Airport region would fall by some 915 jobs (see page 29).

3.1.1 Tourism

- *Tourism produces some 5.2% of GSP and employs some 6.2% of the workforce.*

The overall economic impact of tourism to Victoria has been estimated at 5.2% of Gross State Product, or $8.52 billion each year. Domestic and international tourists spent a combined $11 billion in Victoria in 1998[4] and tourism is estimated to employ 144,000 people, or 6.2% of the total Victorian workforce.[5]

Melbourne Airport enjoys a very supportive relationship with Tourism Victoria. In its 2002-2006 Strategic Plan, Tourism Victoria states its target for 2006 as 1.4 – 1.7 million international tourists visiting Victoria (compared with 1.1 million in 2001) and 25-27 million international visitor nights (compared with 21.2 million in 2001). To help achieve these targets, Melbourne Airport, in active partnership with Tourism Victoria, plays a role in securing international scheduled and charter flights and in facilitating government/airline negotiations for new or expanded international services to Melbourne. The state government also plays a direct role in marketing Melbourne to an international audience, recently spending $10 million on a targeted tourism recovery plan following the September 11 attacks in the US.

- *Tourism Victoria plays an active role in securing international scheduled and charter flights to Melbourne Airport and in facilitating negotiations for new international services to Melbourne*

In its 2002-2006 Strategic Plan, Tourism Victoria reports that, "*There is a close link between Victoria's tourism performance and the capacity and ease of air access to and within Victoria…*" . The strategic plan devotes a chapter to clarifying its vision of "growing direct flights to Melbourne from key targeted source markets…" and discusses how marketing of direct fights between Victoria and key Asian destinations may be pursued over the next 5 years.

Visitation to Melbourne Airport

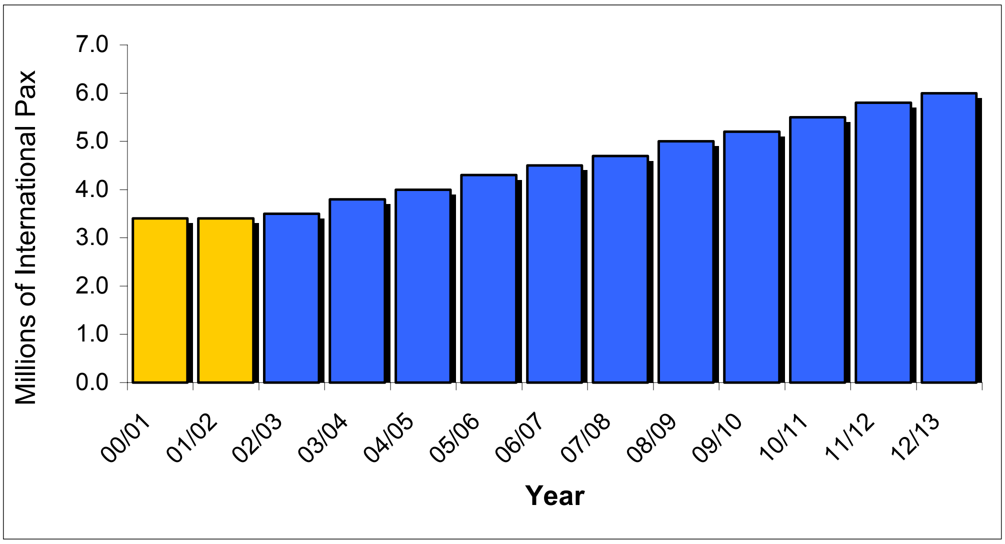
In 2001/2, there were 3.4 million international passenger movements through Melbourne Airport. This was an increase of 1.3% over the previous period, despite the overall downturn in international travel following September 11, 2001. Over the next 10 years, Melbourne Airport forecasts expect international tourist numbers to grow at a compound annual rate of between 4.2% and 6.1% toward 2011/12, resulting in between 5.1 and 6.1 million international passenger movements (inbound and outbound) through the Airport each year.

- *In 2001/2, there were 3.4 million international passenger movements through Melbourne Airport, an increase of 1.3% over the previous period*

[4] Source: The Economic Contribution of Tourism Victoria to the state of Victoria, December 2001, Access Economics Pty Ltd, quoted from Tourism Victoria, Strategic Plan 2002-2006.

[5] Ibid.

■ **Figure 3.1 Recent and Forecast number of international passenger movements, Melbourne Airport**



Source: Melbourne Airport, BAA

International Visitors – Direct Impact

International tourism to Victoria is a significant and growing sector of the Victorian economy. According to Melbourne Airport estimates, 99% of international visitors arrive in Melbourne by air, from both international and domestic origins (ie on international or interstate flights)[6]. In 1999, there were a total of 1.06 million international visitors to Victoria, staying a total of 20.5 million nights within the state.[7] In 1998, international visitors were estimated to spend $76 per night in Victoria. On this basis, the 20.5 million nights that international visitors stayed in Victoria would generate some $1.5 billion in gross receipts across the industry.

■ *99% of international visitors to Victoria arrive by air, either direct or on domestic flights.*

■ *In 1998, international tourists to Victoria spent an estimated $1.5 billion or $76 per visitor night*

Domestic Interstate Visitors

Melbourne Airport's role in facilitating interstate tourism is also extremely important.

According to Tourism Victoria, there were 5.1 million domestic interstate visitors[8] to Victoria in 2001, of whom some 54%, or 2.74 million, arrived by air[9]. With an average estimated spend of $522 within Victoria[10] for each interstate visitor, the total spending by domestic interstate tourists totalled some $2.66 billion in 2001.

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[6] Personal Communication, Melbourne Airport.

[7] Source: International Visitor Survey, Bureau of Tourism Research. Victorian analysis prepared by Research Unit, Tourism Victoria, October 2001.

[8] "Domestic interstate visitors" means visitors who are Australian nationals who travel to Victoria from interstate. Excludes international visitors to Australia who travel to Victoria from interstate. Includes business and VFR visitors. When intrastate (Victorian resident) visitors are included, proportion travelling by air is reduced to 16%.

[9] Includes arrivals at all airports across Victoria, however Melbourne Airport is presumed to host 95% of interstate air arrivals and departures for Victoria.

[10] Source: NVS 2001.This figure of $522 is referred to as 'destination expenditure' and does not include spending on airfares to reach Victoria for example, only spending which occurs once the visitor has arrived in Victoria.

It is presumed that the large proportion of interstate tourist traffic carried by airlines is influenced by the time-pressures of interstate visitors for whom travelling by road or rail is too time-consuming. Supporting this claim, only 30% of visitors from SA travel by air, while 76% of visitors from QLD and 80% of visitors from WA travel to Victoria by air. Therefore if there were a reduction in the quantity or quality of air links to Melbourne some essential passenger traffic may be expected to transfer to road and rail, whilst the majority of discretionary travel (such as interstate *holiday* tourism, which accounts for 33% of the total) could be affected. The convenient and efficient links provided by Melbourne Airport can therefore be assumed to contribute heavily to Melbourne and Victoria's domestic tourism receipts, to the order of around $1 billion per annum.

- *The efficient links to Victoria provided by Melbourne Airport contribute of the order of $1 billion in domestic tourist receipts per annum.*

The Melbourne-Sydney air corridor is the third busiest in the world and Melbourne features in 3 of the top 5 busiest air routes in the country. The concentration of scheduled domestic air traffic at Melbourne Airport is also high, as it is the only Victorian airport in the top 30 interstate pairs.

- **Table 3.1 Interstate air travel - busiest Australian Routes 2000/1**

Rank	City Pair	Passengers
1	**Melbourne** - Sydney	5,840,088
2	Brisbane - Sydney	4,095,696
3	Brisbane - **Melbourne**	2,140,915
4	Adelaide - **Melbourne**	1,419,235
5	Adelaide - Sydney	1,240,018
6	Coolangatta - Sydney	1,237,533
7	Brisbane - Cairns	999,508
8	**Melbourne** - Perth	974,471
9	Perth - Sydney	955,436
10	Canberra - Sydney (a)	685,002
	Other	7,253,197
	Total	**26,841,099**

Source: DOTARS Air Transport Statistics, 2001.

The direct impact of tourism attributed to Melbourne Airport can be estimated by calculating the average effect of each international or domestic traveller to Melbourne and applying that calculation to the actual number of visitors that pass through Melbourne Airport (as opposed to reaching Melbourne or Victoria by car or cruise ship).

- *In 2001, MA handled some 357,000 tonnes of international and domestic airfreight*

3.1.2 Air Freight

Melbourne Airport enables a huge amount of freight to be delivered to and from Melbourne and other locations across south eastern Australia. While airfreight comprises a relatively small proportion of the total Victorian freight sector in terms of tonnage, it represents up to a quarter of all freight by value. Its contribution to the competitiveness of high value and time sensitive exports in international markets cannot be overstated.

- *Melbourne Airport carries 30% of the national total of airfreight*
- *Melbourne is second to Sydney Airport in terms of total freight lifted*

In the 2001 calendar year, Victoria exported 103,000 tonnes of air freight worth an estimated $7.3 billion. In the 1999/2000 financial year, Melbourne Airport exported 98,000 tonnes worth $5.5 billion and carried 101,000 tonnes of imported goods worth $8.2 billion.

Melbourne Airport handled almost 357,000 tonnes of airfreight in 2001. Of this total, 233 thousand tonnes was international airfreight and 123,000 tonnes were domestic cargoes.[11]

The annual international cargo throughput at Melbourne Airport in 2001/2 represents 30 per cent of the national total. Melbourne is ranked second for international freight, behind Sydney and ahead of Brisbane who carry 50 and 10 per cent of the market respectively. However, growth in international freight is slower at Melbourne (4.4 per cent p.a.) than at either Sydney (4.7 per cent p.a.) or Brisbane (5.8 per cent p.a.).

3.2 Key Strengths

The key strengths of Melbourne Airport, which enable it to make a significant contribution to employment and economic activity in Melbourne and Victoria, may be summarised as:

- The ability of Melbourne Airport to operate 24 hours a day, 7 days a week without a night time curfew;
- Its lack of relevant physical capacity constraints, (whether external or internal);
- The very low demand by general aviation for access to Melbourne Airport (which lowers the congestion of runway capacity at the airport);
- The high standard of transport links to Melbourne CBD and industrial regions to Melbourne's northwest and southeast;
- The good spread of international passengers' reasons for travelling to Melbourne mitigates the inherent peaks and troughs of international passenger movements through Melbourne. In 2000/01, 42% of international travellers visited Melbourne on holiday, 22% for business, 11% for education and 25% were visiting friends and relatives.

The nature of each of these strengths is presented in greater detail in Section 4 below.

[11] *Melbourne Airport Airfreight Analysis.* Australia Pacific Airports Corporation, 2002.

4. Safeguarding Melbourne Airport's Strengths

4.1 Melbourne Airport Strengths

Melbourne Airport has been able to increase the level and range of its services, supporting the local, state and national economies, by protecting and enhancing its competitive position within the Australian airservices and general transport sectors.

The main strengths of the airport include its relatively unrestrained capacity for growth, its proximity to the Central Business District of Melbourne, the quality of transport links to the airport, its comparative lack of general aviation and the absence of a night-time curfew on operations. All of these strengths enable Melbourne Airport to continue to operate in a more competitive fashion and generate employment and economic activity for the region, state and nation.

Each of these strengths is considered briefly below.

4.1.1 Physical Capacity and Scope for continued Growth

As a result of well-conceived long term planning, Melbourne Airport is relatively unconstrained by external land use outside of the Airport boundary, nor is it constrained by lack of development space within its bounds.

The Melbourne Airport Strategy[12] (Dames and Moore, 1989) and subsequent work have provided a platform for continued growth and enhancement of the services provided by Melbourne Airport. The 1989 study provided strategies to address runway capacity, landside infrastructure, land use within the airport boundary and beyond and surface access. Subsequent planning reviews, such as the 1998 Melbourne Airport Master Plan, have refined the strategies and forecasts put forward in earlier work, maintaining the airports' competitive flexibility.

In contrast with the constrained space at Sydney International Airport, the 2,639 hectares of space at Melbourne Airport provides room for growth into the future, with 350 hectares allocated for commercial and office development.

- *The space at Melbourne Airport provides ample room for growth into the future*

4.1.2 Infrastructure Capacity – Runway

Lack of General aviation

The near absence of general aviation pressure at Melbourne Airport has provided it with relatively unconstrained capacity for expansion into the foreseeable future. Other large airports in Australia are required to cater for large volumes of small general aviation aircraft (<7,000kg MTOW) which restricts the capacity of runways and aircraft stands. As shown in Table 4.1, 97% of Melbourne Airport's aircraft

[12] The Melbourne Airport Strategy was officially endorsed by the Commonwealth and State Governments in 1990, following an environmental impact study.

movements are presently used by aircraft heavier than 7,000 kg, whereas Brisbane and Sydney are restricted to 84% and 88% respectively.

- **Table 4.1 Total Movements at Australian Airports 2001-02**

Aircraft Weight	> 136	7 - 136	< 7	Special*	Military	Total Movements	Approx GA% of total**
	Thousand Kg						
ADELAIDE	3,502	53,770	42,674	4,360	822	105,128	46%
BRISBANE	25,762	102,484	22,836	1,002	630	152,714	16%
CAIRNS	7,870	22,270	62,476	9,644	628	102,888	71%
COOLANGATTA	3,054	13,010	46,484	15,838	308	78,694	80%
DARWIN	2,762	20,986	50,304	3,922	6,474	84,448	72%
MELBOURNE	**45,994**	**106,422**	**4,262**	**404**	**390**	**157,472**	**3%**
PERTH	13,184	47,882	28,058	1,418	378	90,920	33%
SYDNEY	76,784	153,138	19,450	10,230	720	260,322	12%
TOWNSVILLE	238	16,784	29,076	2,412	9,912	58,422	71%
AVERAGE							**45%**

*Special includes helicopters and aircraft of ‘unknown weight’
** GA (General Aviation) includes special, military and aircraft below 7,000kg
Source: Airservices Australia, 2002.

The reasons for the relative lack of General Aviation at Melbourne Airport compared with other large Australian airports include:

- The original design and intention for Melbourne-based GA services to remain at Essendon and Moorabbin airports when Melbourne Airport was opened in 1970, as opposed to airport developments in Sydney and Brisbane which maintained their GA services to a greater extent as they developed.
- The smaller geography of Victoria, with most major regional centres within comfortable driving distance of Melbourne.
- The linear distance of Melbourne Airport from the CBD (22km) has reduced the convenience of basing helicopter services at the airport. (Helicopter flights are a significant part of the GA demand at Sydney Airport).
- The continued policy support that the state government provides for the present arrangement, in respect of planning provisions for aircraft movements, at Melbourne, Essendon, Moorabbin, Avalon and other airports servicing the Melbourne basin.

The 1998 Melbourne Airport Masterplan[13] reports that modelling of aircraft mix at that time indicated the present two-runway system had an annual capacity of 240,000 movements per annum. On the basis of forecast growth in runway movements, additional runway capacity will not be required at Melbourne Airport for at least a decade, and more likely two, depending on changes to the mix of aircraft operation through the airport.

- *Additional runway capacity will not be required at Melbourne Airport for at least a decade, and possibly two*

[13] Melbourne Airport Masterplan, December 1998, page 36

4.1.3 Curfew free

Melbourne Airport's ability to operate 24 hours a day, 7 days a week is a powerful and significant competitive advantage over other large Australian airports, such as Sydney, which are bound by a noise curfew between 11pm and 6am. Having the ability to operate through the night time hours also provides greater flexibility in scheduling flights from Melbourne to match available landing slots at key overseas destinations, such as Heathrow, therefore increasing the attraction of Melbourne as a hub for international travel.

As noted below in Section 5.3, the flexibility which comes from 24 hour operation reduces the cost of operating in Melbourne to international (and to a lesser extent, domestic) carriers, since they are not losing valuable time on the ground waiting for a curfew to lift. Given the time differences and average flight times between Melbourne and major South East Asian destinations, the lack of a curfew also provides the convenience of departing Melbourne late at night and arriving the following morning. (See Table 4.3).

The amount of traffic during the 'curfew hours' of 11pm to 6am at Melbourne Airport fluctuates with changes to domestic and international airlines' schedules, however the following description of aircraft movements in August 2002 illustrates the overall extent.

■ **Table 4.2: Domestic Jet Services Impacted by a 11 PM to 6 AM Curfew (August 2002)**

Number of Jets Arriving Per Week	Number of Jets Departing Per Week	Carrier
47	41	Australian Air Express (Mail)
26	-	Qantas
7	-	Virgin Blue
80	*41*	*Total* *121*

■ **Table 4.3: International Jet Services Impacted By a 11 PM to 6 AM Curfew**

Number of Jets Arriving Per Week	Number of Jets Departing Per Week	Carrier
1		Air Mauritius
3	3	Air Pacific
5		British Airways
7		Emirates
10	3	Qantas
7	7	Singapore Airlines
	7	Thai Airways
	7	Malaysian Airlines
33	*27*	*Total* *60*

Source: InterVistas, Melbourne Airport (2002)

■ *Some of these flights, (particularly international passenger flights to South East Asia), are only viable as a result of Melbourne Airport's availability around the clock*

If a curfew was put in place at Melbourne Airport, it would be expected that some of these aircraft movements would relocate to other times of the day, with minimal net loss of economic impact or employment (as daytime or nighttime flights are considered good substitutes for each other). However some of these flights, (particularly international passenger flights to South East Asia) are believed to be viable only as a result of Melbourne Airport's availability around the clock. These flights would cease in the event of a night time curfew, bringing an associated loss of employment, passenger movements and freight export opportunities.

There are a number of ways to demonstrate the 'value' of curfew-free status to Melbourne Airport and beyond, and two different methods are presented in this report. The first considers the average employment effect of each aircraft movement and the potential loss of employment which would occur with a curfew.

The second approach is to apply a computable general equilibrium model to the scenario and determine the overall impact upon employment and production which would flow through the economy if Melbourne Airport were forced to abide by a curfew. Both of these approaches are presented in this report.

These impacts are presented in Section 5.3, beginning on page 27.

4.1.4 Transport Links

While Melbourne Airport is 22km from the Melbourne CBD, its excellent road links to the city and to industrial areas in greater Melbourne reduce travel time and cost to a very competitive level.

The Melbourne Airport Master Plan (1998) referred to a joint Government/Melbourne Airport investigation into the present and future capability of the arterial and supporting road network. Key improvements such as sectional upgrading of the Tullamarine Freeway were identified. Since that time, significant items delivered include;

- City Link (Tullamarine Freeway upgrade to Bulla Road and Bolte Bridge to Westgate Fwy)
- Completion of the Western Ring Road and link road to the Southern boundary of the airport

These two developments have had a marked impact on the pace of development of industrial areas through Melbourne's west and northwest, improving the competitive position of Melbourne Airport.

5. Economic Impacts of Melbourne Airport

5.1 Introduction

This Chapter describes the results from three concurrent studies of economic impact at Melbourne Airport

- A survey of employment and wages paid by businesses based at Melbourne Airport
- A survey of the 'micro' employment requirements of specific activities undertaken at Melbourne Airport – passenger and freight flights and
- A study of the anticipated macroeconomic impact of Melbourne Airport, derived via a computable general equilibrium model and applying the data collected in the direct survey stage.

- *Three concurrent methods of analysis were applied in this study:*
  - *A direct survey of airport businesses*
  - *A survey of the employment needs of aircraft movements*
  - *CGE modelling of various policy scenarios*

Employment results are presented for the survey and then for the 'micro-studies' and finally for the macro-economic effects.

5.1.1 Survey results - Direct Employment

Melbourne Airport is a major contributor to the local employment base north of Melbourne The most intuitive measure of economic impact for communities and policy-makers is employment generated. There are three categories of employment impact: direct employment, indirect employment, and induced employment.

Direct employment is the sum total of all employment at firms that are necessary to meet the final demand for an economic sector's production.

Indirect employment is employment at goods and service suppliers that results from the level of activity of direct employers. This employment is generated because the economic sector *directly* involved require materials, supplies, equipment and services to meet demand for their goods and services.

Induced employment is employment generated through expenditures of individuals employed indirectly or directly by the economic sector under study. For example, if an individual directly employed by a sector decides to expand or re-model his/her home, this would result in additional (induced) employment hours in the general economy. Specifically, the home renovation project would support hours of induced employment in the construction industry, the construction materials industry, etc.

Total employment is the sum of direct, indirect, and induced employment.

The direct, on-site employment at Melbourne Airport was determined via a survey of all businesses situated within the airport site, including airlines, retail establishments and others.

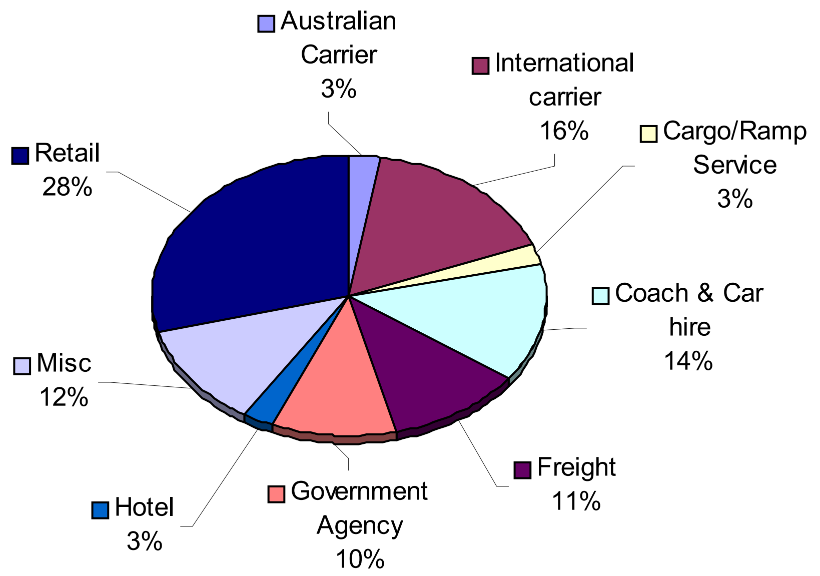
5.1.2 Survey Results – Total Employment at Melbourne Airport

- *Survey responses were received from 86 airport businesses, from a total of 135 contacted.*

The survey of Melbourne Airport businesses was conducted in August-October 2002, via survey questionnaire, follow up phone call and fax. The survey was sent to a total of 135 business and government agencies within Melbourne Airport expected to contain an appreciable level of employment. Data were received from a total of 82 respondents, covering a broad range of business types. Follow up information was received from a further 4 large companies and employment and wages paid were inferred for the remaining 44 small companies based on industry data and typical responses from other companies in the same industry sector.

According to Melbourne Airport statistics, there are approximately 135 companies operating at the Airport which have an appreciable level of employment.[14] The breakdown of companies at Melbourne Airport (by type) are presented below.

■ Figure 5.1 Company Profiles - Melbourne Airport



Source: SKM Survey, September 2002

There are a number of different ways of measuring and demonstrating employment at Melbourne Airport. The *number of employed persons* represents the number of individuals who are employed, even for a fraction of their time, at Melbourne Airport. It includes full time, part time and casual employees who are directly employed by the airport. The *number of people employed* at Melbourne Airport includes people who are part of contract firms to this group –ie it includes cleaners and security staff who are subcontracted to firms at Melbourne Airport.

Employment may then be expressed in equivalent full time positions – which combines full time, part time and casual employees into a single measure with a weighting according to the average number of annual hours worked. Finally, employment may be expressed as either total number equivalent full time (or people) onsite at the Airport, or at off-site offices of companies which have an HQ or significant presence at the airport

- *Approximately 10,000 people were directly employed by companies with a major presence at the airport.*
- *8,000 equivalent full time employment positions are created at the airport.*
- *The closure of Ansett Airlines caused a one-off reduction of some 2,400 jobs from the airport.*

[14] Several companies have space at Melbourne Airport but no permanent employment onsite (such as telecommunications companies, fuel suppliers and others). These companies were not included in our survey.

The survey of all premises across the airport indicated that there were approximately 10,300 people directly employed by businesses operating at Melbourne Airport in late 2002, filling some 9,000 equivalent full time positions. The number of people employed by contract firms serving companies with a major presence at Melbourne Airport was estimated to be at least 400. Based on information provided by Melbourne Airport, businesses and government authorities, there are approximately 8,000 equivalent full time positions at the airport at present.

- **Table 5.1 Derived Employment at Melbourne Airport, August 2002**

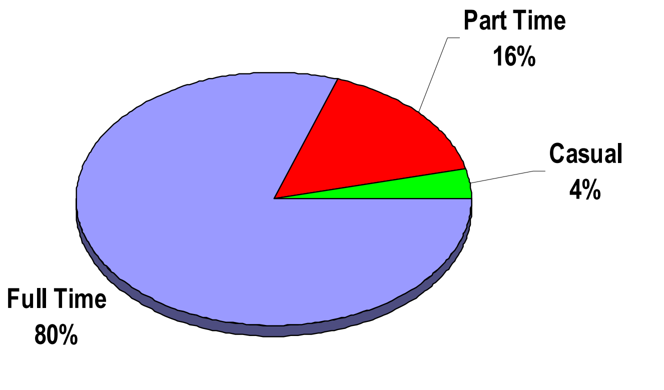
	EFT Onsite	EFT on+offsite	Total Employment (persons)
Aviation-Maintenance	6	6	6
Charter Carriers	9	9	10
Security Companies	75	75	80
Other Carriers	69	69	85
Misc (property)	63	82	109
Hotels	118	122	148
Administration	157	157	176
Cargo Terminal operators	147	147	178
Car Rental Agencies	146	146	187
Non-AUS carrier	146	161	204
Retail Companies	324	324	684
Freight Forwarders	179	274	310
Coach Companies	251	458	470
Government	1095	1104	1096
Australian Carriers	5079	5875	6585
TOTAL	**7862**	**9007**	**10,328**

Source: SKM Survey of Melbourne Airport Businesses, 2002

These figures represent the first detailed analysis of employment at the Airport following the collapse and closure of Ansett Airlines which, in August 2001, employed some 2,400 people at or adjacent to Melbourne Airport. With the closure of Ansett in September 2001 and the subsequent failure of the Tesna bid to reestablish the airline, some 4,950 Ansett jobs were lost across Victoria (Webber and Weller, 2002).

A large majority of employment provided at Melbourne Airport is full time, with only 20% of the non-contract staff employed either part time or on a casual basis. The only sector of employment at the airport which uses a significant proportion of casual labour is retail. Government agencies (such as the various branches of Customs and Air Traffic Control) and airport businesses (such as airlines and ground transport companies) appear to use part time labour to deal with seasonal or daily peaks in demand, rather than full time labour.

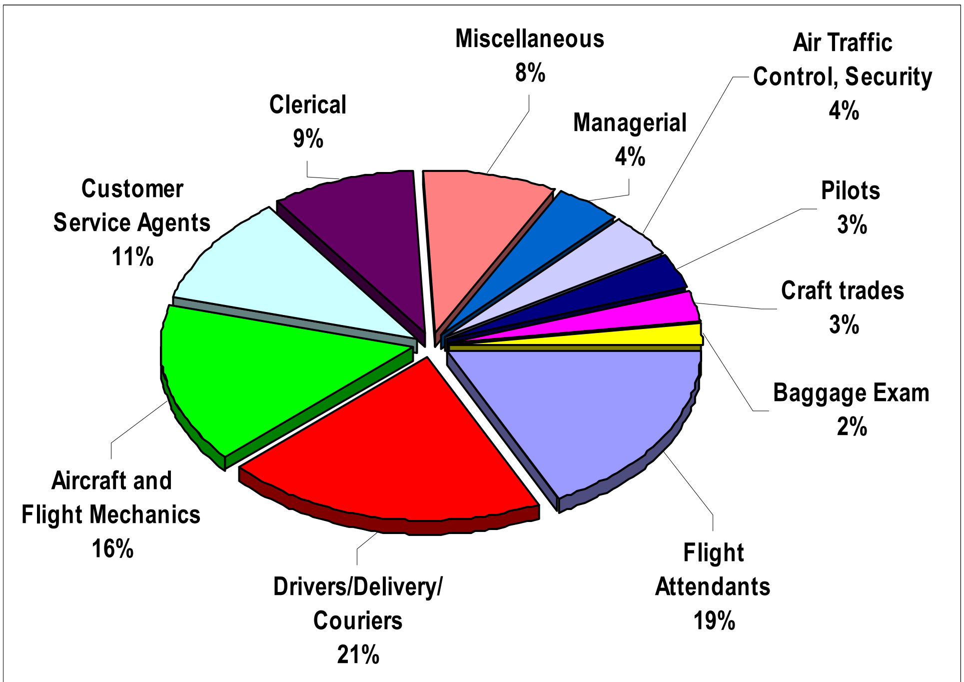
■ **Figure 5.2 Employment by Hours Worked**



Part time workers are employed for an average of 20 hours per week and casual employees are employed for an average of 23 hours for 35 weeks of the year.

A total of 46 government agencies and businesses at Melbourne Airport provided details of the trades or occupations of their staff. Results for this group (representing over 8,500 employees, mainly on site) are as follows:

■ **Figure 5.3 Employment at Melbourne Airport - by Occupation**



Source: SKM Survey, September 2002

The annual wage bill (including on-costs) paid by businesses and government agencies at Melbourne Airport is estimated to be approximately $520 million, based on an average equivalent full time wage at the airport of approximately $50,000.

■ *The annual wage bill for companies and agencies at Melbourne Airport is estimated to be some $520m*

5.1.3 Survey Results - Average Direct Employment Impact of a Single Passenger or Freighter Service

Another useful perspective on the potential for employment generation at Melbourne Airport can be gained by considering the labour required to operate and service a single domestic or international passenger flight. This type of study, referred to in this report as a "microstudy", presents the average and marginal employment which is associated with Melbourne Airport's most common function – aeronautical services.[15]

The estimated average *direct* local employment impact of the Melbourne-Sydney passenger air route - Australia's busiest – was estimated based on consultation with domestic air carriers. The employment impact is described in terms of the number of separate jobs required to operate the flight, and the estimated labour hours supported at each firm. The annual hours generated by the single flight over a year are approximated by scaling the labour hours from a single flight by its annual frequency.

There are a number of different categories of employment which are generated each time a passenger flight departs or arrives at Melbourne Airport. Before even reaching the airport, ground transportation companies are involved in delivering passengers to the airport. Once at the airport, check-in agents, gate agents and loading bridge operators prepare passage for both staff and customers using the flight. Ticketing agents, baggage services, cabin cleaners, catering companies and ground crew prepare the aircraft and its cargo for departure. In addition to this employment, the flight crew itself and supervisory functions such as air traffic control and aircraft load controllers involve employment at the point of arrival or origin for each flight. Further employment is also required in refuelling the aircraft, engineering inspections of the aircraft, security and other overhead functions such as airport management and administration.

Each Melbourne-Sydney flight is estimated to directly involve more than 500 individuals across this range of functions for *each flight.* Since many of the tasks have a short time span or are shared equally between many concurrent flights, some 125 hours of work is calculated to be needed for each Melbourne-Sydney passage, equating to 0.07 annual equivalent full time (EFT) positions[16], When extrapolated over the course of a year (to some 30 flights per day) this flight would generate more than 800 EFT positions.

A similar study undertaken on the Melbourne-Los Angeles route indicated that 0.17 EFT employment positions would be generated each time a flight lands and over the course of a year, a seven-times weekly flight would require labour equivalent to 60 EFT positions, paying nearly $3 million in wages and involving nearly 700 employees at local businesses.

Another study of a freighter service[17] between Melbourne and Hong Kong indicated that each departure of the freighter service involved over 250 *direct* jobs and required

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[15] The full method and range of assumptions made in this microstudy are presented in the Technical Appendices which will not be publicly released to maintain the confidentiality of the organisations studied.

[16] There are an estimated 1786 hours in an EFT position.

[17] This study was completed in August 2002. The name of the airline cannot be disclosed.

some 342 labour hours to store, deliver, load, fly and regulate for each flight - equivalent to 0.2 EFT positions. Over the course of a year, a twice-weekly freighter requires some 20 EFT positions to be put into service and a payroll of some $850,000 between on-site and off-site positions.

5.2 The Economic Contribution of Melbourne Airport to the State, National and Local Economies

In this section we consider the direct contribution of Melbourne Airport to the economy at various levels. This is defined as the activity of those businesses and other operations located within the precincts of Melbourne Airport and their associated off-site operations. This encompasses:

- airline operations (including such ancillary operations as check-in, baggage handling, in-flight meals preparation);
- supporting operations (such as aircraft maintenance and air traffic control);
- airport administration;
- transport operations which use airline services (such as freight forwarders);
- various government services (such as customs and police) and;
- activities that locate themselves at the airport to service travellers (such as retail outlets, car rentals and buses).

The employment and wage income effects of the airport were collected via a survey of business and other organisations based at the airport. This survey of 135 bodies was undertaken by Sinclair Knight Merz, as noted above. In the case of non-response, other sources of information were obtained to estimate an employment figure for that operation.

The first column of Table 5.2 shows the direct employment associated with Melbourne Airport by nine of the 36 MMRF industry classifications. The figures include part-time, casual and contract workers. They also include workers located off-site who undertake activities directly associated with the airport, such as those who work at a Melbourne central business district sales office.

The wage bill figures shown in column 2 of Table 5.2 were, as far as possible, taken from the survey. Where respondents did not provide an answer to the question on the value of their annual payroll, a figure was estimated on the basis of the wage rate derived from respondents undertaking similar activities, or from ABS figures on earnings by industry. The payroll tax figures provided in the fourth column were computed using the current Victorian payroll tax rate of 5.35 per cent on a firm's payroll above $515,000. For firms which had other establishments not included in the survey, only a portion of the threshold was allocated to their Melbourne Airport operation.

The remaining columns for gross operating surplus and other taxes were estimated on the basis of the MMRF data base for 1996-97 and on ABS input-output tables for various years in the 1990s.

■ **Table 5.2 Direct Contribution of Melbourne Airport**

No.	MMRF Industry	Employment	Wage Bill	Gross Operating Surplus	Payroll Tax	Other Taxes
No.		jobs	$m	$m	$m	$m
16	Aircraft Maintenance	1,258	64.4	16.0	3.3	0.5
23	Retail Trade	629	9.5	1.7	0.3	0.5
25	Accommodation, Cafes, etc	330	9.3	5.0	0.5	1.7
26	Road Transport	320	25.7	14.6	1.3	5.5
29	Air Transport	5,611	286.1	133.5	15.0	55.2
30	Services to Transport	1,671	97.5	129.7	4.7	5.0
32	Finance, Business Services	204	9.8	4.3	0.4	0.3
34	Public Services	403	22.2	3.1	0.0	0.3
35	Other Services	20	0.8	0.1	0.0	0.0
	Total	**10,446**	**525.3**	**308.0**	**25.5**	**69.1**

Source: Centre for Policy Studies, Monash University, Sinclair Knight Merz

As a major international airport, Melbourne Airport is associated with a considerable value of export sales. It is estimated that overseas exports by the Victorian Air Transport industry plus sales to international tourists by Victorian firms in 2001-02 was $1.8 billion[18]. A substantial proportion of these sales may be attributable to Melbourne Airport.

■ *We consider the economic contribution of Melbourne Airport in terms of its efficiency in making use of labour and capital resources*

We now turn to the contribution of Melbourne Airport to the economies of Victoria and the country as a whole. We consider the economic contribution of Melbourne Airport in terms of its efficiency in making use of labour and capital resources. Table 5.3 highlights the positive national benefit of an efficient Melbourne Airport that allowed Victorian air transport to enjoy the good productivity growth that it did over the period 1997-98 to 2001-02, rather than just the average productivity growth experienced by Australian industry as a whole.

Thus by 2001-02, five years of fast productivity growth in Victorian air transport meant an extra 881 jobs throughout Australia, above what would have been the situation had Victorian Air Transport experienced the average all-industries Australian productivity growth. Australian real private consumption and gross domestic product were estimated to be over $200 million and almost $300 million higher respectively by 2001-02 as a result of an efficient Victorian air transport industry.

It is expected that the fast growth in the productivity of air transport will continue. Even if the industry returned to the all-industry average productivity growth from 2002-03, the beneficial effect of strong Victorian air transport productivity growth in 1997-98 to 2001-02 would mean a continued higher level of economic output into the future. Thus, projected GDP in 2005-2006 is $320 million higher than if Victorian transport had only experienced all-industry national productivity growth from 1997-98 to 2001-02. Real consumption would be 204 million higher, mainly as a result of a

[18] This estimate includes Air Transport freight revenue, but excludes exports overseas by freight forwarders.

small rise in the real national wage of 0.04 per cent, and employment is 330 jobs above what would otherwise be the case[19].

- **Table 5.3 Effects on Key National Aggregates of an Efficient Melbourne Airport**

	1997-98	1998-99	1999-00	2000-01	2001-02
Real Consumption ($m)	45.5	93.5	142.2	172.4	207.2
Real GDP ($m)	57.1	120.8	183.6	239.3	298.3
Employment (jobs)	344	565	715	851	881

Source: Centre for Policy Studies, Monash University

The effects of an efficient Melbourne Airport on the Victorian economy are shown in Table 5.4. As can be seen by comparing this with table 5.3, the benefit to Victoria, in relation to industry activity, from an efficient Melbourne Airport is larger than that to the nation overall. Its competitiveness with the other states is improved, leading to increased employment and in the long-run to increased migration towards the State. A substantial part of the Victorian increase is at the expense of activity in other states. Again the benefits from efficiency efforts over the 1997-98 to 2001-02 period will continue to be sustained over subsequent years. By 2006-07, Victorian employment would still be almost 5,000 jobs higher than would have been the case with a slower productivity growth in Victorian Air Transport. Similarly Victorian real consumption and gross state product (GSP) would be $415 million and $665 million higher respectively.

- *By 2006-07, Victorian employment would still be almost 5,000 jobs higher than would have been the case with a slower productivity growth in Victorian Air Transport*
- *As shown in the tables, the benefit of an efficient Melbourne Airport to Victoria is larger than the benefit to the nation overall*

- **Table 5.4 Effects on Victorian Economy of an Efficient Melbourne Airport**

		1997-98	1998-99	1999-00	2000-01	2001-02
Real Consumption	$m	74.9	160.4	244.3	302.4	364.9
	%	0.08	0.17	0.24	0.29	0.34
Real GSP	$m	99.4	212.3	331.1	431.1	536.2
	%	0.07	0.15	0.22	0.28	0.33
Employment	jobs	1,229	2,484	3,680	4,382	5,071
	%	0.06	0.12	0.18	0.20	0.23

Source: Centre for Policy Studies, Monash University

The good growth in productivity in Victorian air transport over the first 5 years of our simulation generates increased activity in air transport in the Melbourne Airport district. This increases from just over 2 per cent higher in 1997-98 to almost 9.5 per cent by 2001-02. However, part of the productivity improvement is greater efficiency in the use of labour, which means a lower amount of labour per unit of output. Despite the increased output of the industry, there are just over 10 less jobs in Air Transport in the Airport District in 1997-98, and 175 less jobs by 2001-02.

- *The local area enjoys a higher level of production due to an efficient MA, but a slightly lower level of direct employment*

This is reflected in Table 5.5 which shows an increase in gross regional product (GRP) for the airport district, but a small loss in jobs over the period. The negative flow-on

[19] Over time national employment in the base-case (i.e. lower 1997-98 to 2001-02 Victorian Air Transport productivity) is projected to slowly converge with the level it achieved in the efficient-airport case.

to real consumption expenditure within the airport district is relatively small, partly due to a considerable portion of the reduced consumption expenditure of the displaced air transport workers relating to purchases made in the rest of Melbourne where the larger share of airport workers reside.

- **Table 5.5 Effects on Economy of Airport District of an Efficient Melbourne Airport**

	1997-98	1998-99	1999-00	2000-01	2001-02
Real Consumption ($m)	-0.3	-1.5	-2.4	-4.3	-6.4
Real GRP ($m)	25.1	49.8	75.9	100.3	124.4
Employment (jobs)	-11	-45	-71	-124	-175

Source: Centre for Policy Studies, Monash University

5.3 Economic Benefits of Curfew-free Status

As noted above, Melbourne Airport's ability to operate 24 hours a day and 7 days a week is an important competitive advantage over other Australian airports in attracting passenger and freight traffic. The productivity gains of Melbourne Airport which have brought such significant economic gains for Victoria are closely linked with the airport's curfew free status.

- *The productivity gains of Melbourne Airport which have brought such significant economic gains for Victoria are closely linked with the airport's curfew free status.*

In this section the benefits of Melbourne Airport's curfew free status is examined by considering the consequences of imposing a curfew from 11pm to 6am each day. The benefit of the curfew-free status can thus be obtained by reversing the sign of the results.

The imposition of a takeoff and landing curfew from 11pm to 6am at Melbourne Airport would cause a capacity shift at Melbourne airport, as airlines sought to compensate for the closure. Airlines which are flying to Heathrow from Melbourne, for example may:

- try to provide the same overall capacity in and out of Melbourne Airport by increasing the size of their aircraft in non-curfew slots
- relocate their night time service from Melbourne to a day time service from/ to Sydney
- find capacity through code-share airlines or other sources to maintain capacity.
- simply reduce their seat capacity to London

Whilst it is not possible to estimate how the capacity shift will occur and what proportion of curfew activity would be lost from Melbourne Airport, it is reasonable to assume that the availability of substitute capacity within Melbourne will be limited.

The main impact on the curfew hours are expected to be felt on the tourism sector, the flight services sector and even upon the economic development of Melbourne.

The impact on the tourism sector from the curfew is a result of the reduced seat capacity into Melbourne from international points of origin, and the increased difficulty of entry to Melbourne by domestic carriers. With the large and growing value of the tourism sector to the Victorian economy, the overall effect of the curfew is quite significant.

The lack of a curfew at Melbourne increases its attractiveness to international airlines which prefer for their flight destinations to be as flexible as possible to limit their time on the ground. With a curfew, international carriers are disadvantaged relative to Australian carriers (who have the flexibility of a well developed network) as they are forced to leave their capital underused, standing on the tarmac. In order to maximise the productivity of their aircraft, international carriers may reduce their number of flights to Melbourne or pull out entirely, depending on the economics of the remaining schedules.

The loss of international carriers would have a further negative impact on international tourism to Melbourne and Victoria, as well as reducing employment in the aviation and customer service sectors which serve the airlines.

- *Industry location theory consistently raises the importance of low transport costs, access to markets and skilled labour as key criteria for business location decisions.*

The reduction in international (and domestic) flights into and from Melbourne is also expected to have a negative impact on the economic development of Melbourne as a city for international commerce. Industrial location theory, which predicts the geographic location of industry and commercial activity according to the presence or absence of a list of criteria, consistently points to transport costs, access to markets, access to raw materials and access to skilled staff as fundamental to the industrial international and national location decision[20]. The presence of well-functioning air links is crucial to the efficiency of a highly-interconnected and open economy such as Melbourne's and the erosion of those links – with ensuing erosion of price competitiveness and market access – would have potentially severe consequences for the Victorian economy and its attempt to attract direct investment.

In the simulation undertaken we model the case of a hypothetical curfew having been imposed on Melbourne Airport from 1 July 2002. It can be seen from Table 5.6 that this is projected to lower Australian GDP and employment from 2002-03. A 12 per cent reduction in demand for air transport services at Melbourne Airport has flow-on effects through the Australian economy. A value of GDP that is 0.01 per cent below the baseline forecast is projected for 2002-03. This lower figure is maintained through our forecast period. The immediate impact on employment is a reduction of over one thousand jobs nation-wide. Over time the lower demand for labour has a depressing effect on the real wage and the negative national employment begins to dissipate. There is still a negative effect of around 600 jobs at the end of the period presented in Table 5.6. However, results for further years (not shown here) point to national employment returning close to its base case forecast by 2008-09. A negative effect on GDP still persists at that point due to a lower capital stock following a decline in Air Transport investment.

■ Table 5.6 Effects on Key National Aggregates of a Melbourne Airport Curfew

	2002-03	2003-04	2004-05	2005-06	2006-07
Real GDP ($m)	-64.6	-69.0	-72.3	-70.1	-78.1
Employment (jobs)	-1,071	-929	-759	-569	-621

Source: Centre for Policy Studies, Monash University. Table shows the deviation of GDP and employment from the base case forecast value, as a result of the hypothetical Melbourne Airport curfew.

[20] For a fuller discussion of Industrial Location Theory, see Weber (1981), Porter (1990) and Stillwell (1992)

As shown in Table 5.7, the negative effects of the curfew are much more strongly felt in Victoria which experiences the full brunt of the Melbourne Airport closure. For the period shown in Table 7, the negative effects in Victoria worsen. It is only in subsequent years that there is any diminution in the adverse effects on activity and employment as the labour market begins to adjust rapidly at the national level. It is projected that by 2008-09 the total projected reduction in employment returns to less than 3,200 jobs.

- **Table 5.7 Effects on Victorian Economy of a Melbourne Airport Curfew**

The negative effects of a curfew are felt much more keenly in Victoria

		2002-03	2003-04	2004-05	2005-06	2006-07
	$m	-190	-212	-227	-242	-283
Real Consumption	%	-0.20	-0.21	-0.22	-0.23	-0.26
	$m	-127	-161	-195	-232	-286
Real GSP	%	-0.41	-0.46	-0.51	-0.57	-0.63
	jobs	-2,680	-2,945	-3,149	-3,423	-4,062
Employment	%	-0.15	-0.16	-0.17	-0.18	-0.21

Source: Centre for Policy Studies, Monash University

In Table 5.8 we see that the imposition of a curfew would have a considerable impact within the Melbourne Airport district. Most of the job losses would occur at Melbourne Airport itself, with negative flow-ons into other, but not all, activities in the rest of the Airport district.

- **Table 5.8 Effects on Economy of Airport District of a Melbourne Airport Curfew**

	2002-03	2003-04	2004-05	2005-06	2006-07
Real Consumption ($m)	-45.6	-48.1	-50.4	-52.3	-55.4
Real GRP ($m)	-45.7	-52.9	-61.7	-71.3	-82.5
Employment (jobs)	-804	-835	-875	-924	-99.6

Source: Centre for Policy Studies, Monash University

About two-thirds of job losses in the airport district from a curfew are expected to be in Air Transport

The following table indicates the industries, located in the Airport district, in which the major job losses are projected to occur in the case of a hypothetical curfew. About two-thirds of the Airport district job losses are projected to be in air transport. Other industries to be negatively affected include aircraft maintenance and services to transport (freight forwarders and the Airport itself). The tourism related industries of accommodation, cafes, hotels and other services reduce very slightly in the Airport district over time. These industries lose overseas tourist customers but gain custom from residents who decide to stay at home.[21] Construction is negatively affected as it is assumed that reduced activity in the Airport district will reduce the requirement for investment in new capital.[22]

[21] These industries do slightly better outside the Airport district, as we assume that a portion of their output in this region is closely related to sales to air travellers.

[22] One possible reaction to a curfew might be to build extra airport capacity, but we do not examine that possibility in this report. This is because it appears that

We also conducted simulations to examine the effects of the curfew having a more limited impact on activity at Melbourne Airport, via rescheduling of night flights affected by the curfew to daytime hours. In the absence of knowledge as to the likely degree of rescheduling, we took the example of where half of all vulnerable flights are successfully rescheduled. While our model is a non-linear one, it turns out that halving the shock yields projected outcomes that are close to half of the results shown above.

■ **Table 5.9 Effects on Employment by Industry in the Airport District of a Nightime Curfew at Melbourne Airport**

Sector	2002-03	2003-04	2004-05	2005-06	2006-07
Aircraft manufacturing & maintenance	-25	-25	-26	-27	-29
Construction	-27	-25	-22	-20	-23
Wholesale trade	-7	-8	-8	-9	-10
Retail trade	-37	-42	-45	-48	-51
Repairs (other than aircraft)	-4	-4	-4	-4	-5
Hotels, cafes & restaurants	-11	-16	-24	-31	-41
Air transport	-525	-545	-588	-627	-659
Road Transport	5	4	3	3	2
Transport services	-23	-18	-16	-15	-16
Finance, business services	-16	-17	-17	-18	-20
Public services	-9	-11	-11	-12	-13
Other services	13	7	1	-6	-16
All other industries	-139	-134	-117	-109	-115
Total Airport District Employment	-804	-835	-875	-924	-996

Source: Centre for Policy Studies, Monash University

5.4 The Economic Impact of Alternative Melbourne Airport Growth Scenarios

Table 5.10 and Table 5.11 show the effects respectively of achieving a higher growth rate than the base case, and a growth rate that falls below the base case (low growth). It should be recalled that our results could be considered the outer envelope of the high and low scenarios, since the economic shocks that are modelled involve only the substitution of a local for foreign-produced products, or vice versa.

Thus, looking at the final column of Table 5.9, we see that if a high growth rate is achieved, there will be 5,100 extra jobs in Victoria in 2010-11 than would have occurred in the base case.

■ **Table 5.10 Effect of a High Melbourne Airport Growth Scenario (Percentage deviation from base case)**

		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Australia										
Real Consumption	$m	75.9	50.1	104.8	75.9	102.2	110.0	146.0	166.5	199.8
GDP	$m	39.2	13.1	49.5	20.0	66.2	62.5	104.2	85.2	147.2
Employment	jobs	762	246	813	260	571	550	1,032	1,045	1,650
Victoria										
	$m	87	79	137	130	143	200	249	300	362
Real Consumption	%	0.08	0.07	0.12	0.11	0.12	0.14	0.17	0.20	0.23
	$m	71	72	125	130	155	218	272	323	399
GSP	%	0.27	0.25	0.42	0.40	0.42	0.49	0.58	0.72	0.80
	jobs	1,464	1,256	2,150	1,894	1,932	2,732	3,424	4,225	5,100
Employment	%	0.07	0.06	0.10	0.09	0.09	0.10	0.12	0.15	0.17
Airport District										
Real Consumption	$m	28	25	45	40	42	51	63	83	86
GRP	$m	34	33	57	58	63	79	96	125	142
Employment	jobs	592	502	872	736	718	825	1,022	1,383	1,432

In a roughly symmetrical fashion, if the airport growth forecast is below the base case forecast, consumption, production and employment at the regional, state and national scales are reduced. For example, by 2010-11, employment across Victoria with a low growth rate will be 5,545 people less than the base case, and employment within the airport district will be 1,379 lower.

- **Table 5.11 Effect of a Low Melbourne Airport Growth Scenario (Percentage deviation from base case)**

		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Australia										
Real Consumption	$m	-48.6	-92.1	-100.4	-133.3	-154.7	-148.6	-171.1	-170.7	-203.7
GDP	$m	-25.2	-38.8	-36.5	-57.9	-61.2	-76.0	-138.8	-125.8	-215.9
Employment	jobs	-486	-767	-652	-910	-844	-760	-1,144	-803	-1,440
Victoria										
	$m	-58	-122	-150	-197	-237	-288	-322	-359	-407
Real Consumption	%	-0.05	-0.11	-0.13	-0.16	-0.19	-0.20	-0.22	-0.24	-0.26
	$m	-48	-104	-138	-189	-237	-314	-377	-433	-510
GSP	%	-0.18	-0.37	-0.47	-0.61	-0.74	-0.76	-0.79	-0.84	-0.88
	jobs	-989	-2,033	-2,400	-3,078	-3,593	-4,170	-4,526	-4,933	-5,545
Employment	%	-0.05	-0.09	-0.11	-0.14	-0.16	-0.16	-0.17	-0.18	-0.19
Airport District										
Real Consumption	$m	-18.6	-38.8	-48.1	-63.5	-78.1	-80.4	-81.0	-85.3	-85.3
GRP	$m	-22.3	-48.2	-63.3	-86.2	-109.1	-122.8	-132.0	-146.0	-157.7
Employment	jobs	-393	-805	-960	-1,240	-1,478	-1,383	-1,350	-1,392	-1,379

6. Summary of Main findings

6.1 Value of the Airport

Melbourne Airport fulfils a vital role for Melbourne and Victoria in connecting the city and state to interstate and international commerce. As noted above, in 2002 Melbourne Airport carried 16.4 million international and domestic passengers and 331,000 tonnes of freight.

The airport employs some 10,300 people directly in a score of industry categories and pays wages of approximately $525 million each year.

Rather than seeking to describe the ‘value’ of Melbourne Airport by comparison with how the city and State may appear *without* Melbourne Airport, the economic impact may be described in terms of how the productivity improvements at Melbourne Airport have generated consumption, production and employment.

The high level of productivity growth achieved at Melbourne Airport over the past 5 years has, in 2001/2 contributed an estimated $320 million to real national GDP, and $536 million to Victoria’s GSP. Furthermore, the continued productivity of the airport has created over 5,000 more jobs through the state than if only the national average productivity were achieved in the airport sector. The local area around Melbourne Airport (which contains all or part of 4 municipalities in Melbourne’s north west) has seen an increase in real gross regional product of $124 million in 2001/2 relative to average productivity growth, however improved labour productivity has also meant the loss of some 175 jobs locally over the base case.

If Melbourne Airport achieves its high target growth rate (some 1 percentage point above the base or median estimate) it would add $130 million to Gross State Product in 2005-6 and $400 million by 2010-11. With these higher growth rates, employment across Victoria would be nearly 2,000 positions higher in 2005-6, relative to the base case, and employment within the airport district would be almost 750 higher. At the same time, if Melbourne Airport growth (in terms of international and domestic passenger throughput) is some 1% lower than the base case forecast (of approximately 5.3%), then employment across Victoria would be some 3,000 positions lower and employment within the airport district, 1,240 lower.

6.2 Main strengths protecting these values

Melbourne Airport has been able to achieve these remarkable results by focussing on its strengths – both structural strengths and policy strengths.

Its “structural” strengths relate to its relative lack of runway congestion, ample space for airside and landside development and its excellent links to the Melbourne Central Business District and the industrial heartlands of the city. Each of these strengths add to the efficiency of operations at Melbourne Airport and add to its appeal.

The strengths of the airport which are related to policy are equally important. The three main areas of policy-derived strength are tourism marketing, amenable planning legislation and curfew-free operation.

As noted above, Tourism Victoria's longstanding support of and cooperation with Melbourne Airport is an important feature of the airport's operating environment. The $10 million 'Tourism Recovery Package' released by the Victorian Government in September 2001 following the September 11 attacks were seen as having a large bearing on the 1.3% annual international passenger growth that the airport has seen in the past year.

Careful development planning around Melbourne Airport and appropriate planning legislation (such as provision for Airport Environs Overlays and reservation of appropriate land) have given the airport the opportunity to grow at a suitable pace without becoming congested or causing it to encroach upon its neighbours.

The continued support of other airports within the Melbourne basin for general aviation has also helped reduce congestion at Melbourne Airport.

The final, and perhaps most potent, policy support that the airport enjoys is the lack of a night time curfew on aircraft movements. The lack of a curfew facilitates both international passenger and freight traffic through the airport which would otherwise not pass through Victoria, or would only arrive through other, less efficient means. As modelled in Section 5.3, the lack of a curfew on Melbourne Airport will generate some 2,680 jobs in Victoria in 2002/3 and $286 million in Gross State Product for Victoria by 2006/7 compared with the situation of a curfew being applied in June 30, 2001.

6.3 Conclusion - Recommendations

The findings of this report indicate the extent and magnitude of the economic impact of Melbourne Airport at the regional, state and national levels. A well-functioning airport, with the support of government and solid long-term planning, has and will continue to provide enormous benefits to all stakeholders in terms of employment generation and production.

The conclusion of this report is that, in order for these impacts to continue into the future and even possibly to be enhanced, the airport must continue to protect and build upon its strengths – its favourable geography and policy environment.

State and Federal Governments should continue to support Melbourne Airport:

- by ensuring its ability to operate without a curfew;
- by monitoring development around the Airport to ensure that urban growth in the area remains sympathetic to the airport's long term interests;
- by continuing to support general aviation airports within the Melbourne basin which reduces the runway congestion at Melbourne Airport;

- by continuing to support the development of complementary road and rail infrastructure to the airport and improving the attractiveness of the airport as a freight hub and;
- by continuing to support tourism to Melbourne via direct and indirect promotion of Melbourne and Victoria to international markets.

With these important strengths secured, Melbourne Airport will have a greater chance of continuing its success and providing benefits which accrue to stakeholders across the country.