



Melbourne City Research

Revised City User Estimates and Forecasts Model 2004-2020

www.melbourne.vic.gov.au

Contents

Executive Summary

1.	Purpose	4
2.	Methodology	4
3.	Findings	5
3.1.	Revised Estimates of Day City Users 2004-2006	5
3.2.	Average Night City User Estimates 2004-2006	8
3.3.	Overnight City User Estimates 2004-2006	9
3.4.	Average Day City User Forecasts 2006-2020	9
4.	Limitations	13
5.	Conclusions and Recommendations	14
6.	Appendices	15
7.	References	20

Acknowledgements

This research report was written by Boreak Sik, Melbourne City Research.

Executive Summary

This report explains revisions to the 2004 and 2006 city user estimates and sets out the revised city user forecasts for 2006-2020.

Key Findings

Some 710,600 people currently use the city on a typical weekday, based on the 2006 City Users Survey.

Applying the improved modeling techniques used for the 2006 City User Survey, the original estimate of 644,700 people using the city on a typical weekday in 2004 has been revised to 666,400.

These revised city user estimates have resulted in slower 2004-2006 growth rates for the various city user groups, necessitating a revision to the City User forecasts.

Consequently the revised City User forecasts now estimate that the number of people using the city on a typical weekday will reach 1 million in 2017, not 2014 as originally forecast.

The report recommends that:

- the Central City Users Survey continues to be funded and conducted every two years;
- the model used is regularly updated when relevant data becomes available; and
- the results should be communicated widely to internal and external stakeholders via intranet, internet and presentations.

1. Purpose

This purpose of this report is to explain revisions to the 2004 and 2006 city user estimates and set out the revised city user forecasts for 2006-2020.

2. Methodology

The City of Melbourne estimates the number of City Users by undertaking a biennial "Central City Users Survey". Using the information obtained from this survey, together with information from a variety of other sources, a model has been developed to estimate the number of current and future City of Melbourne users.

The first City User Estimates and Forecasts were published in 2005, based on the City User Survey undertaken in 2004.

The second Central City Users Survey (2006) has recently been completed and employed a more accurate survey technique. In addition the City of Melbourne obtained access to more accurate data on the number of students studying in the City and interstate and overseas visitors. Currently some 710,600 people are estimated to use the city on a typical weekday, based on the 2006 Central City Users Survey.

These new data sources and improved techniques were applied to the original 2004 figures to improve their accuracy and the original estimate of 644,700 people using the city on a typical weekday in 2004, has been revised to 666,400.

These revised city user estimates have resulted in slower 2004-2006 growth rates for the various city user groups, necessitating a revision to the City User forecasts.

Consequently the revised City User forecasts now estimate that the number of people using the city on a typical weekday will reach 1 million in 2017, not 2014 as originally forecast.

The city user estimates and forecasts 2004-2020 are based on the following information and data sources:

- City of Melbourne Central City Users Surveys 2004 and 2006, conducted by Nexus Consultants.
- City of Melbourne Census of Land Use and Employment (CLUE).
- National Visitors Survey (NVS) and International Visitors Survey (IVS), Tourism Australia.
- Forecasts Visitation to Victoria, Tourism Victoria.
- City of Melbourne CoM/id Population Forecasts, prepared by id Consultants.

Revised 2004 & 2006 City User Estimates and Forecasts Model 2004-2020

- Population Census and Estimated Residential Population (ERP); Australian Bureau of Statistics (ABS).
- Higher Education Student Statistics from the Department of Education, Science and Training.

The term “city” in this report refers to the “City of Melbourne” or “CoM” municipal boundary, unless otherwise stated. The term “Central City” refers to the area covered by the “Hoddle grid”, including the area south of Victoria Street, Southbank and Docklands.

For the purpose of this study the term “City Users” has been adopted rather than “City Visitors”. The reason for this is that the term “visitors” tends to imply the purpose of travelling to the city was more for tourism, social or recreational purposes, whereas the term “users” includes all purposes for travelling to or being in the city such as work, study and residential.

City users are also defined as anyone aged 15 years and over who visits the City of Melbourne (CoM) for any reason. City users include all residents of the City of Melbourne. To simplify the estimates and forecasts, city users are grouped into five main categories based on their purpose of traveling to or being in the city and their origin of residence. They are:

- Residents – all CoM residents including workers and students;
- Workers – all workers from any origin who travel to the city for work purposes;
- Students – all students who travel to the city for study purposes;
- International visitors – overseas visitors who travel to the city for non-work or non-study purposes;
- Interstate visitors – interstate visitors who travel to the city for non-work and non-study purposes;
- Regional visitors – Regional Victorian visitors who travel to the city for non-work and non-study purposes;
- Metropolitan visitors – visitors from metropolitan Melbourne suburbs who travel to the city for non-work and non-study purposes.

Wherever possible the following results are reported by the above groups. Appendix A and B provide a full explanation of how the estimates and forecasts are derived.

3. Findings

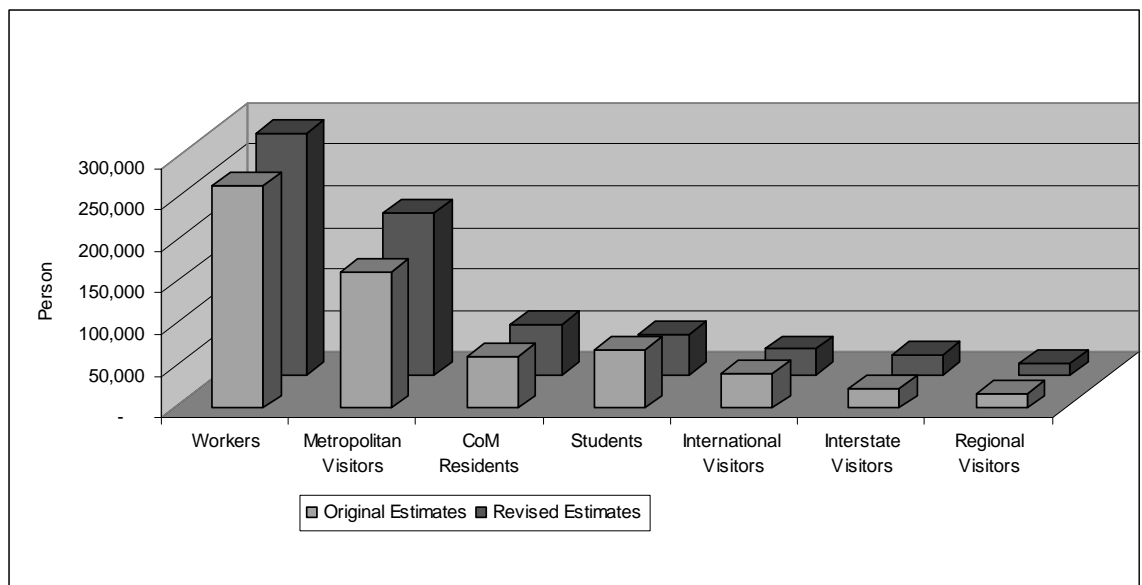
3.1. Revised 2004-2006 Estimates of Average Weekday City of Melbourne Users

Based on the Central City Users Surveys 2004 and 2006 and the other data sources listed in the previous section, the following provides updated estimates of the number of City of Melbourne users on a typical weekday in 2004 and 2006. Due to some differences

in data collection and analysis methods used in the Central City Users Surveys 2004 and 2006, the original estimates of city user numbers to the CoM in 2004¹ were adjusted by using the same methods used in the Central City Users Survey 2006 (see Appendix A for details).

Figure 1 compares the original estimates and revised estimates of average day city users in 2004. The revised total number 666,400 is slightly higher than the original estimate number 644,700. This is due to the fact that the 2004 model underestimated the number of daytime workers and metropolitan visitors, the two largest city user groups comprising 44 per cent and 29 per cent of the total city users respectively. However the 2004 model also overestimated the numbers of other user groups, namely: international, interstate and regional visitors and students, who in total account for only 18 per cent in of all city users in 2004.

Figure 1. Original and Revised 2004 Estimates of Average Weekday City of Melbourne Users



The revised estimates reveal that on an average weekday in 2004, 291,700 workers (compared to 267,700 originally estimated) traveled to work in the city, while 194,500 metropolitan visitors (compared to 163,200 originally estimated) traveled to the city for other reasons. The metropolitan visitors traveled to the city primarily for socializing, shopping, sightseeing, dining.

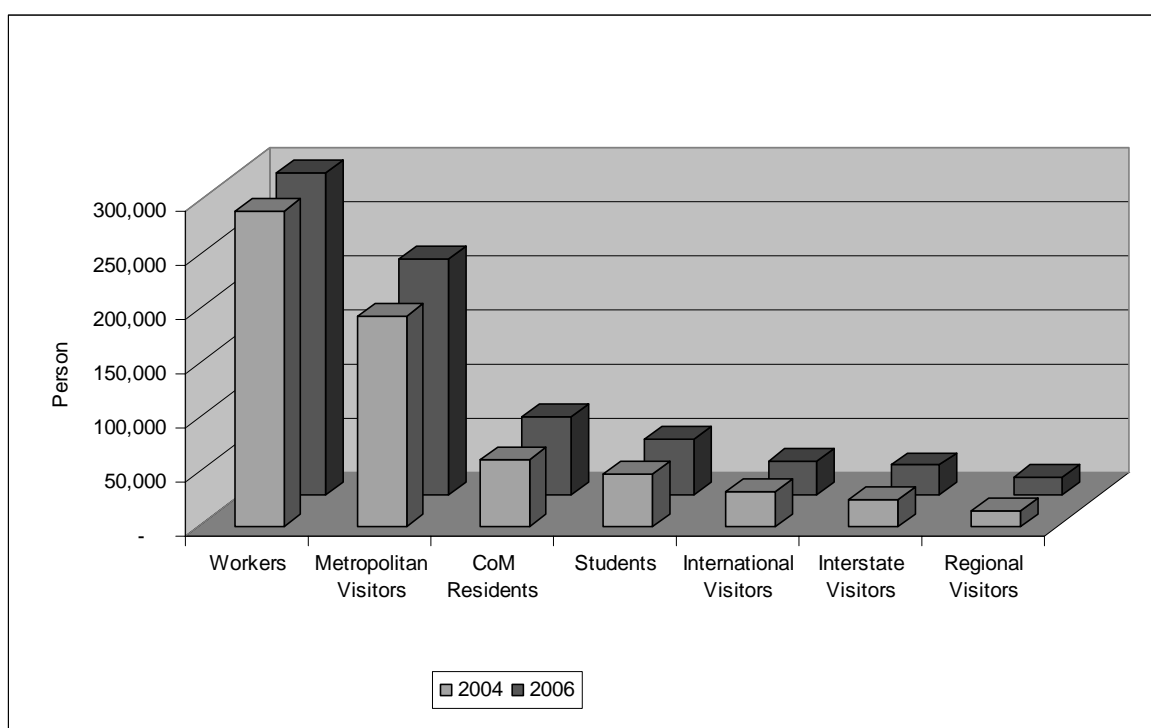
¹ CoM, 2005, "City Users Estimates and Forecasts Model (1998-2015)", p 4

Revised 2004 & 2006 City User Estimates and Forecasts Model 2004-2020

The revised estimates show that apart from international visitors, the number of city users has increased consistently between 2004 and 2006. Figure 2 illustrates that the growth in the average weekday number of City of Melbourne users was about three per cent per annum, from 666,400 in 2004 to 710,600 in 2006. This growth has been driven by a significant increase in the number of metropolitan visitors and City of Melbourne residents. In percentage growth terms, the residential population grew at the fastest rate, 15 per cent, followed by metropolitan visitors, 12 per cent, and regional visitors, 11 per cent.

Tourism Victoria expects the number of international visitors to Victoria in 2006 to decrease marginally compared to 2005. This results in a marginal decrease, to 30,900, in the estimated number of international visitors to the CoM on an average weekday.

Figure 2. Estimates of Average Weekday City of Melbourne Users, 2004 and 2006



3.2. Average Night City of Melbourne User Estimates 2004-2006

Night city users are defined as those who are in the CoM for a period between 6:00pm and 6:00am², including CoM residents. Table 1 shows revised estimates of average night city users to the CoM between 2004 and 2006. The total average weekday night-time city user number has increased from 306,900 in 2004 to 336,300 in 2006. The increase is mainly from the growth of metropolitan visitors.

Metropolitan visitors represent a higher proportion of night-time compared to day-time city users replacing workers and students. Night-time metropolitan visitors represent 41 per cent of the total users compared to 31% during daytime. This reflects the fact that there would be less work and study at night and most night visitors would be in the city for entertainment, dining and socializing purposes.

Table 1 Average Night City Users Estimates 2004-2006

	2004 Revised Est. person	2005 person	2006 person
International Visitors	29,200	28,800	28,600
Interstate Visitors	24,400	26,600	26,400
Regional Victorian Visitors	5,200	5,800	5,800
Students	11,200	11,500	11,900
Workers	38,200	38,600	38,900
Metro Melbourne Visitors	137,100	145,300	153,500
CoM Residents	61,700	67,200	71,200
Total*	306,900	323,800	336,300

* slight variations in total figures are due to rounding

² The original estimates and forecasts defined night city users as city users who are in the city between 7pm and 7am, and hence, the results are not directly comparable with estimate figures in Table 1.

Revised 2004 & 2006 City User Estimates and Forecasts Model 2004-2020

3.3. Overnight City User Estimates 2004-2006

Overnight city users are defined as city users who stay in the CoM for the whole period between 6:00pm and 6:00am³. At this stage CoM residents' night-time movements have not been examined in detail, so they have been included in both the "Night-time" and "Over-night" city user categories. Table 2 shows average (Monday to Friday) overnight city user estimates between 2004 and 2006. It reveals that over 104,000 people stayed overnight in the CoM on an average night in 2004. This number grew by nearly 9 per cent in 2005 and is projected to increase to over 121,000 per night in 2006. If, as assumed, all residents stay overnight, they comprise the largest proportion, (nearly 60 per cent) of the total overnight users, followed by international, interstate and regional Victorian visitors.

It is interesting to note that even though metropolitan visitors represent the second largest user group during day-time, the vast majority of them live close enough to the CoM to return home and only a small proportion stays overnight in the CoM (see Table 2).

Table 2 Average Overnight City User Estimates, 2004-2006

	2004 revised est. person	2005 person	2006 person
International Visitors	20,900	21,700	22,500
Interstate visitors	16,000	18,000	20,200
Regional visitors	5,100	5,600	6,100
Metro Melbourne Visitors	400	700	1,300
CoM Residents	61,700	67,200	71,200
Total*	104,100	113,200	121,300

* slight variations in total figures are due to rounding

3.4. Average Weekday City of Melbourne User Forecasts 2006-2020

This section aims at updating average weekday city user forecasts between 2006 and 2020. The original estimates and forecasts⁴ predicted that the total number of city users would grow at around five per cent per annum between 2005 and 2015 and reach 1

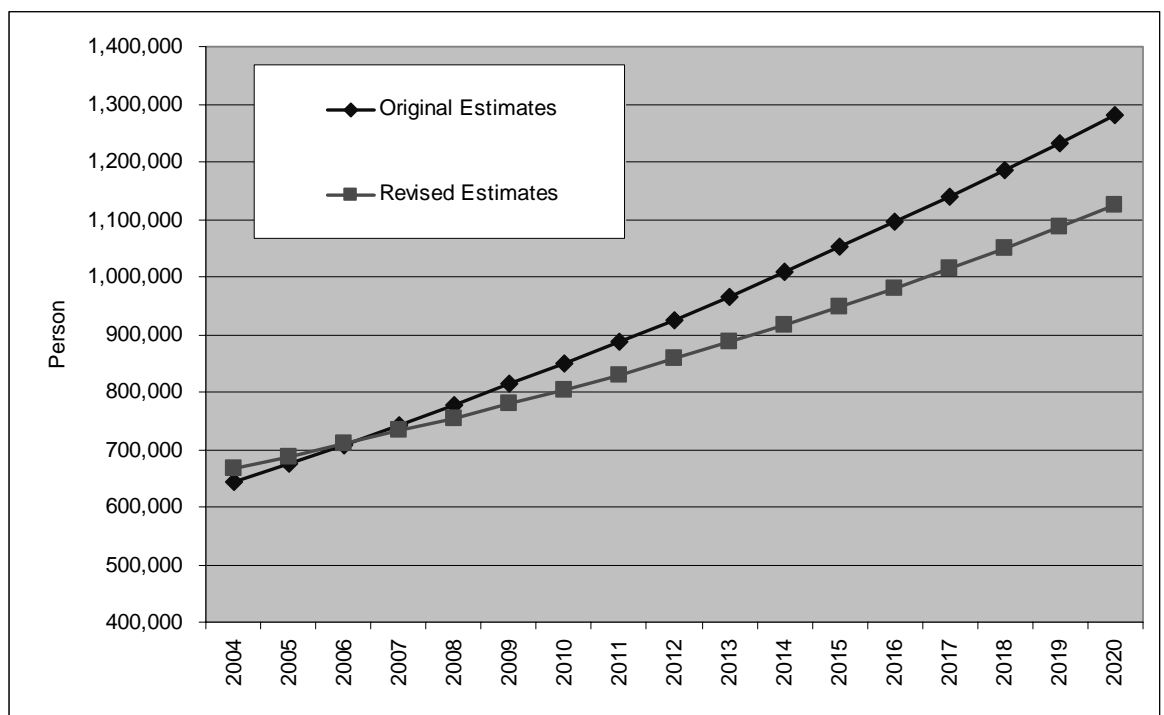
³ The original estimates and forecasts defined night city users as city users who are in the city between 7pm and 7am, and hence, the results are not directly comparable with estimate figures in Table 1.

⁴ CoM, 2005, "City Users Estimates and Forecasts Model (1998-2015)"

million in 2014. These forecasts are now considered optimistic as they were based on high growth rates for students (8 per cent per annum), metropolitan visitors (7 per cent per annum), international visitors (5.7 per cent per annum) and workers (3 per cent per annum). These growth rates are now considered too high when compared to the actual growth rates which occurred between the two Central City Users Surveys 2004 and 2006.

Applying the results from the Central City Users Survey 2006 and other updated data, the total number of city users on an average weekday is forecast to grow at the slower rate of around 3 per cent between 2006 and 2020 and reach 1 million in 2017 (see Figure 3). This growth is anticipated to primarily come from metropolitan visitors who will be attracted to the city by major events and activities.

Figure 3. Average Daily City User Estimates and Forecasts



Workers

The forecast increase in the number of City of Melbourne workers is based entirely on the projection of the employment growth in the CoM between 2002 and 2004. CLUE data, which provides the most reliable estimate employment in the CoM, shows that total employment increased by about one per cent between 2002 and 2004. This growth rate is used to project the average number of weekday workers in the CoM, which is estimated to reach 335,500 in 2020. This simplistic extrapolation method will be improved when a more sophisticated forecast employment model becomes available.

International Visitors

Growth of international visitors to Australia is influenced by a wide range of factors including, growth in the global economy, interest rate and oil price changes, competition from other countries and short-haul destinations (particularly intra-Asian and intra-European), changes in the propensity to travel, major events (such as war and terrorism) and the value of Australian dollar. In its “base-case” scenario, Tourism Australia’s Tourism Forecasting Committee forecasts a 5.5 per cent average annual growth rate for visitors to Australia over the period 2006-2015. The Committee also forecasts that international visitors to Victoria will reach 2.2 million in 2015.

By applying the above growth rate and proportion of international visitors traveling to the CoM on an average day, that international visitors to the CoM are forecast to reach 60,800 in 2020.

National (Interstate and Regional) Visitors

National visitor activity is also influenced by a wide range of factors including: income levels, fuel costs, goods and services competing with travel expenditure, competing destinations, unemployment, consumer confidence, interest rates, retail spending and external events such as 9/11 and the Bali bombings. Any changes in these factors, which are almost impossible to foresee, can have a significant impact on the number of national visitors to the City of Melbourne. Taking into consideration of all the above factors, the Tourism Forecasting Committee has recently revised its forecast model and predicts that domestic visitor number are likely to increase at 4.9 per cent between 2006 and 2015. This rate is used to derive the number of national (interstate and Regional Victorian) visitors to the CoM during the forecast period. As a result, it is forecast that the number of interstate and Regional Victorian visitors to the CoM will reach 45,000 on average day by 2020.

Metropolitan Visitors

Since the cessation of the Victorian Activity Travel Survey (VATS) in 1998, there has been a lack of data on metro-Melbourne visitors to the CoM. The biennial City of Melbourne Central City Users Survey, first conducted in 2004 and again in 2006, has been designed to fill this gap and provides reliable estimates of metropolitan Melbourne visitor numbers to the CoM area. These surveys reveal that, even excluding CoM residents and metro-Melbourne residents who visit the CoM for to work or study, metro-Melbourne residents who travel to the city for shopping, socializing and recreation represent a greater proportion of total city users than international, inter and intra state visitors.

This “non worker, student, CoM resident” CoM user group grew rapidly, by 6 per cent, between the 2004 and 2006 surveys and, if this growth rate is maintained, can be expected to reach just under 0.5 million people on an average weekday by 2020.

However, it should be born in mind that visits to the city for shopping, socializing and recreation can be significantly influenced by major events both in the city and the suburbs.

Residents

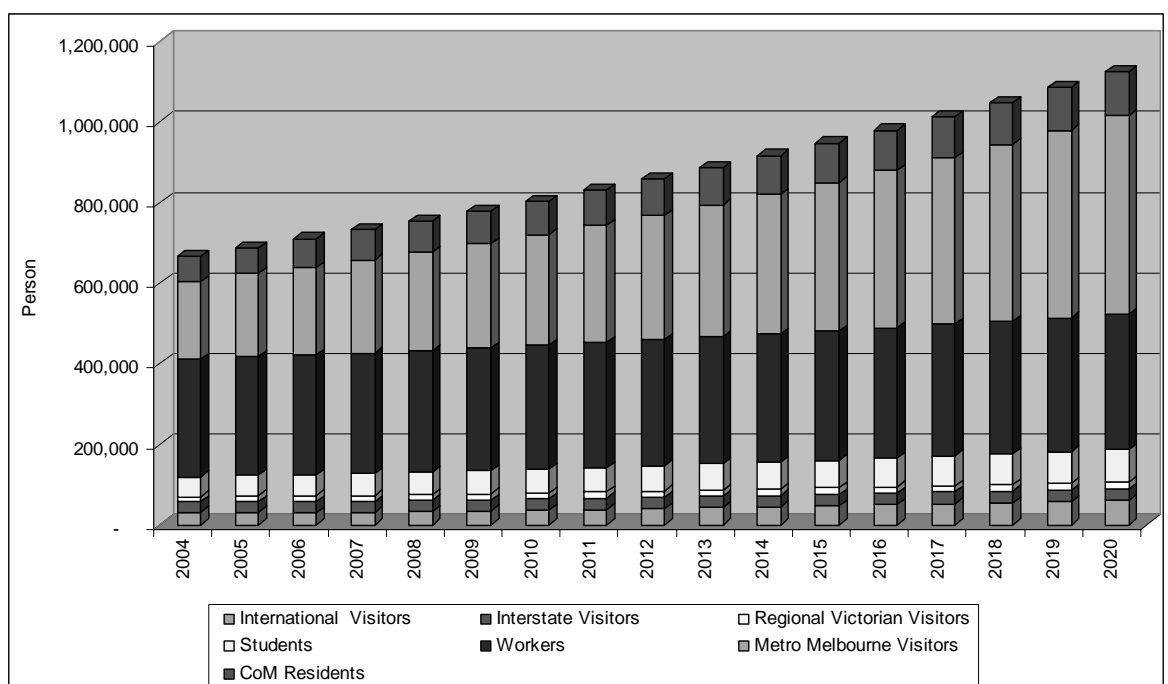
The central city dwelling stock and resident population has grown significantly since the introduction of the Postcode 3000 program and the development of Docklands. Melbourne City Research, together with ID consultants, forecast that the CoM resident population could grow at approximately 3 per cent per annum between 2006 and 2020. Growth is expected to be high, 4-6 per cent, in the immediate future and slow to around 2 per cent over the next 10 years.

Students

Victorian universities have enjoyed remarkable growth in the past decade in terms of the double-digit increase in the number of overseas student enrolments. According to the Department of Education, Science and Training, total overseas student enrolments in Victoria increased more than fourfold in the ten years, 1994-2004.

However the growth in overseas student enrolments has slowed in recent years, due to the increase in alternative education opportunities, in countries which are Australia's traditional sources of overseas students and in other developed nations. Given lack of reliable forecasts of overseas student enrolments at the CoM-based campuses, it has been assumed that the future growth of total students who use the city will remain unchanged at around 3%, as experienced between 2002 and 2004.

Figure 4. Average Daily City User Estimates and Forecasts by Groups



Revised 2004 & 2006 City User Estimates and Forecasts Model 2004-2020

Table 3 Average Day City User Estimates and Forecasts, 2004-2020

Year	Workers	Residents	Students	Visitors				Total*
				International	Interstate	Metropolitan	Regional	
2004	291,700	61,700	48,300	31,600	24,900	194,500	13,600	666,400
2005	294,300	64,300	50,000	31,200	27,100	206,200	15,300	688,400
2006	296,900	71,200	51,600	30,900	26,900	217,900	15,200	710,600
2007	299,500	74,500	53,400	31,700	26,900	231,000	15,200	732,100
2008	302,100	77,300	55,100	33,100	27,000	244,800	15,200	754,800
2009	304,800	80,200	57,000	35,000	27,000	259,500	15,300	778,700
2010	307,400	83,200	58,900	36,800	27,200	275,100	15,300	803,900
2011	310,100	86,200	60,900	38,700	27,300	291,600	15,400	830,100
2012	312,800	89,800	62,900	40,800	27,400	309,100	15,500	858,300
2013	315,600	92,600	65,000	42,900	27,600	327,600	15,600	887,000
2014	318,400	95,100	67,200	45,100	27,800	347,300	15,700	916,600
2015	321,200	97,700	69,400	47,700	28,100	368,100	15,800	948,000
2016	324,000	100,000	71,700	50,000	28,200	390,200	15,900	980,100
2017	326,800	102,400	74,100	52,500	28,300	413,600	16,000	1,013,900
2018	329,700	104,500	76,600	55,200	28,500	438,400	16,100	1,049,000
2019	332,600	106,400	79,200	57,900	28,600	464,700	16,200	1,085,600
2020	335,500	109,100	81,800	60,800	28,800	492,600	16,200	1,124,900

* slight variations in total figures are due to rounding

4. Limitations

The following factors should be considered in interpreting the above estimates and forecasts.

- The limited availability of disaggregated data at the LGA level, eg the City of Melbourne.
- The level of accuracy of data used as some of them are estimates derived from surveys which are subject to sample error.
- The assumptions behind the forecasts, particularly with respect to growth rates, are subject to a wide range of factors including complex political, economic, environmental and social changes.

5. Conclusions and Recommendations

This update could not have been developed without the results from the CoM's Central City Users Surveys 2004 and 2006 and data from other organizations. The latest Central City Users Survey 2006 provides more reliable estimates of city user numbers. The key findings are as follows:

- The original 2005 estimates and forecasts, (based on the 2004 Central City Users Survey) underestimated number of workers and metropolitan visitors, (the two largest user groups) and hence, underestimated the total number of city users to the CoM in 2004.
- Revising the original estimates using the improved method used in the Central City Users Survey 2006, growth in the number of average weekday CoM users has been estimated at around 3 per cent per annum between 2004 and 2006.
- The total nighttime city users numbers are estimated to be less than 50 per cent of total daytime users, with metropolitan visitors predominant at night at the expense of workers and students.
- With a high number of metropolitan visitors residing close to the CoM and returning home at night, overnight users represent about 17 per cent of the total daytime users and are predominantly residents, 60 per cent.
- It is forecast that the total number of average weekday City of Melbourne users could increase by around three per cent annually between 2007 and 2002 and reach 1 million persons in 2017.

It is important to note that the above estimates and forecasts are subject to data survey limitations. Therefore it is recommended that:

- the Central City Users Survey continues to be funded and conducted every two years;
- the model used is regularly updated when relevant data becomes available; and
- the results should be communicated widely to internal and external stakeholders via intranet, internet and presentations.

6. Appendices

Appendix A. Adjustment of 2004 Estimates

Due to significant differences in data collection methodology and data analysis used in the 2004 and 2006 Central City Users Survey 2004 and 2006, some adjustment to 2004 results were carried out to ensure comparability. The differences are:

- i. In 2004 respondents were asked about their visits to the Central City Area in the last seven days while in 2006 respondents were asked about their visits “yesterday”. The 2004 data was reanalyzed by applying 2006 method (only visits to the city on the day before interview were calculated). This adjustment changed overall estimates marginally, except for weekday worker number which reduced from 250,000 to 221,000.
- ii. Due to the lack of NVS-IVS data at SLA level prior to 2005, a less rigorous analysis of the NVS and IVS was possible in 2005. The 2004 figures did not include an extra day for visitors who stayed overnight in the CoM. In addition the 2004 figures did not include international and interstate visitors who stayed outside the CoM. These issues have been addressed in the 2006 analysis.

Appendix B. City User Estimates and Forecasts Calculation

Measuring number of users to the City of Melbourne is a complex task which requires reliable data. As more accurate, detailed data (eg from the NVS-IVS and Central City Users Surveys) become available, the revised estimates and forecasts can be improved. These estimates and forecasts are based on the following data sources and assumptions.

6.1. Day - City User Estimates and Forecasts

Resident Population

2004-2005 resident population figures are based on ABS Estimated Resident Population (ERP).

The 2006-2020 resident population figures are based on CoM/id population forecasts.

Students

- i). Daily student figures are derived from higher education statistics gathered by the Department of Education, Science and Training. Although the data provides extensive information about the term residence of all students in Victoria, it does not provide estimates of the number of students who reside or travel to the city on a daily basis. To estimate number of students who travel to the city, the following adjustments and assumptions are made to the data:
 - a) Postcode boundaries do not match suburb and municipality boundaries, so for the purpose of this study, any postcode which is partly or entirely within municipality boundary is considered as part of the CoM. As a result, postcodes 3000, 3001, 3002, 3003, 3004, 3006, 3008, 3010, 3011, 3031, 3032, 3051, 3053, 3054, 3141, 3181, 3205, and 3207 are considered as being in the CoM.
 - b) It is assumed that on an average day 100% of full-time students travel to the CoM for study related purposes.
 - c) It is assumed that on an average day 50% of part-time students travel to the CoM for study related purposes.
- ii). The above calculation reveals that the number of daily students traveling to the CoM grew at 3% p.a. between 2002 and 2004, hence it is assumed that this rate will continue over the forecast period.

Workers

- i). Daily worker numbers between 2004 and 2006 are derived from the Central City Users Survey 2004 and CLUE data. Based on CLUE 2004 data, 68% of workers in the CoM work in the Central City Area (CCA) and 32% work outside the CCA area. It is assumed that the 32% workers outside the CCA travel to the CoM on a daily basis.
- ii). Based on CLUE 2002 and 2004, the number of city workers increased by about 1% annually between 2002 and 2004 and it is forecast that this trend will continue. If this assumption holds the number of daily workers who use the CoM will increase at the same rate, 1%, between 2004 and 2020.

This model should be updated upon availability of CLUE 2006 data.

International Visitors

- i). Average day numbers of international visitors to the CoM in 2004 and 2005 are derived from the IVS and the Central City Users Survey 2006. The following assumptions are made:
 - a) A 'visitor night' to the CCA, equates to being in the CCA for two days; thus an extra day is added to all international visitors to derive the number of visitor days to the CCA. This has also been used to calculate CoM visitor numbers.

Revised 2004 & 2006 City User Estimates and Forecasts Model 2004-2020

- b) The Central City Users Survey 2006 reveals that international visitors to the CCA who stay in Metropolitan Melbourne (but outside the CCA) visit the CCA on 22.49% of their days. It is assumed that this rate is the same for visitor days to the CoM.
 - c) Similarly, those international visitors who stay in Regional Victoria visit the CCA on 1.49% of their days and it is assumed that this rate applies to visitor days to the CoM as well.
 - d) Thus, the total number of international visitors to the CCA per annum is approximately 42% of the total number of international visitor nights to Victoria and again it is assumed that this rate is the same for visitor days to the CoM.
- ii). The forecasts are based on the above interpretations and assume the above growth rates will remain the same between 2006 and 2020.
 - iii). The Tourism Forecasting Committee estimates that international visitor nights will grow at about 4.9% annually between 2006 and 2015. These forecasts are used to derive average daily visitor number to the CoM. Source: [http://www.tourismvictoria.com.au/images/assets/All_PDFs/research/april06/April_2006_Forecast_Factsheet.pdf, 13/07/ 2006].

Interstate Visitors

- ii). Average day numbers of interstate visitors to the CoM in 2004 and 2005 are derived from the NVS and the Central City Users Survey 2006. The following assumptions are made:
 - a) A 'visitor night' to the CCA, in fact, means being in the CCA for two days; thus an extra day is added to all interstate visitors to derive the number of visitor days to the CCA. This also applies to the calculation of CoM visitor numbers.
 - b) The Central City Users Survey 2006 reveals that overnight interstate visitors to the CCA who stay in Metropolitan Melbourne (but outside the CCA) visit the CCA on 25% of their days. It is assumed that this rate is the same for visitor days to the CoM.
 - c) Similarly, those overnight interstate visitors who stay in Regional Victoria visit the CCA on 2% of their days and it is assumed that this rate applies to visitor days to the CoM as well.
 - d) The number of day-trip interstate visitors to the CCA is derived from NVS and the day-trip visitor number to the CoM is derived from the same source.
 - e) Thus, the total number of interstate visitors to the CCA per annum is approximately 19% of the total number of national visitor nights to Victoria and again it is assumed that this rate is the same for visitor days to the CoM.

- iv). The forecasts are based on the above interpretations and assume the above growth rates will remain the same between 2006 and 2020.
- v). Tourism Forecasting Committee estimates that national visitor nights and trips will grow at about 0.5% annually between 2006 and 2015 and these forecasts are used to derive average daily visitor number to the CoM. Source: [http://www.tourismvictoria.com.au/images/assets/All_PDFs/research/april06/April_2006_Forecast_Factsheet.pdf, 13/07/2006]

Regional Visitors

- i). Average day numbers of regional visitors to the CoM in 2004 and 2005 are derived from the NVS and the Central City Users Survey 2006. The following assumptions are made
 - a). A 'visitor night' to the CCA, in fact, means being in the CCA for two days; thus an extra day is added to all overnight regional visitors to derive the number of visitor days to the CCA and this also applies to calculation of CoM visitor numbers.
 - b). Thus, the total number of regional visitors to the CCA per annum is approximately 11% of the total number of national visitor nights to Victoria and again it is assumed that this rate is the same for visitor days to the CoM.
- ii). Tourism Forecasting Committee estimates that national visitor nights and trips will grow at about 0.5% annually between 2006 and 2015 and these forecasts are used to derive average daily visitor number to the CoM. Source: [http://www.tourismvictoria.com.au/images/assets/All_PDFs/research/april06/April_2006_Forecast_Factsheet.pdf, 13/07/ 2006].

Metropolitan Visitors

- i). The number of metropolitan visitors to the CoM in 2004 and 2006 is derived from the Central City Users Survey 2006. The following assumptions are made:
 - a) Retired or unemployed Victorians who visited other suburbs of the CoM, apart from CCA, are considered as metropolitan visitors to the CoM, see Question 7a and Question 12 of CATI survey for details.
 - b) This group accounts for 22,000 visitors (11% of the total metropolitan visitors to the CCA) to other suburbs of the CoM. This rate is used to calculate the number of metropolitan visitors to the CoM in 2004.
- ii). The 2006-2020 metropolitan visitor numbers are based on the growth rate between 2004 and 2006.

6.2. Night – City Users Estimates

Rates used in the original estimates of night city users are used (see Figure 2 and Figure 4 in the City Users Estimates and Forecasts Model 1998-2015). However, it is important to note that the assumptions and method used is not an ideal but due to time constraint this method is applied. It is strongly recommended this method be redeveloped when another update is carried out.

6.3. Overnight City Users Estimates

- (i) *Residents* – the resident population number is derived from CoM/id population forecast with an assumption that all the CoM resident population stayed overnight in the CoM
- (ii) *International visitors* – the international visitor number is derived from IVS data which provides an estimate number of international visitors to the CoM for non-work and non-study purposes and stayed overnight in the CoM.
- (iii) *Interstate visitors* – the interstate visitor number is derived from NVS data which provides an estimate number of interstate visitors to the CoM for non-work and non-study purposes and stayed overnight in the CoM.
- (iv) *Regional visitors* – the regional visitor number is derived from NVS data which provides an estimate number of regional visitors to the CoM for non-work and non-study purposes and stayed overnight in the CoM.
- (v) *Metropolitan visitors* – the metropolitan visitor number is derived from NVS data which provides an estimate number of metropolitan visitors to the CoM for non-work and non-study purposes and stayed overnight in the CoM. It is important to note that the city user number who traveled to CoM for work and study purposes and stayed overnight in the CoM is very minimal.

7. References

- Quinlivan, B. 2006, 'The Academic Squeeze', *BRW*, May 25-31, pp. 34-39.
- Melbourne City Research, 2005, *City Users Estimates and Forecasts Model (1998-2015)*, City of Melbourne.
- id, 2005, '*City of Melbourne – Small Area Population Forecasts Review – City Report*', City of Melbourne.
- Tourism Victoria, 2006, *Forecast Factsheet 2006*, [http://www.tourismvictoria.com.au/images/assets/All_PDFs/research/april06/April_2006_Forecast_Factsheet.pdf, 15 September 2006].
- Tourism Australia, April 2006, *Forecast-the Fourth Release from the Tourism Forecasting Committee*, Canberra, Australia.