CITY OF MELBOURNE

City of Melbourne

Daily Population Estimates and Forecasts

2015 Update

Table of Contents

List of Figures

Executive Summary

The City of Melbourne's Daily Population Estimates and Forecasts report is a biennial report that examines the nature of who travels to work, study, visit and live in the Melbourne municipality area.

This year's report builds on the existing estimates and forecasts reports released previously and draws on enhanced and updated data sources to provide us with insights about what has happened over the past two years and what is most likely to happen by 2030.

A 2.9 per cent growth in daily population to the city between 2012 and 2014 suggests Melbourne lives up to its reputation as a great place to work, visit, socialise and reside despite global financial uncertainties. This is likely to continue to do well into the future as long as we keep up with our planning and long term thinking to accommodate an average daily population of more than 1 million people expected by 2030.

Our research model categorises daily population into five main groups based on place of origin and primary purpose of travel to, or present in, the city. These are:

- Residents
- Workers
- Students
- Visitors (metropolitan, regional, interstate and international)
- Under 15 years

In a snapshot of an average weekday in 2014, we estimate approximately 854,000 people (residents, commuters, visitors and under 15 years combined) travelled to, or were present, in our municipality. In other words, there were 24,000 more people in the city than two years ago on an average weekday. This suggests a combination of three main factors: resident population growth in general; employment growth and increased visits mainly from interstate and overseas.

The City of Melbourne has been successful in facilitating the substantial increase in resident and visitor numbers and it is expected that it will continue to do so. The report offers us a preview of Melbourne in the next 16 years as estimated daily population approaches one million and challenges us to consider planning now for what is shaping up to be a major growth period in all daily population categories.

The annual percentage growth alone speaks for itself and suggests the following forecasts:

- The number of city residents is forecast to grow at around 3.2 per cent annually during the next 16 years, with more than 202,000 people calling our city home by 2030.

- The number of workers is forecast to grow at around 2.0 per cent annually during the next 16 years, with an estimated 526,000 people travelling to work or undertake work-related activities in the city by 2030.

- The number of higher education students (domestic and international) travelling to the city is forecast to grow around 2.4 per cent annually up to 2030.

- The number of metropolitan visitors is forecast to grow by 0.3 per cent annually up to 2030.

- The number of regional visitors is forecast to grow around 1.3 per cent annually up to 2030.

- The number of interstate visitors to Melbourne is forecast to grow around 1.1 per cent annually up to 2030.

- The number of international visitors to the city is forecast to grow around 4.7 per cent annually up to 2030.

- The number of under 15 years is set to grow around 1.9 per cent annually up to 2030.

The above numbers add up to more than 38.3 per cent increase in daily population to the city by the year 2030. This clearly suggests a need for all internal and external stakeholders to continue to adopt a long-term (minimum ten-year) strategy for planning, policy development and service provision (including emergency preparedness). It will require this kind of far-sighted vision to maintain and enhance Melbourne's reputation as a harmonious and safe place for work, business, study, visit, socialising and entertainment.

The daily population estimates and forecasts report is developed using a wide range of following datasets and reports that are subject to a wide range of assumptions:

- Australian Bureau of Statistics (ABS) Population Census 2011
- Australian Bureau of Statistics (ABS) Revised Estimated Resident Population
- City of Melbourne Census of Land Use and Employment (CLUE)
- Victorian Integrated Survey of Travel and Activity (VISTA)
- National Visitors Survey (NVS)
- International Visitor Survey (IVS)
- Higher Education Student Statistics
- City of Melbourne Central Melbourne Travel Surveys 2004 – 2014
- City of Melbourne Pedestrian Counting Data
- City of Melbourne Development Activity Monitoring
- City of Melbourne/SGS Employment Forecasting 2012 – 2031
- City of Melbourne/Geografia Population Forecast
- Tourism Research Australia Tourism Forecasts Autumn 2014 Issue
- Other data sources.

This report, therefore, rests with numerous assumptions made in those data sources and readers are strongly advised to consult with relevant data sources and reports for further information about assumptions.

Introduction

This report attempts to answer four critical questions:

1. Who comes to the Melbourne municipality?
2. Why do they come to the Melbourne municipality?
3. Where do they come from?
4. How many of them are there in the municipality on an average weekday or average weekend day during daytime or at night?

The cost and logistical difficulty in determining absolute counts of people travelling to, or being present in, the municipality is almost impossible to do accurately. Nevertheless, various accessible data sources provide reliable indications of how many people live, travel to work, study and visit our municipality. Based on those data sources, the City of Melbourne has developed the most comprehensive mathematical model yet to estimate and forecast numbers of people travelling to, or being present in, the municipality on an average weekday or weekend day.

The model was first developed and published in 2005 and updated every two years since. This 2015 update benefits from incremental enhancements and advances in methodology and the following data and information sources:

- Australian Bureau of Statistics (ABS) Population Census 2011
- Australian Bureau of Statistics (ABS) Regional Population Growth, Australian 2013-14
- City of Melbourne Census of Land Use and Employment (CLUE) 2012 and 2014
- Victorian Integrated Survey of Travel and Activity (VISTA) 2007 and 2009
- Tourism Research Australia National Visitors Survey (NVS) Calendar Year 2014
- Tourism Research Australia International Visitor Survey (IVS) Calendar Year 2014
- Department of Education and Training Higher Education Student Statistics 2013
- City of Melbourne Central Melbourne Travel Surveys 2004 – 2014
- City of Melbourne Pedestrian Monitoring Traffic data
- City of Melbourne Development Activity Monitoring
- City of Melbourne/SGS Employment Forecasting 2012 – 2031, January 2014
- City of Melbourne/Geografia Population Forecasts 2015
- Tourism Forecasting Committee Tourism Forecasts Autumn 2014
- Department of Transport, Planning and Local Infrastructure Victoria in Future 2014
- Other data sources.

Objective

The primary objective of this report is to improve the estimates and forecasts model by using the latest available data and information and incorporate all foreseeable factors contributing to the future changes in daily population to the municipality.

Terms and Context

'Municipality' or 'city': the area governed by Melbourne City Council, unless otherwise stated.

'Central Melbourne Area' (CMA): the area comprising the Central Business District (CBD) including the Hoddle grid and the area south of Victoria Street, Docklands and Southbank including South Wharf (see Figure 1).

'Estimated resident population': people, including under 15 years of age children, who reside in the Melbourne municipality.

Figure 1.   City of Melbourne Suburb and Central City Area Boundaries
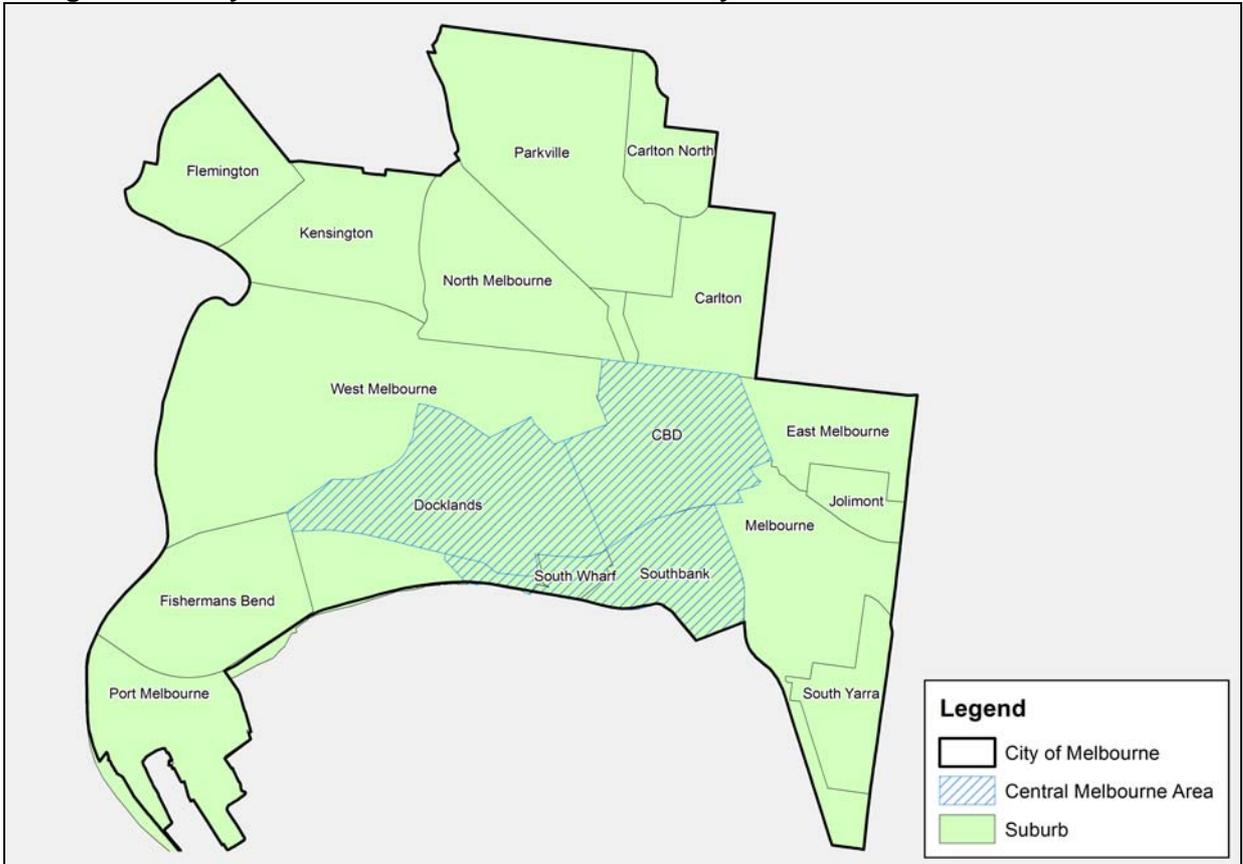
'Daily population': the number of people who travel to, or are present in, the municipality or city for any purposes including residents of the municipality on an average weekday or weekend day. This includes all people of all ages.

Daily population can be divided into the five main categories based on their origin and main purposes for travelling to, or being present in, the city:

- Residents in the municipality including workers and students regardless of where they work or study.

- Workers includes all individuals aged 15 years plus who live outside the municipality and travel to the municipality primarily for work or work-related purposes.

- Students (Higher Education Students) include all individuals aged 15 years plus who live outside the municipality and travel in primarily for study related purposes.

- Visitors include all individuals aged 15 years plus from any origin outside the municipality who travel to the city for all purposes except work and study. This group is further divided into the following four subgroups based on their origin of residence:

    - Metropolitan visitors
    - Regional visitors
    - Interstate visitors
    - International visitors

- Under 15 years include all individuals under 15 years old of age who travel to, or are present in, the municipality for any purposes. This group is considered as a separate category due to legal complications in surveying them. Various indirect sources were used to calculate their estimates and forecasts.

Methodology and Data

To ensure continuity, comparability and consistency, this update largely follows the methodology and structure established over previous updates with latest accessible data. However, it is also important and necessary to keep improving the methodology to address significant changes in data sources and data availability. Two notable areas of improvement made in this update. They include:

i. Estimations of worker numbers – given small level additional data from ABS Population Census and the latest Central Melbourne Travel Survey 2014 data, we slightly changed the way we estimate the number of workers to the city on an average weekday. Previously the worker estimations were based entirely on CLUE employment data with assumption that all full-time workers travelled to work on an average weekday. But ABS Population Census 2001, 2006 and 2011 and Central Melbourne Travel Surveys data consistently suggest that only around 95.5 per cent of full-time city workers travelled to work on the census nights or during survey period.

ii. Estimations of international visitor numbers – in response to the new Australian Statistical Geography Standard (ASGS), the ABS has upgraded its Overseas Arrival and Departures (OAD) data and is back-casting results to 2004. This has subsequently has impacted the International Visitor Survey (IVS) data, as international visitor estimates are benchmarked to OAD, in two ways: (i) it changes in the estimated number of international visitors to the city and metropolitan Melbourne between 2005 and 2014; and (ii) it creates a break in time series data and the new data goes as far back as 2005. The 2004 data in this report is based on the data obtained during the previous update, in 2013.

These improvements, in combination with other minor adjustments, resulted in more accurate and reliable estimates and forecasts of daily population to the city.

Latest data incorporated in this report are as follows:

- **Central Melbourne Travel Survey 2014**: a biennial survey conducted in May 2014 with a sample size of over 2000 Computer-Assisted Telephone Interviewing (CATI) respondents and 2000 intercept interviewing respondents. This survey provides reliable estimates of the number of people travelling to or residing in the Central Melbourne Area on an average weekday and weekend day. It is also designed to collect other key information, especially city visitation patterns of interstate and international visitors who stay outside the municipality but travel to the municipality during their stay, to input into this report.

- **Victoria Integrated Survey of Travel and Activity 2009 (VISTA 2009)**: a comprehensive survey undertaken by Department of Transport, Planning and Local Infrastructure (DTPLI), designed to collect extensive information about travelling behaviours of Victorian residents. The survey covers occupied private residential households living in the Melbourne Statistical Division (metropolitan Melbourne), Geelong, Ballarat, Bendigo, Shepparton and Latrobe Valley.

  Please note that while the survey recorded trips made by people between 5-14 years of age, the data for under 5 years of age trips were also available based on estimations.

- **National Visitor Survey (NVS) and International Visitor Survey (IVS)**: the most comprehensive survey of domestic and international visitors. This survey is conducted year round by Tourism Research Australia (TRA) with data released quarterly. The calendar year data is used as the primary source of estimation of the number of international, interstate and regional visitors to the city in this report.

  The survey data is now available at Statistical Areas Level 2 (SA2), no longer available at Local government Area (LGA), which is based on the new Australian Statistical Geography Standard (ASGS). The ASGS is the Australian Bureau of Statistics' new geographical framework replacing the Australian Standard Geographical Classification (ASGC) from 1 July 2011, cat no.1270.0.55.001.

  As you can see in Figure 2, the SA2 and municipality boundaries do not entirely match. Therefore, only the following SA2s are included as part of the Melbourne municipality in this analysis – a Carlton, Docklands, East Melbourne, Flemington Racecourse, Kensington, Melbourne, North Melbourne, Parkville, South Yarra – West, Southbank and West Melbourne.

  So the estimation of interstate, international and regional visitor numbers for the period of 2004-2012 in this report is revised and backdated.

Figure 2. Melbourne Municipality and SA2 Boundaries
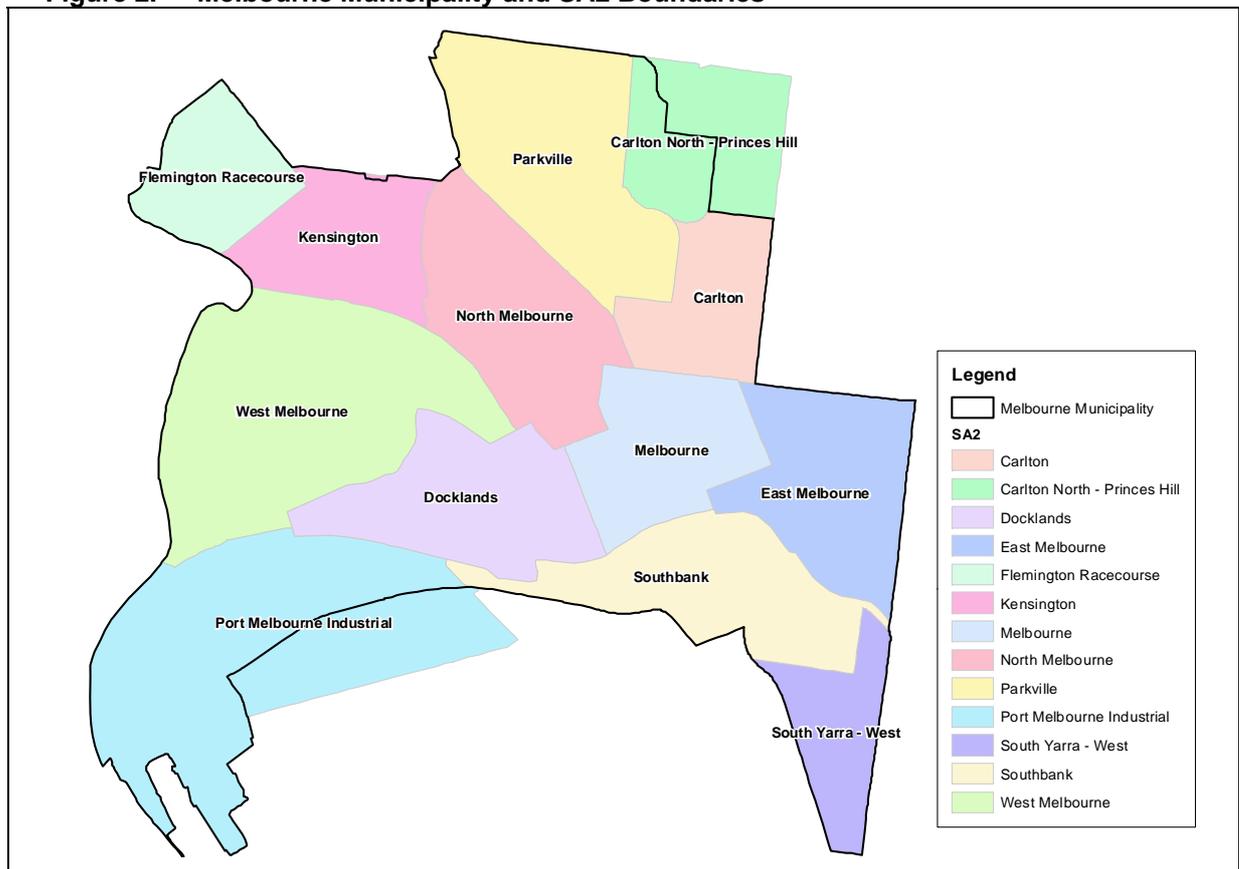
- **Employment forecasts data:** the employment forecast data for this report came from CoM/SGS Employment Forecasting 2013-2031 model, published in January 2014. The model was developed primarily to forecast employment in the city by taking into account various CoM's planning initiatives such as the Southbank Master Plan, City North Structure Plan and Arden Macaulay Structure Plan and other factors.

- **Higher education student data:** collected and managed by the Department of Education and Training. Unlike the 2004-2010 data used in previous reports, which was based on unit record data, the 2011-2013 data is aggregated, provided by the Department of Education and Training. Therefore, the total number of higher education student enrolments and students residing in or outside Melbourne municipality are slightly different from those reported previously.

- **Under 15 years of age population:** calculations of daily population for this group are based on different data sources. One of the primary sources is the Central Melbourne Travel Survey in which a few questions were introduced in 2012 and 2014 to collect information about the number accompanying children under the age of 15 years old and the data, in combination with NVS and IVS data, was used in this report.

Findings

Weekday Daily Population Aged 15 Years and Over

Total Weekday Daily Population

We estimate approximately 854,000 people (residents, commuters and visitors combined) travelled to, or were present, in our municipality on an average weekday in 2014. This represents a 2.9 per cent growth over 2012. In other words, there were over 24,000 more people in the city than two years ago, which suggests a combination of three main factors: population growth in general, employment growth and increased visits from interstate and overseas (see Figure 3).

Figure 3.   Total Daily Population Estimates and Forecasts ('000)

Year	Residents*	Workers	Students	Metropolitan visitors	Regional visitors	Interstate visitors	International visitors	Under 15	Total
2004	72	283	47	190	14	26	24	20	676
2005	76	298	48	209	16	28	26	22	724
2006	80	315	49	230	15	35	28	24	776
2007	85	331	50	187	14	29	26	22	744
2008	90	350	52	151	12	30	28	21	735
2009	94	361	56	138	14	29	29	22	742
2010	98	373	58	158	13	27	28	23	778
2011	100	376	59	168	12	28	32	23	799
2012	105	380	61	179	14	30	36	24	830
2013	116	382	66	171	13	29	42	25	844
2014	122	386	68	163	13	31	45	25	854
2015	126	392	70	165	13	32	47	25	870
2016	135	397	72	166	13	32	50	26	891
2017	137	407	74	166	13	32	52	26	909
2018	141	418	76	167	13	33	55	27	928
2019	144	428	78	167	14	33	57	27	948
2020	148	439	80	167	14	33	60	28	969
2021	152	449	82	168	14	34	63	29	990
2022	159	458	84	168	14	34	66	29	1,012
2023	168	467	86	168	14	34	69	30	1,036
2024	176	476	88	169	15	35	72	30	1,060
2025	181	486	90	169	15	35	75	31	1,083
2026	185	498	92	170	15	35	79	31	1,104
2027	188	505	94	170	15	36	83	32	1,122
2028	192	512	96	170	15	36	87	32	1,141
2029	196	519	98	171	16	36	91	33	1,160
2030	202	526	100	171	16	37	95	34	1,180

* Includes under 15 years

If all the assumptions made in this report and other data sources used in this report are to remain unchanged, we forecast that the total number of daily population to the city is to experience an average growth of 2.0 per cent annually between 2014 and 2030. This will see a million people travelling to the city in 2022 on an average weekday.

Weekday Daily Resident Population Estimates and Forecasts

Living in the city continued to gain momentum over the past two years. It is estimated that more than 122,000 people, including under 15 years of age, resided in the municipality in 2014. This represents a 15.9 per cent growth from 2012 which is an equivalent of 16,788 additional residents in the city. The top five largest growth SA2s are:

- The Melbourne with 6979 additional residents (up by 29.2 per cent)
- Southbank with 3279 additional residents (up by 24.2 per cent)
- Carlton with 1872 additional residents (up by 12.2 per cent)
- Docklands with 1713 additional residents (up by 26.6 per cent)
- North Melbourne with 1703 additional residents (up by 9.9 per cent)

(See Figure 4)

Figure 4.   Estimated Resident Population by SA2, 2004-2014
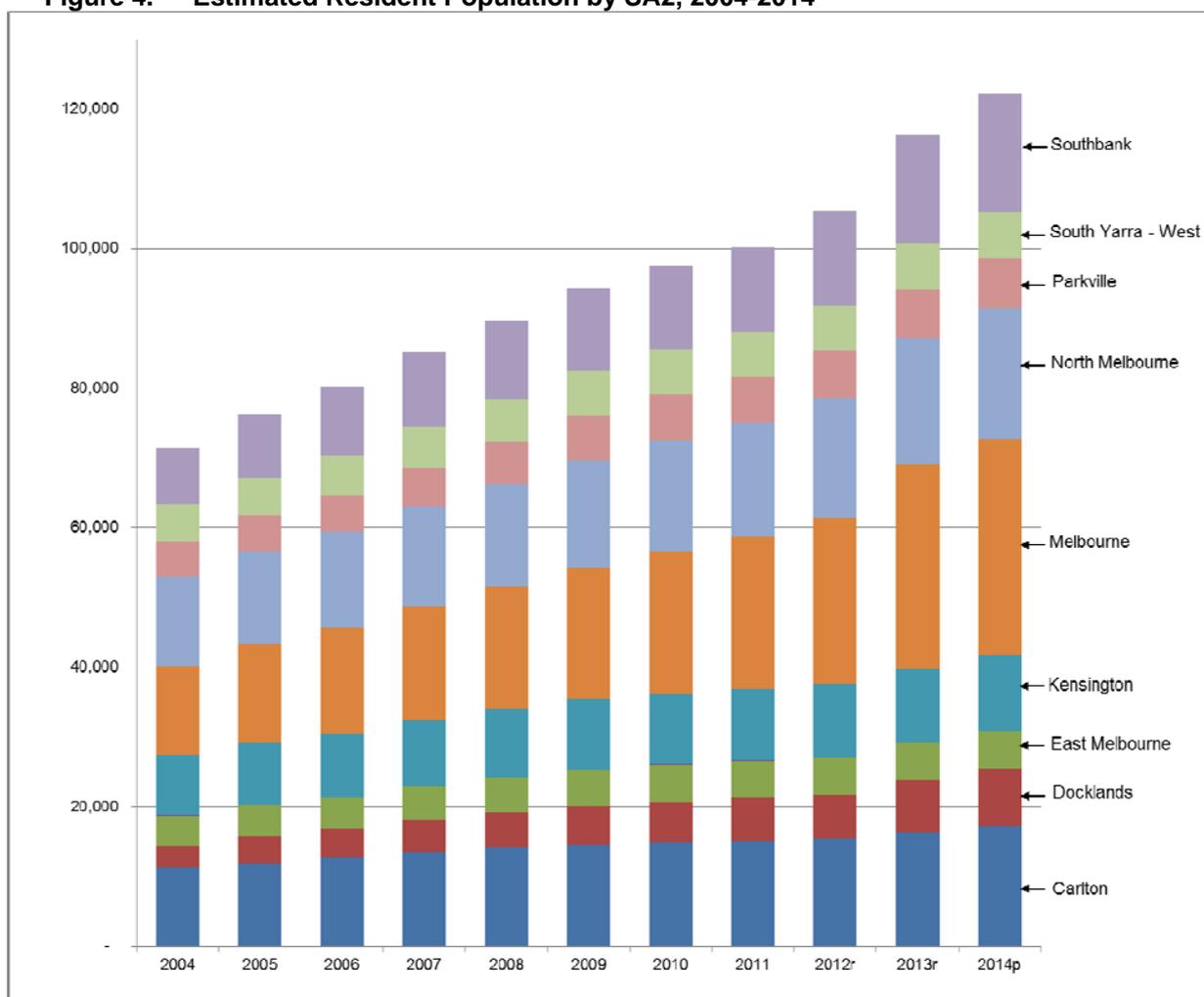
r = revised
p = preliminary
Source: ABS, Resident Population Growth, Australia 2004 to 2014 (cat. no. 3218.0)

Looking at a longer term growth (between 2004 and 2014), the SA2s in the central area also experienced the highest growth. Resident population in Docklands, Melbourne and Southbank grew more than twofold, see Figure 5. Other high growth SA2s include:

- Carlton (up by 53.7 per cent)
- North Melbourne (up by 47.0 per cent)
- Parkville (up by 38.9 per cent).

Figure 5.   Estimated Resident Population Growth Rates between 2004 and 2014 by SA2
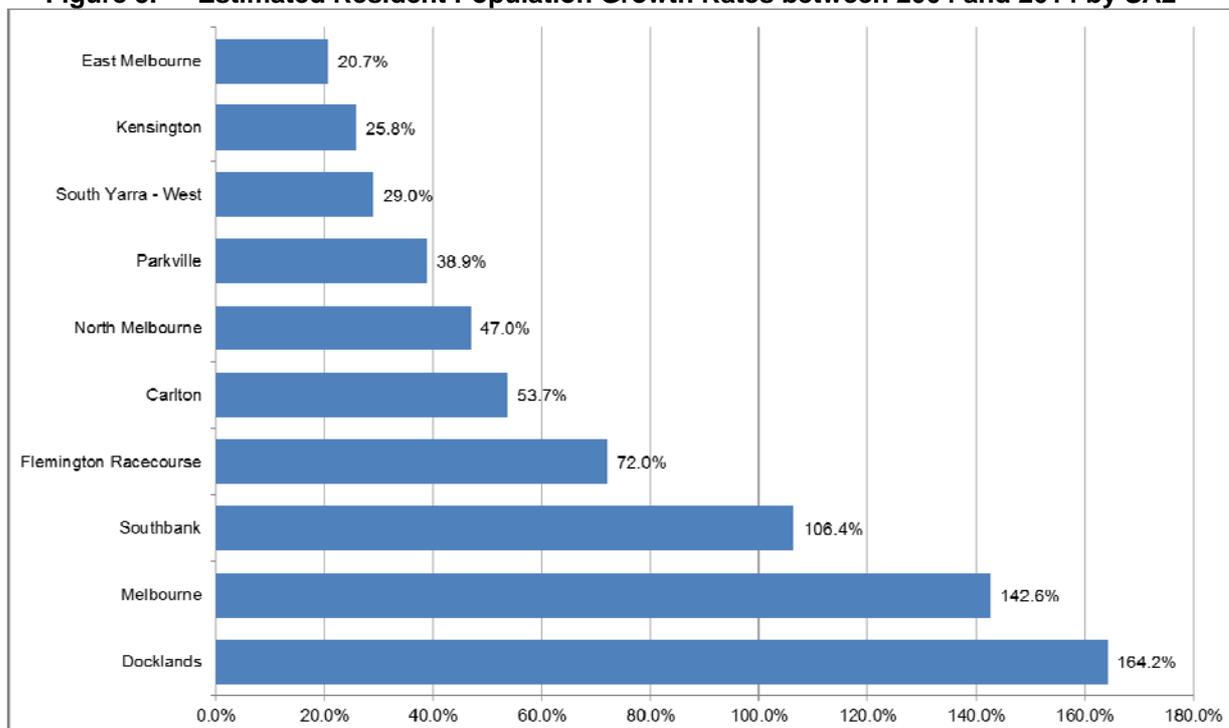
Source: ABS, Resident Population Growth, Australia 2004 to 2014 (cat. no. 3218.0)

The growth has been primarily driven by high-rise apartment living. According to the City of Melbourne's Development Activity Monitoring November 2014 report, it is estimated that more than 9270 residential, including student, apartment dwellings were constructed between 2012 and 2014 in the municipality. More than half of them were in only two areas – the CBD and Docklands, with 1200 residential apartment dwellings each. Other fast growing areas recorded include North Melbourne with 600 apartment dwellings constructed during the reporting period, Carlton with 400 apartment dwellings and Southbank with 360 apartment dwellings, see Figure 6.

It is forecast that approximately 13,480 high rise residential apartment dwellings are in the construction pipeline and expected to be completed within the next five years. The Melbourne CBD is set to gain the most, 6000 dwellings or 44.7 per cent, of the under construction apartments while the rest spreads across Southbank (2740 dwellings or 20.3 per cent), Docklands (1570 dwellings or 11.7 per cent) and Carlton and North Melbourne (1140 dwellings each or 11.7 per cent).

Given the concentration of residential and student apartments, the central area has very high concentration of resident population. Figure 7 illustrates concentration of resident population by SA2 and residential and student apartments. It shows that more than a quarter, 25.3 per cent, of the resident population lived in Melbourne SA2 in 2014. Other populous SA2s include:

- North Melbourne (15.4 per cent)
- Carlton (14.1 per cent)

- Southbank (13.8 per cent)

Figure 6.   Residential Dwellings Completed in 2013 and 2014 and Under Construction
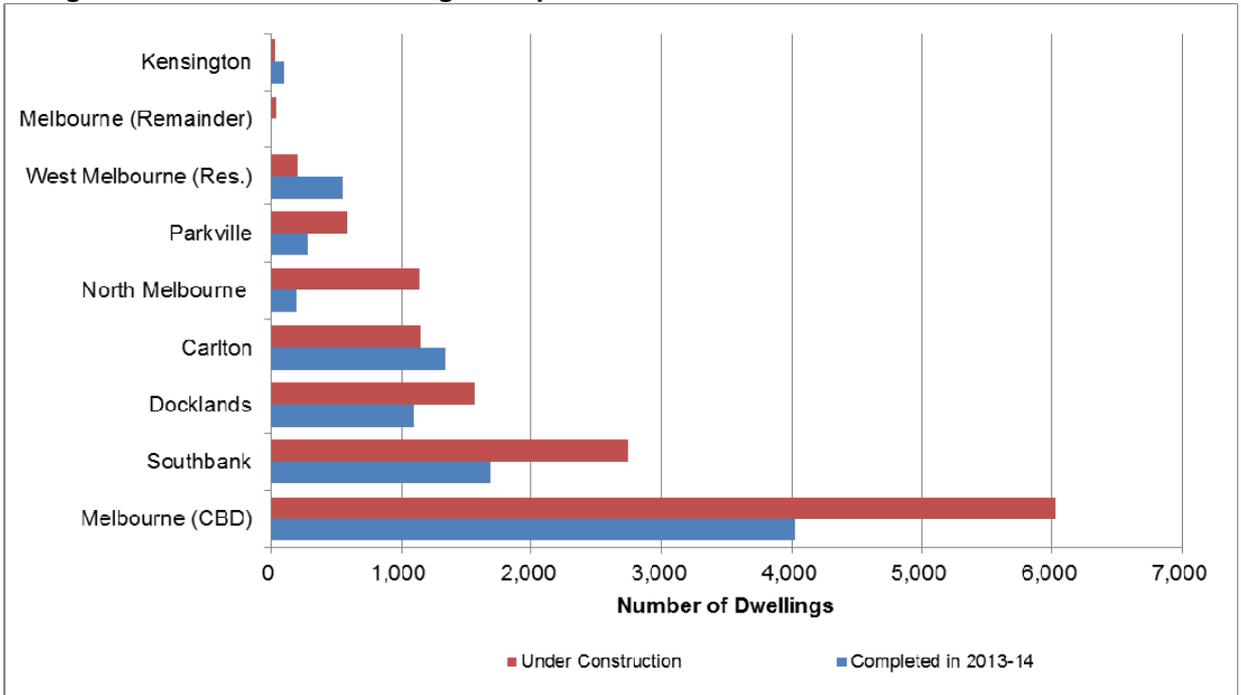
Source: City of Melbourne's Development Activity Monitor, 2014

Figure 7.   Estimated Resident Population in 2014 by SA2 and Residential and Student Apartment Dwellings in 2012
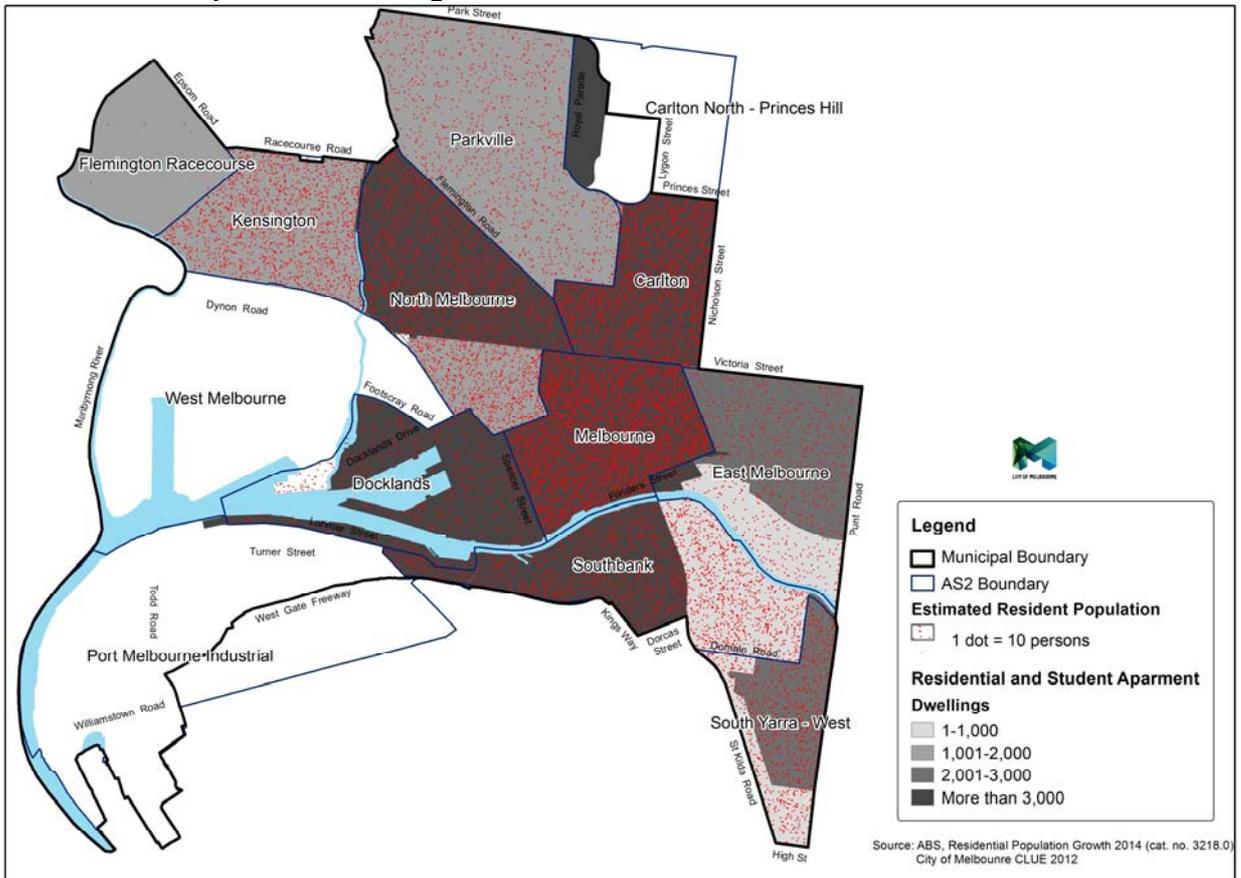
Source: ABS, Resident Population Growth, Australia 2004 to 2014 (cat. no. 3218.0)
        and City of Melbourne CLUE 2012

The city high-rise living momentum is likely to continue and city resident population is set to continue to grow. The City of Melbourne/Geografia Population Forecasts 2015; based on an established statistical method that combines three approaches: (i) housing unit method; (ii) cohort component method; and (iii) sequential household propensity method; suggests that the municipal resident population is likely to grow at around 3.0 per cent annually on average between 2015 and 2036. In total, there will be around 202,000 people, including under 15 years of age population, residing in the municipality in 2030.

It is important to note that city residents are young. It is estimated that more than two thirds, 67.4 per cent, of the total resident population aged under 35 years in 2014. This trend is likely to continue and it is forecast that more than 127,000 (or 63.1 per cent) people residing in the city are under 35 years of age in 2030, see Figure 8.

Figure 8.   Residential Population Growth by Age Group, 2014-2030
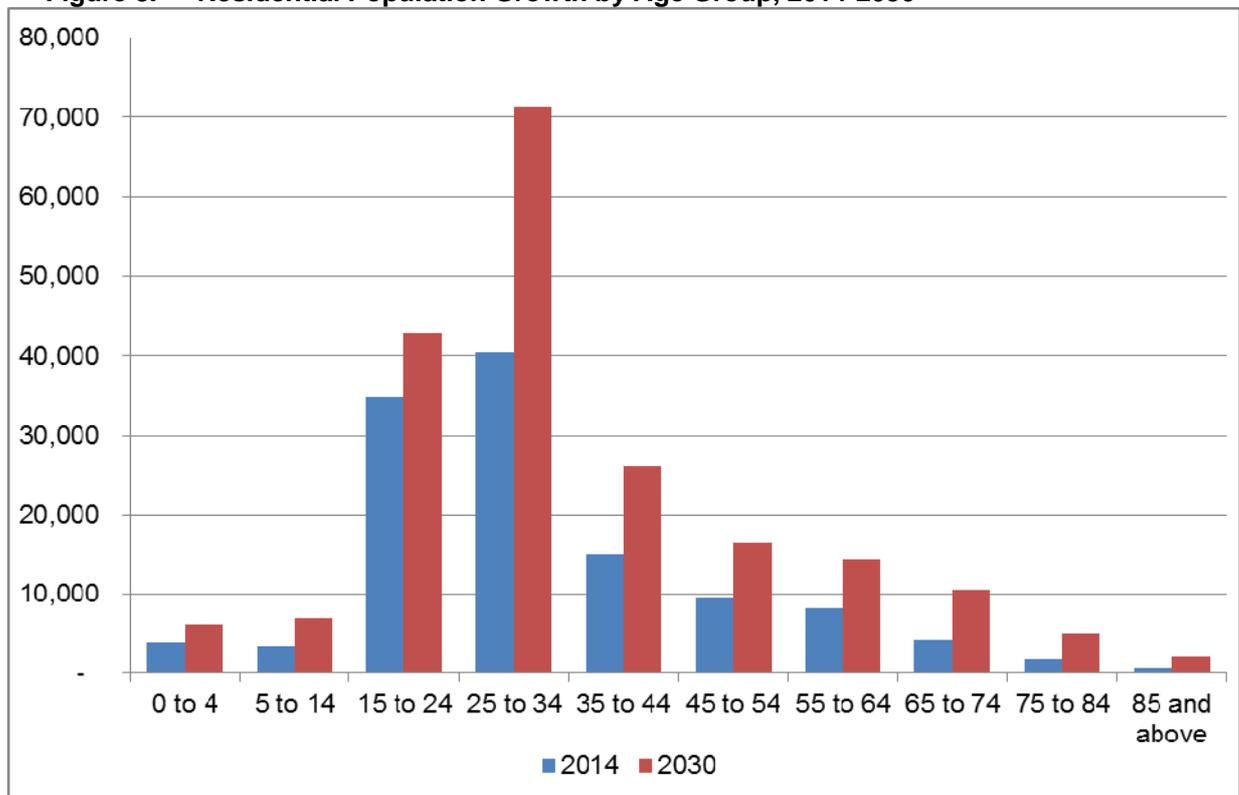
Source: City of Melbourne/Geografia, 2015

Weekday Daily Worker Estimates and Forecasts

Overall employment growth
City workers are an integral part of city and their presence and activity are vitally important for the city vitality and vibrancy. The number of weekday daily workers in the city continued to grow over the past couple of years. It is estimated that more than 386,000 people travelled to the city to work, or undertake work related activities, on an average weekday in 2014. This represents a 1.5 per cent growth over 2012.

The growth is in line with overall growth of employment in the Greater Melbourne area. According to the ABS's Labour Force data, Cat. No. 9291.0.55.001, the total number of employed persons in the Greater Melbourne area experienced a 1.7 per cent, on average, between 2012 and 2014 (see Figure 9).

It is important to note that the number of employed persons in the Greater Melbourne area on a part time basis grew at a much faster rate, 4.6 per cent, than full time counterpart, at only 0.5 per cent, during the reporting period.

Figure 9.   Number of Employed Persons in the Greater Melbourne Area
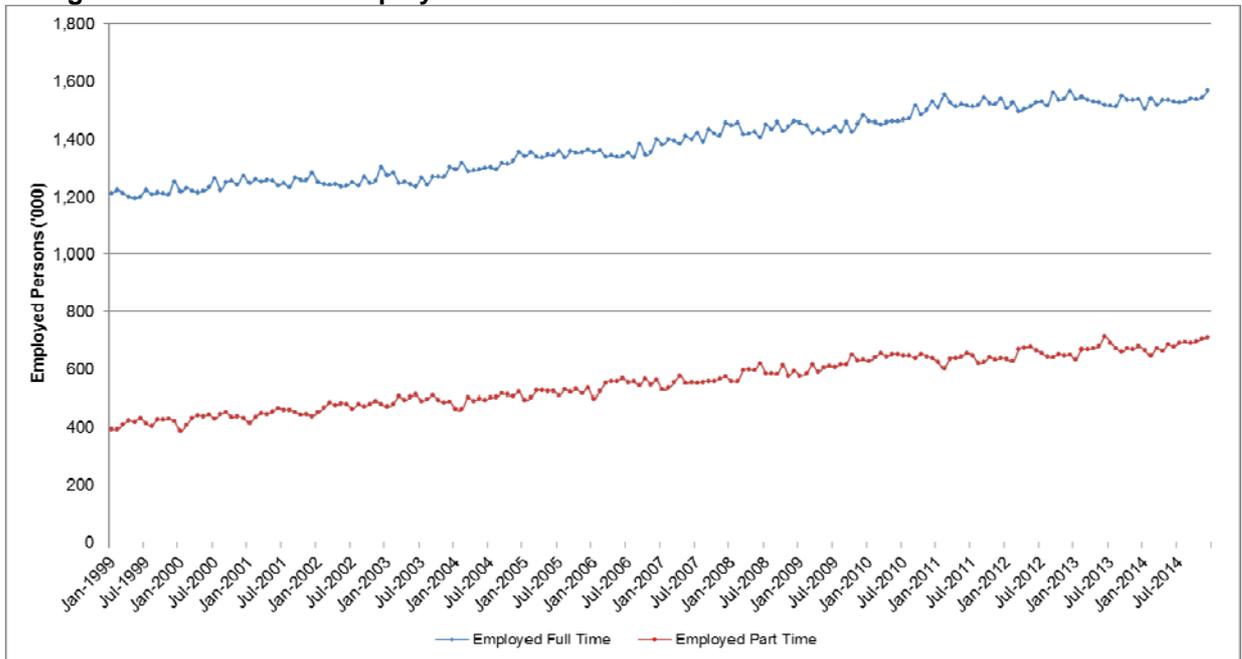
Source: ABS January 2015, 6291.0.55.001 - Labour Force, Australia, Detailed - Electronic Delivery.

Growth in office floor space supply
Along with overall employment growth, supply of office floor space in the city grew substantially over the past two years. The City of Melbourne's development activity monitoring report suggests that more than 217,000 m^2 of office floor space was constructed in the city in 2013 and 2014. Most of the newly office built floor space is in Docklands, 155,000 m^2 or 71.5 per cent, and the Melbourne CBD, 57,000 m^2 or 26.4 per cent. The rest spreads across a few small areas (see Figure 10).

Figure 10.   Office Floor Space Completed and Under Construction in 2013 and 2014
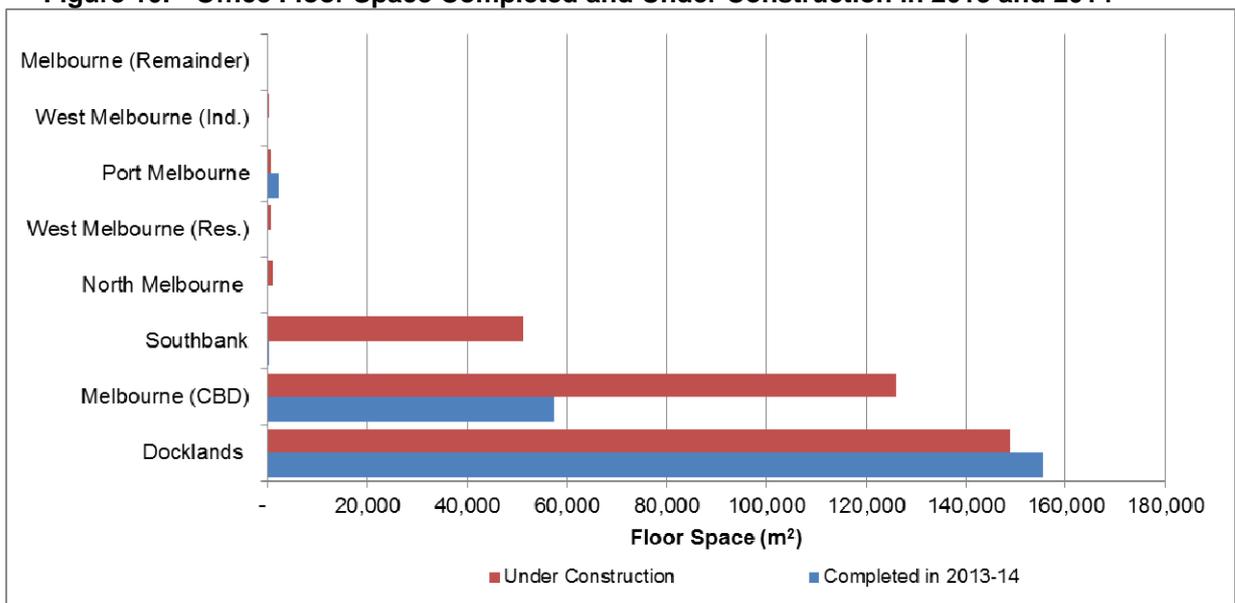
Source: CoM Development Activity Monitor, 2014.

The report also estimates that more than 329,000 m^2 of office floor space is under construction in the municipality. The vast majority of the space is in three central areas – Docklands (149,000 m^2 or 45.2 per cent), the CBD (126,000 m^2 or 38.3 per cent) and Southbank (51,000 m^2 or 15.5 per cent).

Spatial concentration of employment
The City of Melbourne's Census of Land Use and Employment (CLUE) data allows us to take a closer look at spatial concentration of employment in the city. Figure 11 shows the city employment clearly clusters in four main areas – the CBD, Docklands and Southbank. They combined account for more than two thirds, 68.6 per cent, of the total employment in the municipality.

Other areas with high concentration of employment include areas around Alfred Hospital, the University of Melbourne and hospital Precinct in Parkville and Parliament and Treasury precinct, see Figure 11.

Figure 11.   Employment by CLUE Block in 2012
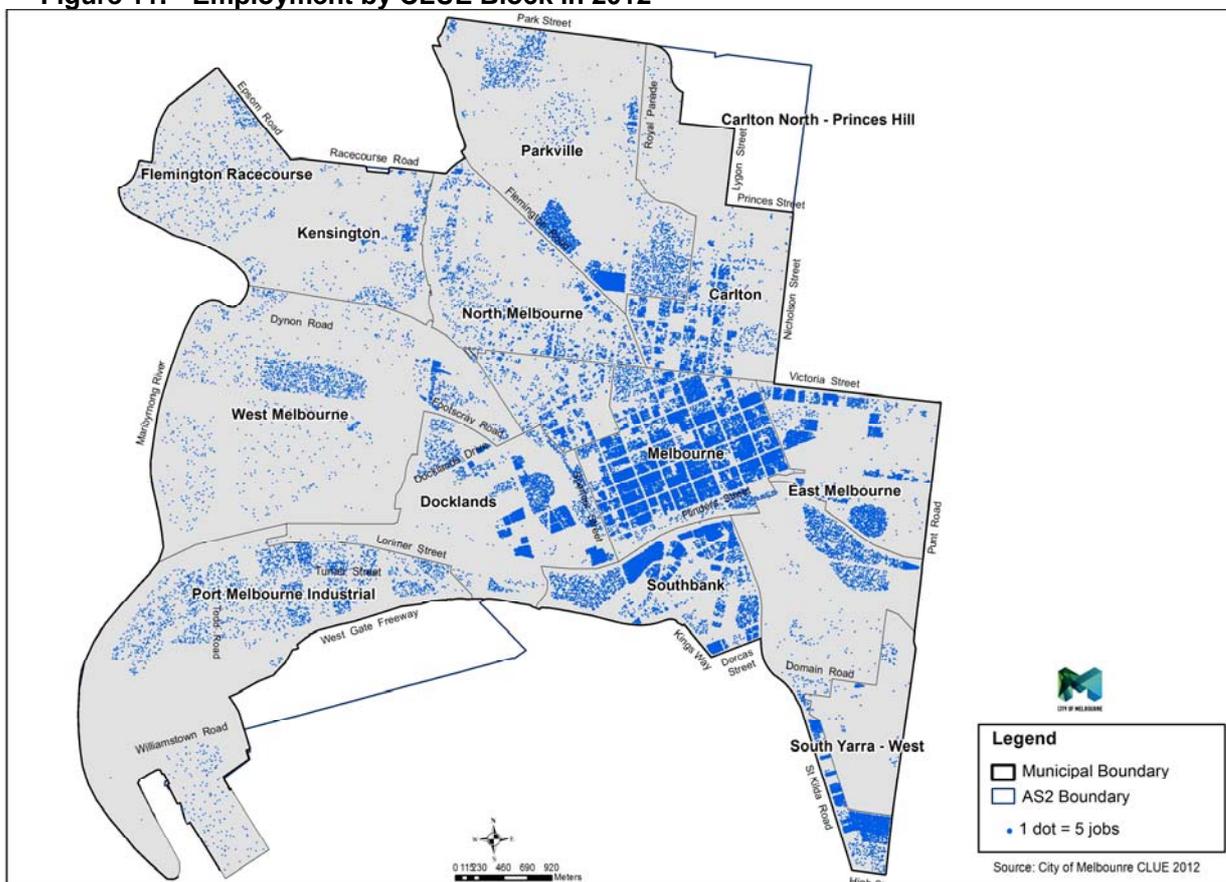
Source: Census of Land Use and Employment 2012.

Demographic characteristics of city workers
It is useful to outline some characteristics of city workers from Place of Work of 2011 Census of Population and Housing data:

- The vast majority of city workers are full time, nearly four in five (79.1 per cent of who travelled to work on the census day in 2011)
- More than half, 57.3 per cent, of the city workers are under the age of 40 while 30-39 year age group accounts for the largest proportion, 30.2 per cent
- 20-29 age group shares 25.7 per cent of the total
- 40-49 year age group shares 22.3 per cent.

(See Figure 12)

Figure 12.   City Workers by Age Group
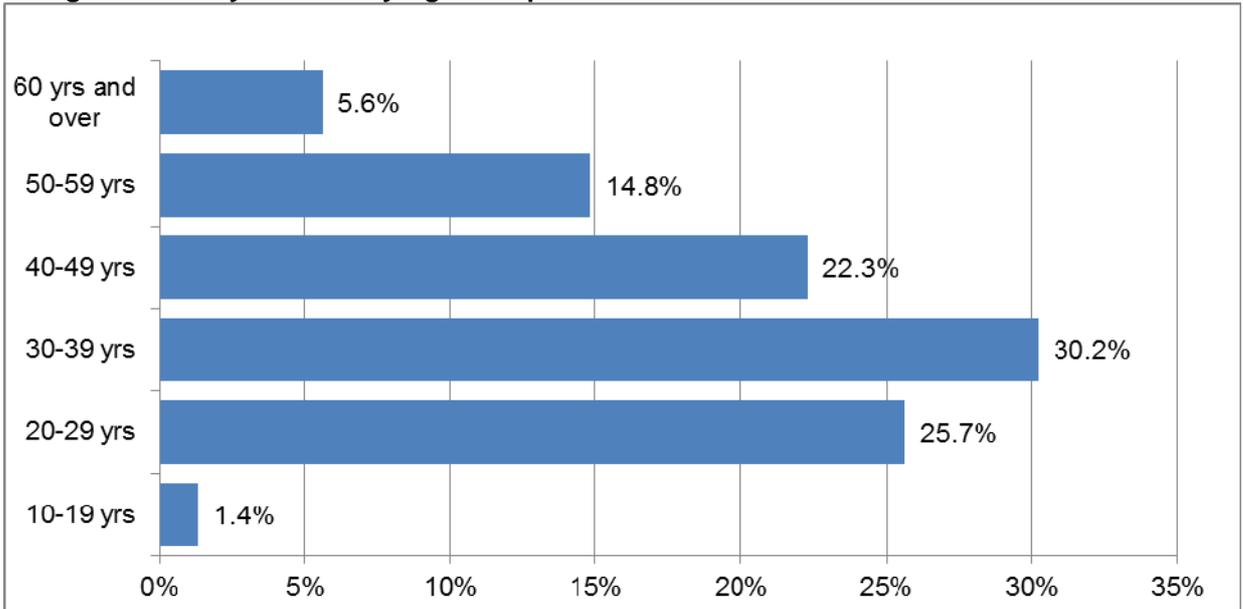
Source: ABS 2011 Census of Population and Housing.

Mode of travel to work
According to the 2011 Census, higher proportions of female city workers use sustainable modes of travel to work in comparison with their male counterparts:

- Train (26.6 per cent female / 24.6 per cent male)
- Tram (10.6 per cent female / 7.3 per cent male
- Bus (1.8 per cent female / 1.5 per cent male)
- Walking (5.8 per cent female / 5.1 per cent male)

(See Figure 13)

Figure 13.   City Workers' Main Modes of Travel to Work by Sex
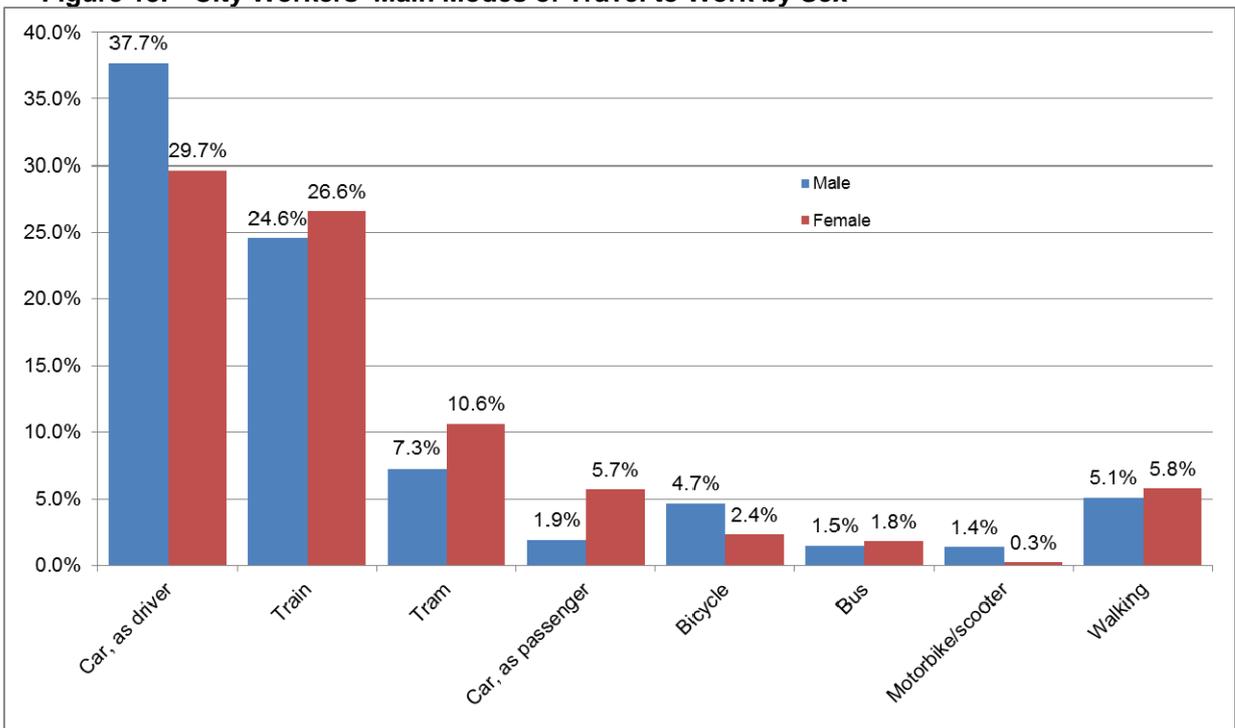
Source: ABS 2011 Census of Population and Housing.

Modes of travel to get around the city
Walking is the most preferred mode of travel to get around the city. According to the Central Melbourne Travel Survey 2014, the majority, 65.4 per cent, of workers get around on foot. Other popular travel modes are:

- Tram (19.6 per cent)
- Train (4.7 per cent)
- Car (as driver – 3.7 per cent and as passenger – 1.4 per cent)

(See Figure 14)

Figure 14.   Modes of Travel Used to Get Around the City
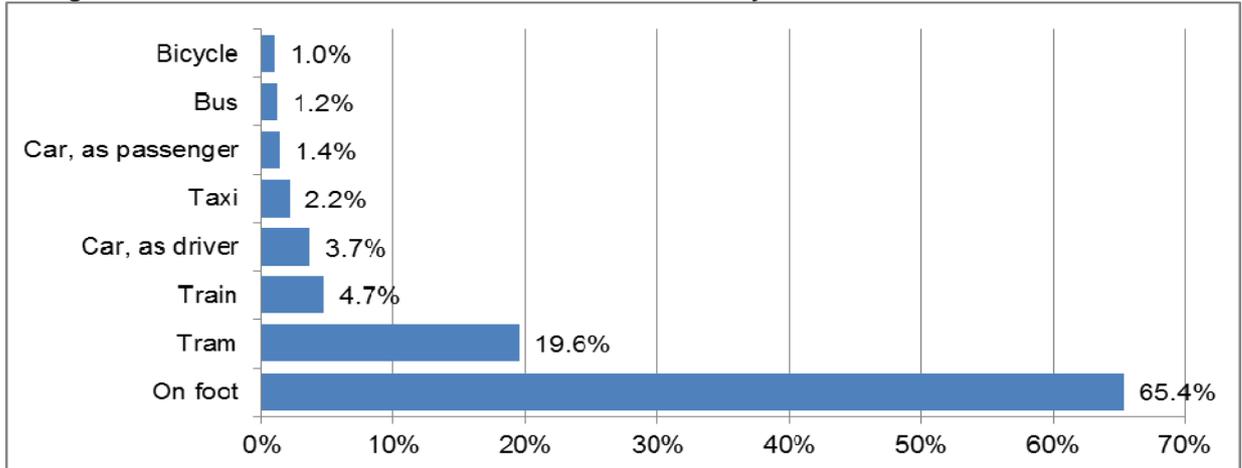
Source: Central Melbourne Travel Survey 2014 Intercept survey.

Secondary activities
Apart from work, many workers do undertake other activities in the city. Based on the Central Melbourne Travel Survey 2014, it is estimated that more than a quarter, 26.3 per cent, of those who travelled to work in the city dined at a café or restaurant. Other common secondary activities include:

- Shopping (16.9 per cent)
- Buying takeaway food or drinks (14.9 per cent)
- Visiting or meeting up with friends or relatives (12.2 per cent)
- Visiting a bar, pub or nightclub (6.9 per cent)
- Sightseeing (8.4 per cent)

(See Figure 15)

Figure 15.   Workers' Secondary Activities
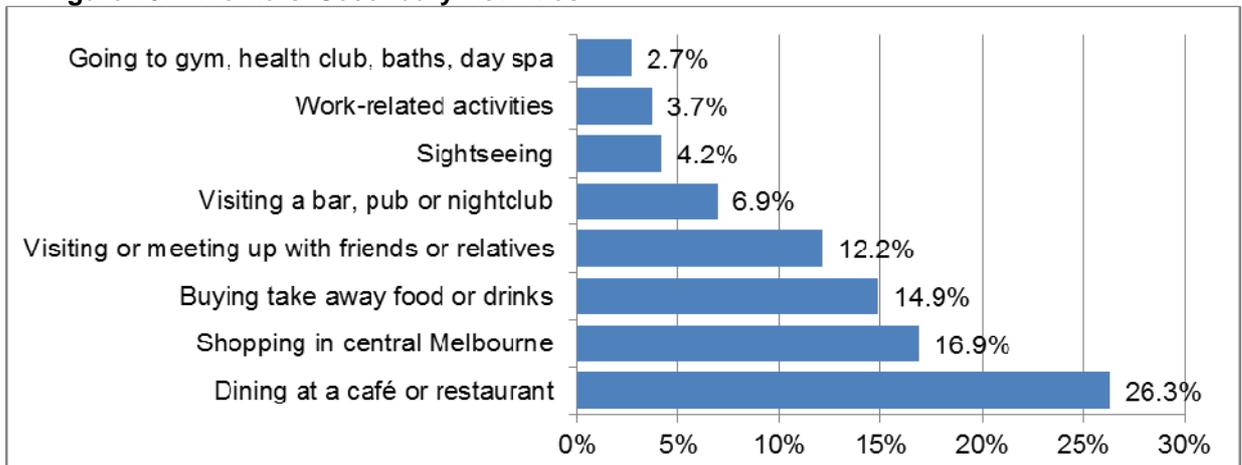
Source: Central Melbourne Travel Survey 2014, Intercept Survey.

Outlook of the number of city workers

The forecast number of workers in this report was primarily based on City of Melbourne/SGS Employment Forecasting Model published in January 2014. The model begins with a top down approach that establishes the total level of employment in Victoria, metropolitan Melbourne, Melbourne municipality and each suburb in the municipality by industry. The employment growth in the city is constrained by the total labour force.

The model suggests that employment in the city is set to grow around 2.0 per cent per annum between 2015 and 2031. This is based on an annual growth rate of 2.5 per cent between 2015 and 2026 and 1.6 per cent between 2026 and 2031.

It further suggests two employment forecast scenarios: Base and No Arden Macaulay, with marginal difference and the emphasis being on Base scenario in this report, see Figure 16.

Base Scenario: employment in the municipality is likely to reach 650,000, including those who reside in the municipality which are considered as residents for the purpose of this report, by 2030, which translates into a forecast of more than 526,000 people, excluding those live and work in the city, travelling to work or undertaking work-related activities in the city on an average weekday.

No Arden Macaulay Scenario: employment in the city is to reach 645,000 by 2030 which is an equivalent of 522,000 people, excluding those live and work in the city, travelling to work or undertake work-related activities in the city on an average weekday.

Figure 16.   Employment Forecasts
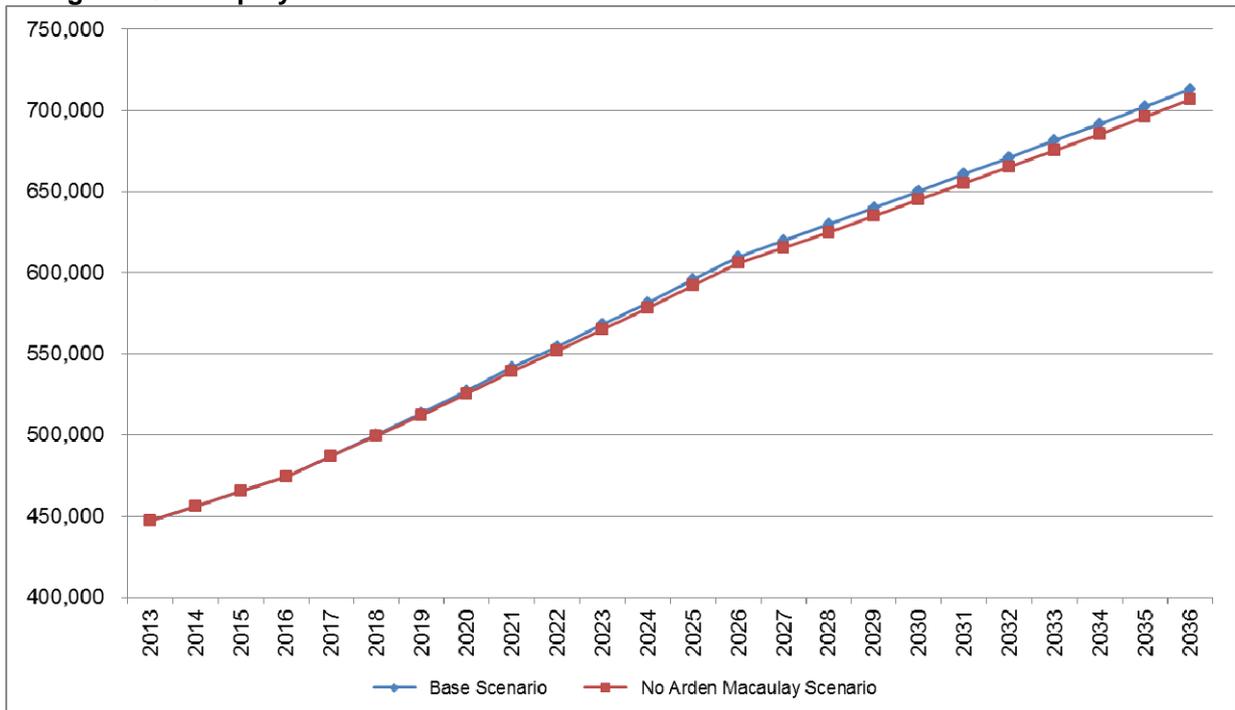
Source: CoM/SGS 2014, Employment Forecasting 2013-2031.

It is important to note that the employment forecast model on which the employment data in this report is based, does not take into account two important influential factors. Firstly the recent domestic and international economic and financial changes may have significant impacts on employment in the city.

Secondly, the Melbourne Metro Rail Project, recently announced by the Labour Government that will transform Melbourne's public transport system. The project is to build two nine-

kilometre underground rail tunnels linking the Sunbury and Cranbourne/ Pakenham rail lines. It also includes five new underground stations to be located at Arden, Parkville, CBD North, CBD South and Domain, that will link passengers to Melbourne's university and hospital precinct, and to major employment centres in Parkville and St Kilda Rd. This project will see additional workers coming to the city to work on the project during major construction expected to commence in 2018.

Weekday Daily Higher Education Student Estimates and Forecasts

With eight universities and numerous post-secondary school institutes, Melbourne is an ideal study destination for domestic and international higher education students. It is estimated that 68,000 higher education students travelled to the city to study or undertake study related activities on an average weekday in 2014. This represents an 11.1 per cent growth over 2012.

Growth in higher education student enrolments
The number of higher education student enrolments at institutions in the city has grown significantly over the past decade. According to the Department of Education and Training's Higher Education Student Statistics, there were almost 109,000 domestic and overseas student enrolments at higher education institutions in the city in 2013. This represents a 4.2 per cent annual growth rate between 2002 and 2013.

The growth has been driven by both domestic and overseas student enrolments. While domestic student enrolments experienced gradual growth at 3.6 per cent annually, on average, between 2002 and 2013, overseas student enrolments rose by 5.5 per cent annually during the same period (see Figure 17).

Figure 17.   Number of Higher Education Student Enrolments at Institutions in Melbourne Municipality, 2002-2013
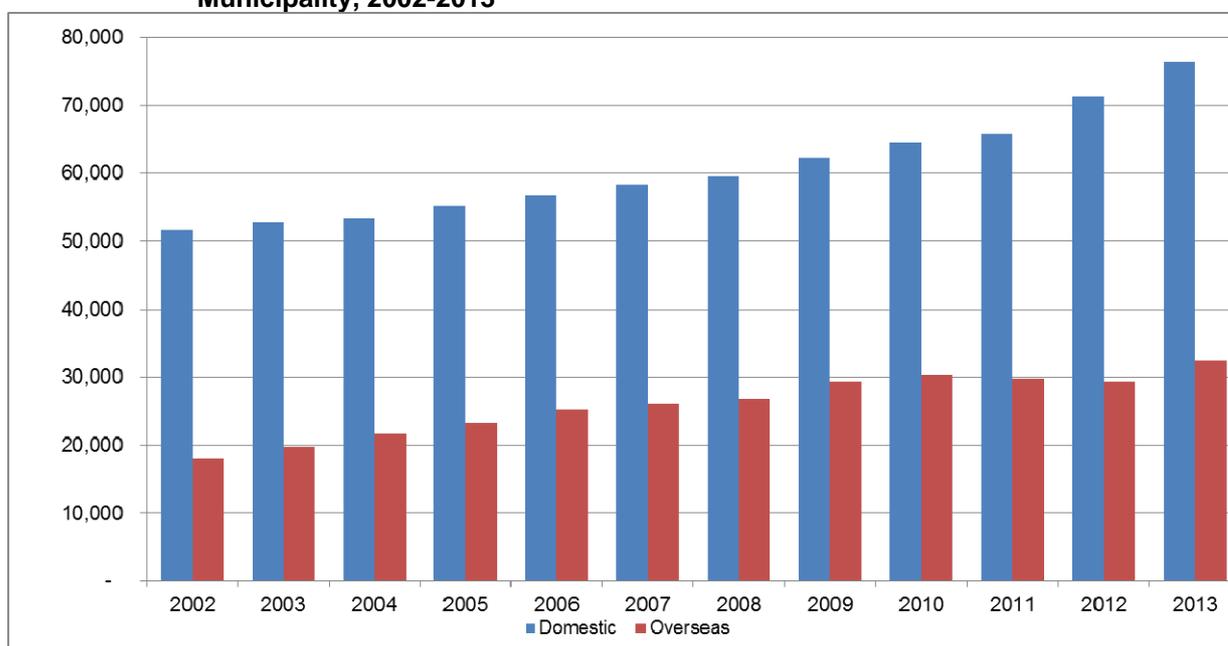
Source: Department of Education and Training Higher Education Student Statistics.

Domestic student enrolments
It is estimated that almost 77,000 domestic and 32,000 overseas higher education students were enrolled at higher education institutions in the city in 2013. It is important to note that the domestic higher education student enrolments rose significantly over the past two years – up by 8.3 per cent between 2011 and 2012 and 7.3 per cent between 2012 and 2013; due mainly

to the introduction of *Transforming Australia Higher Education System* policy which aims to have 40 per cent of 25 to 34-years-old holding a bachelor degree or higher, and give more people the chance to participate in higher education. The policy is a student demand-driven funding system, whereby funding for university followed student demand rather than universities having a specific allocation of funded places. It also provides opportunities for capable people from all backgrounds, especially disadvantaged, to participate to their full potential and be supported in doing so.

Overseas student enrolments
It is estimated that more than 32,000 full-time and part-time overseas student enrolments in the city in 2014. The number of overseas higher education student enrolments in the city bounced back, up by 10.2 per cent, in 2013 after a marginal decline in 2011 and 2012 due probably to a combination of concerns over the Global Financial Crisis, appreciation of Australian dollar and the decline in Indian student enrolments/commencements in Melbourne.

Asian nations continue to be a driving force for the growth. In 2013, nine out of the top 10 source countries are Asian (see Figure 18):

- China (excluding SARs and Taiwan)
- Malaysia
- India
- Indonesia
- Singapore
- Vietnam
- Pakistan
- Hong Kong (SAR of China)
- United States of America
- South Korea

They, combined, share nearly three in four, 72.2 per cent, of the total overseas higher education student enrolments in the city.

Figure 18.   Top Ten Markets of Overseas Higher Education Student Enrolments in the City
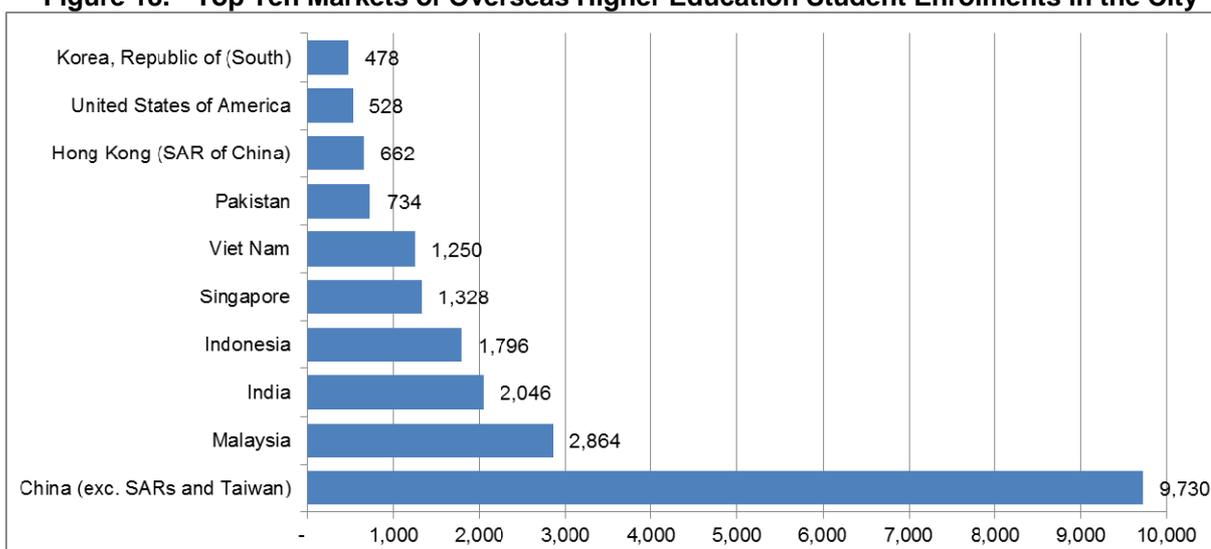
Source: Department of Education and Training, Higher Education Student Statistics 2013.

Outlook
It is forecast that the number of higher education student enrolments and commencements is likely to continue to grow in foreseeable future. The growth is likely to be driven by both domestic and international student demands.

The domestic higher education sector is likely to grow strong in the future with the introduction of *Transforming Australia Higher Education System* policy. As noted above, the domestic higher education enrolments in the city has grown significantly since the introduction of the policy, almost three time higher rate than pre-policy period average growth rate, 2002-2011. The policy is expected to continue impacting on domestic higher education student enrolments unless there will be changes to higher education related policies, especially the reform bill introduced by the Federal Government which aims to allow universities to set their own fees.

Overseas higher education student enrolments are also likely to continue to grow. The growth will be driven by various factors such as continued global demand for higher education, quality of Australian higher education, depreciation of Australian dollars against major currencies which makes Australia's education more competitive and other advantages of studying in Australia.

The latest Australian Education International's (AEI) student data reveals recovery trends of international student enrolments and commencements in Victoria after a decline in 2010 and 2011. The growth in higher education enrolments is likely to continue in the near future as a result of an increase in English Language Intensive Courses for Overseas Students (ELICOS) enrolments and commencements which is a common pathway into higher education. Figure 19 illustrates overseas student enrolments and commencements in ELICOS sector in Victoria.

Figure 19.   Student Enrolments and Commencements in ELICOS in Victoria, 2002 – 2014
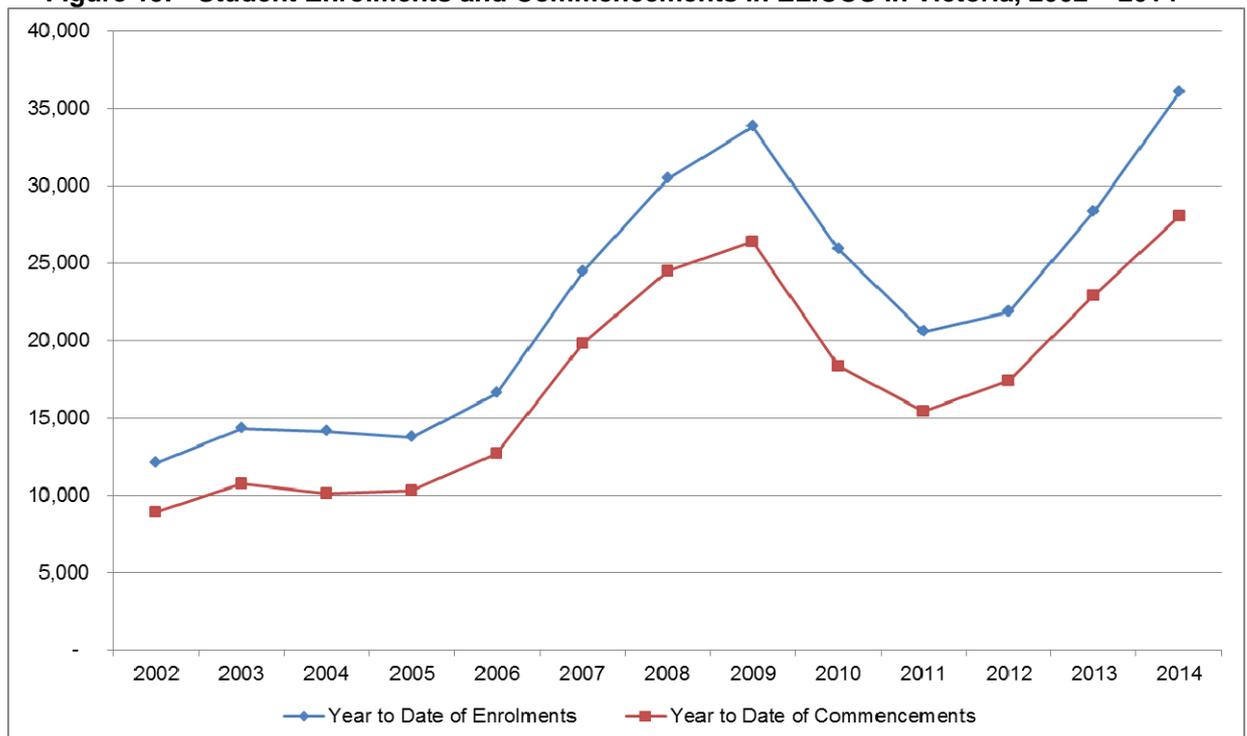
Source: Australian Education International, 2014, Year to Date International Student Data.

Therefore we forecast that the number of domestic and overseas people travelling to the city for study or to undertake study-related activities is likely to grow at a rate of 2-3 per cent per annum between 2015 and 2030. This will see approximately 100,000 people travelling the city for study or study-related activities in 2030.

It is worthwhile mentioning that any change in relation to the higher education sector is likely to have immediate and substantial impact on both domestic and international education enrolments. We assumed that there won't be any major policy changes in the near future and

higher education reform bill, intended to allow universities to set their own fees, introduced by the Federal Government in early 2015 will not be reintroduced and passed.

In this report, we further assumed that the demand for Australian higher education is to continue despite recent increase in level of competition from other well-established higher education institutions in developed countries as well as in emerging countries such as China and others.

Weekday Daily Metropolitan Visitor Estimates and Forecasts

It is estimated that more than 172,000 Metropolitan Melbourne residents aged 15 years and over travelled to the city on an average weekday for visiting purposes that are non-work and non-study in 2014. This represents marginal decline, 2.6 per cent, from 2012.

The Metropolitan Melbourne visitors travel to the city for a wide range of main reasons and the common primary reasons are:

- Attending personal appointments - medical, banking, solicitor and other (23.0 per cent)
- Visiting or meeting with friends and relatives (19.6 per cent)
- Shopping (13.8 per cent)
- Dining at a café or restaurant(9.9 per cent)
- Sightseeing (.9.1 per cent)

(See Figure 20)

Figure 20.   Main Reasons for Traveling to the City for Metropolitan Visitors in 2014
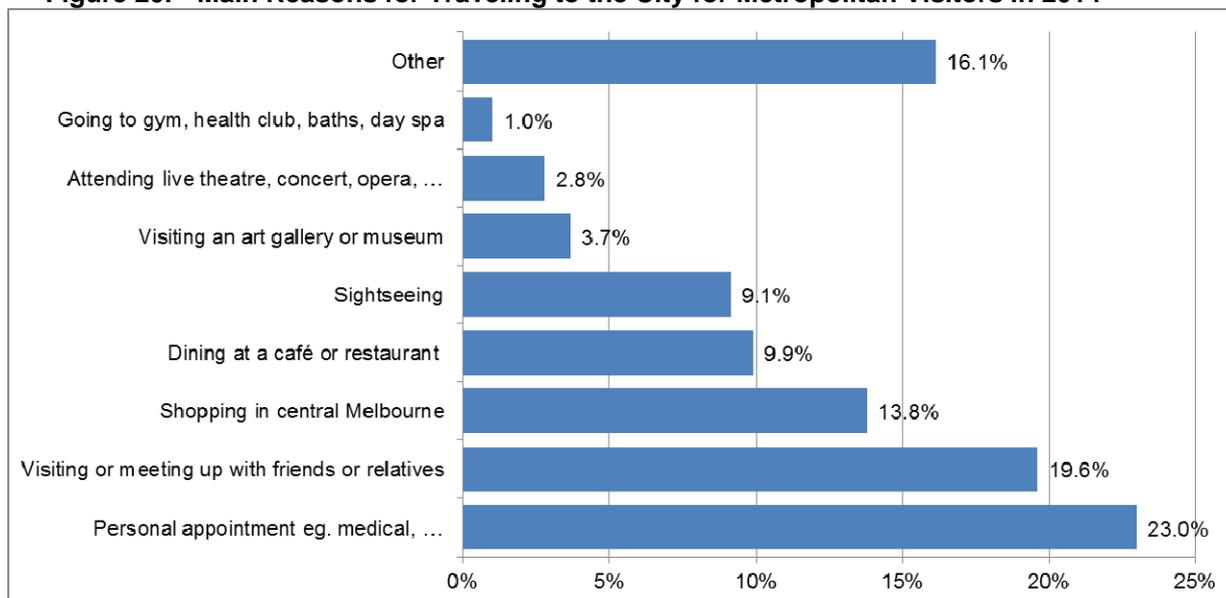
Source: CoM Central Melbourne Travel Survey 2014, Intercept survey.

Apart from the primary reason for traveling to the city, metropolitan visitors also carry out a wider range of other activities. The common secondary activities include:

- Dining at a café or restaurant (36.4 per cent)
- Shopping including groceries (21.5 per cent)
- Buying take away food or drinks (15.2 per cent)
- Visiting or meeting up with friends or relatives (11.4 per cent)

(See Figure 21)

Figure 21. Secondary Activity Undertaken by Metropolitan Visitors

Activity	Percentage
Attending school, university or college in the city	1.5%
Work related business	1.5%
Attending live theatre, concert, ballet, …	1.8%
Visiting a bar, pub or nightclub	2.0%
Visiting parks and gardens	2.8%
Personal appointment eg. medical, banking, solicitor	3.6%
Visiting an art gallery or museum	4.6%
Attending religious place of worship	4.8%
Sightseeing	9.8%
Visiting or meeting up with friends or relatives	11.4%
Buying take away food or drinks	15.2%
Shopping in central Melbourne	21.5%
Dining at a café or restaurant	36.4%

Source: CoM's Central Melbourne Travel Survey 2014 Intercept Survey Data.

Metropolitan visitors are young. According to the Central Melbourne Travel Survey 2014, nearly a quarter, 31.6 per cent, of metropolitan visitors are in 20-29 years old age bracket. Other prominent age groups are:

- 30-39 years old (15.4 per cent)
- 60-69 years old (13.6 per cent)
- 40-49 years old and 50-59 years old (11.8 per cent each)

(See Figure 22)

Figure 22. Demographic Characteristics of Metropolitan Visitors

Age group	Percentage
80 years or more	0.4%
70-79 years	7.0%
60-69 years	13.6%
50-59 years	11.8%
40-49 years	11.8%
30-39 years	15.4%
20-29 years	31.6%
14-19 years	8.5%
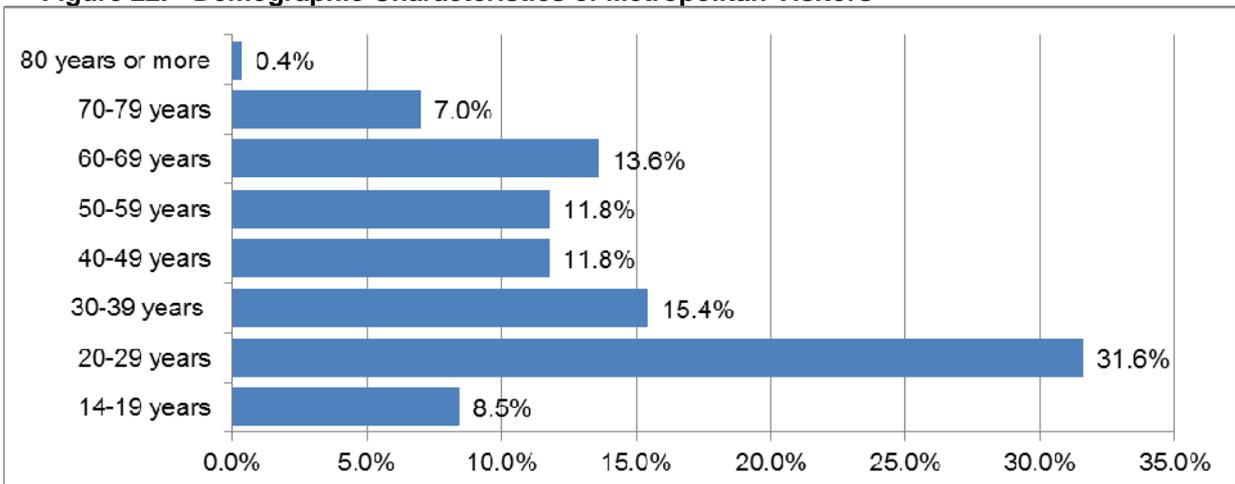
Source: CoM's Central Melbourne Travel Survey 2014 Intercept Survey Data.

Outlook

Population in the Greater Melbourne area, slightly larger than Metropolitan Melbourne, is forecast to grow in the next one and a half decades. Based on Department of Planning and Community Development Victoria in Future 2014, the resident population of the Greater Melbourne is set to reach a five million mark around 2021 and almost 6.8 million by 2041. This represents an average annual growth rate of 1.7 per cent between 2011 and 2041. This growth is to contribute to an increase in the number of people travelling to the municipality for work, study and visit.

According to Central Melbourne Travel Surveys 2004-2014 and CoM's pedestrian counting system, visitation to the city by metropolitan Melbourne residents vary greatly depending on a wide range of factors which are impossible to quantify. However the series of Central Melbourne Travel Surveys suggest that around 0.8 per cent, on average, of metropolitan population aged 15 years travel the city for visit on an average weekday. If this ratio is to remain unchanged we expect over 182,000 metropolitan visitors travelling to the city by 2030 on an average weekday.

Weekday Daily Regional Visitor Estimates and Forecasts

On an average weekday in 2014, we estimated 13,000 regional Victorian residents travelled to the municipality for visiting purposes. This represents an 8.0 per cent decline from 2012. This estimation is based on National Visitor Survey (NVS), rather than on Central Melbourne Travel Surveys' data.

Main purpose of visits
Holidays, leisure, relaxation or getting away is the predominant reason for regional visitors travelling to the city. Based on NVS calendar year 2014 data, more than one in five (21.4 per cent) travelled to the city primarily for holidays, leisure, relaxation or getting away. Other prominent reasons include:

- Shopping (14.7 per cent)
- Medical reasons (12.4 per cent)
- To attend an event, sport or cultural or festival (11.6 per cent)
- Visiting friends (11.2 per cent)
- Visiting relatives (10.9 per cent)
(See Figure 23)

Figure 23.   Main Reasons* for Travelling to the City for Regional Visitors in 2014
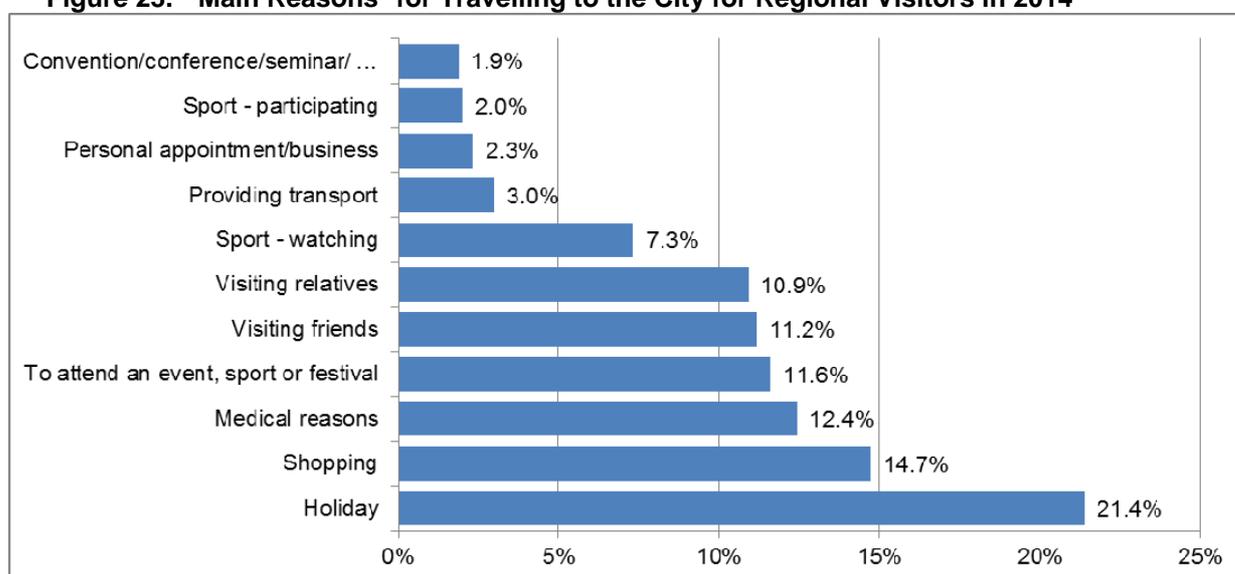
* Excludes work and study related purpose of visit.
Source: Tourism Research Australia, NVS Overnight and Daytrip 2014.

Trip activities
Regional visitors normally carry out a wide range of activities while visiting the city. Based on NVS overnight and daytrip data, the majority, 85.7 per cent, of regional visitors eat out or dine at a restaurant or café. Other popular activities carried out by the regional visitors include:

- Visiting friend and relatives (45.7 per cent)

- Go shopping for pleasure (41.7 per cent)
- Sightseeing or looking around (16.9 per cent)
- Go to pubs, clubs, discos, etc. (15.2 per cent)
- Visiting museums or art galleries (10.8 per cent)

(See Figure 24)

Figure 24.   Trip Activities while Travelling to the City for Regional Visitors* in 2014
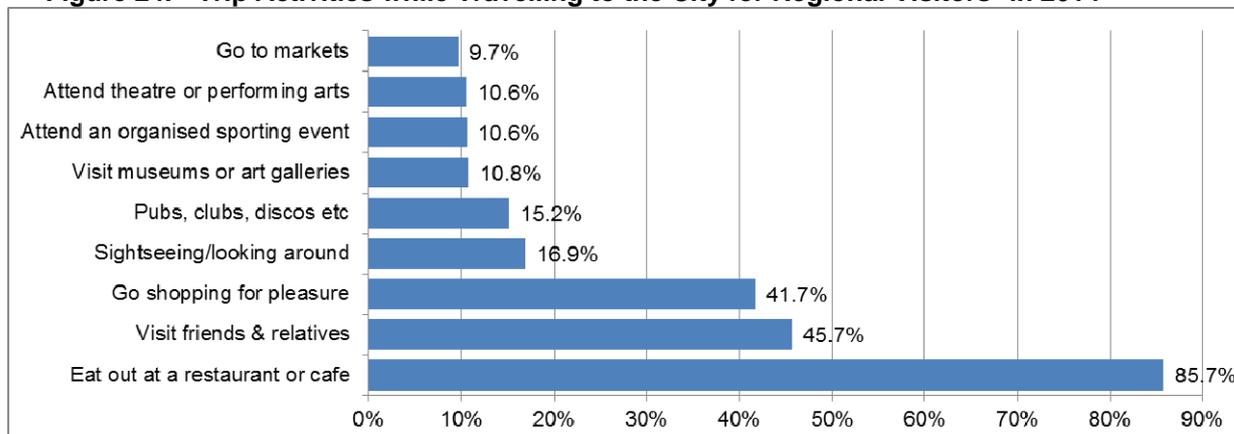
* Excludes those whose main trip purposes are work and study related.
Source: Tourism Research Australia, NVS Overnight and Daytrip Year 2014.

Outlook

Along with metropolitan population growth, regional Victoria is also set to grow in the next 16 years. According to *Victoria in Future 2014*, the regional Victorian population aged 15 years plus is forecast to grow at an annual average rate of 1.3 per cent during 2014 to 2040. This growth will see slight variations in regional visitors to the city on an average weekday.

Assuming that the ratio of regional Victorian residents travelling to the city remains unchanged in the future and the regional population will grow at the forecast rate forecast by the Department of Transport, Planning and Local Infrastructure, we predict the number of regional Victorian visitors to grow at the same rate, 1.1 per cent annually. By 2030, there will be around 16,000 regional visitors travelling to the city on an average weekday.

Weekday Daily Interstate Visitor Estimates and Forecasts

It is estimated that more than 31,000 interstate visitors travelled to the city on an average weekday in 2014, representing a 4.5 per cent increase from 2012.

Purpose of trips

Having more than 5,500 retail and entertainment establishments and full-on major events, Melbourne is an ideal destination for interstate visitors. It is estimated that there were more than 2.0 million overnight and daytrip interstate visitor trips, exclude trips by interstate visitors who stayed outside the municipality but might travel to the city during their visit, to the city in 2014. More than two in five trips (41.0 per cent) were for holidays, leisure, relaxation and getting away while other popular main purposes of the trips include:

- Visiting relatives and friends (17.5 per cent)
- Visiting friends (9.9 per cent)
- Sport – watching (8.9 per cent)
- Attending event, sport or cultural or festival (8.2 per cent)
- conferences, exhibitions, conventions or trade fairs (5.9 per cent)

 (See Figure 25)

Figure 25.   Interstate Trips by Destination Purpose* of Visit in 2014

Purpose	Percentage
Personal appointment/business (exc. health)	0.6%
Providing transport	0.6%
Shopping	0.8%
Attend Funeral	0.8%
Sport - participating	2.2%
Medical reasons	3.5%
Convention/conference/seminar/trade fair/exhibition	5.9%
To attend an event, sport or cultural or festival	8.2%
Sport - watching	8.9%
Visiting friends	9.9%
Visiting relatives	17.5%
Holiday	41.0%
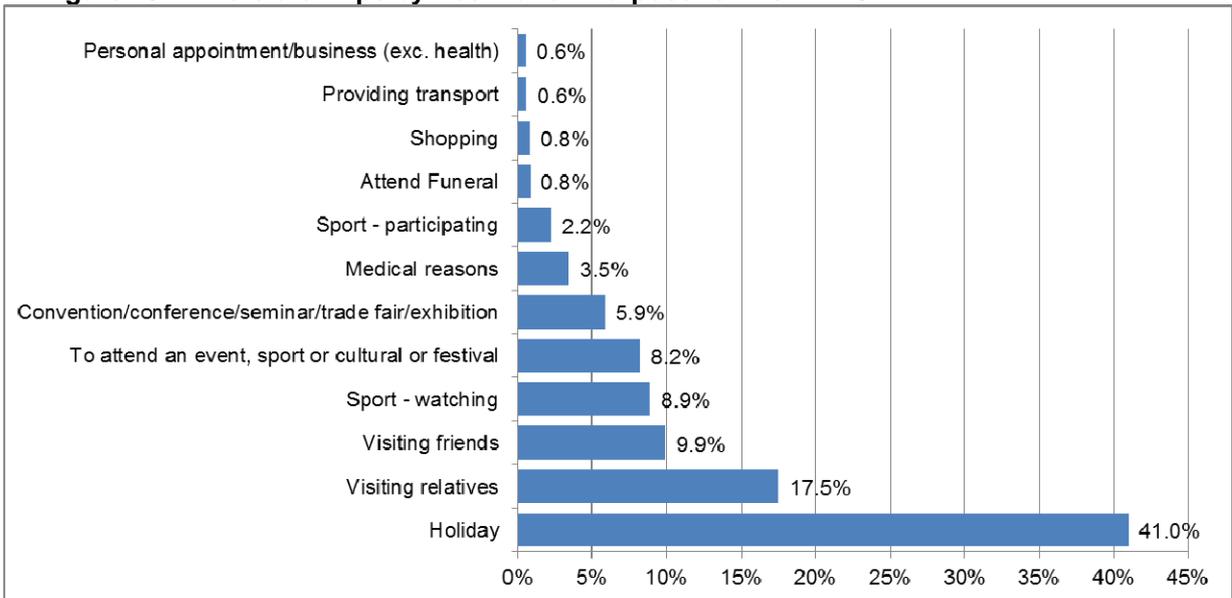
* Excludes those with work and study related destination purpose of visit.
Source: Tourism Research Australia, NVS Overnight Trips and Daytrips 2014.

Demographic characteristics of interstate visitors
It is estimated that more than a quarter of interstate visitors (26.1 per cent) aged 55 years old or over. Other prominent interstate visitor age groups are:

- 25 to 29 years (14.6 per cent)
- 20 to 24 years (14.0 per cent)
- 50 to 54 years (9.6 per cent)
- 40 to 44 years (8.6 per cent)

(See Figure 26)

Figure 26.   Interstate Visitors* by Age Group in 2014
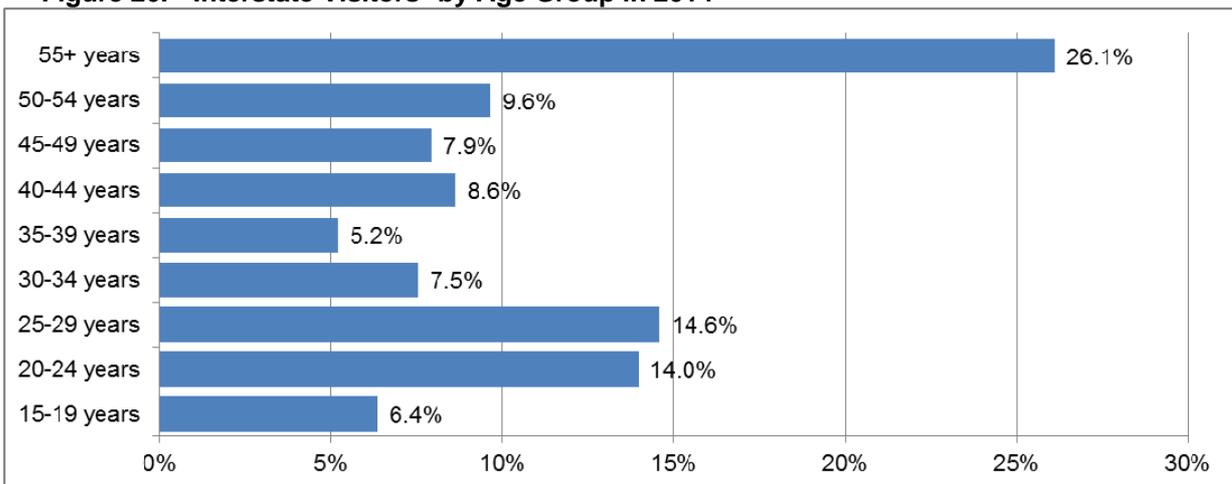
Age Group	Percentage
55+ years	26.1%
50-54 years	9.6%
45-49 years	7.9%
40-44 years	8.6%
35-39 years	5.2%
30-34 years	7.5%
25-29 years	14.6%
20-24 years	14.0%
15-19 years	6.4%

* Excludes those with work and study related stopover reason.
Source: Tourism Research Australia, NVS Overnight Trips and Daytrips 2014.

Origin of interstate visitors
New South Wales (NSW) remained the largest single state/territory contributor of interstate daytrip and overnight trip visitors to the city. It accounted for nearly one in two, 43.4 per cent, visitors to Melbourne in 2014, followed by other states and territories:

- Queensland (17.6 per cent)

- South Australia (13.5 per cent)
- Western Australia (11.5 per cent)
- Tasmania (8.5 per cent)
- ACT (4.5 per cent)

(See Figure 27)

Figure 27.   Origin of Interstate Visitors* to Melbourne in 2014
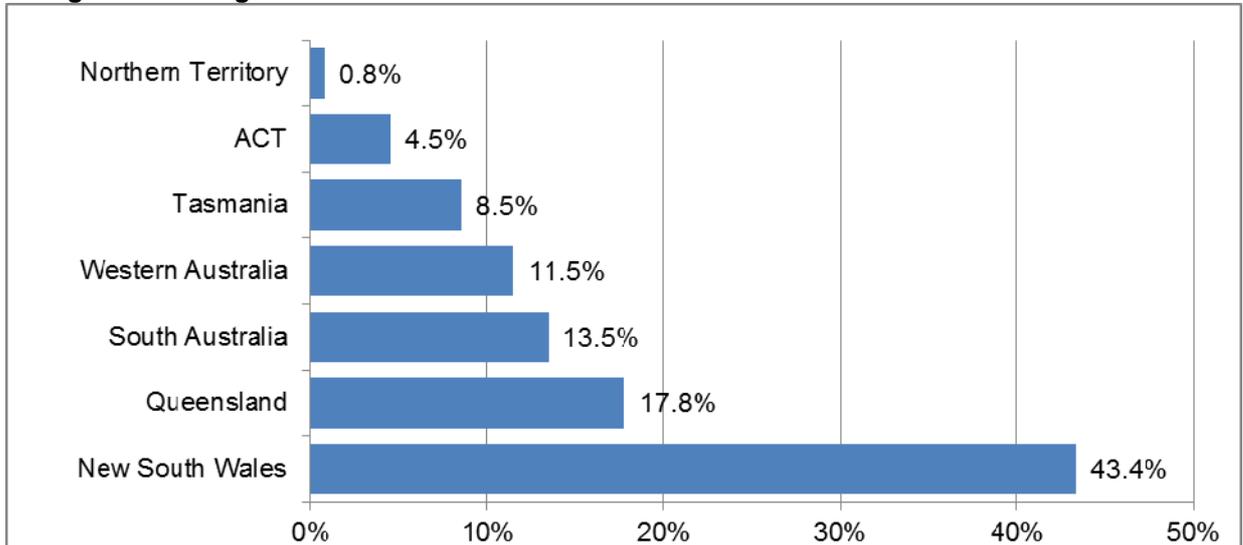
* Excludes those with work and study related stopover reason.
Source: Tourism Research Australia, NVS Overnight Trips and Daytrips 2014.

Household income of interstate visitors
Figure 28 illustrates interstate visitors to the city by their annual household income. It is clear that the highest income bracket households ($200,000 or more) accounts for the largest proportion, 16.2 per cent, of the interstate visitors to the city. Other prominent household income groups are:

- $150,000 to $147,999 (8.2 per cent)
- $130,000 to $149,999 (7.6 per cent)
- $55,000 to 69,999 (7.5 per cent)

 (See Figure 28)

Figure 28.   Interstate Visitors* by Annual Household Income in 2014
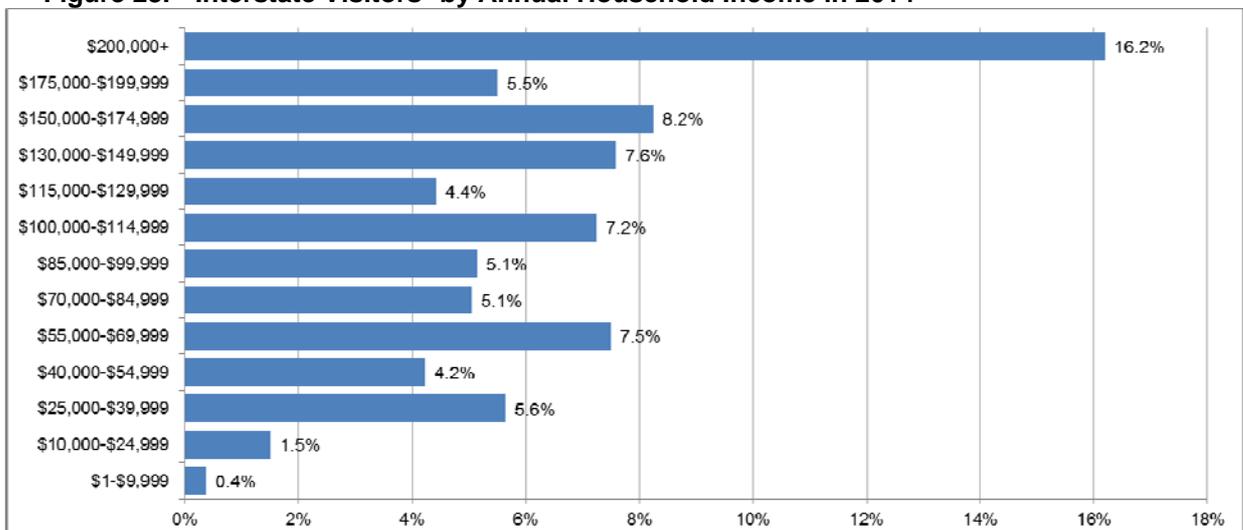
* Excludes those with work and study related stopover reason.
Source: Tourism Research Australia, NVS Overnight Trips and Daytrips 2014.

Length of trip
Interstate overnight visitors stayed approximately 3.3 nights, on average, in Melbourne in 2014. Nearly one in three stayed between 4 and 7 nights and nearly a quarter stayed two nights and three nights (see Figure 29).

Figure 29.   Length of Trip of Interstate Visitors* in 2014
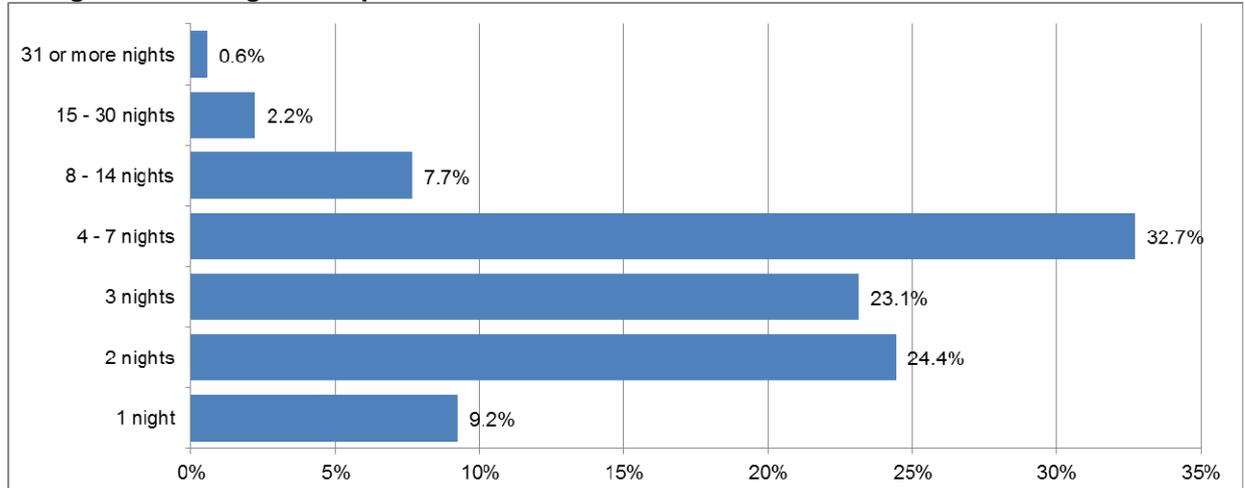
* Excludes those with work and study related stopover reason.
Source: Tourism Research Australia, NVS Overnight Trips 2014.

Popular destinations
Melbourne has plenty to offer in terms of iconic places to visit, unfortunately Bourke Street Mall was not included in the NVS 2014. In 2014, Southbank/Southgate was the most popular destination for interstate visitors. Nearly one third (30.5 per cent) of interstate visitor visited the place. Other popular places include:

* Crown Casino/Entertainment Complex (29.0 per cent)
* Federation Square (28.3 per cent)
* Docklands/Etihad Stadium (21.2 per cent)
* Queen Victoria Market (20.8 per cent)
* Melbourne Cricket Ground (MCG) (10.2 per cent)

(See Figure 30)

Figure 30.   Places Visited by Interstate Visitors* in 2014
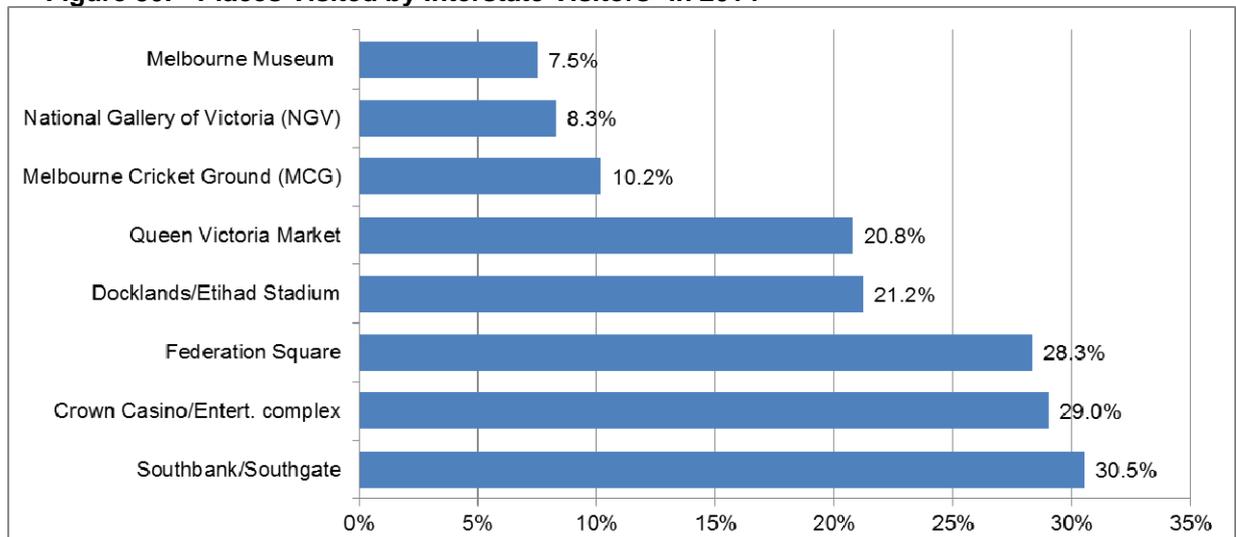
* Excludes those with work and study related stopover reason.
Source: Tourism Research Australia, NVS Overnight Trips 2014.

Accommodation
Having more than 20,000 hotel/motel rooms, Melbourne offers a wide change of accommodation. In 2014, the majority of overnight trip interstate visitors stayed in commercial accommodation – 29.8 per cent stayed in luxury hotels or luxury resorts (4 or 5 start) while another 29.6 per cent stayed in standard hotels or motor inns (below 4 start). Other popular accommodation types include:

- Friends or relatives property (21.0 per cent)
- Serviced apartment (12.1 Per cent)

(see Figure 31).

Figure 31.   Type of Accommodation Used by Interstate Visitors* in 2014
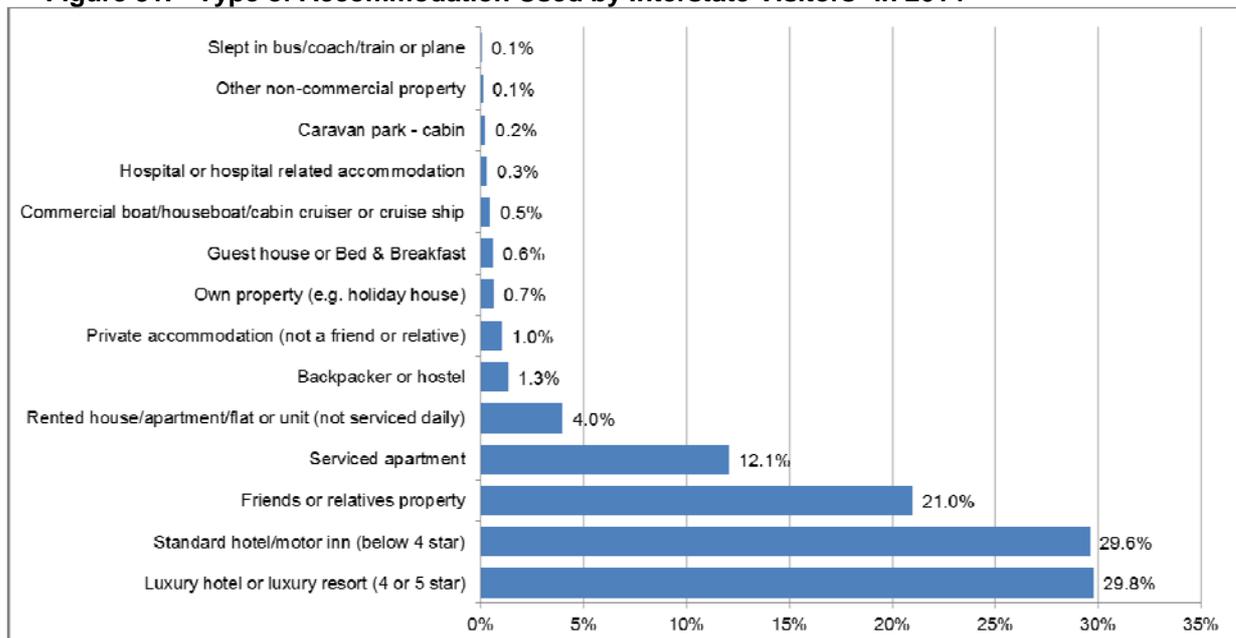
* Excludes those with work and study related stopover reason.
Source: Tourism Research Australia, NVS Overnight Trips 2014.

Outlook
According to Tourism Forecasting Committee and Tourism Victoria, interstate visits to metropolitan Melbourne are set to continue to grow in the next ten years. With regard to domestic visitation, it is forecast that the number of domestic visitor nights to metropolitan Melbourne will grow around 0.7 per cent, on average, between 2013-14 and 2022-23, assuming that wage and consumer inflation pressures are to be contained and low interest rates have positive impact on key consumer and investment activity.

If the proportion of interstate visitors to the city and other assumptions are to remain unchanged, it is forecast that the number of interstate visitors to the city on an average day is set to grow around 0.9 per cent per annum. This adds up to around 37,000 interstate visitors visiting the city on an average weekday by 2030.

Weekday Daily International Visitor Estimates and Forecasts

Melbourne's reputation as an ideal destination to visit continues to grow along with the number of international visitors to the city. This is despite concerns over global financial uncertainty. Based on both the International Visitor Survey (IVS) and the Central Melbourne Travel Survey 2014, it is estimated that 45,000 international visitors aged 15 years plus travelled to, or stayed in, the municipality on an average weekday in 2014.

In one year (2014), this adds up to around 1.35 million international visitors staying in the municipality, accounting for 67.8 per cent of total international visitors to the entire state of Victoria. This growth represents more than 395,000 extra visitors to the city, compared to ten years ago, growing at 3.7 per cent annually between 2005 and 2014. The growth is mainly driven by Asian markets and the top three markets with the more than double digit growth rates are China (up by 12.4 per cent annually); India (up by 12.2 per cent annually) and Indonesia (up by 11.6 per cent annually).

Country of residence of international visitors
In 2014, the number of international visitors to Melbourne was dominated by the top four largest markets, namely China, New Zealand, United Kingdom (UK) and the United States of America (USA). These four combined contributed nearly half, 48.4 per cent, of the total international visitors to the city, see Figure 32.

China was the largest single market; has overtaken the UK and New Zealand since 2010; and accounted for one in five visitors, 21.0 per cent of the total. It is estimated that more than 284,000 Chinese visitors travelled to and stayed in the city in 2014. This represents a staggering growth rate of 12.4 per cent per annually between 2005 and 2014. It is worthwhile mentioning that our sister city program with Tianjin has very likely contributed to this exceptional growth. Other major markets were:

- New Zealand (10.9 per cent)
- USA (8.3 per cent)
- UK (8.2 per cent)

Figure 32.   Number of International Visitors* to the City by Key Markets
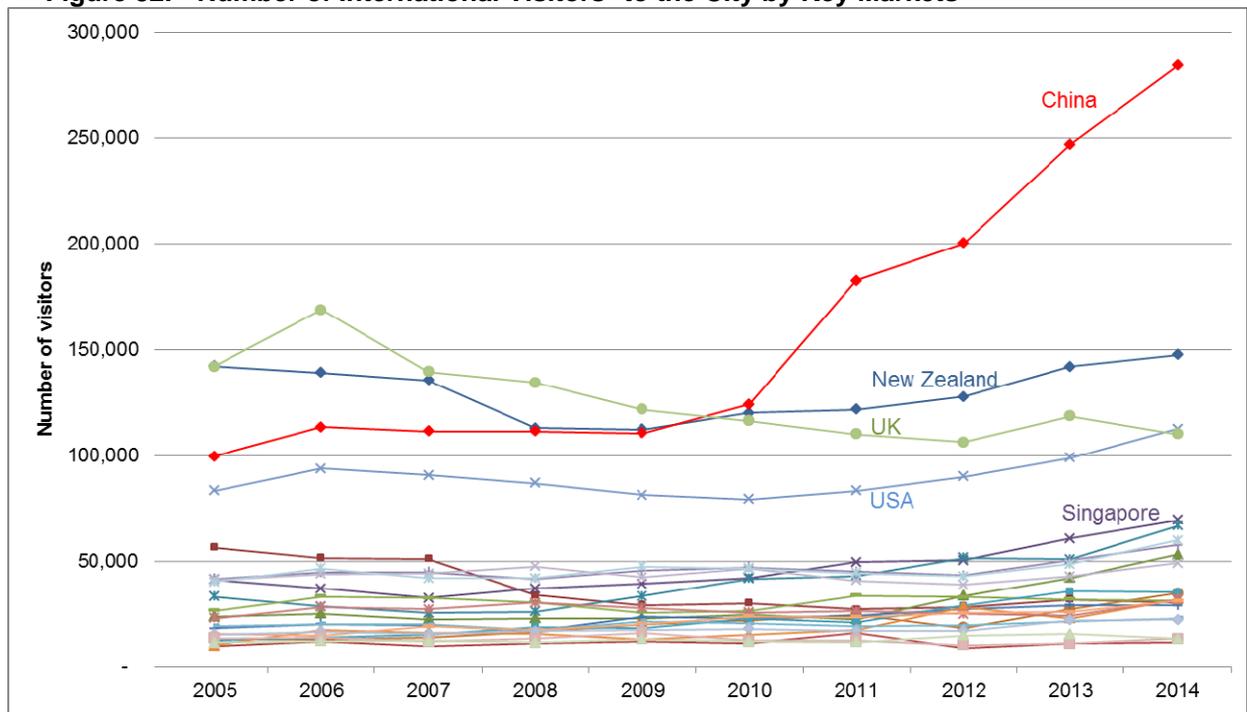
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Stopover reasons
The majority of the international visitors to the city are for holiday. It is estimated that more than 831,000 international visitors travelled to the city for holiday or pleasure representing more than three in five (61.5 per cent) of the total international visitors. The other main stopover reasons include:

- Business (10.6 per cent)
- Visiting relatives (9.6 per cent)
- Visiting friends (6.6 per cent)

(See Figure 33)

Figure 33.   International Visitors* to the City by Stopover Reason
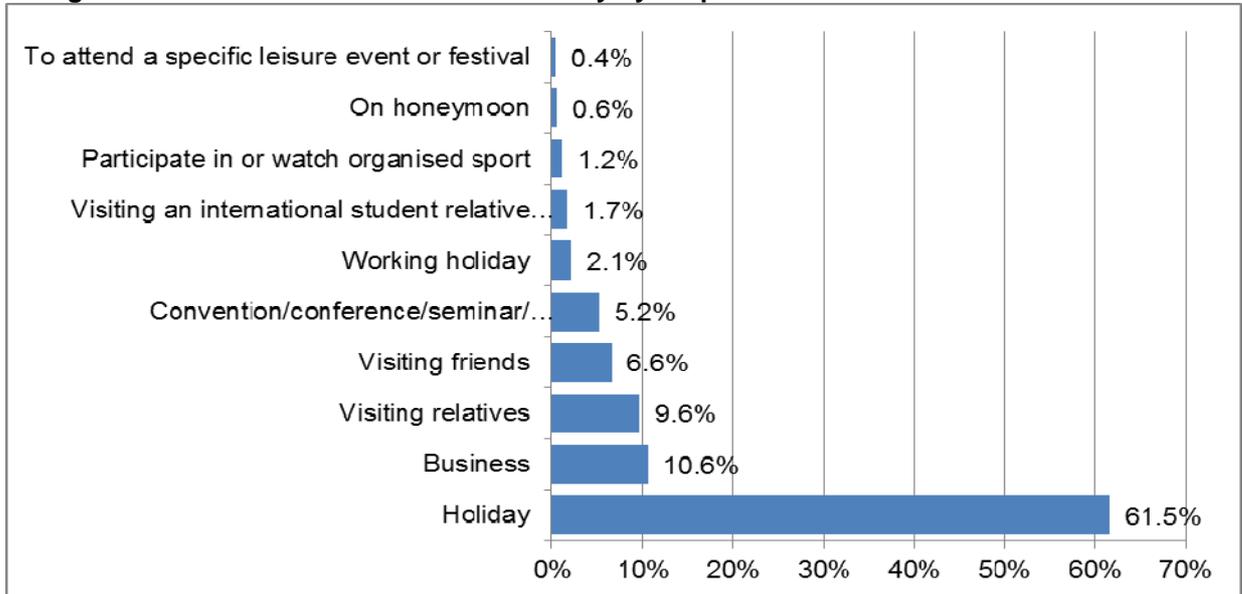
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Demographic characteristics of international visitors
The gender split of international visitors to the city has changes gradually over the past decade. There has been a gradual increase in the share female visitors from 45.9 per cent in 2005 to 51.6 per cent in 2014, see Figure 34.

Figure 34.   International Visitors* to the City by Gender
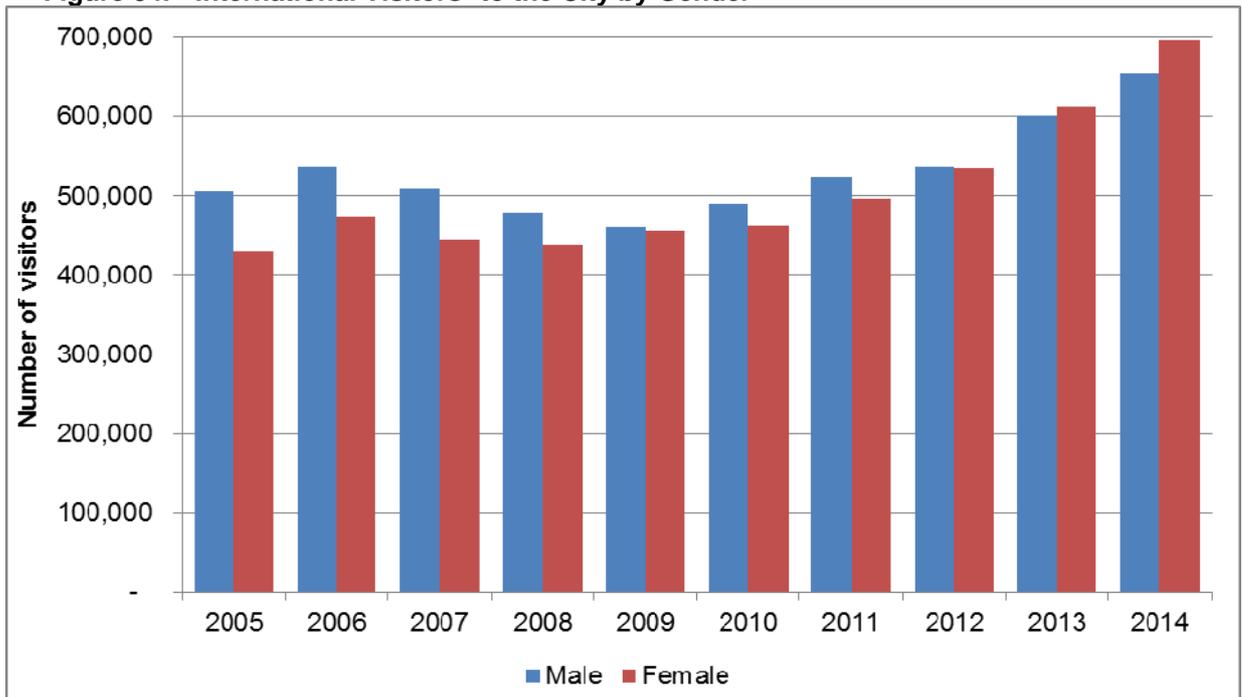
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Given the overall growth in number of international visitors to the city, all age groups have experienced absolute increase during the reporting period. The eldest age group, 55+, grew at the fastest rate, 7.5 per cent annually between 2005 and 2014, while other groups with high growth rates include:

- 25-29 years old (4.1 per cent annually)
- 45-49 years old (4.1 per cent annually)
- 50-54 years old (3.9 per cent annually)

(See Figure 35)

Figure 35. International Visitors* to the City by Age Group
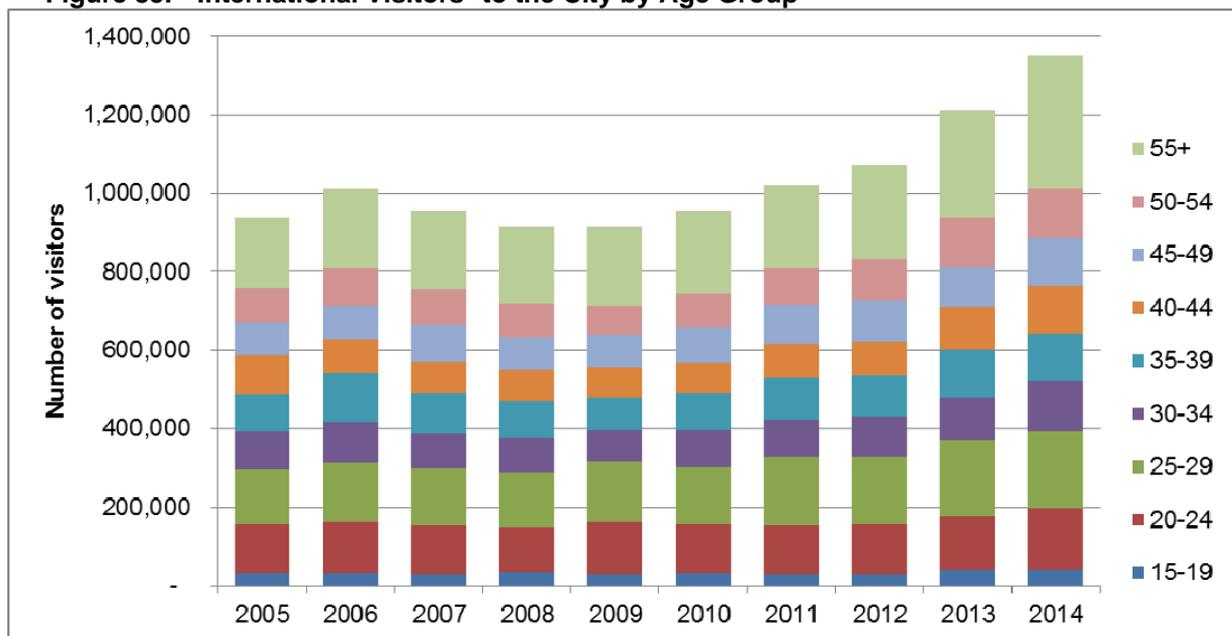
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Duration of stopover (number of nights)
The vast majority of international visitors to the city stayed between 1 and 7 nights during their trip. In 2014, more than four out of five visitors, 83.0 per cent, stayed 1-7 nights, on average, and this proportion has remained almost unchanged over the past decade, see Figure 36.

Figure 36. International Visitors* to the City by Duration of Stopover Nights
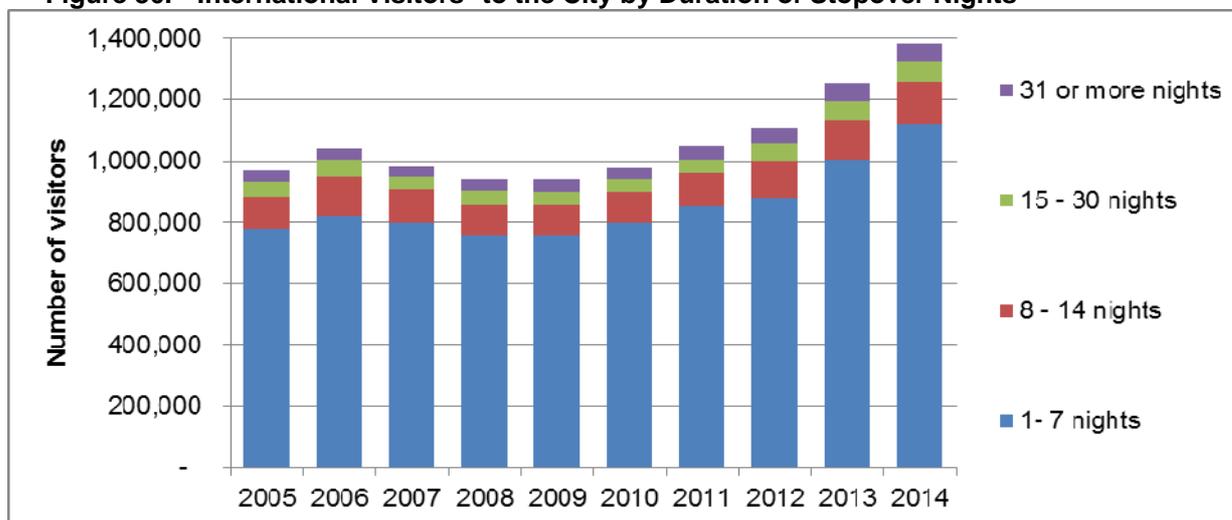
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Accommodation

The majority of international visitor to the city stayed in commercial accommodation. In 2014, nearly two thirds of all international visitors stayed in hotels/resorts/motels or motor inns. Other common accommodation used includes:

- Friends or relatives property (18.0 per cent)
- Backpacker or hostel (11.7 per cent)
- Rented house/apartment/flat or unit (3.6 per cent)

(See Figure 37)

It is interesting to note that the number of international visitors staying in rented house/apartment/flat or unit has doubled over the past ten years to more than 48,000.

Figure 37.   Accommodation Used by International Visitors* to the City
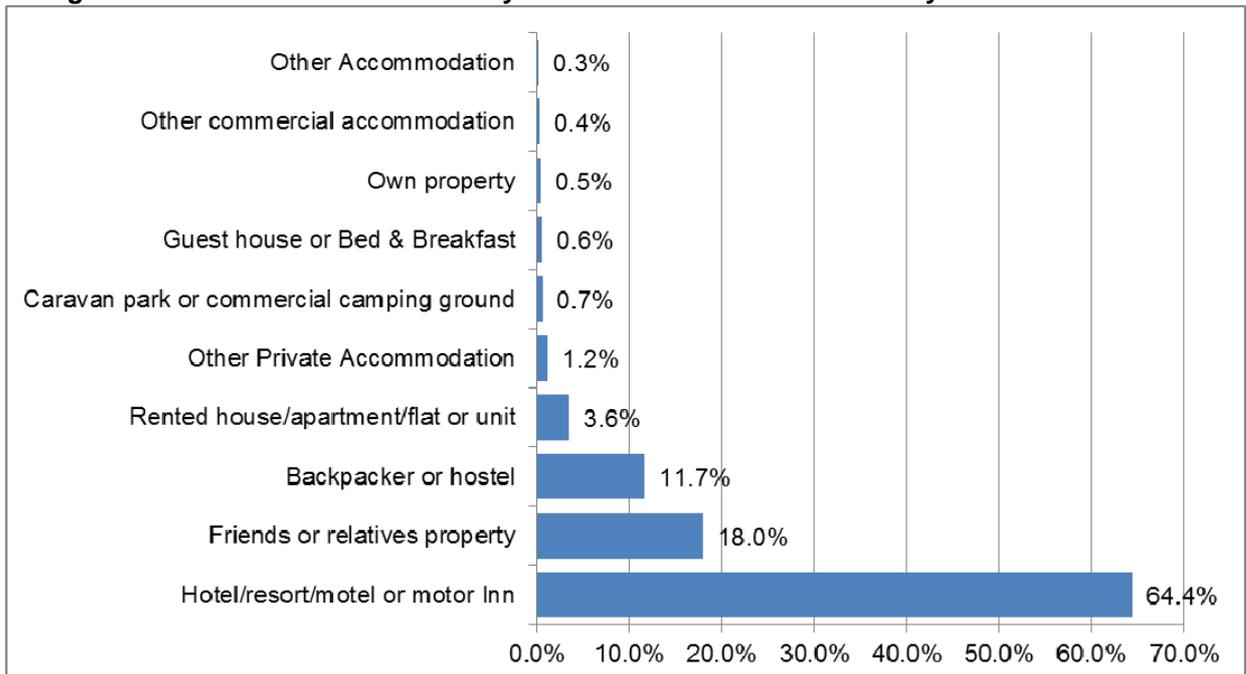
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Places visited

Historical and modern landmarks in Melbourne are among the most popular destinations for international visitors. With its charm and historical value, Queen Victoria Market tops the list as the most popular destination for international visitors. More than one in two (51.8 per cent) of international travellers to Melbourne reported to visit the market during their trips to during their trips to Melbourne. The other favourites include:

- Federation Square (50.4 per cent)
- Bourke Street Mall (30.9 per cent)
- Southbank/Southgate (29.4 per cent)
- St Kilda (28.1 per cent)
- Crown Casino/Entertainment Complex (25.2 per cent)

(See Figure 38)

The international visitors to the city also visited other places outside the municipality during their trips in 2014. More than one in third, 36.5 per cent, reported to visit the Grate Ocean Road while 20.3 per cent visited Phillip Island.

Figure 38.   Places Visited by International Visitors* to the City
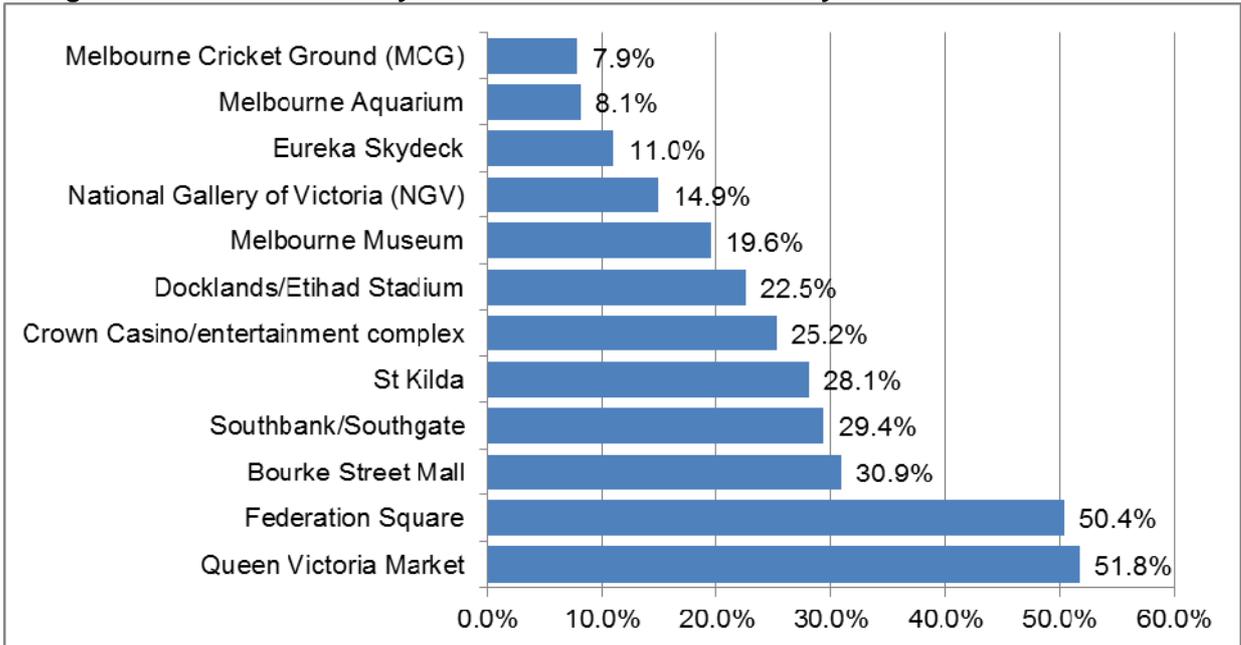
| Place	Percentage
Melbourne Cricket Ground (MCG)	7.9%
Melbourne Aquarium	8.1%
Eureka Skydeck	11.0%
National Gallery of Victoria (NGV)	14.9%
Melbourne Museum	19.6%
Docklands/Etihad Stadium	22.5%
Crown Casino/entertainment complex	25.2%
St Kilda	28.1%
Southbank/Southgate	29.4%
Bourke Street Mall	30.9%
Federation Square	50.4%
Queen Victoria Market	51.8%

* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Access to the internet before trip
Since the introduction of smart phones and mobile devices, access to the internet has become more and more important to international visitors. More than three quarters, 76.3 per cent, of the visitors to the city in 2014 reported to use the internet for information before their trips. This represents a 24.3 per cent growth from 52.0 per cent in 2005. The top four reasons to use the internet before trips include:

- To help plan Australian trip itinerary (53.3 per cent)
- To find out more about Australia after decided to visit Australia (50.3 per cent)
- To find out about accommodation in Australia (47.3 per cent)
- To look for airfares or air schedules: for travel to Australia (46.3 per cent)

(See Figure 39)

Figure 39.   Use of the Internet Before Trip for International Visitors* Visiting Melbourne

| Reason	Percentage
To find a travel agent for Australia	10.4%
To help decide whether or not to visit Australia	15.3%
To look for airfares or air schedules: for travel within Australia	23.9%
To help plan other transport options within Australia	30.5%
To organise VISA's and travel insurance	31.7%
To find out about events or activities within Australia	37.2%
To look for airfares or air schedules: for travel to Australia	46.3%
To find out about accommodation in Australia	47.8%
To find out more about Australia after decided to visit	50.3%
To help plan Australian trip itinerary	53.3%

* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Use of social media for information before trip
In 2014, more than half, 50.9 per cent, of the international visitors to the city used Facebook to look for information about Australia before their trips. Other popular social media sites used include:

- Tripadvisor (30.0 per cent)
- Youtube (13.6 per cent)
- GooglePlus (11.1 per cent)

(See Figure 40)

Figure 40. Use of Social Media for Information before Trips for International Visitors* Visiting Melbourne
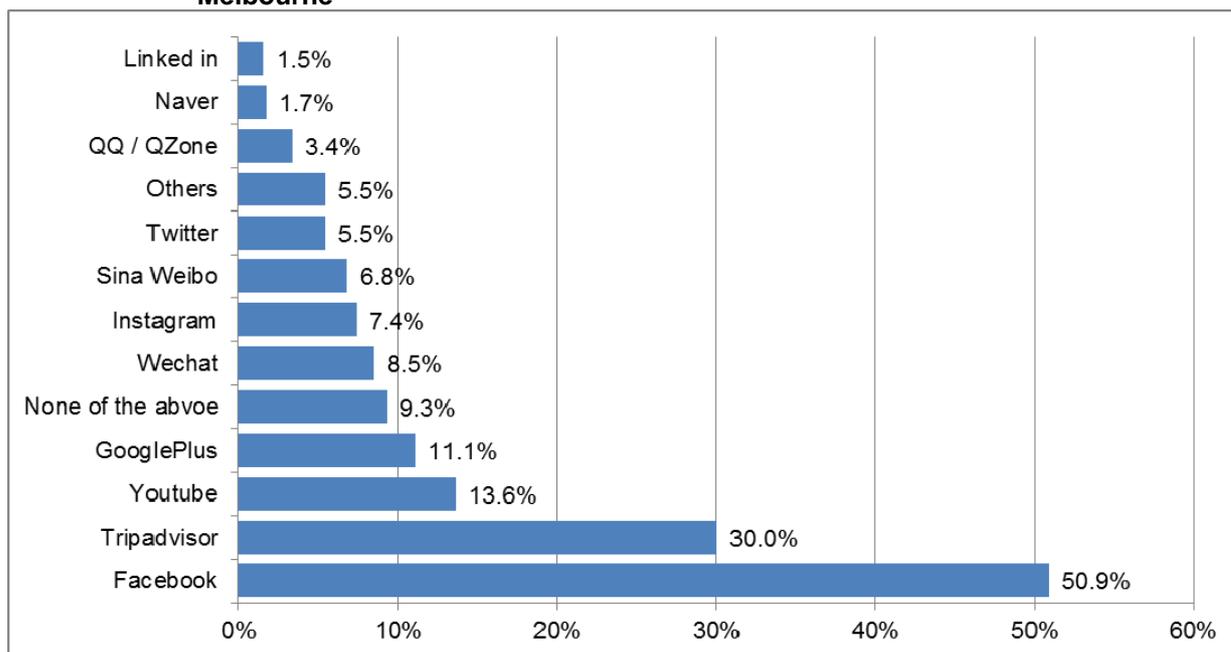
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Access to the internet during trip
Access to the internet is not only important for trip preparation but also during trip to Australia. In 2014, the vast majority of international visitor to the city, 83.5 per cent, up from 74.1 per cent in 2012, reported to access to the internet during their trips.

Figure 41 illustrates rates of internet use by country of residence while travelling. It is interesting to note that European visitors tend to have a higher, on average, propensity to access to the internet while in Australia than their Asian counterparts. French visitors had the highest rate of internet access (95.8 per cent). Other European visitors with high level of internet use during trip include:

- Scandinavia (93.9 per cent)
- Italy (93.2 per cent)
- Other European countries (92.9 per cent)
- Netherland (91.5 per cent)
- UK (90.9 per cent)

Hong Kong and Korea visitors were the top two Asian nations with the highest rates of internet access, 94.7 and 93.9 per cent respectively.

Other Asian visitors with low level of internet access during their trips to Australia include:

- China (68.1 per cent)
- Other Asia (77.8 per cent)
- India (81.2 per cent).

Figure 41.   Use of the Internet while in Australia for International Visitors* Visiting Melbourne
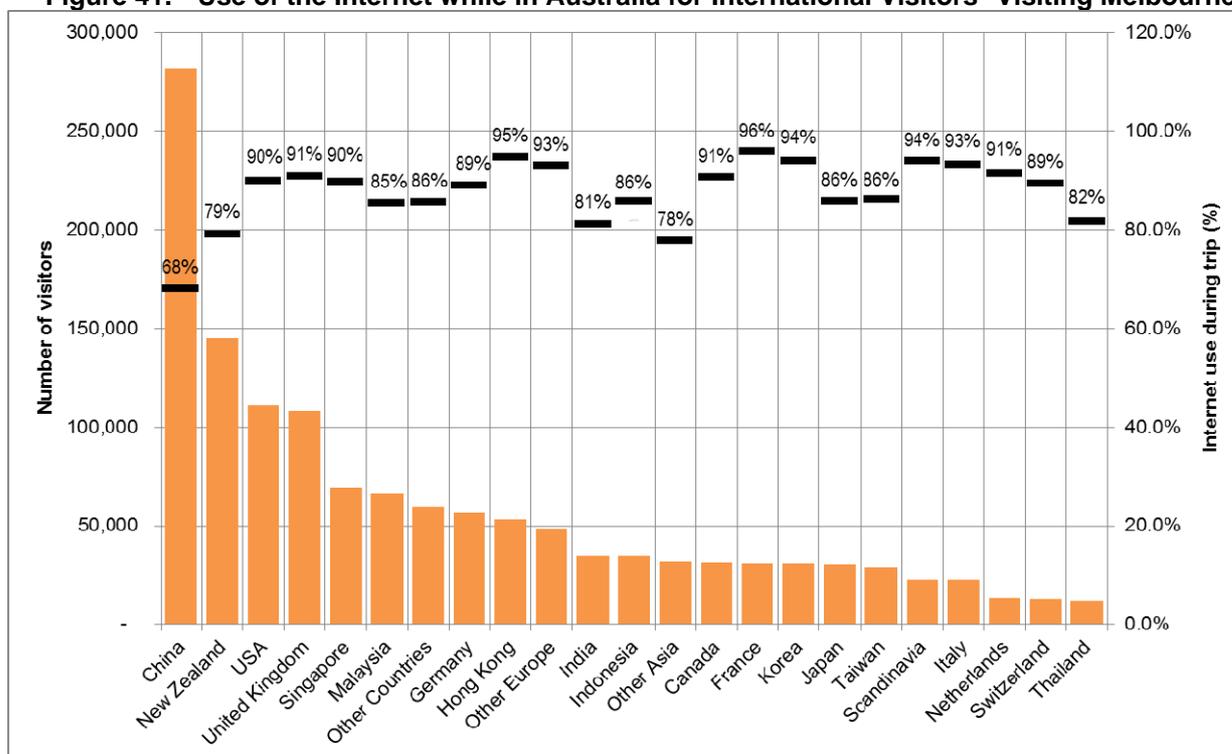
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Reason for internet use during trip
Finding ways to get around the city is the predominant reason for using the internet. Two in three (66.9 per cent) international visitors used the internet to access maps in 2014 while more than a quarter (37.1 per cent) used the internet to look up transport timetables. Other main reasons for internet access include:

- Restaurant guides (30.4 per cent)
- Destination guides (28.5 per cent)
- Attraction guides (24.0 per cent)
- Event guides (19.1 per cent)
- Language translations (13.6 per cent)

(See Figure 42)

Device use
Smartphones are by far the most popular device used by international visitors to access to the internet while travelling in Australia. More than three quarters, 79.7 per cent (up from 49.7 per cent in 2012), of international visitors to the city accessed the internet via smartphones in 2014. Other popular devices used to access to the internet include:

- Netbook/laptop (33.6 per cent)
- iPad (27.0 per cent)
- PC in accommodation (9.7 per cent)
- Tablet PC (9.3 per cent)

(See Figure 43)

Figure 42. Reasons for Using the Internet by International Visitors* to the City
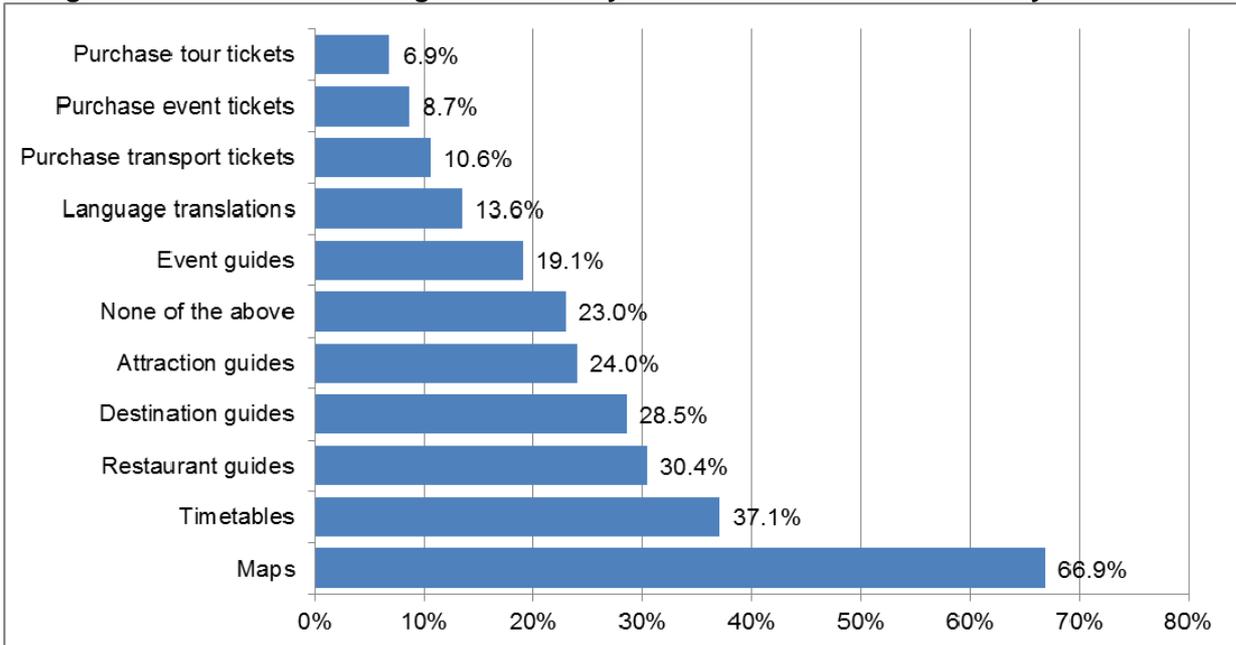
Category	Percentage
Purchase tour tickets	6.9%
Purchase event tickets	8.7%
Purchase transport tickets	10.6%
Language translations	13.6%
Event guides	19.1%
None of the above	23.0%
Attraction guides	24.0%
Destination guides	28.5%
Restaurant guides	30.4%
Timetables	37.1%
Maps	66.9%

* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Figure 43. Means of Access to the Internet During Trips by International Visitors* to the City
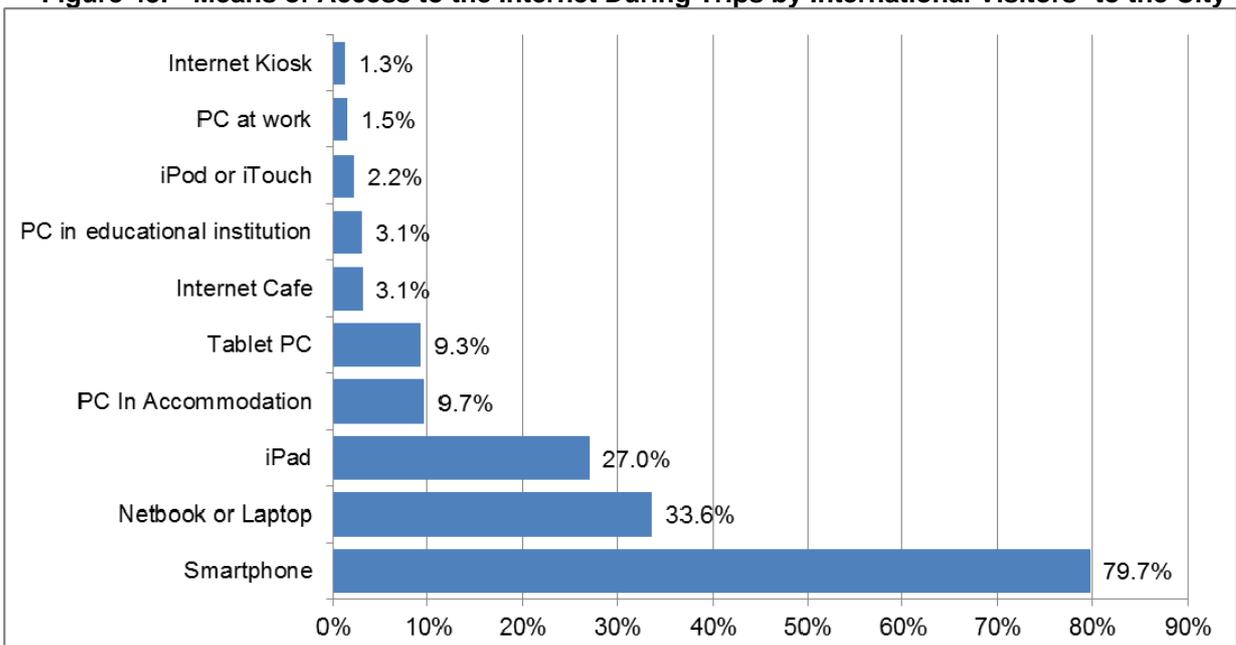
Category	Percentage
Internet Kiosk	1.3%
PC at work	1.5%
iPod or iTouch	2.2%
PC in educational institution	3.1%
Internet Cafe	3.1%
Tablet PC	9.3%
PC In Accommodation	9.7%
iPad	27.0%
Netbook or Laptop	33.6%
Smartphone	79.7%

* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Social media use

In 2014, Facebook was also the most popular social media site to get information about Australia during trip. More than two thirds, 68.1 per cent, of those used social media for information about Australia during their trips used Facebook. Other popular social media sites used include:

- Tripadvisor (26.6 per cent)
- Youtube (14.1 per cent)
- GooglePlus (10.8 per cent)

(See Figure 44)

Figure 44. Use of Social Media during Trip by International Visitors* to the City
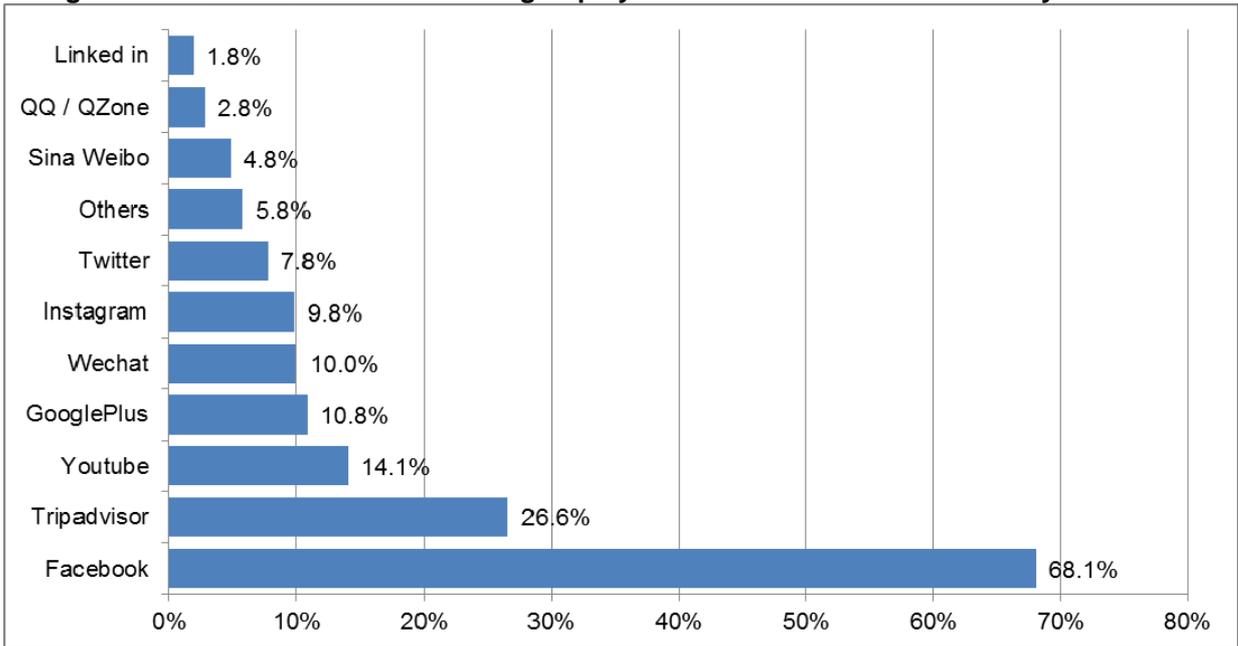
* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2014.

Outlook

Future growth of international visitors to Australia as a whole, and to Melbourne in particular, depends on a wide range of external factors. Some of which are concerns over global financial uncertainty; especially in key markets such as China, New Zealand, UK, USA, Singapore and other Asian nations; recent depreciation of Australian dollar against leading currencies; international aviation capacity to and from Australia and other supply factors.

The recent depreciation of Australian dollar against major currencies is also likely to have some impact on overseas visitation. The latest tourism forecasts published in Autumn 2014, however, suggests a gradual depreciation to average US$0.91 in 2014-15 and to US$0.88 in 2015-16 while the current Australia/United State exchange rate was much lower, 0.7721 on 17 June 2015.

Taking all of these into consideration, Tourism Research Australia forecasts that inbound tourism to Australia is likely to continue to grow, with Asia will continue to play a key role. Tourism Victoria further suggests that the number of international visitors to Victoria is likely to grow at 4.9 per cent per annum between 2012-13 and 2022-23. By extrapolating the above forecasts, the number of international visitors to the city is likely to grow at around 4.5 per cent annually between 2015 and 2030.

Weekday Daily Population Aged Under 15 Years

According to ABS Population Census 2011, population aged under 15 years accounts for nearly one in five, 18.2 per cent, of the total Victorian resident population. The way in which this group uses the city, therefore, is important and this report is a second attempt to quantify and explain their travelling patterns to the city.

Due to legal restrictions on interviewing, data on this population group's city travelling behaviour is very scarce. To overcome the issue, a couple of questions were added to the Central Melbourne Travel Surveys since 2012, to collect data about accompanying children

under 15 years of age. These questions have been asked in both computer-assisted telephone interviewing and intercept interviewing surveys.

The data from those questions is then cross-checked with VISTA data and NVS-IVS data. All data sources suggest consistently higher proportions of adult population travelling to the city with children under 15 years of age on weekend days than on weekdays. Based on VISTA 2009 data, it is estimated that 3.9 per cent of Victorian adult residents travelling to the city on an average weekday have children aged under 15 years old, compared to 9.6 per cent on an average weekend day. These ratios are used to calculate the number of children under 15 years of age to the city for metropolitan and regional visitors on an average weekday and weekend day.

Similarly, numbers of children travelling with interstate and international visitors are derived from NVS and IVS data. The NVS and IVS do not interview children under 15 years of age directly but do collect data about travelling parties in which a question is asked if the visitors travel as a family group – parent(s) with children. The data from this question offers some insightful information about the proportion of interstate and international visitors travelling to Melbourne with their children under 15 years of age.

The datasets reveal that around 10 per cent of interstate overnight visitors travel to the city as family groups while only 4.5 per cent of international visitors do. These percentages are used to derive the numbers of children under 15 years of age for interstate and international visitor groups in this report.

Weekday Night-Time Daily Population (aged 15 years plus) Estimates

Melbourne is becoming a 24-hour city where people come for entertainment, hospitality and time-out with friends and relatives. The number of night-time daily population, which is defined as people aged 15 years plus travelling to, or being present in, the city after 6.00pm, shows gradual growth in recent years. It is estimated that around 391,000 people, excluding residents under 15 years of age, were in the city at night on an average weekday in 2014. This represents a 3.7 per cent annual growth since 2004 (see Figure 45).

Figure 45.   Weekday Night-Time Daily Population (aged 15 years plus) Estimates ('000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residents (under 15 years)[1]	5	5	5	6	6	7	7	7	7	8	8
15 Years Plus											
Residents (15 years plus)	66	71	75	79	84	88	91	93	98	109	114
Workers[2]	93	97	101	107	114	117	120	127	133	137	141
Students[3]	16	16	17	17	18	19	19	20	21	23	24
Metropolitan visitors	45	50	55	44	36	37	38	40	43	41	39
Regional visitors	6	7	6	5	4	5	4	4	6	5	5
Interstate visitors	23	25	32	26	27	25	24	24	26	25	26
International visitors	24	26	23	25	26	25	28	32	37	40	42
Total (15 years plus)[4]	273	292	310	304	308	315	324	341	364	380	391

[1] are not included in the total.

[2] are not necessarily in the city to work at night but their primary reason to travelling to the city for the day is to work.

[3] are not necessarily in the city to study at night but their primary reason to travelling to the city for the day is to study.

[4] slight variations in total figures are due to rounding.

More than a third of night time population were city workers in 2014 who left the city after 6.00 pm while another 29.1 per cent were city residents, excluding those under 15 years of age.

Other predominant groups were:

- International visitors (10.8 per cent)
- Metropolitan visitors (10.1 per cent)

Weekday Overnight Daily Population (aged 15 years plus) Estimates

Overnight daily population is defined as those people aged 15 years plus who stay overnight in the city. Even though we understand that some municipal residents are away from home on any given night; we make an assumption that all city residents are in the city overnight for the purpose of this report.

Weekday overnight daily population has increased gradually since 2004. It is estimated that approximately 181,000 people, excluding residents under 15 years of age, stayed overnight in the city in 2014 on an average weeknight. This is an increase of 4.5 per cent annually since 2004 (see Figure 46).

Apart from residents who shared for nearly three in five of the overnight population, international and interstate visitors are the other predominant overnight population groups in 2014. They, combined, accounted for about one in three (31.6 per cent) of the overnight daily population in the city.

Figure 46. Weekday Overnight Daily Population (aged 15 years plus) Estimates ('000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residents (under 15 years)[1]	5	5	5	6	6	7	7	7	7	8	8
15 Years Plus											
Residents (15 years plus)	66	71	75	79	84	88	91	93	98	109	114
Workers[2]	2	2	2	2	2	3	3	3	3	3	3
Students[3]	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	1
Metropolitan visitors	2	2	3	2	2	2	2	2	2	2	2
Regional visitors	5	6	5	4	4	4	3	3	4	4	4
Interstate visitors	20	23	30	23	24	22	21	21	23	22	23
International visitors	20	23	24	21	23	24	22	24	28	33	34
Total (15 years plus)[4]	116	126	140	132	138	142	141	147	159	172	181

[1] are not included in the total.

[2] are not necessarily in the city to work at night but their primary reason to travelling to the city for the day is to work.

[3] are not necessarily in the city to study at night but their primary reason to travelling to the city for the day is to study.

[4] slight variations in total figures are due to rounding.

* less than 1000.

Weekend Daily Population Estimates

The weekend daily population patterns are quite different from those on weekdays. While the latter is strongly influenced by workers, who account for half of the total weekday daily population, the former is primarily determined by other daily population groups' activities.

The data from the City of Melbourne's pedestrian counting system, installed across the city, shows distinctive difference between weekday and weekend pedestrian patterns. As illustrated in Figure 47, the weekday patterns have three distinctive peaks: a morning peak when workers arrive to work, a lunch-time peak when they go out during lunch break and an evening peak when they go home. Weekend patterns have a bell shape curve with only one afternoon peak, between 2.00 and 3.00pm, mainly when people arrive to shop, socialise, or meet up with friends and relatives, sightseeing, or carry out other activities in the city.

Figure 47.   Average Hourly Pedestrian Counts for the First 18 Sensors in 2014
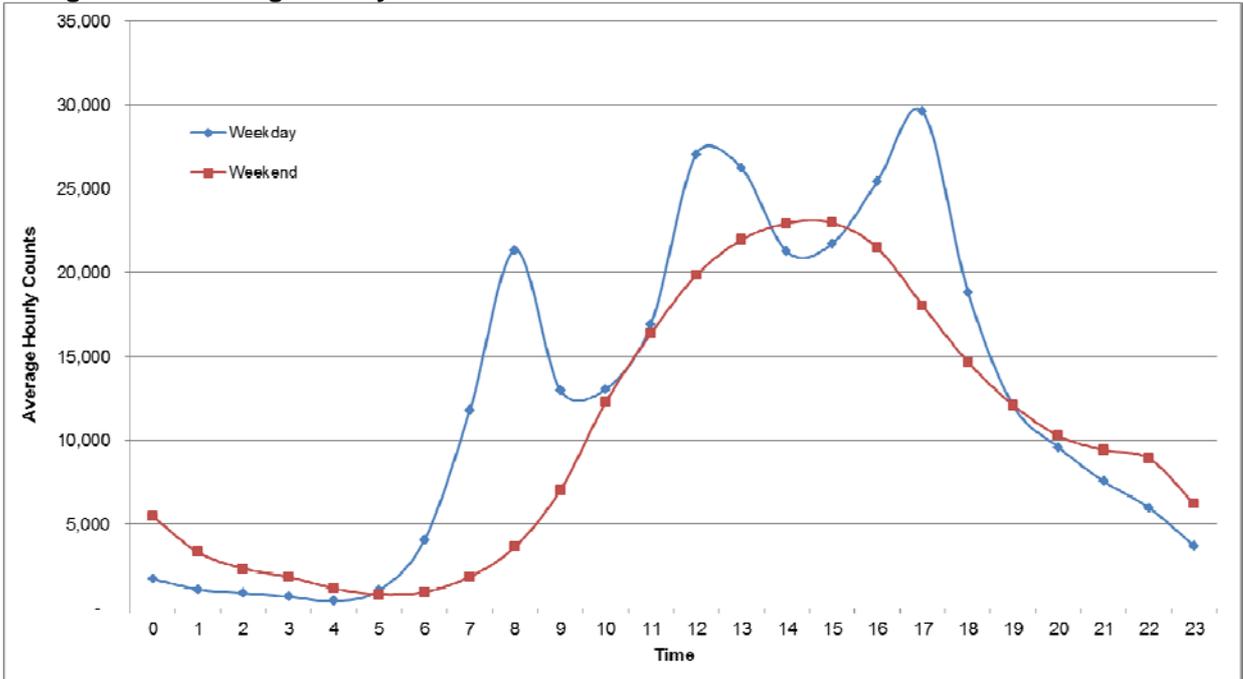
Source: City of Melbourne's Pedestrian Counting System, 2014.

Our model estimates that more than 0.6 million people travelled to, or were present in, the city on an average weekend day in 2014. This represents a 6.8 per cent growth over 2012 (see Figure 48).

As would be expected, the weekend daily population is predominantly visitors. In 2014, nearly half (48.1 per cent) were metropolitan visitors, followed by city of Melbourne residents aged 15 years plus (20.6 per cent). Weekend workers share only 20.6 per cent of the total number of daily population to the city. International and interstate visitors accounted for only 8.0 per cent and 5.6 per cent respectively of the total.

Apart from residents, workers and students, primary reasons for visiting the city on weekend days vary considerably across visitor groups.

Figure 48.   Weekend Daily Population (including under 15 years) Estimates 2004-2014, ('000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
15 years plus											
Residents	66	71	75	79	84	88	91	93	98	109	114
Workers[1]	51	56	61	64	68	73	78	79	79	80	81
Students[2]	3	3	3	3	5	8	11	9	7	9	10
Metropolitan visitors	182	225	279	277	275	270	266	264	262	264	266
Regional visitors	9	10	9	8	7	8	8	7	9	8	8
Interstate visitors	26	28	35	29	30	28	27	28	29	29	31
International visitors	22	24	25	23	25	27	26	29	33	40	44
Total 15 years plus	358	417	487	484	494	501	506	509	518	539	553
Under 15 years	39	46	53	53	54	55	55	55	56	58	60
Total*	398	462	540	537	548	556	561	564	574	597	613

* slight variations in total figures are due to rounding

Weekend metropolitan visitors
Shopping and meeting up with friends/relatives are the two predominant reasons for travelling to the city by metropolitan on an average weekend day. These two main reasons combined

accounted for more than half of the total – 55.3 per cent (see Figure 49). Other main visiting reasons for this group are sightseeing (8.5 per cent) and dining (8.5 per cent).

Weekend regional visitors
Similar to metropolitan visitors, the majority of regional visitors travel to the city primarily to visit or meet up with friends or relatives and shopping. These main reasons combined represent 57.4 per cent of the regional visitors to the city on an average weekend day. Other main reasons for regional visitors travelling to the city include:

- Attending a sporting event – 8.8 per cent
- Personal appointment – 7.8 per cent

Weekend interstate and international visitors
Unlike local visitors, the majority of distance visitors, interstate and international, travel to the city primarily for sightseeing. In 2014, more than 41.8 per cent of interstate visitors and 63.2 per cent of international visitors reported to travel to Melbourne for sightseeing. Other main reasons for travelling to the city were:

- Shopping – 26.4 per cent for interstate visitors and 16.2 per cent for international visitors
- Meeting up with friends/relatives – 15.4 per cent for interstate visitors and 4.4 per cent for international visitors

Figure 49.   Weekend Visitors' Primary Reasons for Travel to the City
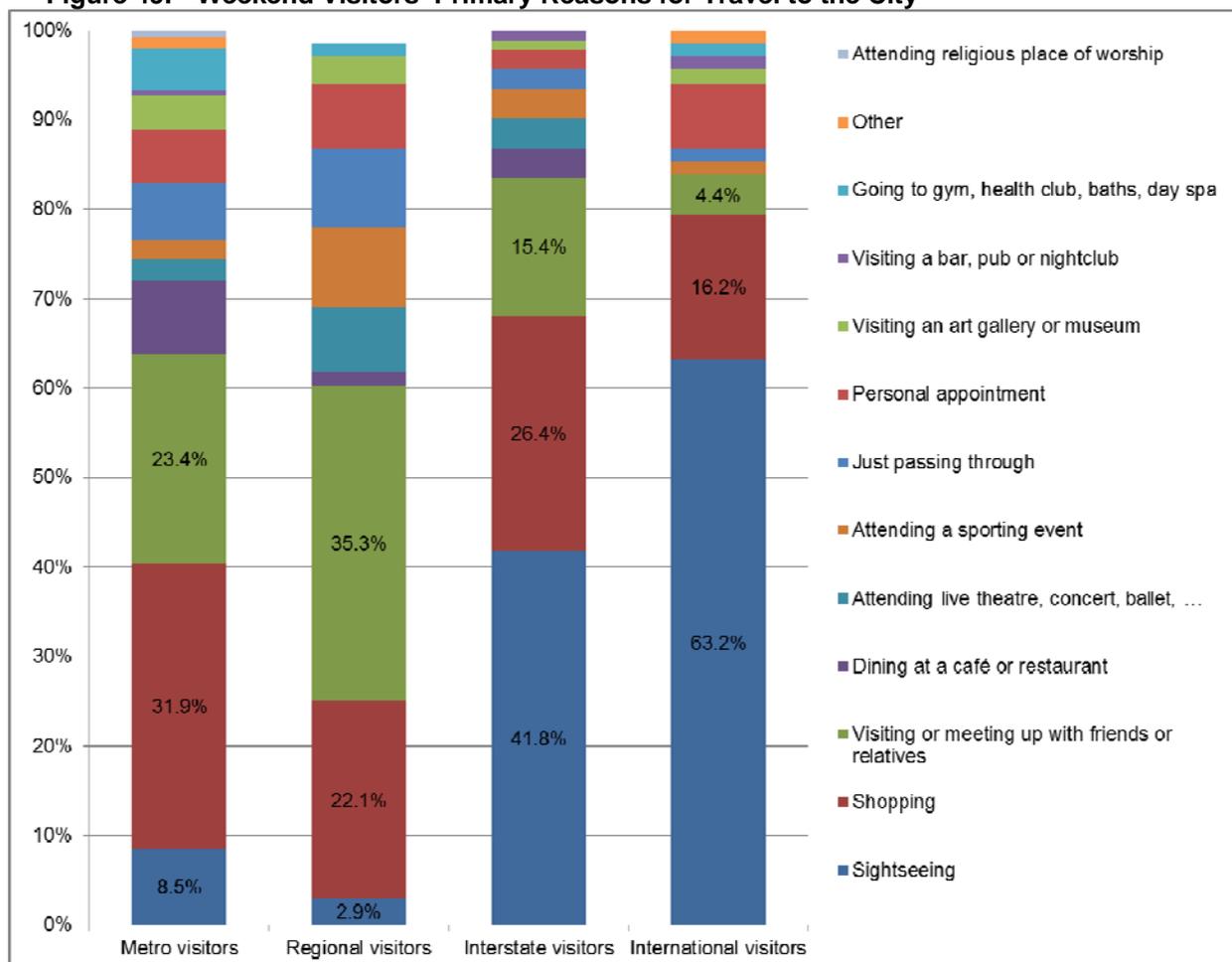
Source: CoM Central Melbourne Travel Survey 2014 Intercept Survey Data.

Weekend Night-Time Daily Population (aged 15 years plus) Estimates

Weekend night-time daily population is defined as people aged 15 years plus who travel to, or are present in, the city on an average weekend night after 6.00pm. The model suggests that over a quarter of a million people were in the city on an average weekend night in 2014. This represents a 10.2 per cent growth between 2012 and 2014 (see Figure 50).

Figure 50.   Weekend Night-Time Daily Population (age 15 years plus) Estimates, ('000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residents (under 15 years)[1]	5	5	5	6	6	7	7	7	7	8	8
15 Years Plus											
Residents (15 years plus)	66	71	75	79	84	88	91	93	98	109	114
Workers[2]	20	22	24	25	26	28	30	31	31	33	33
Students[3]	1	1	1	1	2	3	5	4	3	4	4
Metropolitan visitors	46	56	70	69	69	68	67	65	64	64	63
Regional visitors	7	7	7	6	5	6	5	4	6	5	6
Interstate visitors	22	25	32	25	26	24	23	24	25	25	26
International visitors	22	24	26	23	25	26	25	28	32	37	40
Total (15 years plus)[4]	183	207	235	229	237	243	245	249	259	277	286

[1] are not included in the total.

[2] are not necessarily in the city to work at night but their primary reason to travelling to the city for the day is to work.

[3] are not necessarily in the city to study at night but their primary reason to travelling to the city for the day is to study.

[4] slight variations in total figures are due to rounding.

Weekend Overnight Daily Population (aged 15 years plus) Estimates

The model suggests that more than 184,000 people, including residents, stayed overnight in the city on an average weekend night in 2014. This represents a 15.1 per cent growth between 2012 and 2014 (see Figure 51). The growth is primarily driven by the increase in municipal resident population and international visitors.

City residents account for the majority of the overnight weekend population. In 2014, it is estimated that 61.9 per cent of overnight weekend population were residents, followed by international visitors, accounted for 18.7 per cent and interstate visitors – 12.4 per cent.

Figure 51.   Weekend Overnight Daily Population (aged 15 years plus) Estimates, ('000)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residents (under 15 years)[1]	5	5	5	6	6	7	7	7	7	8	8
15 Years Plus											
Residents (15 years plus)	66	71	75	79	84	88	91	93	98	109	114
Workers[2]	2	2	2	2	2	2	2	2	2	4	4
Students[3]	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
Metropolitan visitors	3	3	4	4	4	4	4	4	4	5	5
Regional visitors	5	6	5	4	4	4	3	3	4	4	4
Interstate visitors	20	23	30	23	24	22	21	21	23	22	23
International visitors	20	23	24	21	23	24	22	24	28	33	34
Total (15 years plus)[4]	116	127	141	134	140	144	143	148	160	175	184

[1] are not included in the total.

[2] are not necessarily in the city to work at night but their primary reason to travelling to the city for the day is to work.

[3] are not necessarily in the city to study at night but their primary reason to travelling to the city for the day is to study.

[4] slight variations in total figures are due to rounding.

* less than 1000.

Conclusions

The Melbourne average daily population continued to grow over the past two years despite concerns over global financial uncertainty. It is estimated that 854,000 people, including the under 15 years of age group, travelling to, or are in, the city on an average weekday in 2014. This is an increase of 2.9 per cent from 2012.

The estimates and forecasts in this report clearly suggest that the growth is likely to continue over the next 16 years, with a total number of daily population to the municipality growing around 2.0 per cent annually between 2015 and 2030. If this is materialised daily population to the city will reach a million mark in 2022.

This presents a number of important challenges for planning and policy formulation with regards to maintaining and enhancing Melbourne's reputation as a place for work, study and play. More specifically, this major growth will translate into an increase in demand for:

- More open space/gardens/parks
- Enhanced public transport
- Greater pedestrian flow management
- More entertainment, cultural and sporting activities, as well as opportunities to socialise
- Maximise safety at night time and
- More office, residential and retail floor space.

In short, there is a clear need for all stakeholders to continue to adopt a long-term strategy vision for the forecasted one million people travelling to our city by 2030.

It should be noted that these estimates and forecasts are subject to data limitations and assumptions made in relation to a wide range of internal and external factors influencing people travelling behaviours. Changes in any of these factors or assumptions can result in the forecasts becoming less accurate and out of date. The data inputs and assumptions, therefore, must be reviewed regularly and the model updated regularly to ensure accuracy.

References

Australian Bureau of Statistics 2015, 'Regional Population Growth, Australian 2013-14', Cat. no. 3218.0, Australian Bureau of Statistics website, accessed on 31 March 2015: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/3218.02013-14?OpenDocument.

City of Melbourne/Geografia, 2015, 'City of Melbourne Population Forecasts', City of Melbourne website, accessed on 4 June 2015: http://melbournepopulation.geografia.com.au/.

City of Melbourne/SGS, 2013, 'Employment Forecasts', internal document.

Department of Education and Training 2014, 'International Student Enrolments in Australia 1994-2014', Australian Government Department of Education and Training website, accessed on 24 March 2015: http://education.gov.au/student-data.

Department of Employment 2014, '2014 Employment Projections', Department of Employment website, accessed on 22 January 2015: http://lmip.gov.au/default.aspx?LMIP/EmploymentProjections.

Department of Transport, Planning and Local Infrastructure 2014, 'Victoria in Future 2014 – Population and household projections to 2051', Department of Transport, Planning and Local Infrastructure website, accessed on 21 January 2015: http://www.dtpli.vic.gov.au/data-and-research/population/census-2011/victoria-in-future-2014.

Edwards, D and Radloff A 2013, 'Background Paper – Higher Education enrolment growth, change and the role of Private HEPs', prepared for the Australian Council for Private Education and Training, Australian Council for Educational Research, ACER website, accessed on 02 April 2015: http://research.acer.edu.au/higher_education/35/http://www.acpet.edu.au/uploads/files/ACER Background Paper for ACPET - Growth in HE FINAL 131115(1).pdf.

Group of Eight Australia 2014, 'Future Demand for Higher Education in Australia', Group of Eight Australia website, accessed on 02 April 2015: https://go8.edu.au/sites/default/files/docs/backgrounder-future-demand-for-higher-education-in-australia.pdf.

Premier of Victoria Media Releases, 2015, 'Work Begins on The Melbourne Metro Rail Project', Monday 16 February 2015, Premier of Victoria website, accessed on 16 June 2015: http://www.premier.vic.gov.au/work-begins-on-the-melbourne-metro-rail-project.

Public Transport Victoria 2012, 'Metropolitan Public Transport Demand Forecast Report', website, accessed on 22 January 2015: https://s3-ap-southeast-2.amazonaws.com/ptvic/Metropolitan+Patronage+Demand+Forecast+Report+2012+-+updated.pdf.

Reserve Bank of Australia, 'Exchange Rates', Reserve Bank of Australia website, accessed on 18 June 2015: http://www.rba.gov.au/statistics/frequency/exchange-rates.html.

The State of Victoria, Department of Transport, Planning and Local Infrastructure 2014, 'Plan Melbourne – Metropolitan Planning Strategy', Plan Melbourne website, accessed on 22 January 2015: http://www.planmelbourne.vic.gov.au/data/assets/pdf_file/0016/131362/Plan-Melbourne-May-2014.pdf.

Tourism Research Australia, Autumn 2014 Issue, 'Tourism Forecasts Autumn 2014 Issue', Tourism Research Australia website, accessed on 22 January 2015: http://www.tra.gov.au/documents/forecasts/Tourism_Forecasts_Autumn_2014_FINAL_18062014.pdf.