

Research Matters

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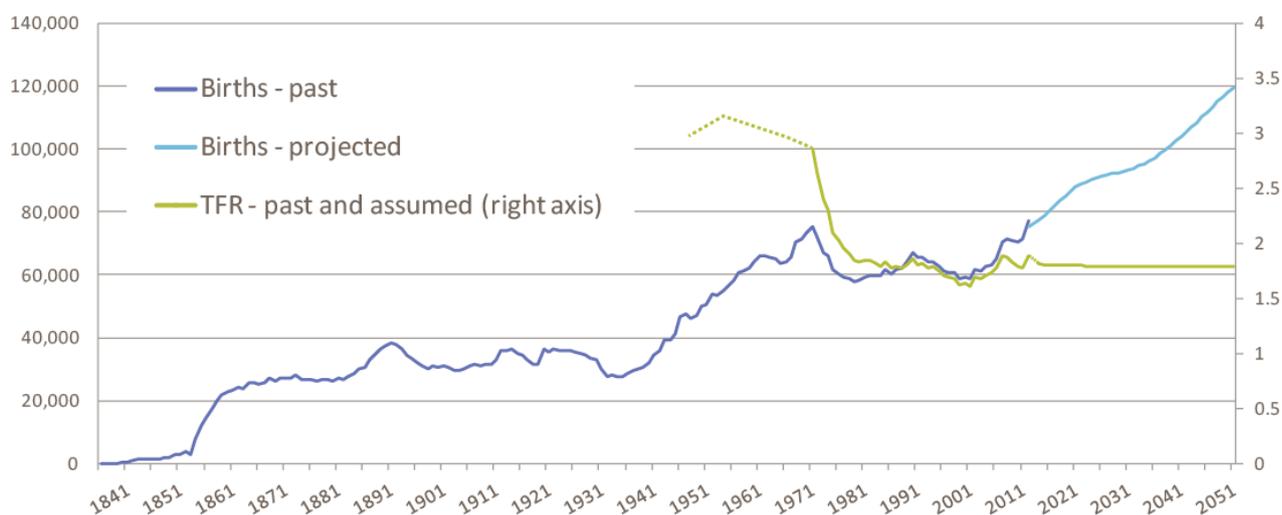
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Comeback Kids: the increase in births and the future growth of Victoria's child population

In 2010, Ken Henry (then Treasury Secretary), said that the greatest surprise in the 2010 Intergenerational Report was the projected increase in the number of children in Australia between 2010 and 2050.

Population ageing has for long been seen as a major issue for government and businesses, both here and overseas. The ageing of baby boomers and its financial ramifications was the main reason why the intergenerational reports were prepared in 2002, 2007 and 2010. But at the very time that the first wave of baby boomers was reaching retirement age, another demographic event was occurring: a surge in births. In 2007, the number of births in Australia surpassed the previous record high of 276,000 that occurred back in 1971. In Victoria's case, it was only in 2012 that the 1971 high of over 75,000 was surpassed. In the decade up until 2012, annual births had increased by 49,000 in Australia and 16,000 in Victoria. The increase in births impacts directly on maternity services and the need for education and other child related needs, as well as on long term population growth.

Figure 1. Annual Births, Victoria.



The number of births is the product of the size and distribution of the female population in reproductive ages (which is influenced by past fertility rates and immigration) and the prevailing age specific birth rates. Figure 1 shows the number of births (and the Total Fertility Rate (TFR)) in Victoria from the 1830s onwards and the numbers projected to occur in the latest Victoria in Future publication. It can be seen that there are three 'steps' to the trend.

The first step-up occurred in the gold rush years when Victoria experienced a large influx of young adults and, despite high male to female ratios, there was a sharp increase in births. This was followed by 80 years of relative stability leading right up to World War II. Population growth continued through booms and busts but even the 1880s boom was small in comparison to the gold rush.

The second step-up began in the early war years and gathered pace through 'the long boom' in the 25 years after the end of World War II. Fertility rates rose from 2.2 to a high of 3.7 by 1961 but then dropped back to 2.8 a decade later. The strong demand for labour in that long economic boom led to the young adult population of Victoria being boosted by high levels of overseas migration from Europe. The combination of immigration and high fertility rates saw births increase from around 30,000 per year at the start of the 1940s to over 70,000 by 1971. After 1971 there was steady increase in the young adult female population as the baby boomers aged. However, the wider spread use of oral contraception as well as increased female participation in higher education and paid work after 1971 contributed to such a drop in fertility rates that annual births flattened out over the following 40 years. The economy was more volatile while baby boomers, both men and women, fuelled the growing labour market. Consequently overseas migration was comparatively low between 1971 and 2006.

In the last few years, the number of young women has grown to such an extent that births are again increasing even with stable fertility rates. In projections it's assumed that the total fertility remains flat. However, the increasing number of young women (boosted again by overseas migration) results in the third step-up in births. Annual births in Victoria are projected to rise from 75,000 in 2012/13 to over 90,000 by the early 2030s. Consequently Victoria's school age populations could well increase substantially over the next 20 years – by around 200,000 extra primary school age children and 150,000 secondary school age children.

The 2013 Urban Development Program: trends in residential development in metropolitan Melbourne

The 2013 Urban Development Program (UDP) publication was released by the Department of Transport, Planning and Local Infrastructure (DTPLI) in January 2014. The UDP tracks supply and consumption of industrial and broadacre residential land, and planned residential redevelopment projects in metropolitan Melbourne.

Data sources for the UDP include council consultations, aerial imagery analysis, and other data from government and commercial providers. The data used in the UDP is based on the best information available at the time about future development.

The release includes the official report and a series of spatial data layers which can be accessed from the DTPLI website at:

<http://www.dpcd.vic.gov.au/planning/plansandpolicies/urban-development-program/2013-housing-and-industrial-land-data>

This article summarises a couple of key points from the residential sections of the report.

Residential redevelopment

DTPLI tracks the progress of residential redevelopment projects (ten or more dwellings) that are either planned or being constructed. Figure 1 shows the annual pipeline of number of dwellings in planned projects in the UDP between 2004 and 2013. Since 2006, the number of dwellings has increased every year, almost doubling over this six year period. This increase is due to very strong growth in the pipeline of dwellings in apartment projects of four or more stories.

Figure 1: Annual pipeline of dwellings in residential redevelopment projects in Melbourne.

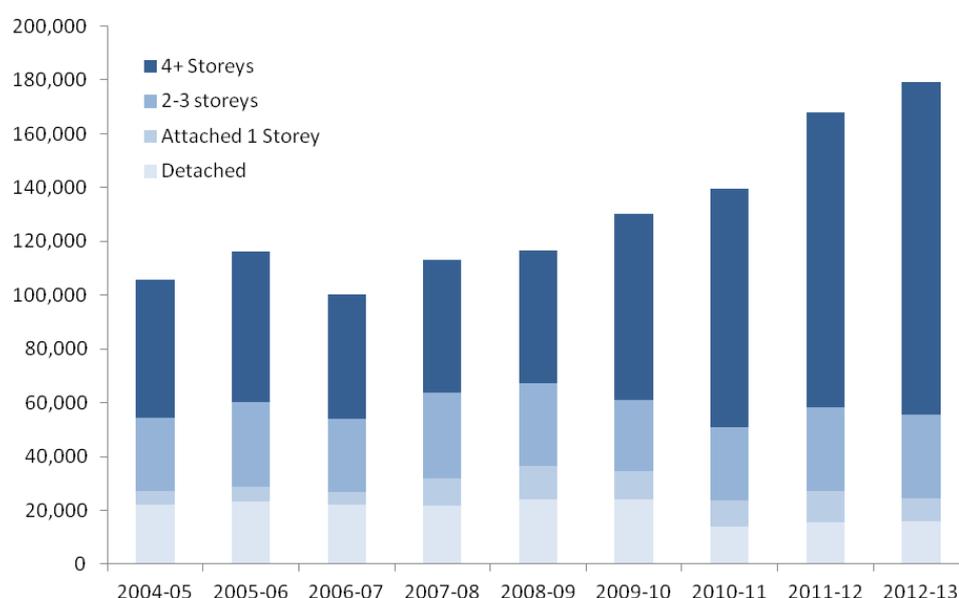
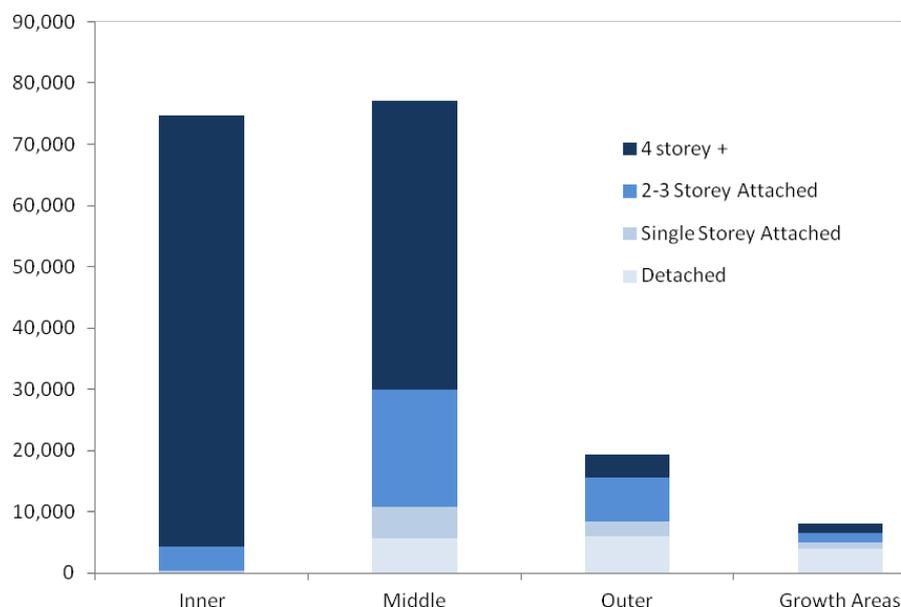


Figure 2 illustrates the distribution of the 2013 pipeline of dwellings in planned redevelopment projects between regions¹ of Melbourne, by built form. This chart shows that the pipeline of dwellings is concentrated in projects of four or more storeys, in the inner and middle Local Government Areas (LGAs).

Figure 2: Residential redevelopment pipeline of dwellings by region by built form.



Broadhectare residential development

The term “broadhectare residential development” refers to new suburban housing estates that are usually developed in large precincts on the edge of Melbourne which have been zoned for this purpose. The UDP monitors the supply and consumption of this land and provides estimates of the number of residential lots that will be created in each area.

Figure 3 shows the supply of lots in each growth area LGA from UDP releases in each year from 2005-06 to 2012-13. There was a significant increase in 2010 to 2011 with the expansion of the urban growth boundary, and it is now estimated that there is capacity for over 400,000 lots in growth areas.

Continued on page 5

¹ The regions used here consist of the following LGAs:

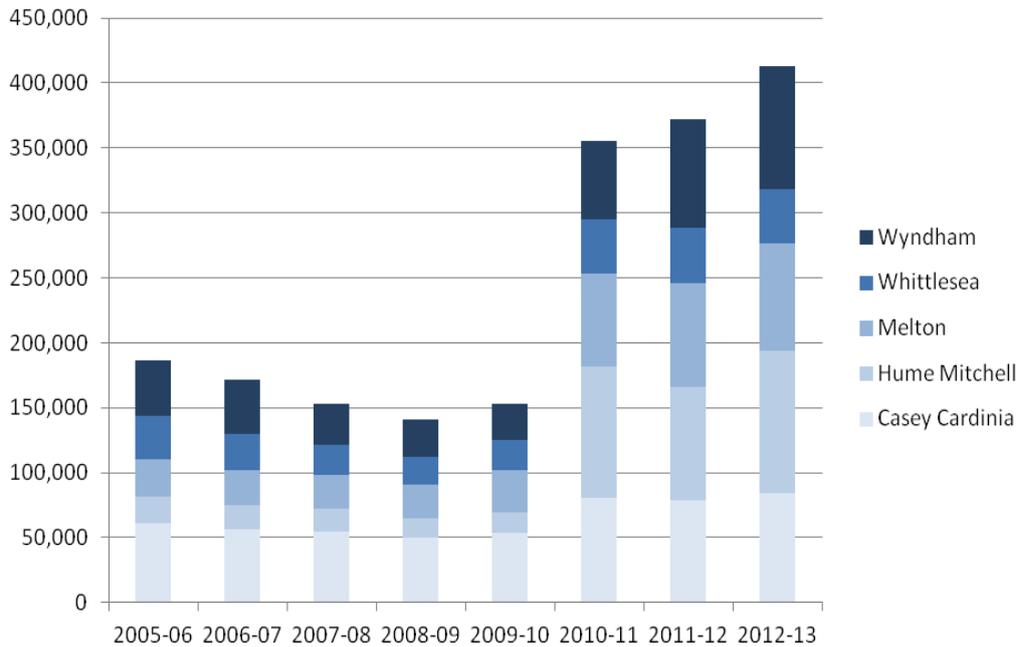
Inner: Melbourne, Port Phillip, Stonnington, and Yarra

Middle: Banyule, Bayside, Boroondara, Darebin, Glen Eira, Hobsons Bay, Kingston, Manningham, Maribyrnong, Monash, Moonee Valley, Moreland, and Whitehorse

Outer: Brimbank, Frankston, Greater Dandenong, Knox, Maroondah, Mornington Peninsula, Nillumbik, and Yarra Ranges

Growth Area: Casey, Cardinia, Hume, Melton, Whittlesea, Wyndham

Figure 3: Broadhectare lot supply by growth area 2005-06 to 2012-13.



Since 2005-06 there has been a downward trend in the size of new growth area lots created. Figure 4 shows the distribution of lots over this period. In 2005-06, almost 70% of lots were above 500 square metres, while in 2012-13, only 30% were above 500 square metres. Smaller lot sizes result in higher lot yields; therefore, the trend towards smaller lot sizes is one reason why the anticipated yield has increased since 2010-11.

Figure 4: Broadhectare lot construction, by lot size (in square metres), 2005-06 to 2012-13.



SAR Partners with RAI Canberra

Goulburn and Orange are unusual subjects of research for a Victorian Government researcher. However, Fiona McKenzie recently spent two months in Canberra as a visiting researcher at the Regional Australia Institute (RAI). During this time she used a mix of quantitative and qualitative methods to study two regional New South Wales cities in order to explore the factors that play a role in economic development.

Like many regional cities with populations in the 20,000 - 40,000 range, Goulburn and Orange offer a variety of services and business enterprises. In fact, on a range of descriptive statistical indicators, Goulburn and Orange appear very similar. In the general perception of many, however, these two cities are worlds apart and attract very different characterisations. The qualitative research explored the different characteristics of each settlement, providing insights into the strengths, barriers and ultimate potential of each city.

Orange, NSW



Photo by Fiona McKenzie

Goulburn and Orange have been cities in transition for the past two decades. Both have been subject to changes in the economic arena with structural adjustment playing out in the decline of agricultural employment and closure of manufacturing businesses. Orange has emerged with a strong profile in tourism and also benefits from gold mining, regional health sector facilities and having the head office of the NSW Department of Primary Industries. Goulburn has grown slowly but steadily during the past decade which reflects a relatively strong and resilient local economy. One of the most notable differences between the two cities is the level of confidence expressed by key civic leaders.

Historically, Goulburn was the key regional centre for its hinterland. Wealthy thanks to wool production, it provided a retail and social centre for a broad area. “Rambo” the giant merino stands as testament to this history although the city has moved into other industries like transport and logistics, health sector, and public services. Despite many positive aspects of Goulburn city there appears to be a lack of confidence among many of its residents and a feeling that others judge them poorly. Despite having a strong economic base thanks to the local jail and a range of public services, these very activities were highlighted by some as giving the city a negative image.

Goulburn, NSW



Photo by Fiona McKenzie

Whether success builds confidence, or confidence builds success, may be debated. However, in either case, there needs to be an understanding of what success should look like and this is true for any regional city. Despite some statistical similarities, Orange and Goulburn have different histories, cultures and geographies. They will therefore have differing pathways into the future and the definition of ‘success’ may be very different in each location. Having the confidence to pursue one’s own unique potential is therefore a critical factor.

The research approach used in Orange and Goulburn is intended to be applied to selected regional cities in Victoria during 2014. The aim of these case studies is to deepen our understanding of how regional cities work and how they can better realise their growth and development potential.

Long Distance Commuting and Community Wellbeing: lessons from the Stawell study

Stawell Town Hall



photo: Lisa Gervasoni

Labour mobility is an important element within regional economic theory and policy. Such mobility is seen as creating a flexible and efficient economic system in which workers move to areas of greatest employment opportunity. However, reality is rarely as simple as this. In fact, humans tend to value non-economic factors in their choice of residence – place association, family and friends' networks and physical aesthetics – which can be strong anchors preventing relocation. For this reason, mobility through commuting may be substituted for mobility through permanent migration.

The case study of Stawell represents an interesting extension of this preference for commuting over out-migration in response to the impending closure of the local gold mine. The opportunities presented through long distance commuting – flying in particular – are being pursued with the aim of retaining the local population.

Fly-In-Fly-Out (FIFO) commuting can present challenges for those involved: separation for periods of time, potential loneliness and isolation as well as disruption to prior patterns of work and leisure. Nevertheless, some interviewees noted that many 'regular' jobs present difficulties through long work shifts or deregulated working hours. Individuals and couples respond differently to such challenges and, while long distance commuting may place destructive levels of stress on some relationships, it tends to exacerbate issues rather than create them on its own. An important factor determining the level of such impacts is the nature of the work arrangements. Shorter block rosters such as 8 days on, 6 days off were reported as much more family friendly than arrangements with longer periods of absence.

A factor which appears to be important is whether the individual or family enters the FIFO lifestyle fully informed or aware of what it entails. In this respect, the fact that Stawell has a number of people involved in FIFO appears to have the benefit of first-hand information being available to those who may be considering the lifestyle. Additional support from local Council and regional health care organisations have formalised this process to some degree through the establishment of regular support and information meetings.

Stawell has a number of factors which make it suitable for future FIFO expansion. It has an airport capable of running charter flights and a local aviation company willing to expand to meet demand. The local workforce has been involved in the mining industry for decades and the workforce is therefore 'job ready' for many other mining opportunities across Australia. Support for the concept has been gained across various sectors of the local community – business government and local workers. The town itself is an attractive place to live being near the Grampians and being within an hour's drive from regional centres like Horsham, Ballarat and Bendigo.

The expansion of FIFO also faces challenges to be fully realised. Stawell is not the only town in Australia vying to be a FIFO source hub. Town representatives have struggled to fully engage with mining companies elsewhere in Australia as most employ recruitment agencies to deal with staffing. At a more subtle level, Stawell faces some competitive challenges. While the Stawell Gold Mine workforce has a range of mining skills and education, the overall profile of occupation and tertiary qualifications appears lower than some other mining regions in Australia like the Pilbara.

With Australian mining becoming more mechanised it is likely that future jobs in the industry (and certainly the higher paid jobs) will be those requiring higher levels of formal education, for example engineering or electronics, rather than being based on manual labour. FIFO alone will not transform the future education levels of the Stawell work force although it will enable exposure of local workers to a more diverse range of mining opportunities. In this regard, it may influence the aspirations of local workers and their families and enable much greater engagement with a globalised mining sector, thus generating future economic opportunities and pathways.

The report on this study is now available on the Urban and Regional Research website. See the “What’s New Online” section on page 9 for details.

Postscript:

Research similar to the Stawell study has been undertaken in Western Australia for the town of Busselton which has become a source community for a number of Rio Tinto mines in the Pilbara. The experience of Busselton is, in many ways, the future that Stawell is seeking. Hence, the opportunity to develop insights through these case studies is critical so that lessons can be passed on and pitfalls avoided. Fiona McKenzie (from Victoria) has recently collaborated with the WA authors, Fiona Haslam-McKenzie and Aileen Hoath, to prepare a joint paper comparing the two case studies. If you would like to know more about this paper, please see the Fiona McKenzie’s contact details in the “What’s New Online” Section on page 9.

Boarding the plane at Busselton, WA.



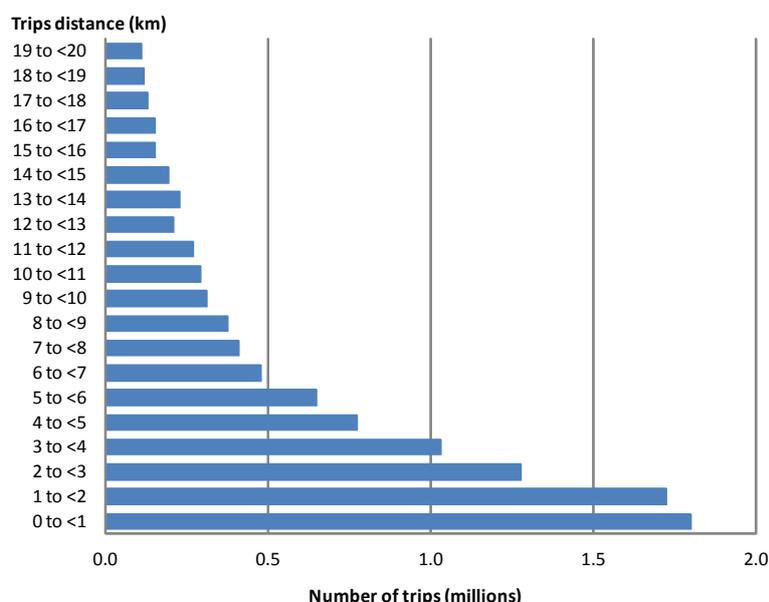
Photo by Fiona Haslam-McKenzie from Perth.

VISTA Data and the 20 Minute City

A city of '20-minute neighbourhoods' is identified as a key vision within *Plan Melbourne*. This objective recognises that easy access to local activities and services – employment, education, shops, childcare, community centres, medical services, and recreation opportunities – benefits the development of vibrant community hubs. To understand the potential challenges of delivering 20-minute neighbourhoods, the existing travel patterns of Melburnians need to be considered. This article focuses on travel distances as an initial view of how Melburnians access local activities and services, their travel behaviour and travel patterns. It uses data from the Victorian Integrated Survey of Travel and Activity (VISTA) – an ongoing survey of travel and activity, conducted in Melbourne and selected regional centres.

Trip distances for Melbourne residents on an average day of the year (combining weekday and weekend travel together) are illustrated in Figure 1. This chart suggests that 20-minute neighbourhoods are already significant to many Melburnians, with trips heavily skewed towards shorter distances. Approximately 15 per cent of all trips are less than 1 kilometre in length (equivalent to a 12 to 15 minute walk) while just over 50 per cent of trips are under 5 kilometres in length (or a 15 to 20 minute bike ride).

Figure 1: Trips by Melbourne residents, by distance (up to 20km)



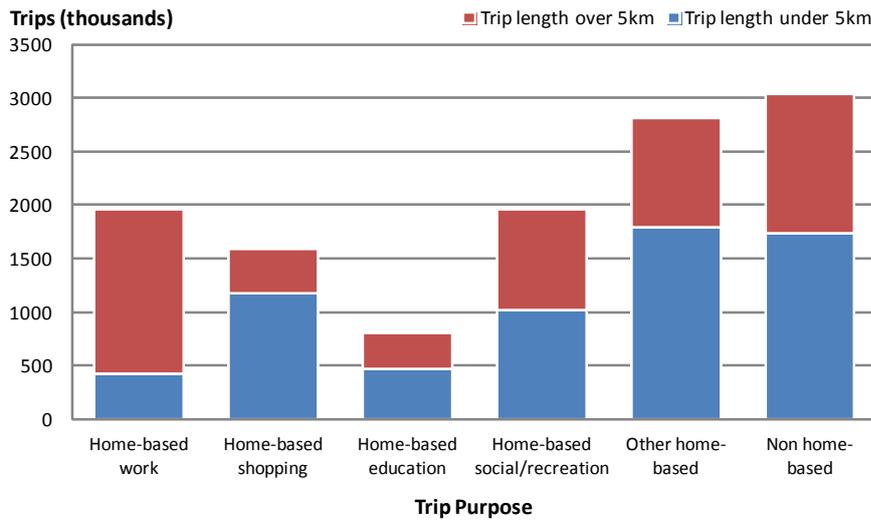
However, there are also many longer trips occurring. Indeed, trips longer than 5km in length still account for 90 per cent of all kilometres travelled by Melbourne residents. Trips are therefore examined in more detail below, to highlight whether there are regions or activities that will create particular difficulties from a planning perspective.

Figure 2 shows the number of trips for different purposes. Trip purposes are defined as 'home-based' and 'non home-based'. Home-based trips are those with an origin or destination at home. For example, a home-based work trip represents travel between home and work, or work back to home. A high level of short, home-

based trips indicates that both transport patterns and urban structure support people living and interacting in their local community. This would represent people not travelling far to access different activities. For shopping, education and (to a lesser degree) social and recreational travel this largely holds. Most trips for these activities are relatively short. In contrast, for the large number of home-based work trips made on an average day, the majority are over 5km in length.

Non home-based trips are those made as part of a broader trip-chain. Ideally, these would also be predominantly short trips, i.e. having travelled somewhere, a number of other activities can be accessed nearby. Again from Figure 2, distances of over 5 kilometres are travelled for a substantial number of these linked trips. Interestingly, the trip-making patterns do not change dramatically for different parts of Melbourne. Looking just at a selection of major home-based trip purposes (Figure 3), travel distances of inner-Melbourne residents are compared with outer-Melbourne residents. While the proportions differ, there is still a strong tendency for home-based work trips to be longer than 5 kilometres regardless of home location. Education and shopping trips are typically made closer to home, for inner and outer metropolitan residents.

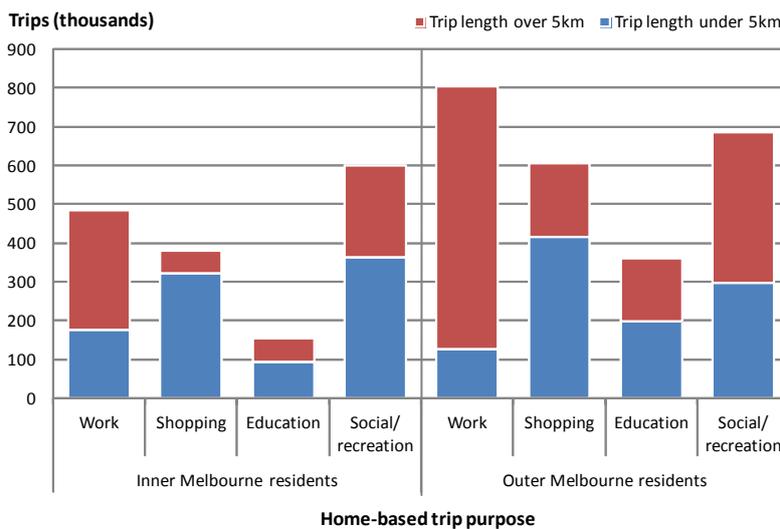
Figure 2: Trips by Melbourne residents, by distance and purpose



Note: 'Other home-based' trips may include personal business, health visits, picking up or dropping off someone, accompanying someone, and other travel not classified elsewhere.

Source: VISTA 2009-10

Figure 3: Comparison of Inner and Outer Melbourne resident trips, by distance and purpose



Source: VISTA 2009-10

This type of information provides a valuable foundation for implementing Plan Melbourne initiatives. Through datasets such as VISTA, the travel from home to access various activities can be monitored over time. Similarly, the flexibility of VISTA will allow different interpretations of neighbourhood to be defined. 'Proximity' may be defined on home-location, or in relation to where people work, study or participate in other cultural and community activities. Definitions of accessibility can also be explored, in which measures of travel to different activities by different modes are developed and tested.

This article was prepared by Stephen Roddis and Christina Inbakaran from the Transport Information Services and Mapping Branch of DTPLI.

What's New Online?

A summary of new products available on the Urban and Regional Research website:

- A suite of **Urban Development Program** (UDP) reports have now been released online. You can view the reports online by visiting the page below:

<http://www.dpcd.vic.gov.au/planning/plansandpolicies/urban-development-program/2013-housing-and-industrial-land-data>

- For more information on the Stawell Case Study or the Goulburn and Orange study, please contact Fiona McKenzie, Manager Regional Analysis on (03) 9208 3695, otherwise view the **Long Distance Commuting – Stawell Case Study** report at the location below:

<http://www.dpcd.vic.gov.au/home/publications-and-research/urban-and-regional-research/Regional-Victoria>

Please note:

The Spatial Analysis and Research (SAR) branch is now part of the new Department of Transport, Planning and Local Infrastructure (DTPLI). All our products and bulletins are being transitioned to the new website (www.dtpli.vic.gov.au) over the coming months. For the time being, they remain available on the website of the former Department of Planning and Community Development (www.dpcd.vic.gov.au).

The following URL will take you directly to SAR's products and data:

<http://www.dpcd.vic.gov.au/home/publications-and-research/urban-and-regional-research/census-2011/social-atlas>

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