

# PATREC PERSPECTIVES



## Estimating the size of Australia's Suburban Population

Australia is often said to be an urban nation. While the vast majority of Australians live in cities and towns, it is arguably more accurate to say that Australia is a *suburban* nation. This Perspective summarises the findings of a study that estimates the size of Australia's suburban population using a method based on transit modal share analysed across the nation's 16 largest cities. The findings clearly indicate that the vast majority (75-80% on average) of Australia's 'urban' population is suburban. Moreover, the vast majority of population growth is also suburban. Future urban policy and research should reflect this predominance of the suburbs.

### AUSTRALIA: A (SUB)URBAN NATION

It is often remarked that Australia is an urban nation. Indeed, such is the title of Robert Freestone's (2010) excellent history of Australian planning. Australian Bureau of Statistics (ABS) census data (shown in Figure 1) show that, in the 100 years to 2011, Australia's 'urban' population grew to constitute 89% of the entire population. To the extent that 'urban' merely means 'not rural', Australia is indeed a very urban nation. However, this simple definition of 'urban' is too broad a category for policy and planning (Gordon & Janzen, 2013). Australia, as a number of urban scholars have noted, is more a *suburban* nation than an urban one (Stretton, 1975 [1970]; Davison, 2013). This PATREC Perspective provides an overview of a recently completed study on the extent of Australia's suburban population that analysed the nation's 16 largest cities. In short, such is the extent of suburbia in Australia it merits specific research and policy attention.

Davison (1993) notes that Australia was "born urban and quickly grew suburban" (p. 63). Suburbia has been a ubiquitous facet in discussions of Australian society and cultural identity ranging from the scathing critique in Robin Boyd's (1960) book *The Australian Ugliness* through to the celebratory mirth of the 1997 film *The Castle*. Politicians such as Wayne Swan - *Postcode: The Splintering of a Nation* - and Mark Latham - *From the Suburbs: Building a Nation from Our Neighbourhoods* - have also foregrounded the significance of Australian suburbia. Several urban scholars have recognised that policy and planning for Australian cities must be suburban in focus (see, for example, Hugh Stretton's (1975 [1970]) *Ideas for Australian Cities*, Patrick Troy's (1996) *The Perils of Urban Consolidation* and Brendan Gleeson's (2006) *Australian Heartlands: Making Space for Hope in the Suburbs*). Despite the ubiquity of the suburbs - all metropolitan-based Australians live in one - the number and proportion of Australia's population living in the suburbs is something of an unknown.

### DEFINING URBAN & SUBURBAN

The data presented here follows on from Gordon and Janzen's (2013) study of Canadian cities in which many definitions of 'urban' and 'suburban' were tested in an effort to estimate the size of Canada's suburban population. Two methods - Transit Modal Share (T8) and Dwelling Density (D4) - were devised to classify census tracts across 33 metropolitan areas as 'suburban' or

'urban'. The two methods were replicated for the 16 Australian cities with populations greater than 100,000. Both methods utilised 2006 and 2011 ABS Census of Population and Housing data: (i) 'Method of Journey to Work' (MJW) for T8 and (ii) dwelling counts for D4. Analysis was conducted at the 'Statistical Area 2 (SA2)' level - the smallest census spatial unit for which 'Place of Usual Residence' data is readily available. In calculating population growth from the 2006 census period to 2011, 'Statistical Local Areas' were converted to SA2s using the appropriate ABS correspondence file.

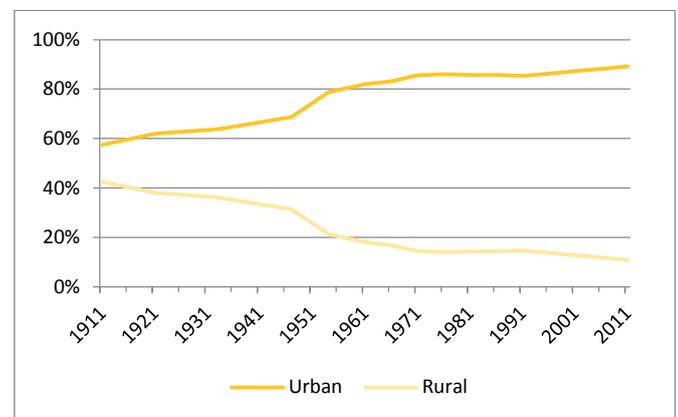


Figure 1: Population of Australia considered urban and rural, 1911-2011. (Source: ABS, 2014)

The D4 classification method did not produce credible results because dwelling densities in most Australian cities are significantly lower than Canadian cities and below typical benchmarks to support transit in suburban areas. Additionally, the SA2 unit of analysis is generally larger than Canadian census tracts. The T8 classification method did produce credible results, and as such, all SA2s across the 16 cities were classified according to the following definitions:

- **Active Core:** SA2s in which rates of active transportation to work (i.e. walking, cycling, etc.) are at least 150% of the local metropolitan mean;
- **Transit Suburb:** SA2s in which rates of public transportation to work are at least 150% of the local metropolitan mean (and active transportation is less than 150% of the mean);

- **Auto Suburb:** SA2s in which both active transportation and public transportation rates are less than 150% of the local metropolitan mean;
- **Exurbs:** SA2s in which population density is less than 150/km<sup>2</sup> (OECD definition of 'rural community');
- **Other:** SA2s with no, or with miniscule, resident populations (such as national parks, cemeteries and industrial estates).

## HOW SUBURBAN IS AUSTRALIA?

### Urban vs. Suburban Population Size

The results, summarised in Figures 2 and 3 below, indicate that 77.1% of the combined population of the 16 largest cities live in neighbourhoods classified as suburban. Less than 14% lived in 'Active Cores' (a proxy for 'urban', although there are some minor anomalies) with population share ranging from 8% in Darwin to 22% in Toowoomba. The largest 'Transit Suburban' population was in Sydney (14%), while Sunshine Coast, Geelong, Townsville, Cairns, Darwin and Toowoomba contained no neighbourhoods classified as Transit Suburbs. 'Auto Suburb' populations ranged from 39% (Hobart) to 84% (Cairns). Figures 4, 5 and 6 illustrate the spatial pattern of the four suburban types across Sydney, Melbourne and Perth, respectively. In general, Active Cores are more pronounced within the inner-suburban ring. Sydney displays elements of a polycentric pattern with active cores in areas such as North Sydney, Parramatta and Liverpool. Melbourne exhibits an extensive active core zone that extends to the North and East, combined with extensive new automobile suburbs, whilst Perth displays an active core corridor extending to Fremantle. A full set of maps is available from our [dropbox](#).

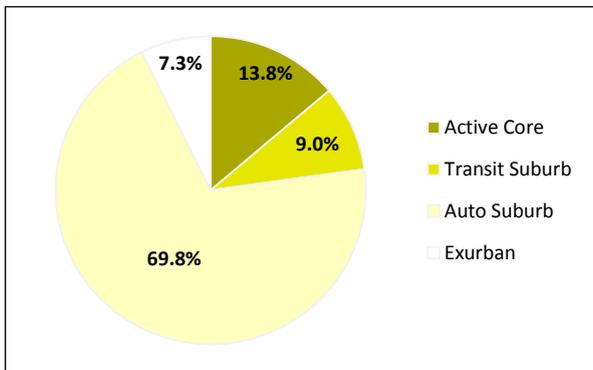


Figure 2: Distribution of combined population of Australian cities with >100,000 residents

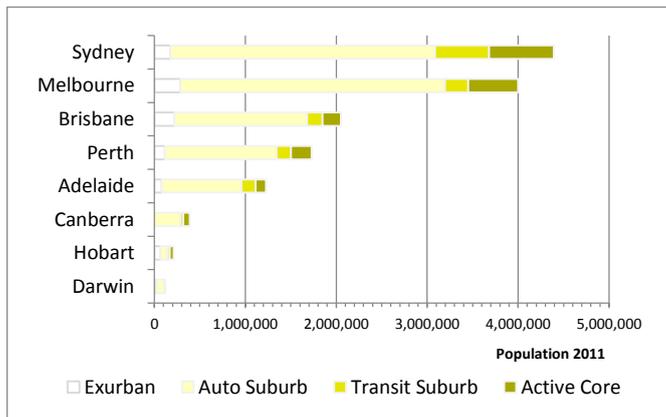


Figure 3: Distribution of populations of state/territory capitals

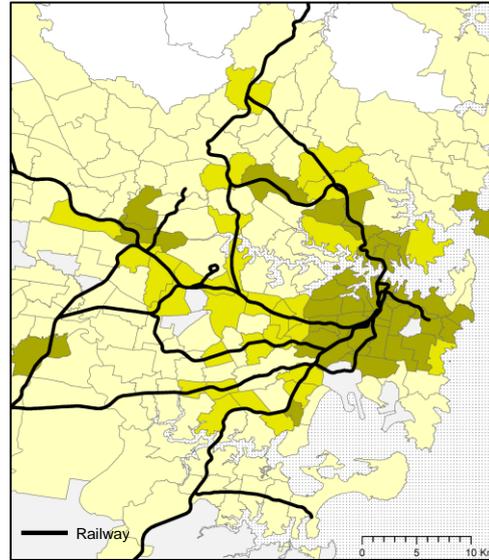


Figure 4: Spatial pattern of neighbourhood types in Sydney, 2011

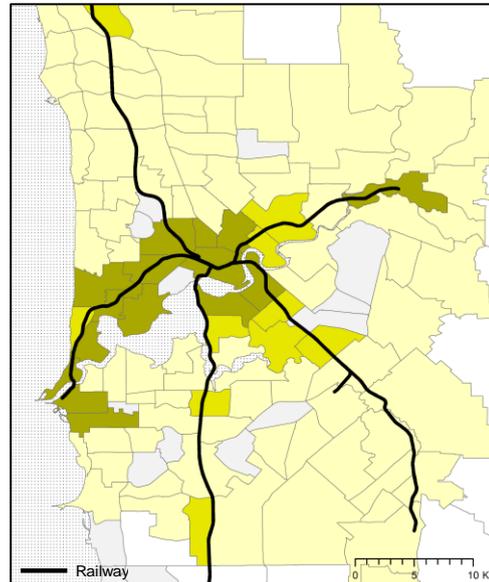


Figure 5: Spatial pattern of neighbourhood types in Perth, 2011

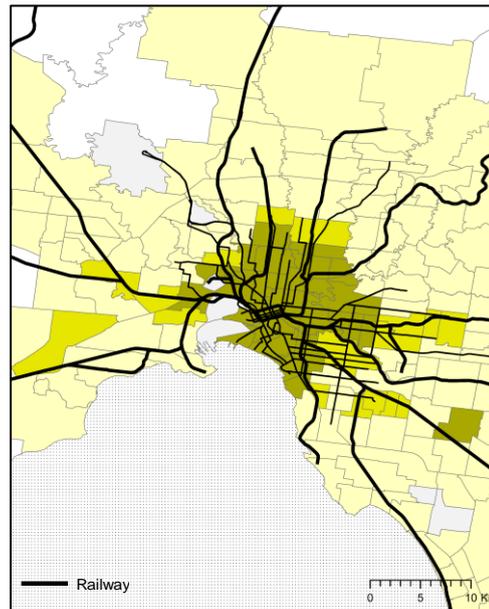


Figure 6: Spatial pattern of neighbourhood types in Melbourne, 2011

## Urban vs. Suburban Population Growth

The predominance of suburbia in Australian metropolitan areas is also reflected in the distribution of population growth. Between 2006 and 2011, the combined population of the 16 cities grew by 9.3%; 9% growth in Active Cores, Transit Suburbs and Auto suburbs, and 7% growth in Exurbs. As Figure 7 summarises, over 78% of all population growth occurred in suburban neighbourhoods, with the majority (70%) in Auto Suburbs. This trend was reflected across all cities and while the rate of growth in some cities' cores outpaced the suburbs (e.g. Darwin, Canberra and Wollongong), this growth was from a low base. As Figure 8 further suggests, the future of Australian cities appears suburban.

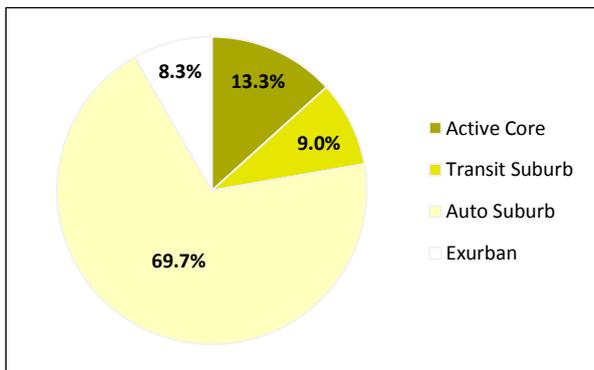


Figure 7: Share of combined population growth (2006-2011) in cities with >100,000 residents

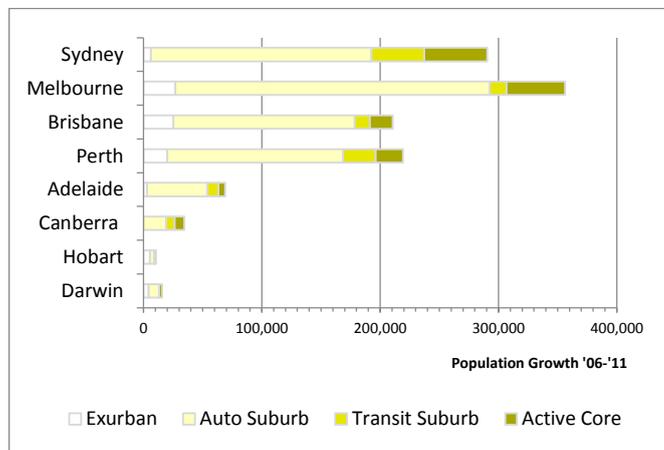


Figure 8: Distribution of population growth (2006-2011) in state/territory capitals

## A note on relative measures of urban/suburban

It is pertinent to note that census tracts classified as Active Cores, Transit Suburbs and Auto Suburbs are not necessarily comparable across cities in all cases. Census tracts are classified relative to the mean for their respective metropolitan area; a tract classified as an Active Core in Geelong, for example, may not necessarily be similarly classified were it located in Adelaide. This is particularly relevant when comparing Transit Suburbs: Public Transport usage varies from 23% of journeys to work in Sydney to 1% of journeys to work in Toowoomba. Thus, a Toowoomba tract with 1.5% transit use and 98.5% auto use could be classified as a Transit Suburb. To avoid such nonsensical results, areas classified as Transit Suburbs with public transit usage rates less than the aggregate mean of all cities (13.8%) were re-classified as Auto Suburbs.

It is also pertinent that dwelling densities vary significantly both within and between cities. For instance, the densest Active Core in Perth – North Perth – contains 10.8 units/ha while the densest Active Core in Sydney – Potts Point - Woolloomooloo – contains 62.5 units/ha. Similarly, the dwelling density within Auto Suburbs varies from a maximum of 23 units/ha (Dee Why - North Curl Curl, Sydney) to the minimum of 0.4 units/ha (Wacol, Brisbane). While the density classification method did not produce credible results, it is nonetheless important to note these differences as well as to recognise more broadly the 'polyglot reality' of Australian suburbs (Gleeson, 2006).

## FUTURE DIRECTIONS: DUE ATTENTION TO THE SUBURBS

The future of Australian cities appears decidedly suburban. Suburbia is home to the majority of Australians and looks set to remain so for the foreseeable future. While some may despair at this prognosis, others are optimistic – whether for the prospect of consolidation or 'retrofitting suburbia', or for the continuation of a suburban 'way of life'. Irrespective of one's views on the suburbs, their predominance must be reflected in public policy and research. The diversity of suburbs and suburbanites must be understood, and while improvements sought, the myriad reasons why and how so many make a life there must also be appreciated. The new Federal Minister for Cities and the Built Environment, Jamie Briggs, needs to seriously consider the development of an explicit suburban policy that integrates the economic, social, environmental, for Australia is not an urban nation – it is a suburban one and where the majority of voters reside.

Research methods and further findings will be discussed in forthcoming publications.

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The Planning and Transport Research Centre (PATREC) is a collaboration between three public universities (The University of Western Australia, Curtin University and Edith Cowan University) and the State Government of Western Australia (Department of Transport, Main Roads Western Australia and The Western Australian Planning Commission).

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