



Advance Australia fair?

Trends in small area socio-economic inequality, 2001 to 2006

AMP/NATSEM INCOME AND WEALTH REPORT
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1. Foreword

From 2001 to 2006 Australia experienced unprecedented prosperity - with some people drawing comparisons to the golden era of the 1950s. But instead of riding on the sheep's back, as we did back then, in 2006 Australia was riding on the back of a prolonged resource boom driven by record demand. So we had a prosperous nation but did this mean good times for all Australians?

The 20th AMP.NATSEM Income and Wealth Report, *Advance Australia Fair?*, takes a critical look at trends in income, unemployment, immigration and other socio-economic factors for different geographic regions of Australia, rather than individual Australians - drawing on Census data from 2001 and 2006.

The report found that while the gross income of the average Australian household grew by 31 per cent during the period, incomes in affluent areas increased more rapidly, at 36.5 per cent for the wealthiest suburbs, compared with the poorest suburbs where income increased by 29 per cent.

While it's easy to conclude the divide between rich and poor is growing the picture is in fact much more complex. For many areas, including the most affluent, the benefits of a bigger pay cheque have been well and truly offset by the increase in housing and living costs.

Income relative to increased cost of living

The report may in fact show why so many households feel as though they are barely keeping their heads above water. For example, the average income of Sydney households increased by 22 per cent after rising housing costs were taken into account. However, once you factor in the rising cost of food, petrol, education, and childcare the increase is whittled away to an annual increase of around 1.5 per cent.

It's the same story in Adelaide, Hobart and Melbourne where sharp increases in housing costs also eroded the value of the income rises that households experienced.

From 2001 to 2006 the housing costs of the average Australian household increased by a substantial 62 per cent. The biggest increases were seen in Adelaide, Brisbane, Hobart and Canberra where housing costs increased by between 63 and 68 per cent.

But if you look at specific neighbourhoods, it becomes clear that middle income neighbourhoods were the hardest hit, with housing costs for these areas increasing almost 65 per cent. This compares with 54 per cent for affluent areas and 48 per cent for the poorest areas.

And housing costs for the average Australian household increased much more rapidly than gross income. While the equivalent gross income of the average Australian household rose by 31 per cent from 2001 to 2006, the increase in equivalent gross after-housing-costs income was only 26 per cent.

The question we need to ask ourselves is are we making sacrifices so we can live in bigger and better houses or is the actual cost of housing increasing? Or is it a combination of the two?

Where do the rich live?

Traditionally, Australia's wealthiest areas have been confined to capital cities but now, thanks to the mining boom, remote regions also have their own "rich" neighbourhoods - in mining towns of northern Western Australia and the mid-east of Queensland.

But overall most of the high income areas remain in the capital cities. Canberra fared the best, with the fewest poorer areas and the most affluent areas of any capital city.

Melbourne and Sydney had significant pockets of high income areas, with buffers of moderate income areas before the poorer areas, typically found on the fringe of the cities. Perth had no areas in the bottom low income bracket, also most likely due to the mining boom.

Many low income areas were on the east coast of Australia, including northern New South Wales beaches (Port Macquarie and Coffs Harbour) and north of Brisbane (Gympie and Kingaroy).

In the top end, Darwin had very few areas experiencing low incomes - yet this was not the case for the rest of the Northern Territory, which was in the lowest income decile.

Outright home ownership a reality for the poor

Households in the lowest income areas were more likely to be outright homeowners than those in any other neighbourhood - possibly reflecting a high number of retirees. In 2006, 41 per cent of households in the bottom low income areas owned their homes outright, compared to only 32 per cent in the highest income areas.

Households in middle income neighbourhoods were the group least likely to own their home and have no mortgage, with outright home ownership rates having fallen for middle income suburbs since 2001. In contrast, those living in the most affluent neighbourhoods were more likely to be living in rental properties than any other income group.

Record low unemployment

The drop in the unemployment rate since 2001 is one of Australia's economic success stories with just 4.8 per cent unemployment in 2006 compared to 6.8 per cent in 2001. But how does this translate geographically?

Perhaps not surprisingly, the boom towns of Brisbane, Perth and Darwin saw a significant drop in unemployment. However, the biggest falls were in the Queensland suburbs of Broadbeach-Mermaid Beach, where unemployment fell from 9 per cent in 2001 to 4.5 per cent in 2006 and Cranbrook, where it fell from almost 9 per cent to just under 4 per cent.

The West Australian regional areas of Joondalup-South and Stirling-Central also saw big drops, from 5.8 to 2.6 per cent and 9.6 to 4.2 per cent.

This was in contrast to some of our bigger centres, Melbourne and Sydney in particular, where unemployment rates fell only marginally in many areas while unemployment actually increased in Melton-East and Inner Melbourne in Victoria and Griffith-Mango Hill in Queensland.

A nation of migrants

Australia is a nation of migrants and certainly nothing changed from 2001 to 2006 when nearly 550,000 new migrants arrived on Australian soil and almost half of them were skilled workers.

Most of the migrants were attracted to the big city centres such as Sydney and Melbourne. Sydney was the preferred destination for migrants followed by Melbourne, while one in 10 recent arrivals settled in Perth and Brisbane.

Very few migrants chose to experience Australian life in rural and regional areas - with the exception of Queensland where regional areas competed with Brisbane in terms of new migrant numbers. This could be due to the number of mining jobs available in remote areas in that State.

Conclusion

This report takes a critical look at the diverse regions in this country and it's clear that while the nation overall prospered during the five years to 2006 many households were struggling to realise the gains of this prosperity.

The impressive increases in household incomes across the board were largely offset by increased spending on housing and increases in the cost of living more generally - and it's the households in middle income areas who were the least likely to enjoy these prosperous times.

This could go some way to explaining the shift in behaviour we have seen in Australian communities in recent times; where high employment, high incomes and strong economic conditions have not necessarily reflected the beliefs and perceptions of average Australians.



Craig Meller,
Managing Director, AMP Financial Services

2. Introduction

The nation as a whole experienced unprecedented prosperity between 2001 and 2006. The unemployment rate fell from the annual average of 6.8 per cent in 2001 to 4.8 per cent in 2006 (ABS, 2008a). On average, another 1.1 million Australians found jobs - and in 62 per cent of cases these were full-time jobs (ABS, 2008b). Average weekly earnings increased from \$811.50 a week in the December quarter of 2001 to \$1,013.60 a week in the same quarter of 2006 (ABS, 2007a).

All these economic changes were reflected in growing affluence, with the Australian Bureau of Statistics (ABS) reporting that average household incomes increased by 19 per cent between 2000-01 and 2005-06, after the payment of income tax and after adjustment for inflation and changes in household size (ABS, 2007b, p. 13). The official ABS statistics suggested that the gap between rich and poor nationally showed little change over this period, with national income inequality thus remaining relatively stable (ABS, 2007b, p. 13).

So, at a national level, the economic boom was widespread and the nation prospered. But good news at the national level can still mask very different outcomes for those living in the many diverse regions that characterise Australia, as the national results average out all of the outcomes across Australia. As a result, it is possible for relatively stable income inequality at the national level to be accompanied by narrowing or increasing gaps between rich and poor neighbourhoods.

Consequently, this report examines trends in income, unemployment, immigration and other socio-economic factors for different geographic regions of Australia using the 2001 and 2006 Census data. The results immediately underline the importance of taking a spatial perspective showing, for example, that:

- In many capital cities, apparent substantial increases in income have been largely offset by rising housing costs and general price increases.
- Households living in areas with the highest incomes have experienced a 36 per cent increase in incomes from 2001 to 2006, compared to a 29 per cent increase in areas where households have the lowest incomes, and
- Households living in middle income neighbourhoods experienced around a 65 per cent increase in their housing costs from 2001 to 2006, compared with only a 54 per cent increase for households in the most affluent neighbourhoods.

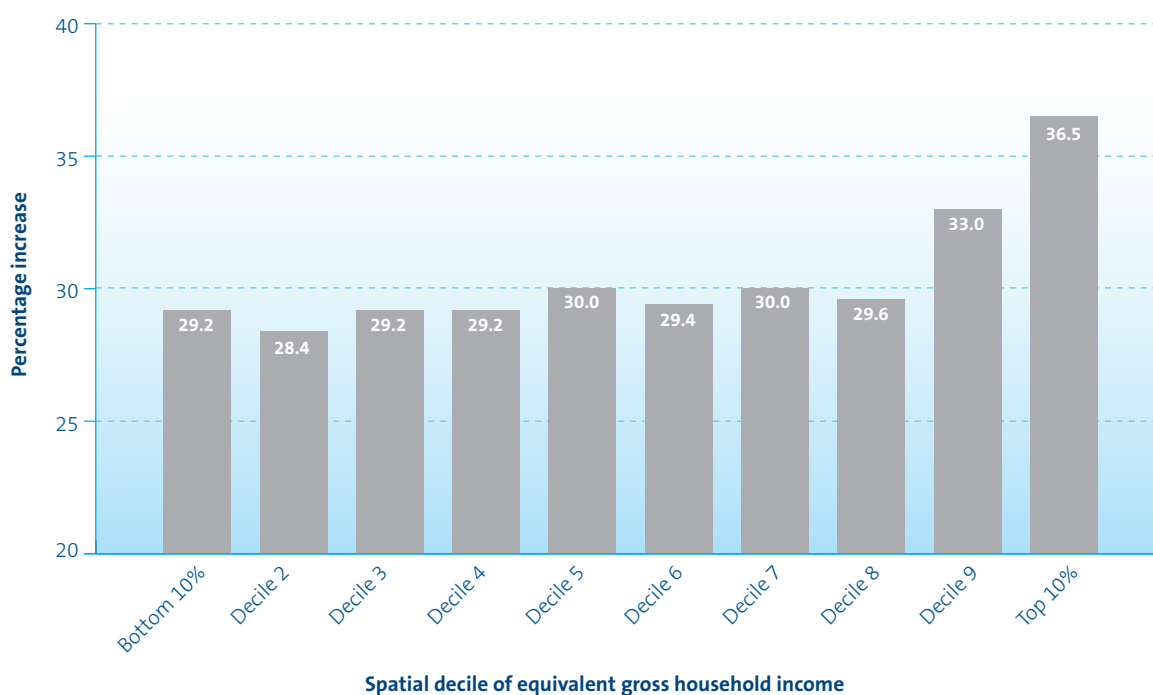
These results are different to the national results calculated using a national survey because we map and summarise the data for each area. This allows comparisons between different areas to be made, rather than looking at Australia as a whole. More information on the spatial analysis techniques used is contained in the Technical Notes at the end of this report.

3. A decade of growing divides

When we summarise how different areas in Australia have fared, the gross income of the average Australian household increased by a robust 31.2 per cent between 2001 and 2006, after accounting for falling household size by using an equivalence scale. This was a higher rate of income growth than the 26 per cent that the average household notched up between the 1996 and 2001 censuses (Harding *et al.*, 2004, p. 4). (In both cases, no account was taken of inflation, so these are “nominal” increases in gross income - unlike the ABS national statistics quoted above which showed lower “real” increases after adjusting for inflation.)

Average incomes in affluent areas increased more rapidly than in poorer areas. While the average incomes of the one-tenth of the population living in the poorest areas increased by 29.2 per cent, the incomes of the middle increased by about 30 per cent and the incomes of the top one-tenth grew by about 36.5 per cent (Figure 1). Thus, there was a growing divide between richer and poorer neighbourhoods during the five years. Both rich and poor areas shared in the fruits of the boom, but not to quite the same extent.

Figure 1 - Percentage increases in average equivalent gross incomes, by spatial income decile, 2001 to 2006



Notes: These are increases in equivalent average household gross income within each statistical local area allocated to one of the spatial income deciles as described in Technical Notes.

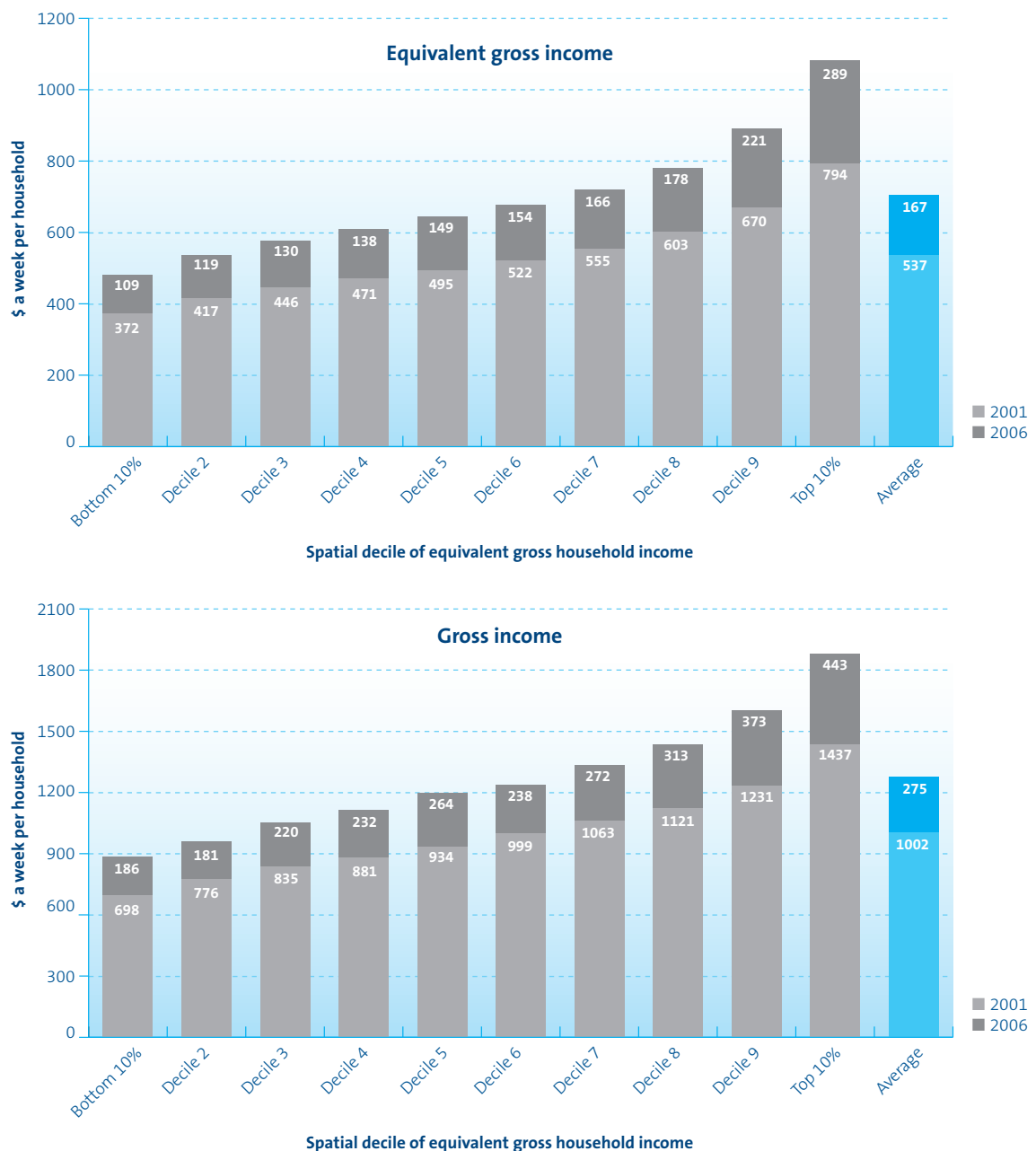
Data sources: Estimated from ABS 2001 and 2006 Census tables.

There was a growing divide between the richest neighbourhoods and the rest of the country during the five years to 2006, although the fruits of the boom were reflected in sharp income increases across the entire country.

Figure 2 shows the actual dollar changes in income underlying these percentage increases. The top chart in Figure 2 indicates that the equivalent gross incomes of the one-tenth of Australians living in the poorest neighbourhoods increased by \$109 a week, from an average of \$372 a week in 2001 to \$481

a week by 2006. (This equates to the 29.2 per cent increase in incomes shown in Figure 1 for the bottom decile.) The incomes of the most affluent one-tenth increased by \$289 a week, from an average of \$794 a week in 2001 to \$1,083 a week per household in 2006.

Figure 2 - Average equivalent gross and gross household incomes by spatial income decile, 2001 and 2006



Notes: These are increases in average equivalent gross household income and average gross household income within each of the spatial income deciles as described in Technical Notes. “Equivalent” income means that the gross income of each household has been divided by a value which reflects the number of adults and children supported by that household’s income, which is why “equivalent gross” income is lower than “gross” income.

Data sources: Estimated from ABS 2001 and 2006 Census tables. See Table A1 for detailed results.

In 2001, the equivalent gross incomes of those in the most affluent decile were 2.1 times higher than those in the poorest decile. By 2006, this relative gap had widened slightly, so that incomes of those in the top decile were about 2.3 times higher on average than those households in the bottom decile.

However, these results are for *equivalent* incomes, where we have made an adjustment for the number of people that each household's income has to support. Thus, a household consisting of a couple with two children and a gross income of \$50,000 a year is not as well off as a single person household with a gross income of \$50,000 a year. In applying our equivalence scale, the "equivalent" gross income of single person households is the same as their gross income. However, for all those larger households - such as couples with children - their equivalent gross incomes are lower than their gross incomes, in recognition of their extra financial burdens.

This approach is considered the most desirable by economists, particularly as the shrinking size of the average household in Australia means that just looking at gross income does not take account of the fact that an average income is now typically supporting fewer people than a decade or two ago. But it can be hard to work out how your own income compares with these equivalent gross income measures.

Consequently, the bottom chart in Figure 2 also shows the gross incomes of households in each of our deciles, before any equivalence scale has been applied to put larger and smaller households on a more equal footing. The one-tenth of Australians living in our most affluent decile enjoyed an average gross income of \$1,880 per week (\$97,760 per year) in 2006, an increase of \$443 a week compared with the \$1,437 a week (\$74,724 per year) that prevailed in 2001. The average gross income of the one-tenth of Australians living in our poorest decile was \$884 a week in 2006 (\$45,968 per year), up \$186 on the \$698 a week (\$36,296 per year) that applied in 2001 (Figure 2). The gross household incomes of the top decile in 2006 were thus slightly more than double those of the poorest.



Most of the affluent neighbourhoods are found within the capital cities

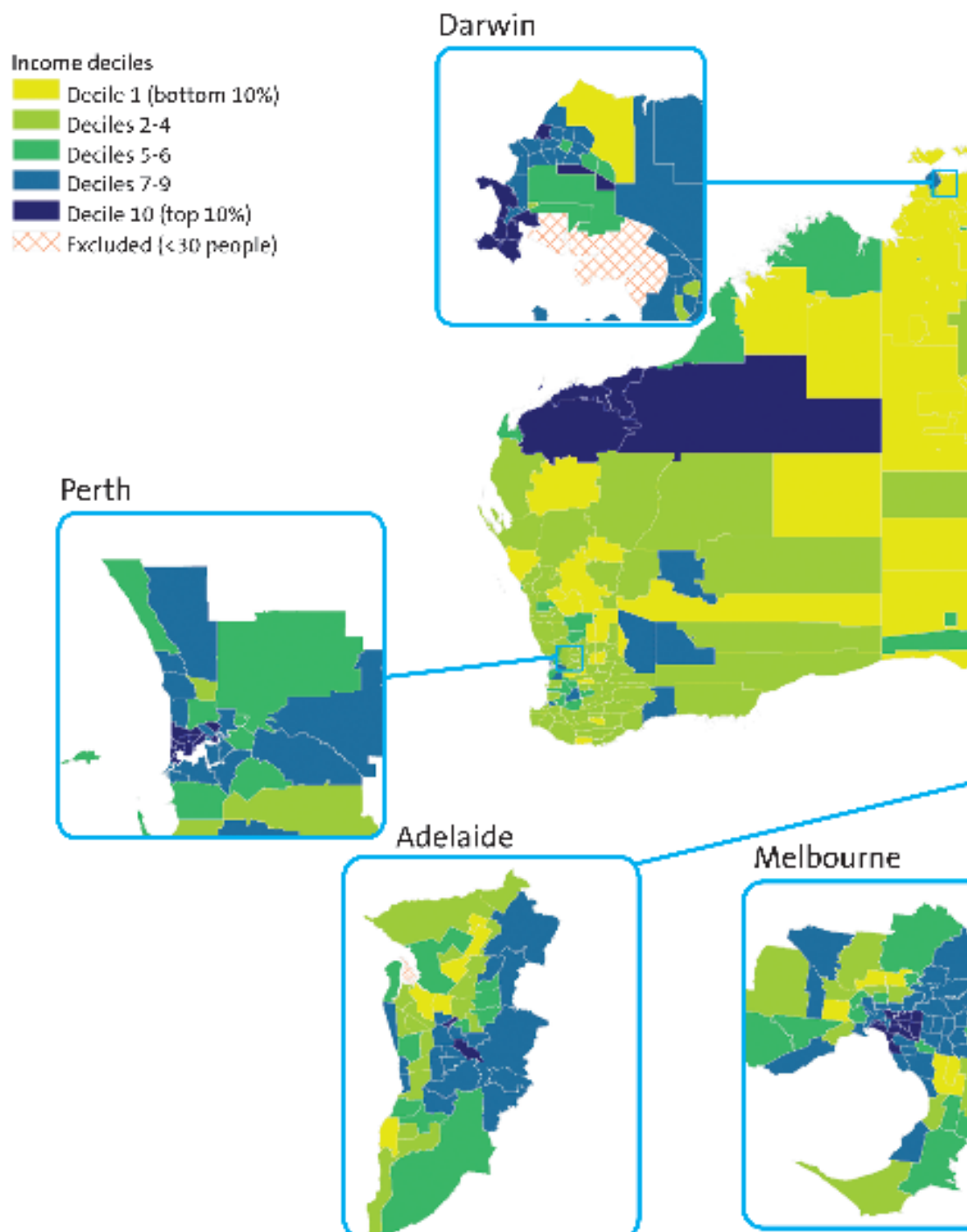
4. Where do the affluent live?

Income is one of the main enablers in our society. Those with higher incomes tend to have better health outcomes, more satisfying jobs and more prospects, whereas those on lower incomes tend to suffer from worse health, greater exclusion from society and less satisfying jobs (Walker *et al*, 2006).

Figure 3 shows a map of the poorest and richest areas in Australia. The light yellow sections of this map show where the one-tenth of Australians living in the poorest neighbourhoods live, while the dark blue sections show where the one-tenth of Australians living in the most affluent neighbourhoods live.

One of the interesting aspects of looking at small area income distribution is that areas that have high incomes tend to be next to other areas with high incomes, and areas with low incomes tend to be next to areas with low incomes. Between areas of high and low incomes, there is nearly always a buffer of moderate income suburbs. Rarely is there an area of a high income zone next to an area of low income. This effect can be seen in Sydney, for example, where the area to the north of the city (including Frenchs Forest, Belrose and Lane Cove) is an area of high incomes; and the area to the south-west of the city (such as Bankstown, Fairfield and Strathfield) experiences low incomes. Between these two areas, there is an area of moderate income. This pattern occurs in most capital cities: there is usually a medium income “buffer” between the richest areas and poorest areas.

Figure 3 - Equivalised gross income deciles for small areas, Australia, 2006



Note: Author's calculations based on 2006 Census.

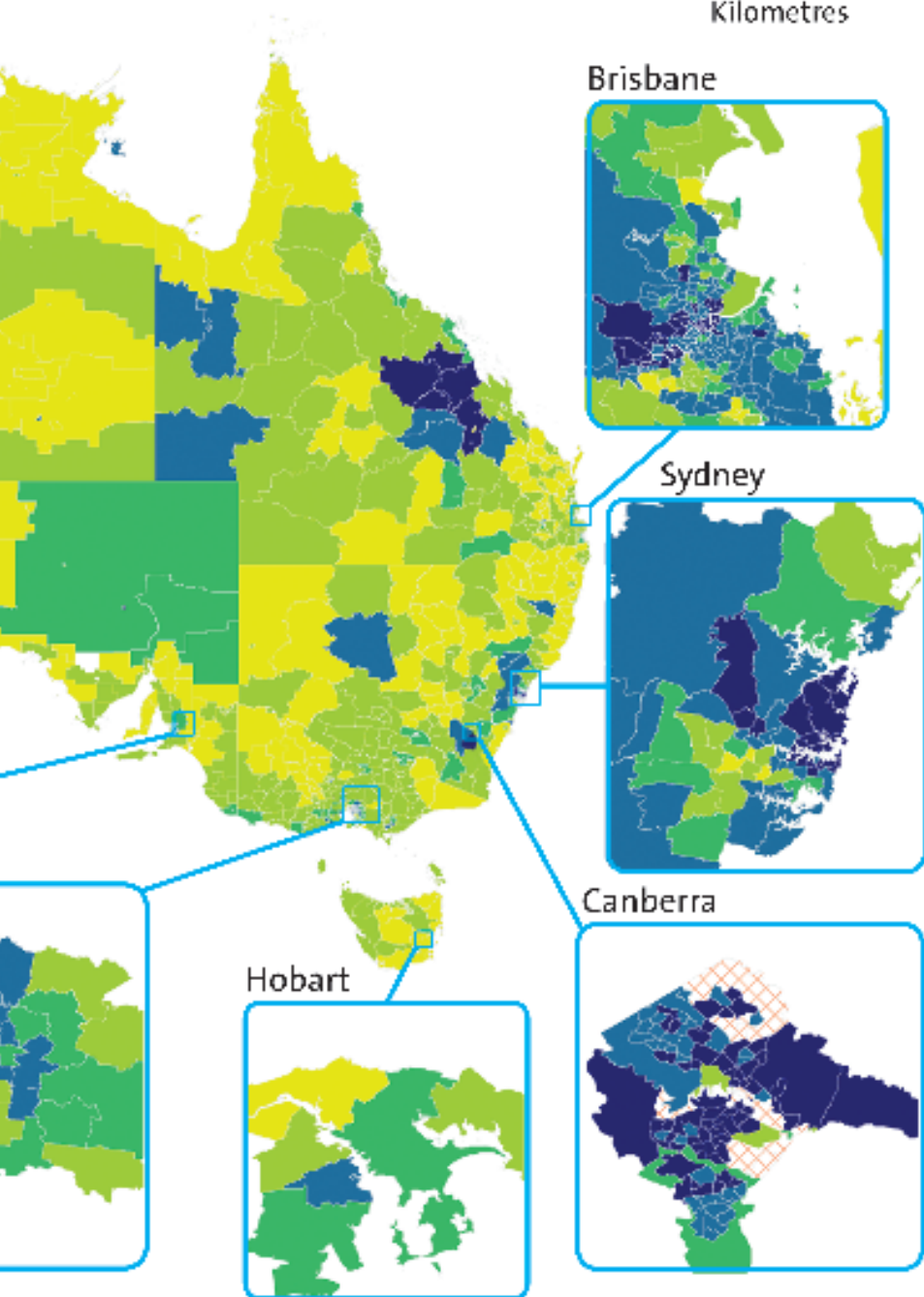
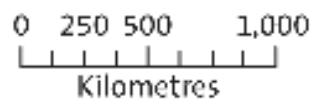


Figure 3 clearly illustrates the urban/rural divide in terms of incomes in Australia. Most of the high income areas are in capital cities, with few high income areas in rural areas. Those rich areas which are in remote regions tend to be mining towns, like those in the north of Western Australia (Newman, Port Headland and Tom Price) and the mid-east of Queensland (around Belyando, a strong coal mining area). Many of the areas in the middle of Australia are very large areas, and have a high proportion of indigenous Australians, who typically have lower incomes and live in areas traditionally associated with higher poverty. Opportunities for work in these remote areas are also limited, which would affect the incomes of those living in these areas.

The other interesting point about Figure 3 is that many of the areas of low income are on the east coast of Australia, in particular northern New South Wales beaches (Port Macquarie and Coffs Harbour and Inland), and north of Brisbane (Gympie and Kingaroy). So people experiencing a “seachange” from Sydney to the New South Wales north coast are also moving into areas of lower income.

Housing costs also tend to be lower in these rural and remote areas, so the need for higher incomes is not as great. Recent housing research by NATSEM published in AMP.NATSEM Report No. 19 showed that housing affordability in areas outside the capital cities was much better than within capital cities, so the higher income experienced in the capital cities generally did not compensate for the higher housing costs experienced (Tanton *et al.*, 2008). In areas outside the capital cities, this factor may be offset by higher fuel and food prices and, in remote areas, by much higher prices overall. (The next section looks at housing costs in more detail.)

Generally Figure 3 shows that Canberra has the fewest poorer areas and the most affluent areas of any capital city, and this is consistent with the higher incomes typically reported by Canberrans (ABS, 2007b). There are some areas of low income in Canberra, but these tend to be small areas with a high concentration of public housing tenants and students.

Tasmania has no area in the highest income decile. This is consistent with ABS data which shows that in 2005-06, Tasmania had the lowest median income (ABS, 2007b).

Melbourne is similar to Sydney, showing areas of high income (such as Inner Melbourne, St. Kilda, South Yarra and Toorak), then a buffer of moderate incomes before the poorer areas on the fringe of the city (such as Sunshine, Preston, and Broad Meadows). Adelaide has a mix of poor and rich areas although, again, a clear clustering of poor and rich areas can be seen (rich areas include Burnside, Playford Hills and Tea Tree Gully and poorer areas include Salisbury and Enfield). A moderate income buffer zone between the poorest and richest areas is again apparent.

Perth has been a beneficiary of the boom in mineral prices in recent years, and there are no areas in Perth in the bottom decile of the spatial income distribution (that is, the poorest areas across Australia). There are also areas in northern Western Australia where high earnings have placed them in the top spatial income decile, with this again being driven by the mining boom.

Darwin also has few areas experiencing low incomes, and a number of areas in the highest decile of incomes across Australia. This is not true of the rest of the Northern Territory, which is in the lowest income decile.

Brisbane shows the traditional clustering of rich areas (such as Brookfield and Anstead), poor areas (Moggill and Durack), and the buffer of middle income areas between rich and poor areas.

It is clear that most of the rich settlements are in capital cities. Yet there are a few top income SLAs in regional areas of Queensland (Mackay-Fitzroy region) and Western Australia (Pilbara region). Many of these could be rich due to the mining boom being experienced in remote areas.

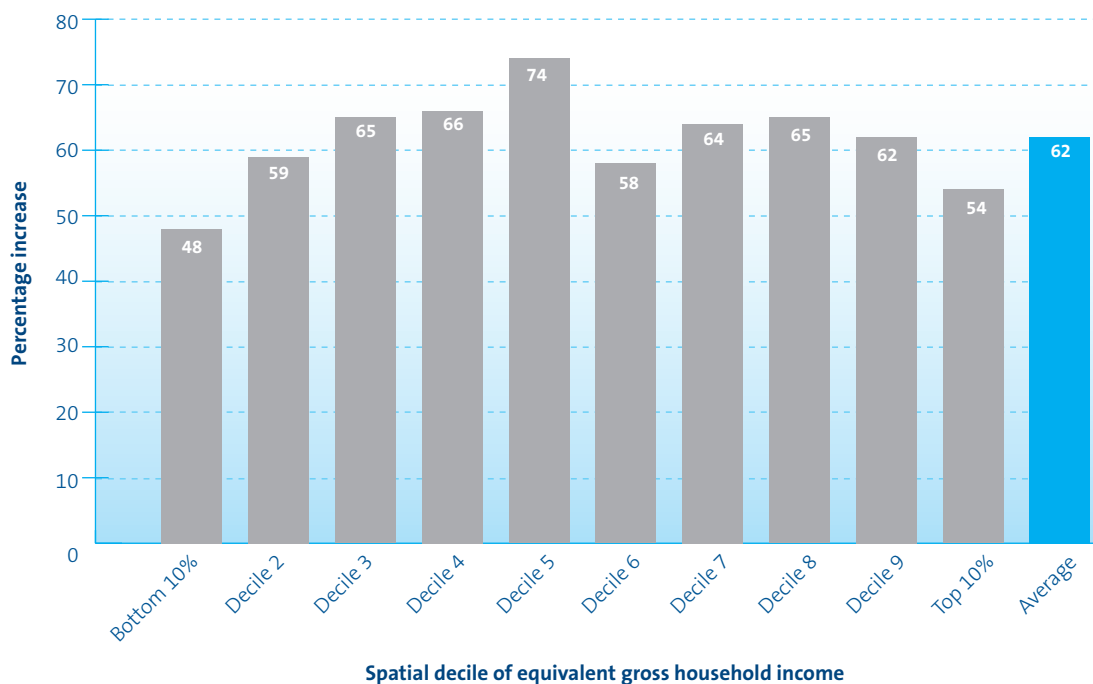
Overall, looking at the richest and poorest areas across Australia highlights the capital city/rural divide that exists in Australia. It also highlights the poverty found in the remote Northern Territory, where many of our Indigenous people live.

5. The housing bombshell

Rising house prices have been one of the factors causing many households extensive financial pain in recent years. The Census data suggest that the housing costs of the average Australian household increased by a substantial 62 per cent between 2001 and 2006. This represented an increase from \$123 a week for the average household in 2001 to \$199 a week by 2006. (The census definition of “housing costs” only includes mortgages and rents paid and, for example, excludes rates).

However, intriguingly, housing costs increased more rapidly for middle income households than for households at the top and bottom of the spatial income spectrum. As Figure 4 indicates, the housing costs of the most affluent spatial decile increased by 54 per cent - a lower percentage increase than for most of the other deciles. For the poorest decile, the commensurate increase in housing costs over the same period was 48 per cent. In contrast, for much of middle Australia, the increase was closer to 65 per cent.

Figure 4 - Percentage increases in average housing costs, by spatial income decile, 2001 to 2006



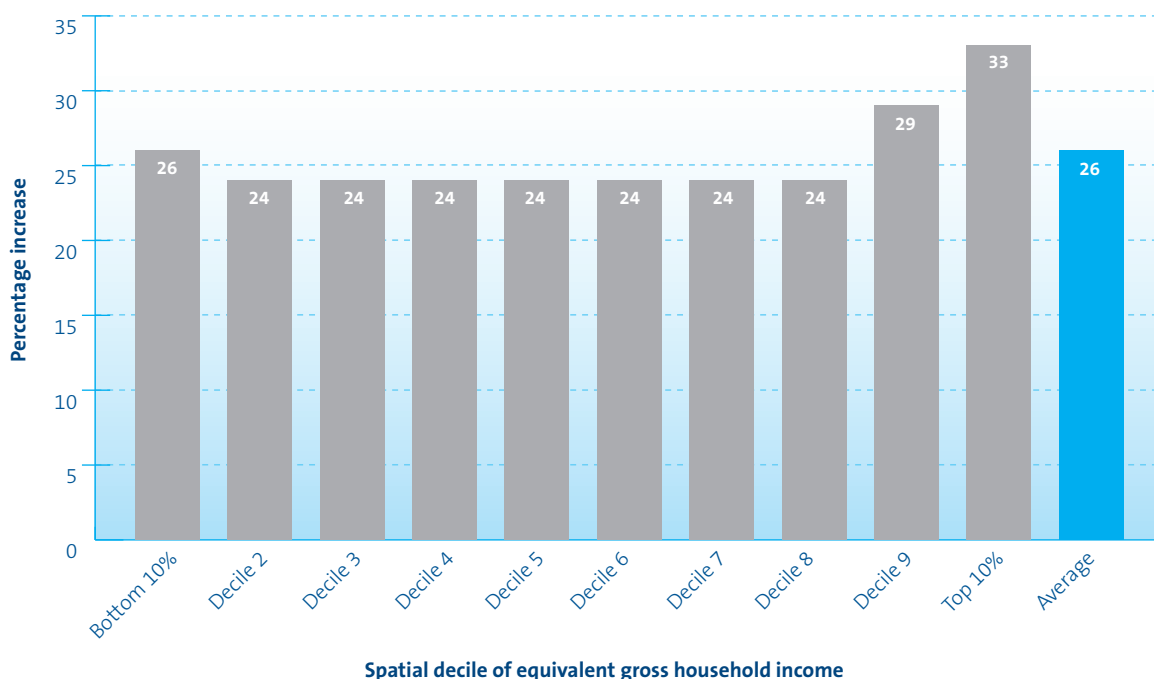
Data sources: Estimated from ABS 2001 and 2006 Census tables.

For the average Australian household, housing costs increased much more rapidly than gross income between 2001 and 2006. As a result, while the economic boom did result in across-the-board increases in gross income for the nation, the escalation in housing costs dampened the effective improvements in living standards. Thus, as noted earlier, while the equivalent gross income of the average Australian household rose by 31 per cent between 2001 and 2006, the increase in equivalent gross “after-housing-costs” income was only 26 per cent (Figure 5).

Researchers often use “after-housing-costs” income measures when examining poverty or income inequality, in part because

the housing costs of older Australians are so much lower than those of younger Australians (Harding, 1997; Harding and Szukalska, 2000; Siminski and Saunders, 2004; Saunders *et al.*, 2008, p. 69). As a result, looking at income before expenditure on housing can understate how well off older Australians are relative to younger Australians. Another group for whom this can be particularly important is public housing tenants (who typically pay lower rents than those in private rental housing). As Saunders *et al.* explain, “many regard the after-housing-costs measure as more reliable than the before-housing-costs measure for comparing movements in poverty over the life cycle” (2008, p. 69).

Figure 5 - Percentage increase in average equivalent gross “after-housing-costs” income, by spatial income decile, 2001 to 2006



Data sources: Estimated from ABS 2001 and 2006 Census tables.

Interestingly, Figure 5 also shows there is a pronounced spatial dimension to these issues. The slower growth in the housing costs of those living in the most affluent areas, allied with their above average income increases, have resulted in a growing gulf between the richest suburbs and the rest of Australia. Once we look at households living in richer and poorer neighbourhoods, after subtracting their housing costs from their incomes and after applying an equivalence scale to take account of possible systematic differences in household size, we find that the incomes of those living in the richest neighbourhoods have increased most rapidly - by about 33 per cent, compared with around 24 per cent for the bottom 80 per cent of neighbourhoods (Figure 5).

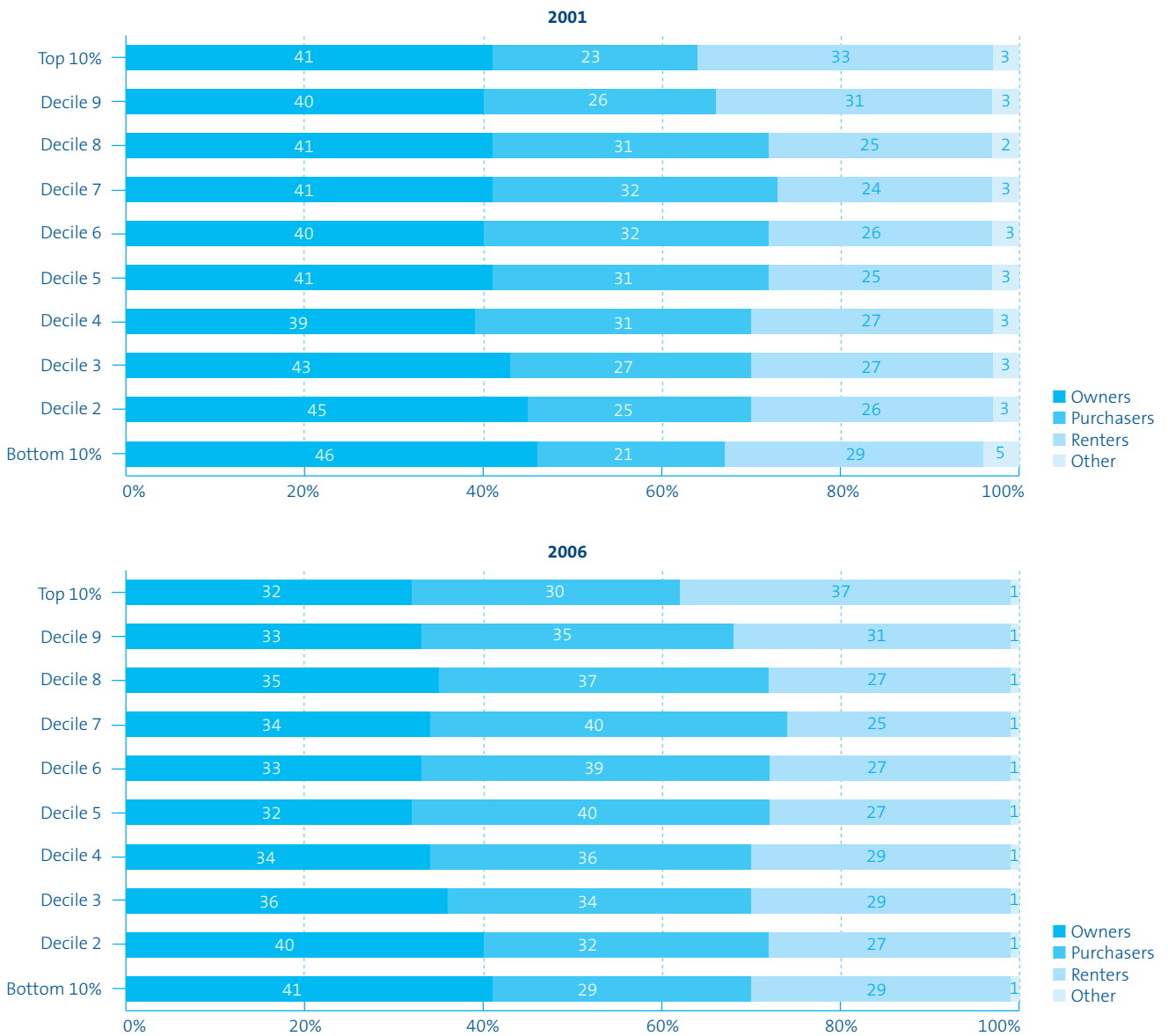
The 19th AMP.NATSEM Report focused on housing and demonstrated the pronounced generational impacts of rising house prices. That report showed that, at a national level, there has been a sharp fall in the proportion of households that own their home outright, down from about 43 per cent of all households in 1995-96 to 34 per cent in 2005-06 (Tanton *et al.*, 2008, p. 28). Although this current report uses Census data to examine these trends (rather than national sample survey data, as in the earlier study), the Census also reveals the same fall in outright home ownership and a shift towards home purchase (figure 6).

Many would expect poorer areas of Australia to contain a higher concentration of renters and a lower concentration of homeowners. But the reality is quite surprising, with households in the lowest spatial income decile being more likely to be outright home owners than those in any other spatial income decile. Figure 6 indicates that, in 2006, 41 per cent of households in the lowest spatial income decile owned their homes outright, down from 46 per cent in 2001. The effects for the most affluent decile were much more pronounced, with 32 per cent of top decile households being outright home owners in 2006, down from 41 per cent in 2001.

Figure 6 also clearly illustrates the financial pain experienced by middle Australia, showing how households in middle income neighbourhoods were more likely to be outright home owners in 2001 than they are today. The figure almost suggests the hollowing out of outright home ownership across the five years, with home purchasers now being the largest single tenure group across the middle income deciles (ranging from Decile 4 to Decile 8).

Interestingly, the 10 per cent of Australians living in the most affluent neighbourhoods in 2006 were more likely to be living in rental households than those in any other decile. For example, while around 37 per cent of all top decile households were renters in 2006, this compared with around only 27 per cent in Deciles 5 and 6. Conversely, households in Deciles 5 and 6 were much more likely to be home purchasers than were households in the top decile.

Figure 6 - Housing tenure by spatial income decile, 2001 and 2006

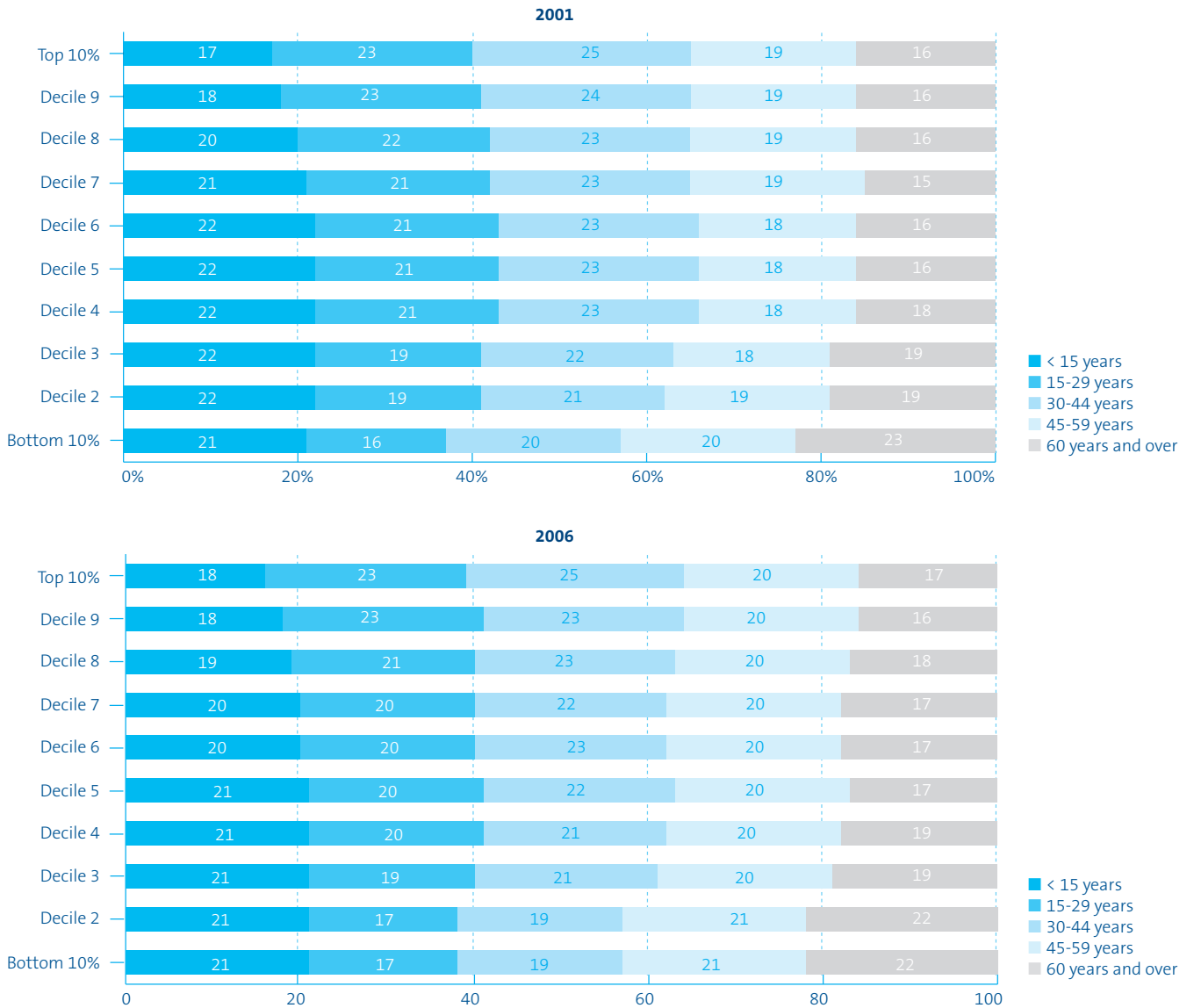


Data sources: Estimated from ABS 2001 and 2006 Census tables.

Some further clues to the differing characteristics of households living in richer and poorer neighbourhoods are provided in Figure 7. The much higher outright home ownership among lower income neighbourhoods described above is correlated with the greater presence of older Australians in these neighbourhoods. While about one in every 4.5 individuals living in bottom decile neighbourhoods is aged 60 years and over, only one in every six top decile individuals belong to this seniors age group.

In top decile neighbourhoods there are fewer children, with about 18 per cent of all residents being aged less than 15 years, in comparison with the 21 per cent that prevails for the half of all Australians living in the lower five spatial income deciles. But, not surprisingly, one-quarter of those living in top decile neighbourhoods are in the prime working years and aged 30 to 44 years - a greater representation than for any other spatial income decile.

Figure 7 - Age distribution by spatial income decile, 2001 and 2006



Data sources: Estimated from ABS 2001 and 2006 Census tables.

Between 2001 and 2006, household incomes increased most sharply for residents of Queensland, Western Australia and the two Territories

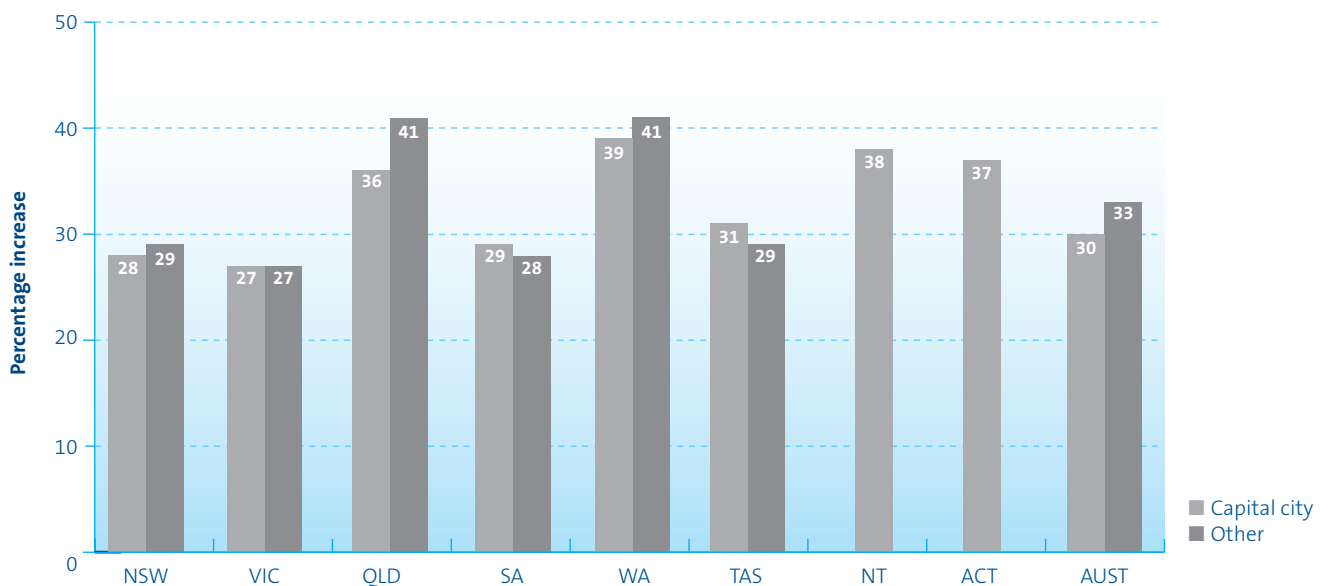
6. Two Australias?

There have been concerns that the mining boom is dividing Australia into a “two speed” economy, with Queensland and Western Australia prospering while the rest of Australia is left behind. Certainly, when looking at incomes, we find that Perth has no areas in high poverty and that many areas in northern Western Australia are in the richest group of areas across Australia. However, Figure 8 suggests a more complex picture over the period from 2001 to 2006.

Perth experienced the greatest increase in equivalent gross household incomes out of all the capital cities between 2001 and 2006, at 39 per cent. This was closely followed by the 37 per cent increase notched up by areas in the ACT and 36 per cent in Brisbane. Sydney, Adelaide and Melbourne all experienced the lowest increases, of about 28 per cent.

The mining boom was also reflected in the fast-paced income growth occurring outside Brisbane and Perth, with those Queenslanders and Western Australians living outside Brisbane and Perth experiencing a 41 per cent growth in income.

Figure 8 - Percentage increase in average equivalent gross household income, State and Territory, 2001 to 2006

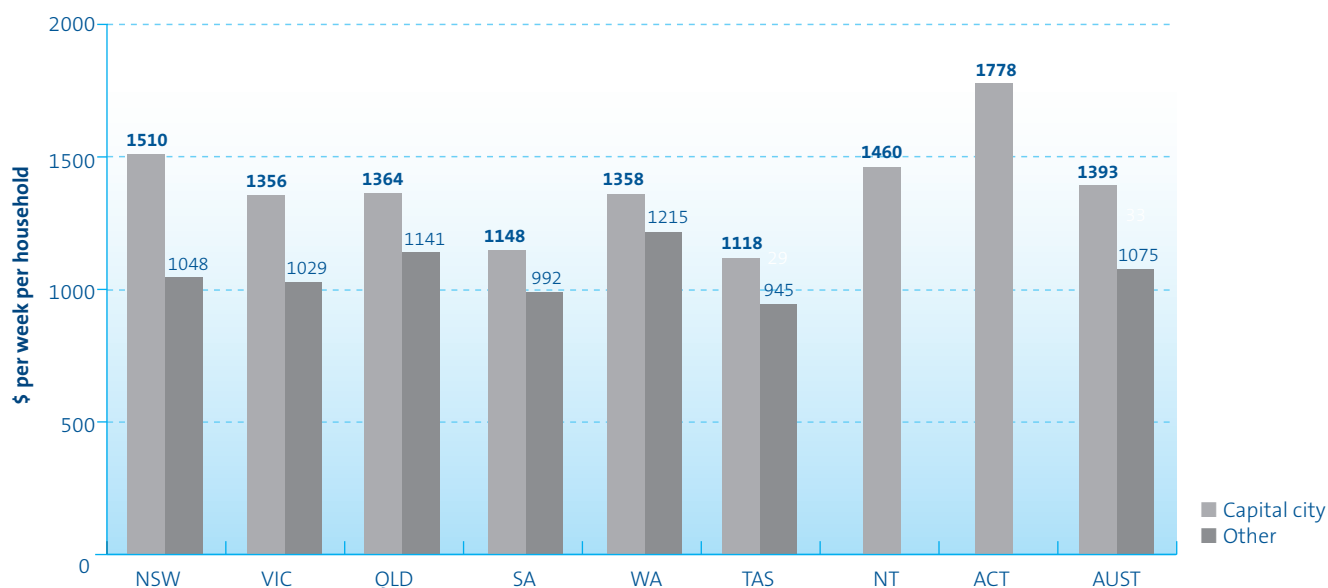


Data sources: Estimated from ABS 2001 and 2006 Census tables. Remote NT has been combined with Darwin, as the population size in remote areas of the Northern Territory means that some percentages calculated are unreliable due to the low population numbers. In the ACT, there are few people outside the capital city Canberra, so again these areas have been merged with the Canberra value.

The extent of these differential changes has been sufficient to reverse some of the traditional income rankings between the cities apparent a decade ago. In 2006, as was also the case 10 years earlier in 1996, Canberra residents enjoyed the highest gross household incomes in the nation (Lloyd *et al.*, 2001, p. 19). In both years, Sydneysiders also notched up the second highest incomes. However, whereas in 1996 Melbournians recorded higher gross

household incomes than those living in Brisbane, by 2006, strong population and economic growth in Queensland had pushed Brisbane marginally ahead (Figure 9). The average gross income of Adelaide residents was close to that of Hobart residents in both years, with the income of its average household of \$1,148 a week, in 2006 being slightly above the \$1,118 recorded by households in Hobart (Figure 9).

Figure 9 - Average gross household incomes, State and Territory, 2006



Data sources: Estimated from ABS 2006 Census tables.

Figure 10 below again attempts to take account of changes in housing costs between the capital cities, by subtracting housing costs from gross income and then using the equivalence scale to take account of the number of people each household has to feed and support (Table A2). Figure 10 can be compared with Figure 8, which shows the percentage changes *before* taking out housing costs, while Figure 10 shows the percentage changes *after* taking account of housing costs.

The results in Figure 10 make it clearer why so many Australians feel overwhelmed by their housing costs and are unsure whether they really are much better off today than at the beginning of the decade. For example, the average income of Sydney households, after taking out their housing costs and taking account of how many mouths they had to feed, increased by 22 per cent between 2001 and 2006 (Figure 10). (Table A2, in the Appendix, shows the figures used to obtain these graphs.)

At first glance, this 22 per cent income growth suggests that Sydneysiders were among the beneficiaries of the boom. However, we need to keep in mind that prices - of food, transport, education, childcare as well as housing and many other items - also increased during the five years. The national increase in the Consumer Price Index between 2001 and 2006 excluding housing costs (which are already taken into account through our use of after-housing income) was 13.9 per cent (ABS, 2008c). So this means that the average Australian

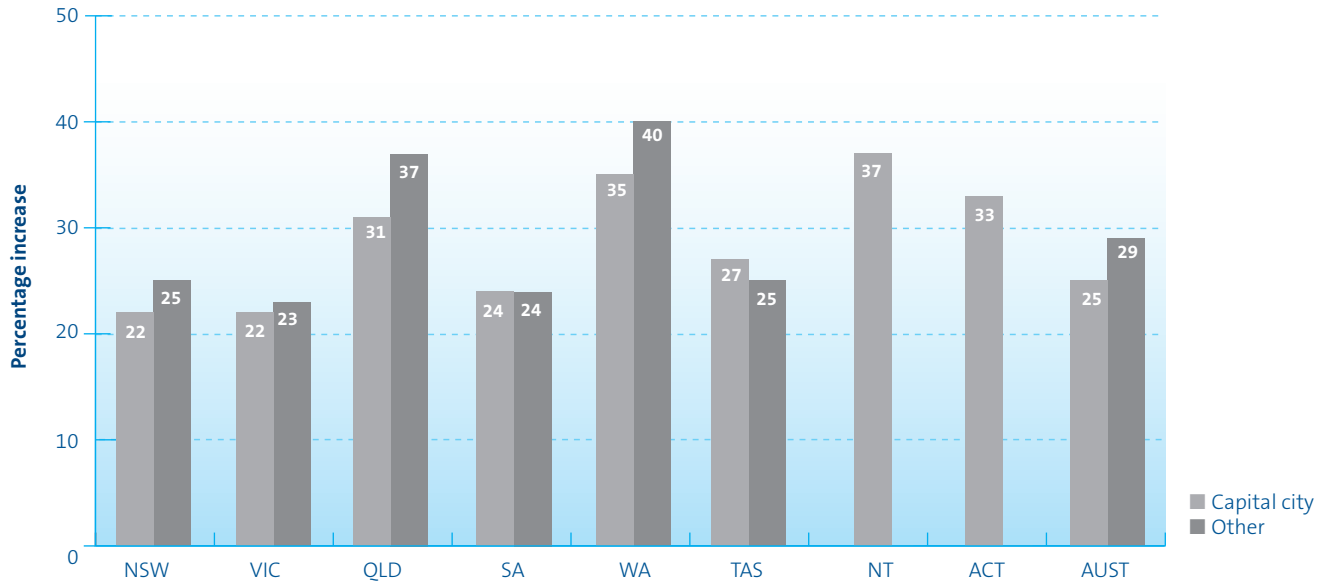
household needed its “after-housing-costs” income to increase by 13.9 per cent just to tread water. This suggests that, for many Sydneysiders, their substantial increases in earnings and other income sources were largely offset by increases in their housing costs and the costs of living, so they were not in a much better financial position by 2006 than five years earlier.

But Sydney residents were not the only city dwellers to feel the pinch of rapidly rising housing bills. The sharpest increases in housing costs occurred in Adelaide, Brisbane, Hobart, and Canberra, where housing costs increased by 63, 68, 64 and 64 per cent respectively (Figure 11). Trends in housing costs and equivalent gross incomes were much the same in Melbourne as in Sydney (Table A2).

There were areas of Australia where living standards improved markedly, even after taking account of increases in housing costs. These comprised Brisbane and Queensland more generally, Perth and Western Australia, the Northern Territory and the ACT, with all of these areas experiencing above average increases in equivalent after-housing gross income (Figure 10). (There are, of course, issues about the extent to which booming incomes in mining areas are disguising slow growth in other non-mining rural areas.)

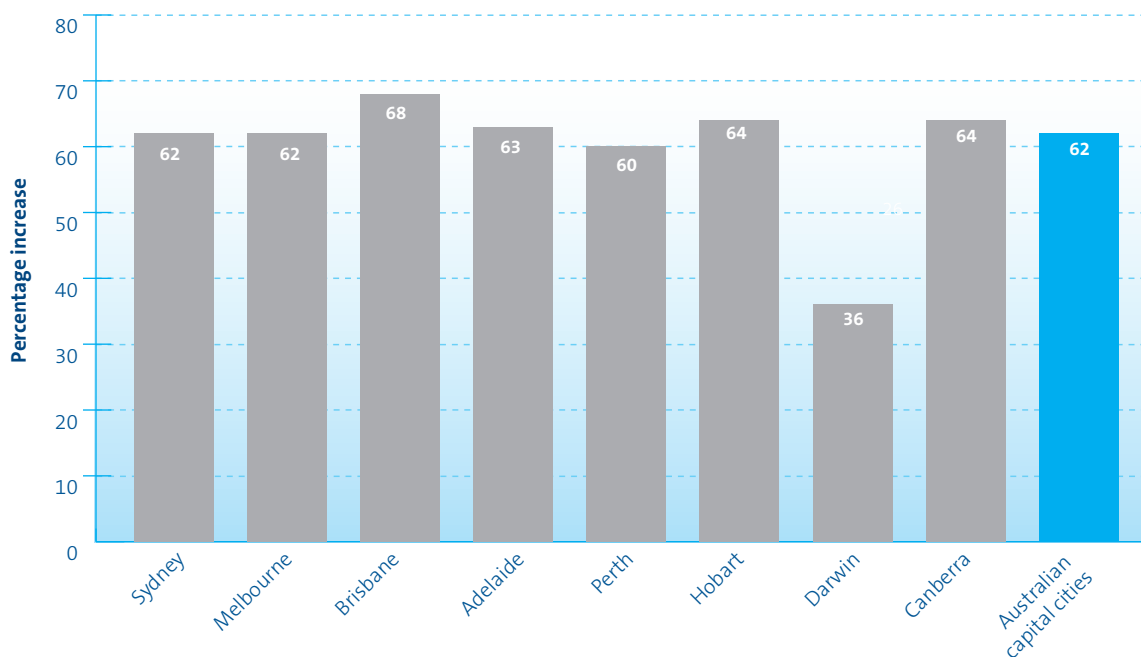
For many households in Sydney, Melbourne and Adelaide, substantial income increases appear to have been largely offset by rising housing costs and price increases generally, resulting in little improvement in their standard of living.

Figure 10 - Percentage increase in average equivalent gross “after-housing-costs” income, State and Territory, 2001 to 2006



Data sources: Estimated from ABS 2001 and 2006 Census tables.

Figure 11 - Percentage increase in average housing costs per household, by capital city, 2001 to 2006



Data sources: Estimated from ABS 2001 and 2006 Census tables.

7. The geography of unemployment

One of the key indicators used to judge a government's and a society's performance is the unemployment rate. The unemployment rate shows the proportion of people aged 15 and over who are in the labour force and seeking paid work. The fall in unemployment was one of the success stories of the Howard Government, with the proportion looking for full-time work falling from 6.8 per cent in 2001 to 4.8 per cent in 2006 on average (ABS, 2008a). How was this national fall in the unemployment rate translated geographically during the five years to 2006?

Figure 12 maps the change in the unemployment rate of each SLA between 2001 and 2006. The dark blue SLAs are those where there was the greatest percentage decline in the unemployment rate. In some cases we have to interpret these figures with caution, as a fall in the number of unemployed from six to three persons, for example, can produce a 50 per cent fall in the unemployment rate. Thus, the analysis has to be complemented by examining the actual numbers that lie behind the percentage change (and these figures are on the AMP website in the companion document to this report which contains the detailed SLA results).

There were more than 100 Statistical Local Areas where the unemployment rate increased during the five years

Nonetheless, it is clear from the map that the boom towns of Brisbane, Perth and Darwin did well on the unemployment front, with sharp falls in the proportion of the labour force that were unemployed. Broadbeach-Mermaid Beach on the Queensland Gold Coast recorded a sharp fall in the unemployment rate from about 9 per cent in 2001 to around 4.5 per cent by 2006, with the number of unemployed falling from around 540 to just over 200. Cranbrook in Queensland also experienced good times, with the unemployment rate falling from almost 9 per cent to just under 4 per cent, representing a fall of about 160 unemployed persons. Joondalup - South in Western Australia similarly flourished, with the unemployment rate falling from 5.8 to 2.6 per cent during the five years, and with Stirling-Central enjoying a decline in the rate from 9.6 to 4.2 per cent.

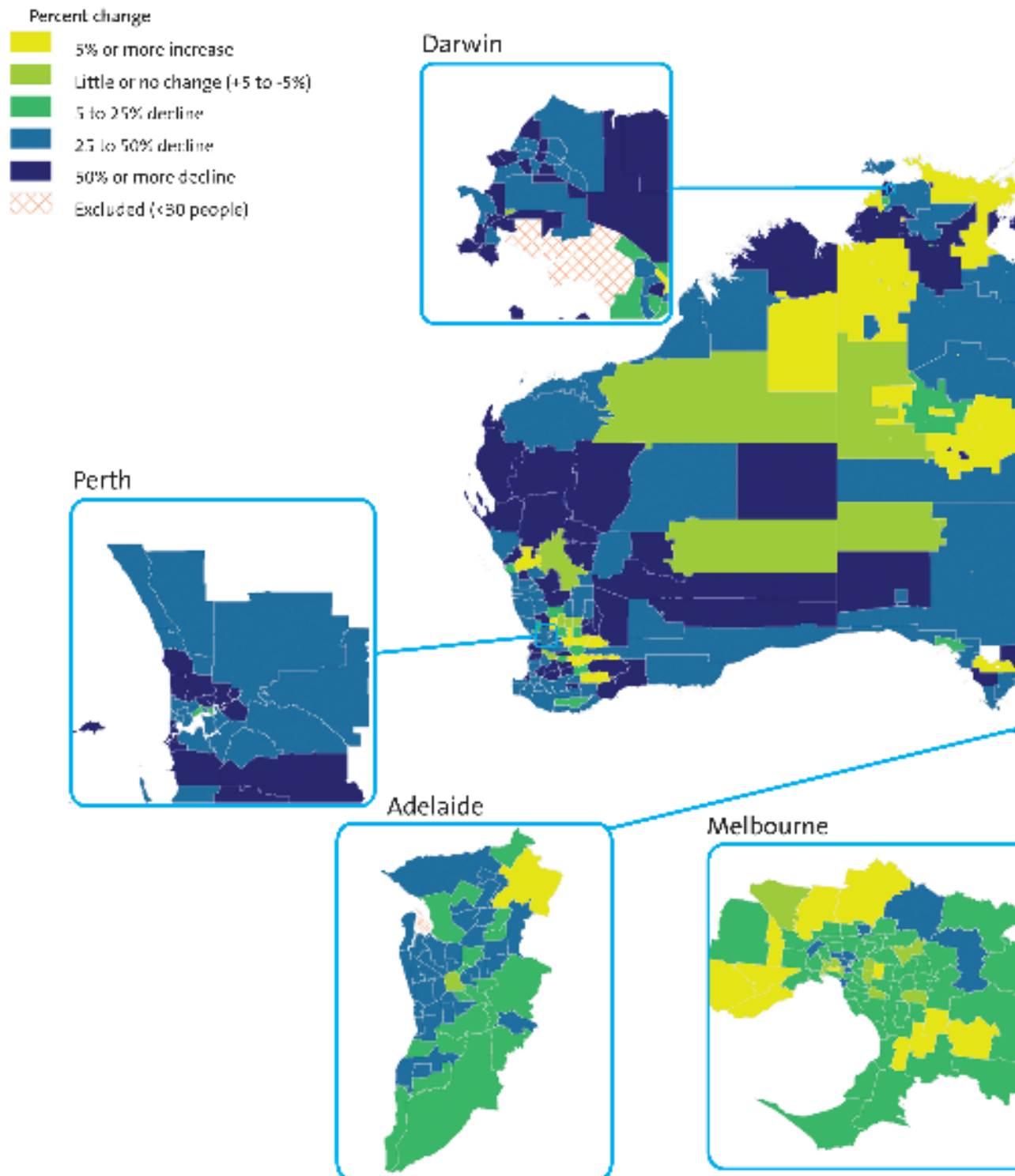
There was less change in Melbourne and Sydney, with the unemployment rate falling only marginally in areas like Rockdale and Blacktown in Sydney and Manningham-West and Monash-West in Victoria.

There were also some regions in Australia that bucked the national trend towards falling unemployment, with more than 100 SLAs where the unemployment rate increased over the five years. These areas are shown in yellow in Figure 12 and included areas like Melton-East and Inner Melbourne in Victoria, as well as Griffin-Mango Hill in Queensland.

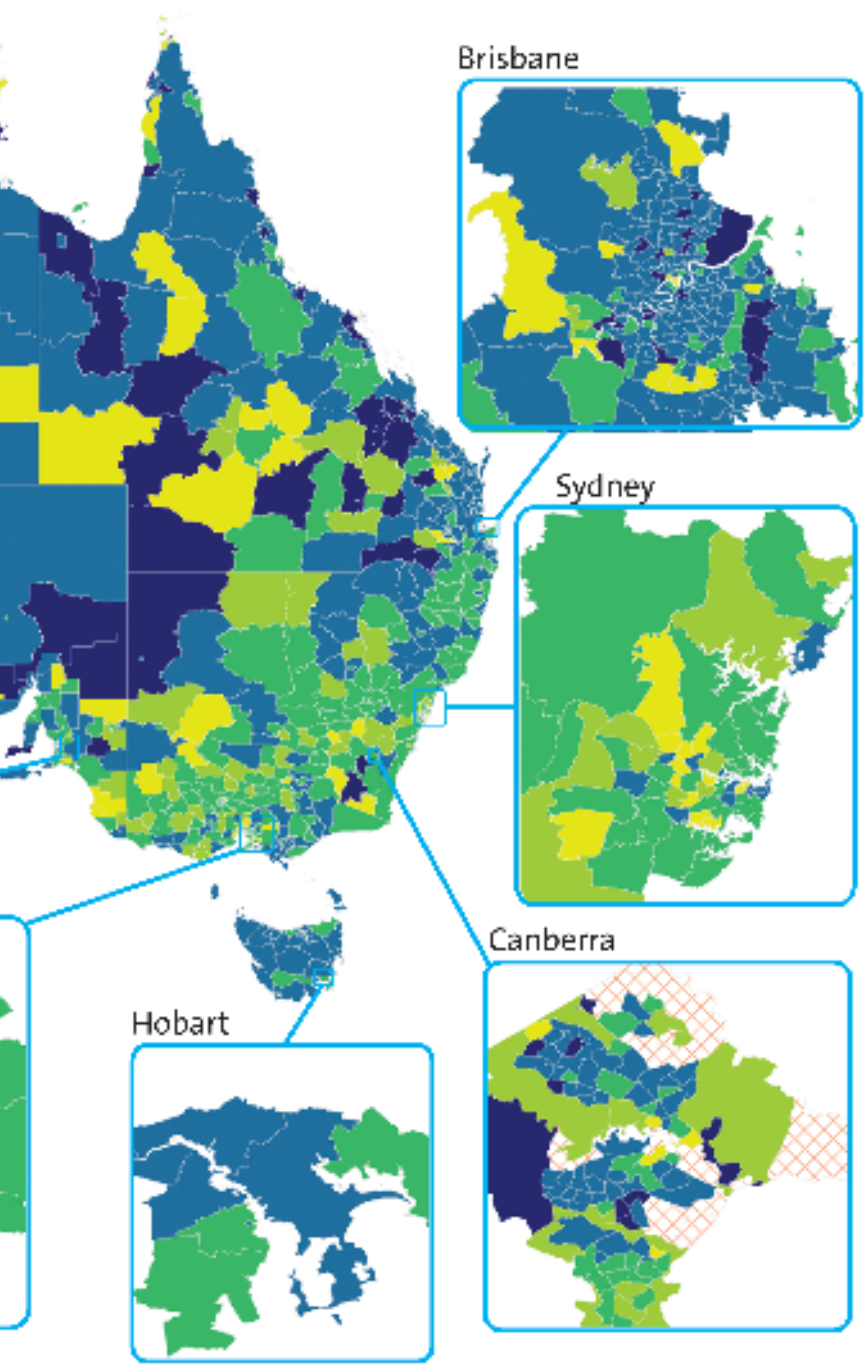
Some rural areas benefited more from the fall in unemployment, in particular remote Western Australia and the Northern Territory. This is in contrast to the income in these areas, which is often still very low.



Figure 12 - Percentage change in the number of unemployed persons, by Statistical Local Area, between 2001 and 2006



Notes: Authors' calculations based on 2001 and 2006 Censuses



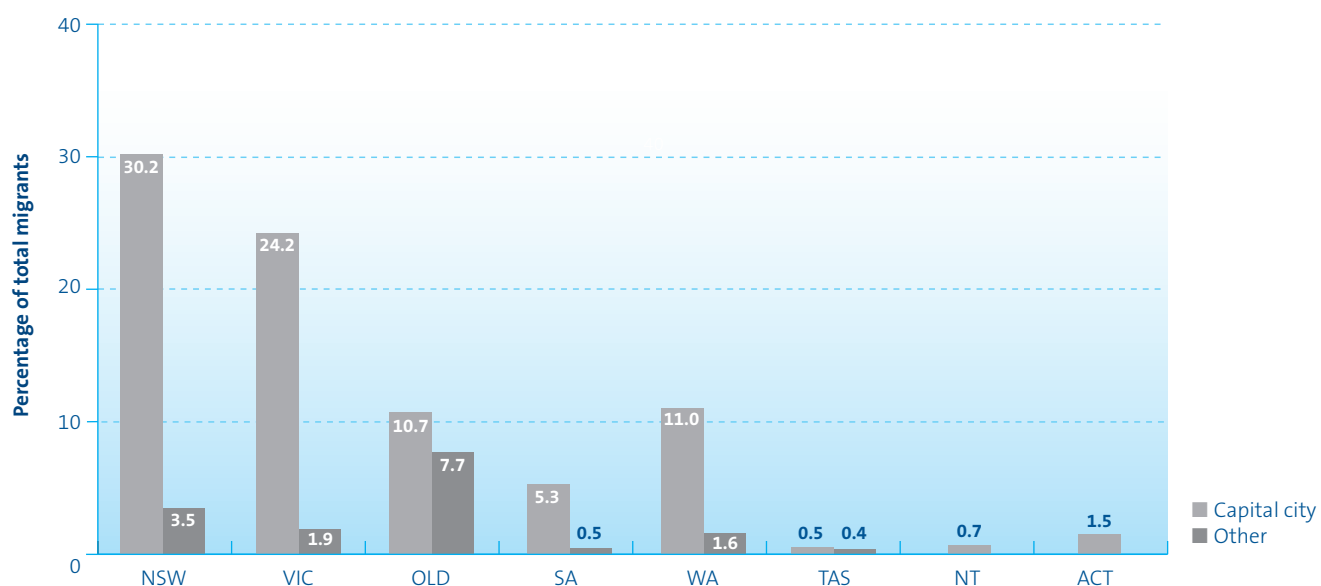
8. A nation of migrants

Australia has always been a country built upon migration. However, particularly in the past few years, the jobs boom and strong economic growth in Australia has not only meant lower unemployment, but also higher demand for skilled labour. During the 2001-02 to 2005-06 period, Australia welcomed nearly 550,000 new migrants (ABS, 2008b). Out of this total, skilled migrants accounted for 43.4 per cent. A part of the excess demand for skilled workers has been filled through the skilled migration program, and these migrants are also sharing in and contributing to the higher incomes experienced by all Australians.

Most of the incoming residents tend to live in big cities, like Sydney and Melbourne. Sydney, with just 20 per cent of the Australian population overall, was the most preferred destination for immigrants, attracting more than 30 per cent of the total intake from 2002 to 2006. Melbourne was the next most favoured destination, receiving 24 per cent of all migrants in the same period. Perth and Brisbane were the next preferred cities, where one in ten recent arrivals settled. While Adelaide accommodated one in 20 immigrants, Canberra, Darwin and Hobart were less popular, receiving only around one in 100 newcomers.

There are indications that immigrants are increasingly dispersed across Australia, with many of them now settling in regional towns (McDonald and Withers, 2008). Yet, in the big states such as New South Wales, Victoria and Western Australia, most immigrants chose to live in the capital cities. For example, regional areas of New South Wales received just under 4 per cent of immigrants, well below its 12 per cent share of the Australian population. Only in Queensland did the regional areas compete favourably with the capital city, Brisbane, in attracting new residents (11 per cent in Brisbane and 8 per cent in the rest of the state). This may be because of the mining boom being experienced in Queensland and the demand for mining jobs in remote areas.

Figure 13 - Percentage of recent immigrants, by destination, 2002 to 2006



Data sources: Estimated from ABS 2006 Census tables.

Note: These figures are not directly comparable with other figures on immigration due to the variable that we have used on the Census to derive immigration, which includes foreign students living in Australia for more than one year (see Technical Notes). This has only had a large effect on the ACT figure, which has a very small immigrant population, but has very significant university activity, so the proportion of international students staying for more than one year is high.

Almost one-third of all migrants arriving between 2002 and 2006 headed for Sydney

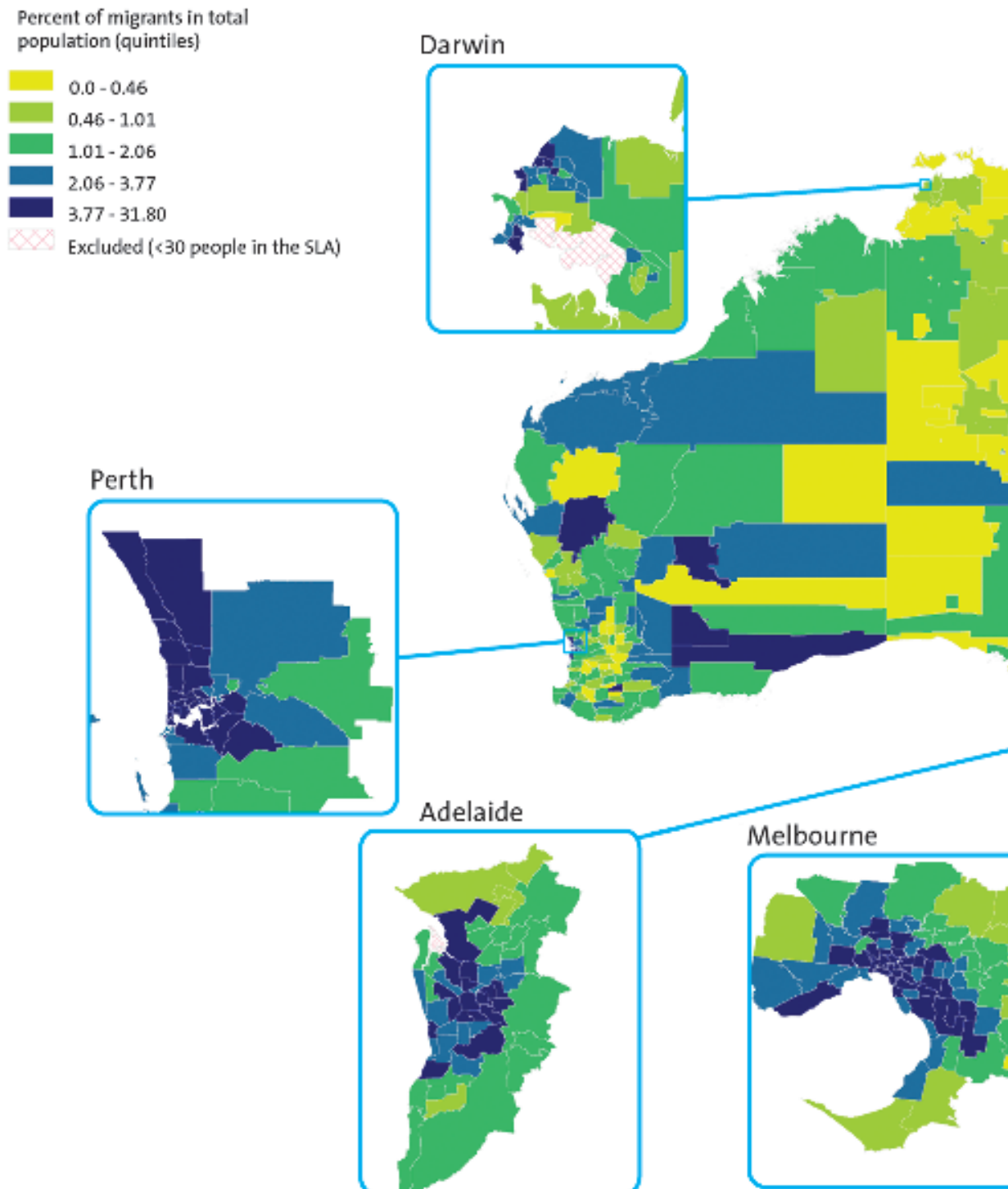
Figure 14 shows migrants as a proportion of the total population within each SLA (see Technical Notes for an exact description of “migrants”, which is used colloquially here). It shows that most recent migrants live in the capital cities. There are more migrants living in SLAs in Perth, Melbourne and Sydney compared to the other capital cities. Besides Darwin, Perth is the closest capital city in Australia to Indonesia, which may be why many migrants from Indonesia live there. In Inner Perth, almost one in every five residents is a recent arrival from overseas.

Both Sydney and Melbourne have the population and jobs to support skilled migrants. The high migrant areas also tend to be near the city centres, and not on the outskirts of the cities. In Inner Melbourne, around 32 per cent of residents said they were born overseas and had arrived in Australia between 2002

and 2006, with Southbank-Docklands recording around 21 per cent of residents as migrants. Moving to Sydney, in Inner Sydney and Inner Parramatta around one-fifth of residents were recent migrants, with the proportion falling to just over one-tenth in areas such as western Sydney, Burwood and Auburn.

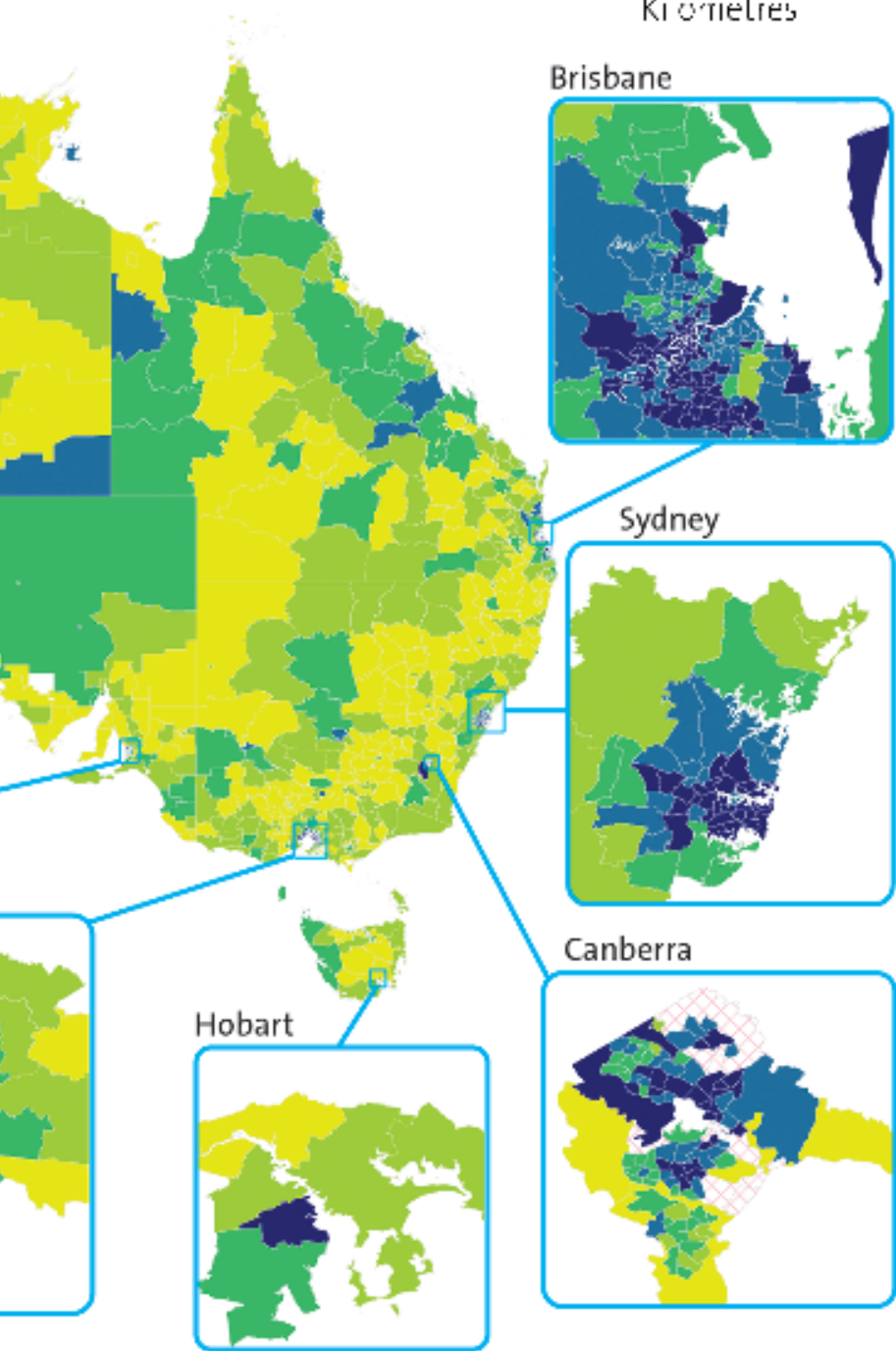
Significant areas of Brisbane and Canberra also notched up a high proportion of recent migrants among their residents. In Brisbane, more than one-tenth of the residents of South Brisbane, Sunnybank, Runcorn, Indooroopilly and Kangaroo Point were recent migrants. In Canberra, recent arrivals tended to be concentrated near the universities, with around one-tenth of the residents of Bruce, Belconnen, and Braddon being recent arrivals, rising to 36 per cent for Acton because of the presence of the Australian National University.

Figure 14 - Recent migrants as a proportion of usual residents, by Statistical Local Area, 2006



Notes: Authors' calculations based on 2006 Censuses

0 250 500 1,000
Kilometres



9. Conclusions

During the five years to 2006 the nation prospered, with strong economic growth and falling unemployment. The fruits of the boom were widely shared - with both affluent and poorer neighbourhoods generally enjoying improving financial prosperity.

The equivalent gross income of the average Australian household increased by about 31 per cent between 2001 and 2006, a more rapid rate of growth than experienced during the preceding five years. However, the 10 per cent of Australians living in the most affluent neighbourhoods recorded a 36.5 per cent growth in their average gross household incomes (after taking account of the number of adults and children supported by each household's income). This compared with a 29 per cent income growth rate for the 10 per cent of Australians living in the poorest neighbourhoods and about a 30 per cent increase for middle Australia. There was thus some increase in the gap between the most affluent neighbourhoods and the rest of Australia.

Somewhat surprisingly, the extent of this gap widened when differential movements in housing costs were taken into account. The housing costs of the one-tenth of Australians living in the most affluent neighbourhoods increased by much less than for the average Aussie household between 2001 and 2006. As a result, looking at the living standards of households after they have paid their housing costs and after taking account of how many people they have to support, the incomes of those in the most affluent neighbourhoods rose by a sharp 33 per cent. This was a more pronounced increase than the 24 per cent recorded by those living in poorer and middle income neighbourhoods.

Those spread across Australia's far flung cities also faced different experiences. Average household incomes rose sharply for residents of Brisbane, Perth, the Northern Territory, and the ACT. However, incomes increased somewhat more slowly for those living in Sydney, Melbourne, Adelaide and Hobart. Within the capital cities, after also taking account of the impact of changing housing costs, the highest increases in living standards were enjoyed by residents of Brisbane, Perth and the two Territories. Particularly strong growth was also evident for Western Australia and Queensland more generally.

For the rest of the country, however, it appeared that many households had only managed to tread water between 2001 and 2006, with what initially appeared as substantial increases in household income over this period being offset by rising prices for housing and other costs of living. Most notably, living standards appeared to have increased only slightly for the average household in Sydney, Melbourne and Adelaide, with the real value of sustained income growth being largely eroded by sharp increases in housing costs and other prices.

Looking at income in 2006 spatially, we see that those living in remote areas in Australia generally still suffer low incomes, unless they are benefiting from the mining boom. Areas of very high income still tend to be in the cities, although there are lower income areas in the cities, and these tend to be separated from the richest areas by a middle income band of suburbs. So, overall, there is still very much an income spatial divide in Australian cities.

Analysis of changes in unemployment rates during the five years showed clearly how national averages can mask divergent trends within different areas of the nation. While many neighbourhoods notched up falls in unemployment, in line with the national reduction in unemployment, in other areas unemployment remained stubbornly resistant to change or even increased.

Australia has traditionally relied heavily on migrants to boost economic growth and fill jobs, and this has been particularly true during the past few years of record migration levels. Migrants mainly come into Australian capital cities, particularly Sydney, Melbourne and Perth, but this is possibly because governments are targeting skilled migrants, and the jobs for skilled workers tend to be in the capital cities. Very few migrants go to rural and remote areas.



References

- ABS, 2004: *Australian Standard Geographic Classification (ASGC) 2004*, 1216.0, ABS.
- ABS, 2007a: *Average Weekly Earnings, Australia, Nov 2007*, 6302.0, ABS.
- ABS, 2007b: *Household Income and Income Distribution, Australia, 2005-06*, 6523.0, ABS.
- ABS, 2008a: *Labour Force, Australia, Feb 2008*, 6202.0, ABS.
- ABS, 2008b: *Year Book Australia, 2008*, 1301.0, ABS.
- ABS, 2008c: *Consumer Price Index, Australia, Mar 2008*, 6401.0, ABS.
- Harding, A., 1997: "The Suffering Middle: Trends in Income Inequality in Australia, 1982 to 1993-94", *The Australian Economic Review*, vol. 30, no. 4, pp. 341-358.
- Harding, A., Yap, M. and Lloyd, R., 2004: *Money, Money, Money - Is this a rich man's world? Trends in spatial income inequality, 1996 to 2001*, AMP. NATSEM Income and Wealth Report, Issue 8.
- Harding, A. and Szukalska, A., 2000: "Trends in Child Poverty in Australia, 1982 to 1995-96", *Economic Record*, vol. 76, no. 234, pp. 236-254.
- Lloyd, R., Harding, A. and Hellwig, O., 2001: "Regional Divide? A study of income inequality in Australia", *Sustaining Regions*, vol. 1, no. 1, pp. 17-30.
- McDonald, P. and Withers, G., 2008: *Population and Australia's Labour Force*, Policy Paper No. 7, Canberra, The Academy of the Social Sciences in Australia.
- Saunders, P., Hill, T. and Bradbury, B., 2008: *Poverty in Australia: Sensitivity Analysis and Recent Trends*, Report commissioned by Jobs Australia on Behalf of the Australian Council of Social Service (ACOSS) SPRC Report 4/08, Sydney, Social Policy Research Centre.
- Siminski, P. and Saunders, P., 2004: "Accounting for housing costs in regional income comparisons", *Australasian Journal of Regional Studies*, vol. 10, no. 2, pp. 139-155.
- Tanton, R., Nepal, B. and Harding, A., 2008: *Wherever I lay my debt, that's my home: Trends in housing affordability and housing stress, 1995-96 to 2005-06*, AMP.NATSEM Income and Wealth Report 19, Canberra, AMP.
- Walker, A. Pearse, J., Thurect, L. and Harding, A. 2006, "Hospital admissions by socioeconomic status: does the inverse care law apply to older Australians?", *Australian and New Zealand Journal of Public Health*, Vol. 30, no. 5.
- i. Historically, 2000-01 was something of an outlier on the income inequality front, with somewhat higher income inequality than in earlier years (as measured by the ABS using the Gini coefficient). If we extend the analysis back to cover a 10 year span, then national income inequality did increase between 1995-96 and 2005-06 (ABS, 2007, p. 13).
 - ii. As explained in Technical Notes, the equivalence scale used was the modified OECD scale, which gives a value of 1 to a single adult, 0.5 to second and subsequent adults in the household and 0.3 to each child aged 0 to 14 years in the household. A standard family with two adults and two children thus has an equivalence scale value of 2.1 (1 + 0.5 + 0.3 + 0.3). The average gross income of households within each SLA is divided by the average number of adults and children within the average household within each SLA to give an equivalent gross income for households living within a particular SLA. These results differ from those in our earlier AMP Report No. 8, partly because the earlier analysis used a less detailed spatial unit (the postcode or, more accurately, "postal area" rather than the SLA).
 - iii. This is why this increase in income for the average household is higher than the ABS national estimates cited in Section 2. The ABS estimates are increases in income after subtracting for inflation.
 - iv. This is an additional reason why the equivalent gross incomes of households shown in Figure 2 for 2001 differ from those in our earlier AMP Report No. 8. In the earlier report, we used a couple with two children as the "base" household, so that the incomes of single person households were increased when we moved from gross to equivalent gross income, as were the incomes of sole parent households with one child. In the intervening period, the ABS has moved to adopt a single person household as the "base" household when it reports equivalent incomes (2007b, p. 13). Accordingly, we have also adopted this convention. As noted in the Report, this means that now the gross and equivalent gross incomes of single person households remain the same as we move from one income concept to the other, but that the "equivalent gross" incomes of both sole parent and couple with children households are lower than their "gross" incomes.
 - v. See the Technical Notes for information on how "immigrants" were defined in this study using the Census data.



About one in every 4.5 individuals living in the lowest income neighbourhoods is aged 60 years and over, compared with only one in every 6 in the highest income neighbourhoods.

Technical notes

Source data

All data used in this report were taken from the Basic Community Profile of the Census 2001 and 2006, issued by the Australian Bureau of Statistics. The data were reported at the Statistical Local Area (SLA) level for each of the states and territories in both surveys. All SLAs from the eight states and territories were included in the analysis except those which had less than 30 people, as our previous experience has shown that including such exceptionally small SLAs can produce unreliable results (eg a small change in numbers in these areas can lead to large percentage changes). Depending on the issue under investigation, the unit of analysis in the report is the household, family or person.

Statistical Local Area

A Statistical Local Area (SLA) is a standard geography in the Australian Bureau of Statistics Australian Standard Geographical Classification (ASGC) (ABS, 2004). This geography covers the whole of Australia, with 1,430 SLAs in 2006 and 1,353 SLAs in 2001.

Spatial analysis

The type of analysis conducted in this report is a “spatial” or geographic analysis. What this means is that we have used Census data to calculate measures such as household income, unemployment and overseas immigration for every Statistical Local Area (SLA) in Australia. These have then been mapped, graphed and summed.

This approach means that we can explore the small area differences that may be masked when data are aggregated into national average outcomes. The types of analyses that can be undertaken with these spatial data, for example, include maps of each variable to identify areas that are high or low on a particular indicator compared to other areas.

Average gross household income

Some challenges are involved when using the Census data to calculate the average gross household incomes of those living in different small areas. One is that the Census only reports gross income in ranges, rather than reporting an exact value. We therefore need to estimate the gross incomes of households within each Census income range.

The two censuses reported the number of households by SLA who lived in private dwellings and had gross household income in different ranges. We used the detailed data from the ABS

Surveys of Income and Housing Costs (SIHC) confidentialised unit record files for 2000-01 and 2005-06 to estimate the likely income of households within each of the Census gross income ranges. In the first step, the gross household income of each household in these SIHCs was classified into the same income ranges as those reported in the census. The mean of the gross household income for households within each of these income ranges within the two SIHCs was then calculated. Every household in a given Census income range was then assumed to have the (same) average income for that income bracket. This average value was then multiplied by the number of households which were reported for that same income range in the corresponding census results for each SLA. The results were then aggregated across all income ranges within each SLA to derive the total gross household income of each SLA. In the final step, the aggregate gross household income of each SLA was divided by the total number of households within that SLA to find the average gross income per household for each SLA.

Households reporting negative incomes had their incomes reset to zero. On the Census, a person within a household may not report their income. These people are given a “Not Stated” record on the Census. This means we do not have any idea of what the household’s true income is so, in this analysis, any household where anyone has reported a Not Stated income is excluded from this analysis of the spatial income deciles. This is consistent with our treatment of “not stated” incomes in other reports, and is also consistent with the treatment of this group by the ABS. There are about 803,000 households, or 11.2 per cent of all households, who are excluded due to Not Stated incomes in 2006 (and around 759,000 or 11.3 per cent in 2001).

Average equivalent gross household income

The total number of adults, who were defined as aged 15 and above, and total number of children (aged 0 to 14) were also aggregated for each SLA. These numbers were then divided by the total number of households within that SLA to find the average number of children and adults per household. Based on these average numbers, the equivalised number of persons per household for each SLA was calculated, using the OECD modified equivalence scale (ie giving the weight of 1 to the first adult, 0.5 to the second and subsequent adults and 0.3 to each child). The estimated average gross income per household in each SLA was then divided by the equivalised number of persons per household in each SLA to derive equivalent gross income for an average household in each SLA. To give an example, if the households in a particular SLA averaged two

adults and two children, then the estimated average gross household income of that SLA was divided by 2.1 (1 + 0.5 + 0.3 + 0.3) to derive the estimated average equivalent gross household income for that SLA.

Housing costs

The housing costs in this study were the mortgage payment and rent that each private dwelling paid per week, as reported in the two Censuses. The mortgage payment includes repayment of principal (which differs from the ABS approach in its national income sample surveys, which separately identify interest payments and the repayment of principal by households). Since the Census tables we used only reported the amount of mortgage payment and rent in a range, the aggregate mortgage payment and rent for all households within each SLA were again calculated with the use of information on mortgage payments and rents from the SIHC 2000-01 and 2005-06 in the same way as the calculation of gross household income. After the aggregate amount of mortgage payment and rent was calculated for each SLA, the average amount per household was calculated by dividing by the number of households in each SLA. This then resulted in the calculation of gross household income net of housing costs for that SLA.

To derive the equivalent gross “after-housing-costs” income measure, the estimated housing cost of the average household in each SLA was deducted from their estimated gross income. This amount was then divided by each SLA’s equivalence scale value (calculated as described above), so as to derive the equivalent gross “after-housing-costs” income measure.

Spatial income deciles

After the equivalent gross income for the average household in each SLA was calculated, all SLAs were sorted by this equivalent gross household income measure.

These SLAs were then assigned into 10 deciles in such a way that the total number of people in each decile was 10 per cent of the total Australian population living in private dwellings. This means that we have weighted the results for each SLA by the population living in private dwellings in that SLA. If we did not weight by population size, we would be ascribing the same importance when calculating the results to SLAs containing 100 people or 35,000 people. As many of the small SLAs lie outside cities and have lower average incomes, such an approach would have given undue emphasis to smaller areas.

In some cases, a particularly large SLA falls on the boundary between one income decile and another. In such cases, we have to allocate all of those living in the SLA to a single decile, which means that there can be very slightly more or less than 10 per cent of persons in each spatial income decile.

Our measure of population included all persons in occupied private dwellings but did not include people in non-private dwellings (for example, those living in boarding houses, accommodation for the aged and prisons).

The spatial income deciles were used as one of the primary classification criteria in subsequent analysis. The lowest spatial income decile can thus be described as the decile containing the 10 per cent of Australians living in the poorest neighbourhoods, as measured by the average equivalent gross household income of their SLA.

This equivalent gross household income ranking measure for each SLA was used in all of the subsequent income decile analysis in Sections 3, 4 and 5.

No account was taken of possible changes in SLA boundaries during the two years (as was done for the analysis of unemployment by SLA, as described below). Because we were weighting our results by population numbers, this was a less important measure to take than when analysing changes in the number of unemployed within an SLA between the two years. Changes in the fortunes of particular small areas through time mean that, in any event, the bottom income decile will not consist of the same SLAs in both years.

Immigration

Neither the 2001 nor 2006 Censuses reported the total number of recent immigrants per SLA. Rather, they reported the number of people who were born overseas and the year of their arrival in Australia. In both censuses, those who were born overseas and stayed in Australia for less than a year were deemed visitors and excluded from the reported figures. As there was no other information on the number of recent immigrants by SLA, the number of people who were born overseas and stayed in Australia for more than a year and who stated they arrived in Australia between 2002 and 2006 was used as a proxy for the number of recent immigrants. Using this figure may somewhat overstate the number of recent real immigrants, as it also contains foreign students who at the time of the 2006 Census had been in Australia for more than one year. Nevertheless, the overall proportion of foreign students out of the total number of people who were born overseas was not usually large and so was considered to be small enough to be irrelevant for the broader picture that we were exploring. Further, many of the students studying in Australia for more than a year also subsequently become permanent immigrants. In the 2006 Census, 649,000 people reported that they were born overseas, arrived in Australia between 2002 and 2006, and were in Australia for more than one year.

In calculating the proportion of the population who were recent immigrants, the total population of each SLA was defined as those who were usual residents of that SLA.

In Figure 14, the results are not weighted by the usual residents of each SLA, so the yellow group consists of the 20 per cent of SLAs with the lowest proportions of migrants as a percentage of usual residents. Note that the 2006 SLA boundaries were used in this analysis, as the question about who stated they arrived in Australia between 2002 and 2006 was from the 2006 census

Unemployment

In this report, the calculation of total unemployed persons and total labour force was limited to those who were aged 15 and above. An unemployed person was one who was unemployed and looking for full-time or part-time work for the week prior to the Census night. On the other hand, the labour force included all those who were 15 years old and above and who were employed (ie who worked for payment during the week prior to the Census night, or had a job but who were on leave or who were on strike or stood down temporarily) and who were unemployed. The unemployment rate was the ratio between the total numbers of unemployed persons to the total number of persons in the labour force within each SLA.

Comparing SLAs through time

Comparison of changes in the fortunes of small areas through time is complicated by the changing boundaries of Statistical Local Areas. Some large SLAs in 2001 were split into two or more SLAs in 2006 and, more rarely, some existing 2001 SLAs were merged together in the 2006 Census. There were 1,353 SLAs in the 2001 Census but there were 1,430 SLAs in the 2006 Census.

For most of the analysis presented in this report it was not necessary for us to make any adjustment for these changing boundaries. However, for the analysis of changes in the number of unemployed and the unemployment rate by SLA between 2001 and 2006, we needed to try to create consistent small area boundaries. For that reason, just for this section of the report, adjustments had to be made to SLAs in 2001 to ensure that they matched with the new SLAs in the 2006 census. This was done in two steps. First, for those SLAs in 2001 that were merged into a single SLA in 2006, all the 2001 variables were aggregated to create new aggregated variables for a new SLA. Second, for those 2001 SLAs that were split into two or more new SLAs in 2006, the value of the variables was divided according to the proportion of population of the new 2006 SLAs relative to the old 2001 SLA.

Thus, for example, if a single SLA in 2001 was divided into three new SLAs in 2006, one containing 50 per cent of the population of the original SLA and the other two containing 25 per cent each, all of our statistics for the original SLA were multiplied by these factors (.50, .25, 25), so that three new SLAs were created which shared the characteristics of the original 2001 SLA. It is very important to note that this method cannot take into account situations in which the characteristics we are examining are not distributed evenly across the new SLA boundaries. For example, if one of the new SLAs in the example above contained 25 per cent of the population of the original SLA, but 50 per cent of the unemployed persons, this will not be captured by this concordance method. Thus, apparent changes in unemployment between 2001 and 2006 for those SLAs which were subject to boundary changes may be due in part to the boundary change itself, not to actual changes in the characteristics of the population. For this reason, while we have included these “boundary change” SLAs in our maps, we have excluded them from the detailed SLA tables of results in the document accompanying this report.

Capital city and balance of state

An area was grouped into Capital City or Balance of State based on the Statistical Division. A Statistical Division of 05 was used to identify a capital city, and all other statistical divisions were allocated to Balance of State. One of the advantages of using Statistical Divisions is that they are fairly stable over time. The ABS defines a capital city SD as one that contains the anticipated development of the city for a period of at least 20 years (ABS, 2004).

It is important to note that while all SLAs were grouped into “Capital City” and “Balance of State” while analysing the changes in income distribution between the two censuses, all SLAs in the NT and ACT were grouped into only one group “Capital City”. This is because while there are a number of SLAs outside of the capital city in the NT, these are all low population SLAs, which means any slight change in a variable of interest could lead to a large change in the proportion being used. In the ACT, there are very few SLAs outside the capital city of Canberra and, again, they have very low populations.

Appendix

Table A1 - Household Incomes and Housing Costs, by Spatial Income Decile, 2001 and 2006

	2006					2001				
	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	WEEKLY HOUSING COSTS	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	WEEKLY HOUSING COSTS	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS
Bottom 10%	884	124	760	481	414	698	84	615	372	328
Decile 2	957	138	819	536	459	776	87	689	417	371
Decile 3	1055	160	895	576	489	835	97	738	446	394
Decile 4	1113	177	936	609	513	881	107	774	471	414
Decile 5	1198	198	1000	643	537	934	114	820	495	434
Decile 6	1237	201	1036	675	566	999	127	872	522	456
Decile 7	1335	214	1120	721	605	1063	130	933	555	487
Decile 8	1434	221	1213	781	660	1121	134	987	603	531
Decile 9	1604	248	1356	891	753	1231	153	1078	670	586
Top 10%	1880	293	1588	1083	913	1437	190	1247	794	687
All	1278	199	1079	705	595	1002	123	879	537	471

Note: In each of the two years the average equivalent gross household income of each SLA is calculated and then the population living in private dwellings is allocated to spatial income deciles, with the 10 per cent of the population living in the poorest SLAs being ranked to the bottom decile (Decile 1). These spatial income deciles are thus weighted by population numbers, as the population living in an SLA can vary enormously. No reranking of SLAs occurs as the income measure shifts from equivalent to non-equivalent income measures.

Table A2 - Household Incomes and Housing Costs, by Capital City and Balance of State, 2001 and 2006

	2006					2001				
	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	WEEKLY HOUSING COSTS	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	WEEKLY HOUSING COSTS	WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME	EQUIVALENT WEEKLY AVERAGE GROSS HOUSEHOLD INCOME NET OF HOUSING COSTS
Sydney	1510	270	1240	817	671	1216	167	1049	637	549
Balance of NSW	1048	154	894	589	503	833	96	738	455	403
Melbourne	1356	207	1148	741	628	1099	128	971	585	516
Balance of VIC	1029	135	894	579	503	832	83	749	455	410
Brisbane	1364	220	1144	746	625	1017	130	886	546	476
Balance of QLD	1141	180	961	628	528	854	113	741	446	387
Adelaide	1148	162	986	665	571	901	100	801	517	460
Balance of SA	992	118	874	566	499	794	73	721	443	402
Perth	1358	208	1150	756	640	1000	130	871	545	474
Balance of WA	1215	151	1064	660	578	906	103	804	467	414
Hobart	1118	151	968	641	555	861	92	769	490	437
Balance of TAS	945	113	832	541	476	745	72	673	421	380
NT	1460	208	1252	753	642	1142	153	990	544	469
ACT	1778	244	1534	990	854	1324	149	1175	722	640
Australian capital cities	1393	224	1169	765	642	1096	138	958	586	512
Balance of Australia	1075	154	921	600	514	838	96	741	451	400
All of Australia	1278	199	1079	705	595	1002	123	879	537	471



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