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Understanding the spatial impacts of direct and indirect government housing expenditure

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ACRONYMS

ABS	Australian Bureau of Statistics
AHURI	Australian Housing and Urban Research Institute Limited
AIHW	Australian Institute of Health and Welfare
ATO	Australian Tax Office
CGE	Capital Gains Tax Exemption
FHOG	First Home Owner Grant
GST	Goods and Services Tax
MYRP	Multi-Year Research Project
OPD	Occupied Private Dwelling
RA	Rent Assistance
SEIFA	Socio-Economic Indexes for Areas
SHA	State Housing Agencies
URP	Usually Resident Population
VDHS	Victorian Department of Human Services
$	Australian dollars

EXECUTIVE SUMMARY

This is one of several reports from the AHURI Multi-Year Research Project (MYRP) into 'Addressing spatial concentrations of social disadvantage'. The MYRP aims to develop an improved understanding of the spatial impacts of policies related to housing, both in terms of how they act to accentuate and encourage market-led dynamics, but also where they seek to mitigate the negative effects of market operation.

This report maps government spending related to housing at a relatively fine spatial scale. It tracks who receives these expenditures and where they live. Government expenditure types estimated in the analysis are both direct and indirect, as follows:

Direct expenditure on housing:

- government provision of public housing through State Housing Agencies (SHAs)
- first home owner grants and boosts (FHOG)
- private rental assistance (RA).

Indirect expenditure that provides housing benefits through the tax system (or housing 'tax expenditures'):

- negative gearing for rental housing investors
- capital gains tax exemption for owner occupiers.

The analysis is spatially and temporally limited to Melbourne only, for the 2011–12 financial year. Expenditures are calculated to the postcode level to show how housing expenditure is distributed within Melbourne.

The results are summarised in Table 1 below. The total housing expenditure figure for Melbourne was $5.2 billion in the 2011–12 financial year. Public housing was the smallest proportion of this figure, at around $107 million or 2 per cent of the total. FHOG, for both new and existing properties, had an outlay of $277 million, 5.3 per cent of the total. Rental assistance had a total of $500 million (9.6% of the total). These expenditures were eclipsed by the negative gearing ($861 million) and capital gains tax exemption ($3.5 billion) estimates, which comprised 17 per cent and 67 per cent of total outlays respectively.

Table 1: Total expenditure, Melbourne, 2011–12

Melbourne	Total $ 2011–12	$ Per dwelling	% Total
Public housing	$107,080,000	$72	2.0%
FHOG total	$277,229,000	$187	5.3%
Rent assistance	$501,063,000	$338	9.6%
Negative gearing	$861,248,000	$582	16.5%
Capital gains exemption	$3,481,031,000	$2,350	66.6%
Total	$5,227,652,000	$3,530	100.0%

Source: Author's calculations, 'Total $' rounded to nearest $1000

To see where this expenditure flows in terms of household (dis)advantage, the Melbourne population was divided into four equal quartiles based on the ABS Socio-Economic Indexes for Areas (SEIFA) score of disadvantage. The most socio-economically disadvantaged 25 per cent of areas only received 20 per cent of total expenditure, while the top 25 per cent of socio-economically advantaged areas received 33 per cent of all expenditure.

The main findings are:

- Locations (postcodes) with higher levels of socio-economic advantage as measured by SEIFA received higher levels of total housing expenditure than disadvantaged locations.
- Direct housing expenditure through public housing and rent assistance were very well targeted to disadvantaged locations. However, this could be interpreted negatively in that these expenditures are concentrating socio-economically disadvantaged households in spatially disadvantaged locations. This is especially true for rental assistance, which is spatially concentrated in outer suburbs with relatively poor access to transport, jobs and services.
- First home owner grants were reasonably well targeted to disadvantaged and 'middle' locations. This is likely to reflect housing market dynamics, with first home buyers able to afford properties in these locations.
- Indirect housing expenditures through negative gearing and capital gains tax exemptions were very poorly targeted, with the majority of these expenditures going to advantaged locations.
- Indirect housing expenditure comprised over 80per cent of all expenditure measured in dollar terms, so poorly targeted expenditure types were also by far the largest expenditure types.

The main finding of this analysis is that *direct and indirect government expenditure on housing privileges socio-economically advantaged locations*. Households in the top 25 per cent most advantaged postcodes received, on average, $4600 in direct and indirect government housing benefits in 2011–12. Households in the 25 per cent least advantaged postcodes received, on average, $2800 in direct and indirect benefits. This raises serious questions about the spatial targeting of government housing expenditure in Australia, particularly the indirect benefits provided to advantaged households through the tax system. It suggests that careful consideration needs to be given to the spatial consequences of direct and indirect housing assistance if this is intended to produce social good outcomes that mitigate some of the effects of housing market processes.

1 INTRODUCTION

This paper is one part of the AHURI Multi-Year Research Project (MYRP) *Addressing spatial concentrations of social disadvantage*. The aim of the MYRP is to examine the role of housing, housing markets and housing policies in how concentrations of disadvantage in Australian cities are understood and addressed. A key objective of the project is to develop an improved understanding of the spatial impacts of housing and non-housing policy settings, both in terms of how they act to accentuate and encourage market-led dynamics, but also where they seek to mitigate the negative effects of market operation. In bringing together the spatial jigsaw of expenditure and policy interest, this paper aims to inform understanding of how these may influence housing markets and household behaviours across and within cities, and their impact relative to accessibility and affordability issues.

The MYRP is interested in concentrations of socio-spatial disadvantage. This paper maps government spending related to housing. It addresses the hypothesis that the spatial impacts of public spending and taxation do little to address disadvantage and do not privilege disadvantaged areas. Therefore, this paper contributes to the understanding of how government housing expenditure mitigates—or exacerbates—spatial disadvantage in Australian cities. It follows a review of the academic and scholarly literature and consideration of policy and practice (Pawson et al. 2012) and complements analysis of the role of housing markets in concentrations of social disadvantage (Hulse et al. 2014) and detailed investigation of the experiences of living in disadvantaged places in Australia (Cheshire et al. 2014).

Mapping government spending related to housing is complex for a number of reasons. These include the division of responsibility for programs in Australia's federal system of government, the administrative data bases on housing-related programs which are maintained by a number of different portfolios, and issues of data availability, data quality and the requirement to estimate or impute some expenditure types. Due to this complexity, this paper is a scoping study that is geographically and temporally limited. The aim of the paper is to provide some empirical data on expenditure distribution, while furthering the development of methods to estimate housing expenditure spatially.

While the MYRP project includes Brisbane, Sydney and Melbourne, the type and detail of housing expenditure data available differs for each city. The spatial scale of the data also differs between data types. The trade-off is therefore between covering all cities with a limited range of data, or focusing on one city in more detail. The most comprehensive data set available was for Melbourne compared to the other two cities included in the MYRP, so the research reported here includes Melbourne (Greater Capital City Statistical Area)[1] only.

Government housing expenditure takes many forms in Australia. It includes direct provision of housing through public housing, general income support in the form of rent assistance, or as a tax expenditure such as the capital gains tax exemption for owner-occupiers. Government expenditure types estimated in the analysis are both direct and indirect, as follows:

Direct expenditure on housing:

- government provision of public housing through State Housing Agencies[2] (SHAs)
- first home owner grants and boosts (FHOG)
- private rental assistance (RA).

[1] The GCCSAs represent the socio-economic extent of each of the eight state and territory capital cities (ABS 2011a).

[2] Traditionally referred to as State Housing Agencies, in most cases these responsibilities are now administered as part of government departments with a broad range of responsibilities.

Indirect expenditure that provides housing benefits through the tax system (or housing 'tax expenditures')

- negative gearing for rental housing investors
- capital gains tax exemption for owner occupiers.

Appendix 1 provides an explanation of each expenditure type. There are other expenditure types that were not incorporated into the analysis due to data constraints. These include—but are not limited to—capital gains tax discount for rental investors (see Yates 2009); non-taxation of imputed rent on owner-occupied dwellings (see Yates 2009; Saunders & Siminski 2005); payments to community housing providers (see Milligan et al. 2009); state land tax exemptions for owner-occupied dwellings (see Productivity Commission 2004), the exclusion of the principal place of residence from the aged pension asset test (see Judd et al. 2014, p.15), and the National Rental Affordability Scheme which is now in abeyance (see Milligan & Pinnegar 2010).

A number of AHURI projects have examined housing expenditure, especially through the tax system (Wood et al. 2011; Yates 2003, 2009). This work is not spatially disaggregated below the level of the states and territories. Yates' 2009 report, *Tax expenditures and housing*, is particularly relevant to this project and is discussed in greater detail below. There has also been related research into Australian housing expenditure beyond the AHURI report series. The Australian Institute of Health and Welfare's (AIHW 2004) paper, *Measuring the distributional impact of direct and indirect housing assistance*, included rent assistance, public housing, FHOG, non-taxation of imputed rent for owner-occupiers and capital gains tax exemption for home owners. Yates was one of the report's authors, and the method was similar to her subsequent AHURI study. Both analyses were spatial to the state and territory level only. Abelson and Joyeux (2007) provide a useful overview of taxes and subsidies affecting housing in Australia. Fane and Richardson (2005) examine capital gains tax and negative gearing. Brown et al. (2011) look at the user cost of housing, especially the role of capital gains tax, while Dungey, Wells and Thompson (2011) and Randolph, Pinnegar and Tice (2013) are interested in FHOG schemes. With the exception of Randolph et al. who focus on Sydney, these studies do not address the spatial distribution of expenditure. While summarising the international literature is beyond the scope of this report, the review by Pawson et al. (2012) includes relevant studies from the United Kingdom and should be referred to by readers seeking a broader background in previous studies.

Yates' (2009) study was on the effects of housing-related tax expenditure by household income quintile for Australia, for the 2005–06 financial year. Her results include total estimates of $1.2 billion for negative gearing, and almost $30 billion for the capital gains exemption on owner occupied dwellings. She concluded that the tax system provides 'most assistance to those households who need it least' (p.6), namely older owner occupiers in the top income groups. Similarly, the earlier AIHW (2004) report found that the benefits to renters (rent assistance and public housing) were targeted to low-income households, while benefits to home owners (FHOG, capital gains exemption and imputed rent) were not. In 2013, the Grattan Institute applied Yates' methodology to 2011–12 data. They calculated RA assistance at $3.5 billion, negative gearing at $3 billion, and a capital gains exemption of $14 billion (notably lower than Yates' original calculation, which is not explained by the Grattan Institute as they claimed to adopt Yates' methodology) (Kelly et al. 2013, p.22). These national figures provide a check for the Melbourne level estimations set out in this report.

This report extends these previous analyses by disaggregating direct and indirect housing expenditure spatially, to the level of postcodes. This has not been undertaken before, and is complex due to limited data availability and the requirement to estimate some expenditure types. Fine grained spatial disaggregation is valuable because it offers insight into how housing expenditure is distributed within cities (in this case, Melbourne). This informs the wider MYPR

project, which looks at the function of housing submarkets within cities and how these are related to socio-spatial disadvantage.

The remainder of the report is structured as follows. The next chapter sets out the method for determining each expenditure type. This is followed by the results of the analysis, for all of Melbourne and by postcode. The report concludes with a discussion of policy and research implications.

2 METHOD

This chapter sets out the method used to calculate each of the housing expenditure types. The expenditure types that were included are public housing provision, first home owner grants, rent assistance payments, negative gearing and capital gains tax exemption. Some expenditure items required complex estimation. Therefore, the results for these items are exploratory only. The method documented here can be replicated in other cities and in other time periods should data be made available.

The analysis includes 2011 (or the 2011–12 financial year where this is reported) only, as all of the data sets were available for this year. Time series analysis could be included in the future. A relatively comprehensive data set was available for Melbourne compared to the other two cities included in the MYRP, so as noted, the research included Melbourne (Greater Capital City Area) only (see Table 2 below for an overview of data sets). The spatial scale was the postcode, which was the finest geographical level available across the different data sources. In Melbourne, there were 268 postcodes included in the analysis. These had an average of 5500 occupied private dwellings per postcode. The expenditure was compared to the Australian Bureau of Statistics (ABS) *Socio-Economic Indexes for Areas* (SEIFA) for each postcode (specifically, the 'Index of Relative Socio-economic Advantage and Disadvantage', ABS 2011b). This enabled expenditure to be compared across the (dis)advantage spectrum of Melbourne postcodes. The raw SEIFA score for each postcode was used, rather than the decile, as Melbourne had a higher concentration of postcodes in the more advantaged deciles, and using the raw score provided greater differentiation between postcodes. Nominal dollar values were used for the 2011–12 financial year.

Table 2: Summary of data for Melbourne

Source	State	Data	Years	Geography
First home owner grant	VIC	Number and value	2000–01 to 2012–13	Postcode
Valuer General's data	VIC	Sales price for dwellings	2001, 2006 and 2011	Geocoded unit record, includes postcode
Rent assistance	VIC	Payment type by income unit type	2011, 2012	Postcode
Taxation statistics	All	Net rental loss by individuals and $	1993–94 to 2011–12	Postcode
Report on Government services	All	Expenditure on public housing	Annually by financial year	By state only

Source: Author

Two issues arose with all data types. The first was how to express and compare dollar values across spatial units. The options were to calculate the dollar value ('$') of the expenditure as the total $ for the spatial unit, as $ by Usually Resident Population (URP), as $ by Occupied Private Dwelling (OPD), or as $ per household. The results have been expressed as $ by OPD and total $, on the basis that dwellings should be the unit of analysis when looking at housing expenditure, and total $ enables absolute expenditure amounts to be compared as annualised figures. The second issue was the unit of analysis. While expenditure was calculated at a household level, in reality all of these expenditures (except for multi-member public housing households) are 'captured' by an individual (or income unit in the case of RA). For example, in the case of negatively geared investors, the rental loss is allocated to an individual's taxable income. In a household with more than one resident where both are working, this is likely to be

the individual with the higher income. However, the benefit is shared by the household in the form of an overall higher household income. Therefore, the expenditure is treated as attached to a household (in the form of an OPD) in the analysis.

The method for estimating each expenditure type, along with issues specific to particular expenditure types, is set out below. As noted earlier, these expenditure types are explained in Appendix 1.

1. First home owner grant (FHOG)

The data was extracted from the Victorian State Revenue Office website manually, by searching for and downloading data for each postcode. The resulting database gave the $ amount of FHOG (including base grants and 'boosts'), by new and existing dwellings, by postcode, for the 2011–12 financial year. Some postcodes received no FHOG in the year. These were locations with high proportions of industrial or institutional land uses.

2. Rent assistance (RA)

The data obtained from the Australian Department of Social Services is the number of RA recipient 'income units' by family type by postcode. To convert this to a dollar figure, the RA fortnightly payment rate by family type was multiplied by the number of recipients of each family type. This was then annualised and reduced by 20 per cent to take into account those income units who do not receive the full rate.

3. Public housing expenditure

Using the 2011 ABS Census, the number of 'state or territory housing authority' landlord dwellings was calculated for each postcode in Melbourne. In order to translate dwelling counts into a dollar figure, the 2011–12 Productivity Commission *Report on Government Services* data, recurrent expenditure for public housing was used (Tables 16A.1 and 16A.2) (SCRGSP 2014). The calculations are set out in Table 3.

Table 3: Calculating public housing expenditure

	Item	N = , $
1	Number of public housing dwellings, VIC 2011–12	64,768
2	Net recurrent expenditure per dwelling per annum	$5,884
3	Depreciation expenditure per dwelling per annum	$2,226
4	Net expenditure per dwelling per week (item 2 + item 3 ÷ 52 weeks)	$156
5	Weekly rent at 25% income	$105
6	DHS net rental income 2012 (after rent subsidy)	$406,500,000
7	Rental income per dwelling (item 6 ÷ item 1)	$6,276
8	Rental income per dwelling per week (item 7 ÷ 52 weeks)	$121
9	Assume conservative rental income of $100 per week	$100
10	Actual subsidy per dwelling per week	$56
11	Actual subsidy per dwelling per annum (item 10 x 52 weeks)	$2,912

Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Victoria had $381 124 427 in net recurrent expenditure on 64 768 of public housing dwellings in the 2011–12 financial year or $5884 per dwelling per annum (item 2 in Table 3). This is the lowest published figure of any state or territory, with New South Wales spending $7429 per dwelling per annum (SCRGSP 2014). Net recurrent expenditure includes administration costs (e.g. the cost of the administration offices of the property manager and tenancy manager),

operating costs (e.g. the costs of maintaining the operation of the dwelling, including repairs and maintenance and rates), but excludes depreciation costs for the asset. Depreciation was an additional $2226 per dwelling per annum in Victoria for 2011–12, bringing the total to $8110 per dwelling per annum, or $156 per week.

This *excludes* rental income from tenants, as recurrent expenditure data and all financial data in the SCRGSP include only costs to government for the provision of services (no income streams, e.g., tenant rental payments, are collected/reported). It was therefore necessary to net off rental income from the 'net expenditure' figure.

The Victorian Department of Human Services' *Annual Report 2012–13* lists rental income for Victoria at $406 500 000 in 2012, which is after rent subsidy has been taken into account (VDHS 2013, p.151). This equates to rental income of $121 per dwelling per week, which is slightly larger than the recurrent expenditure figure (items 6–8 in Table 3). To check this, the rebated rent paid by a single pensioner household was calculated at 25 per cent of income, or $105 per week. A further check on this amount is the average social housing rent in Queensland, which was $120 per week in 2012 (DHPW 2013, p.5). Assuming a conservative rent figure of $100 per week, the actually subsidy per dwelling was $2912 per annum. This was multiplied by the number of public housing dwellings in each postcode to give a total annual expenditure amount.

The 'user cost of capital' is the cost of the funds tied up in the capital used to provide public housing. It is set out in the Productivity Commission's report on Government Services for each state and territory, and is a large figure relative to the recurrent cost of providing public housing (SCRGSP 2014). It has not been included here, as the analysis is of recurrent expenditure in one year only, not the long-term financial sustainability of the public housing system. Furthermore, the other expenditure items calculated in this analysis do not include a user cost of capital. It should be noted that the user cost of capital for Victorian public housing was $19 049 per dwelling per year in 2011–12, and inclusion of this in the estimation would therefore add significantly to expenditure on public housing.

4. Capital gains tax exemption (CGE)

The realised capital gain is the amount of equity a property owner holds at the time of sale minus the initial deposit they paid when they purchased the dwelling. It is not taxed for owner occupied housing, whereas investor housing is taxed at the owner's marginal tax rate applied to 50 per cent of the capital gain.[3] To value the capital gain exemption, it is assumed that the alternative is for owner-occupied housing to be treated in the same way as investor-owned housing. The capital gain exemption for owner-occupied housing is therefore valued at 50 per cent of the total capital gain multiplied by the relevant tax rate. There are not enough repeat sales in the Valuer-General's 2001, 2006, and 2011 database to calculate actual capital gain by spatial unit, and it is not noted whether properties are owner occupied or privately rented.

Instead of calculating 'realised capital gain' (which only happens when a dwelling is actually sold), the analysis focused on 'notional capital gain'. This is the annual notional wealth gain accruing from the tax concession, irrespective of whether an owner-occupied dwelling is in fact sold. Yates applied a notional nominal capital gain of 4 per cent per annum (2009, p.15), and this has been applied here. Yates argues her 4 per cent figure is 'extremely conservative', and she justifies selecting it to minimise any claim that the reported estimate is too high, and because 4 per cent could be regarded as an approximation of the real capital gain (nominal capital gain minus inflation).

Valuer-General's data for Victoria was used to calculate the median sales price in each postcode for 2011. This was used as an approximation of housing values in each postcode.

[3] Although if purchased through a Self Managed Super Fund the CGT rate is further discounted and may be as low as zero.

This was then multiplied by a 4 per cent notional capital gain, divided by 50 per cent and multiplied by a marginal tax rate. Sourced from the Australian Tax Office (ATO), 32.5 per cent was selected as the marginal tax rate (see ATO 2014 for all rates). This rate represents the $37 001–$80 000 individual income group, which included 37 per cent of tax payers in 2011–12 (ATO 2012). There were 17 per cent of taxpayers who paid higher rates in that period. The 4 per cent notional capital gain is conservative, as this was applied by Yates to all owner-occupied properties in Australia. Properties in Melbourne, especially in inner suburbs, would have higher notional capital gains as house prices in these locations have risen faster than other outer urban and non-urban locations (Forster 2006).

5. Negative gearing

A rental property is negatively geared when it is purchased with the assistance of borrowed funds, and the net rental income, after deducting other expenses, is less than the interest on borrowings (Wood & Kemp 2003, p.750). In Australia, investors can deduct net rental losses on negatively geared property from other types of income, including salaries and business income. Therefore 'rental property can act as a tax shelter and one that is thought to be of special benefit to high income Australians' (Wood & Kemp 2003, p.750).

Negative gearing of investment properties was calculated using the ATO taxation statistics on net rental property loss claimed in 2011–12 financial year, by postcode (ATO 2012). This was a dollar figure of all net rental loss claimed by residents of the postcode, and indicates the location of the owner of the investment property, not the property itself. As with the capital gains tax exemption, this dollar figure was multiplied by the 32.5 per cent marginal tax rate to calculate the reduced tax payment by investors who claimed a rental property loss. This reduced tax payable is a benefit to the investor.

It should be noted that the following analysis is for the items that are calculated here only. Therefore 'total' expenditure refers to the total of these items, and excludes those other expenditures set out in the introduction. Further, where a choice has been available in estimating expenditures, the more conservative assumption has been selected.

3 RESULTS

3.1 Total expenditure

Table 1 aggregates the direct and indirect housing expenditure calculations for the Melbourne metropolitan area. The total housing expenditure figure for Melbourne was $5.2 billion in the 2011–12 financial year. From the expenditure types that have been estimated, public housing was the smallest proportion of this figure, at around $107 million or 2 per cent of the total. FHOG, for both new and existing properties, had an outlay of $277 million, 5.3 per cent of the total. Rental assistance had a total of $500 million (9.6% of the total). These expenditures were eclipsed by the negative gearing ($861 million) and capital gains tax exemption ($3.5 billion) estimates, which comprised 17 per cent and 67 per cent of total outlays respectively.

Table 4: Total expenditure, Melbourne, 2011–12

Melbourne	Total $ 2011–12	$ per OPD	% Total
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Negative gearing	$861,248,000	$582	16.5%
Capital gains exemption	$3,481,031,000	$2,350	66.6%
Total	$5,227,652,000	$3,530	100.0%

Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011, 'Total $' rounded to nearest $1000.

While Yates (2009) only accounts for tax based expenditures, her national level estimates provide a check against these calculations for Melbourne. In 2005–06, she calculated the Australian wide benefit from non-taxation of capital gains as $29.8 billion (p.13). It is assumed the proportion of total Australian expenditure occurring in Melbourne is based on population, and that Melbourne's population was around 18 per cent of Australia's population in 2011–12 (4 million out of 22 million, see ABS 2013). Applied to Yates' $29.8 billion figure, Melbourne's share should be $5.3 billion just in capital gains exemptions. Therefore, the figure reported here of $3.5 billion is conservative.

To see where this expenditure flows in terms of household (dis)advantage, the Melbourne OPD population was divided into four equal quartiles based on the SEIFA score (Table 5 below). The most socio-economically disadvantaged quarter of households (quartile 1) only received 20 per cent of total expenditure, while the top 25 per cent of socio-economically advantaged households received 33 per cent of all expenditure. This is separated into expenditure type in Table 5.

Table 5: Total expenditure by SEIFA quartiles, Melbourne, 2011–12

OPD quartiles by SEIFA	Total expenditure	%
Quartile 1	$1,024,820,838	20%
Quartile 2	$1,161,559,360	22%
Quartile 3	$1,307,820,040	25%
Quartile 4	$1,733,451,748	33%
Total	*$5,227,651,986*	*100%*

Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

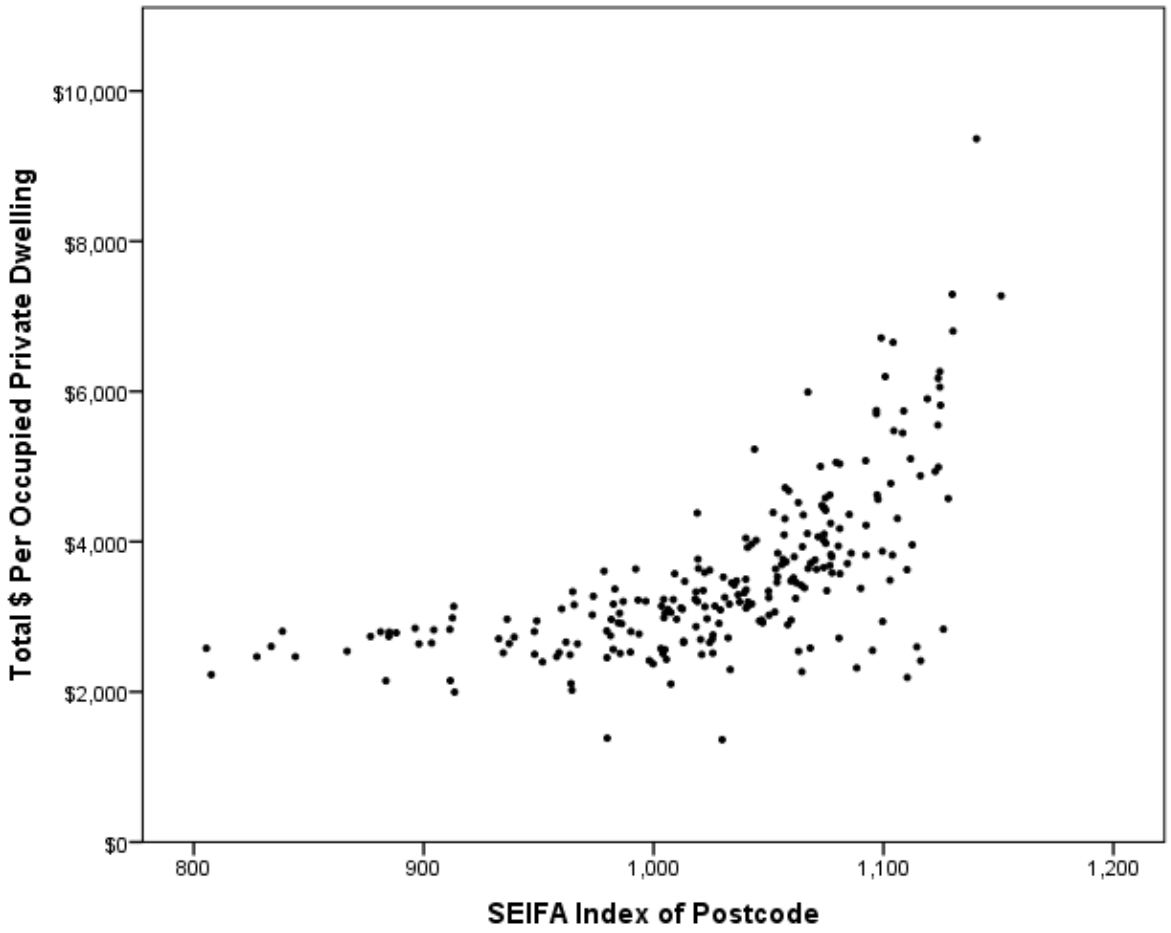
Table 6: Expenditure by type by SEIFA quartiles, Melbourne, 2011–12, by occupied private dwelling

OPD quartiles by SEIFA	Public housing $ by OPD	FHOG total $ by OPD	Rent assistance $ by OPD	Negative gearing $ by OPD	Capital gains exemption $ by OPD	*Total $ by OPD*
Quartile 1	$27	$226	$508	$344	$1,586	*$2,778*
Quartile 2	$16	$261	$347	$491	$1,971	*$3,139*
Quartile 3	$16	$150	$281	$607	$2,461	*$3,570*
Quartile 4	$9	$112	$219	$879	$3,367	*$4,614*

Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

For the graph and map analysis presented in the remainder of this report, the dataset was cleaned to remove postcodes with less than 500 OPDs. This removed extreme values where expenditures were reported by OPD. Thirty postcodes were excluded out of 268, with 238 postcodes remaining.

Figure 1: Total $ per OPD by SEIFA, postcode, Melbourne GCCA, 2011–12

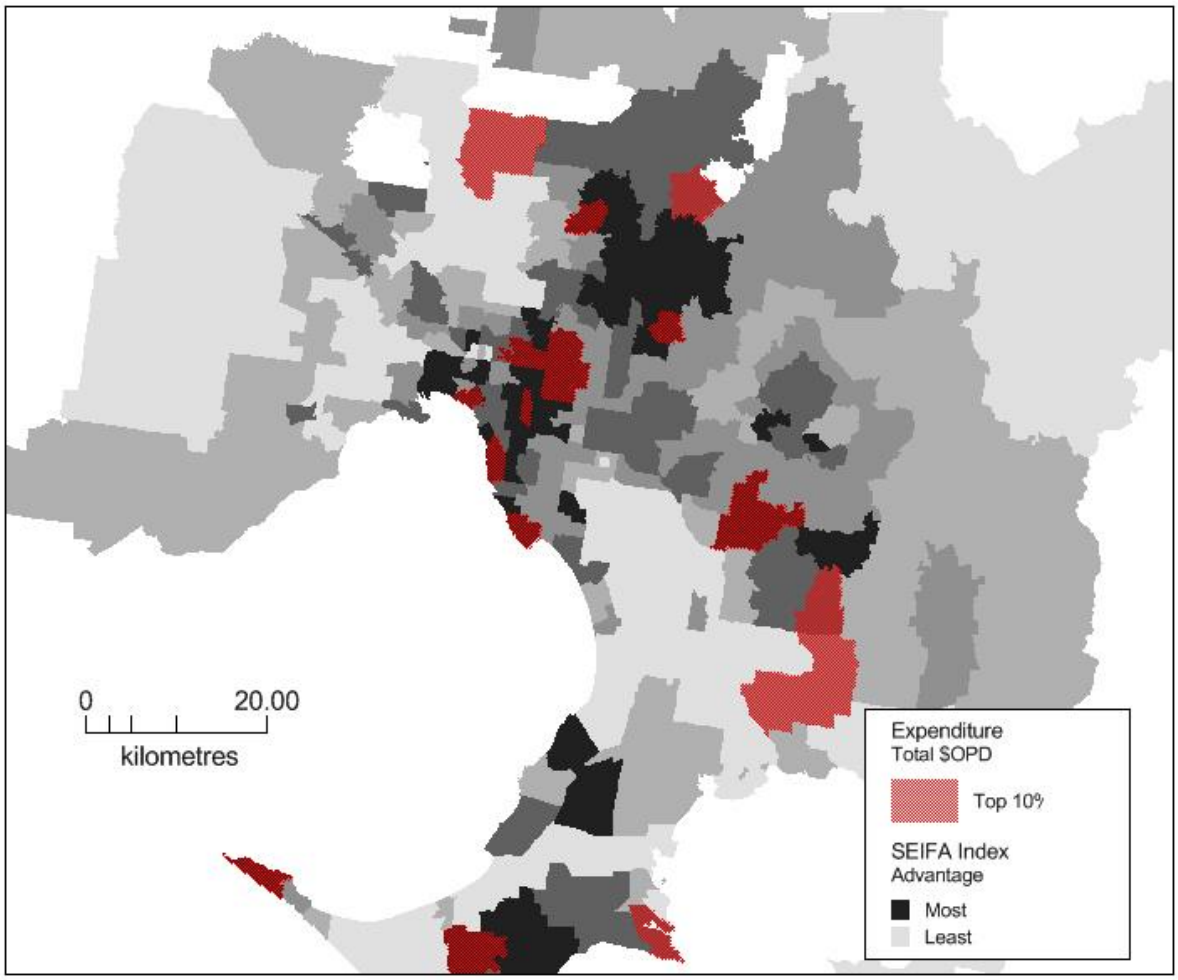


Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 1 above plots the total expenditure by OPD against the SEIFA score of each postcode. As a higher SEIFA score indicates a relatively higher level of socio-economic advantage, this chart suggests a positive relationship between expenditure levels and SEIFA index. To test this

relationship, a linear regression analysis was undertaken between the total expenditure by OPD and the SEIFA score (see Appendix 2). The result was a co-efficient of 10.33, so for every 1 point increase in the SEIFA score, the model predicted total expenditure per OPD to increase by $10.33. This relationship was confirmed as significant by the regression model.

Figure 2: Spatial distribution top 10 per cent total $ by OPD, postcodes, Melbourne, 2011–12, by SEIFA



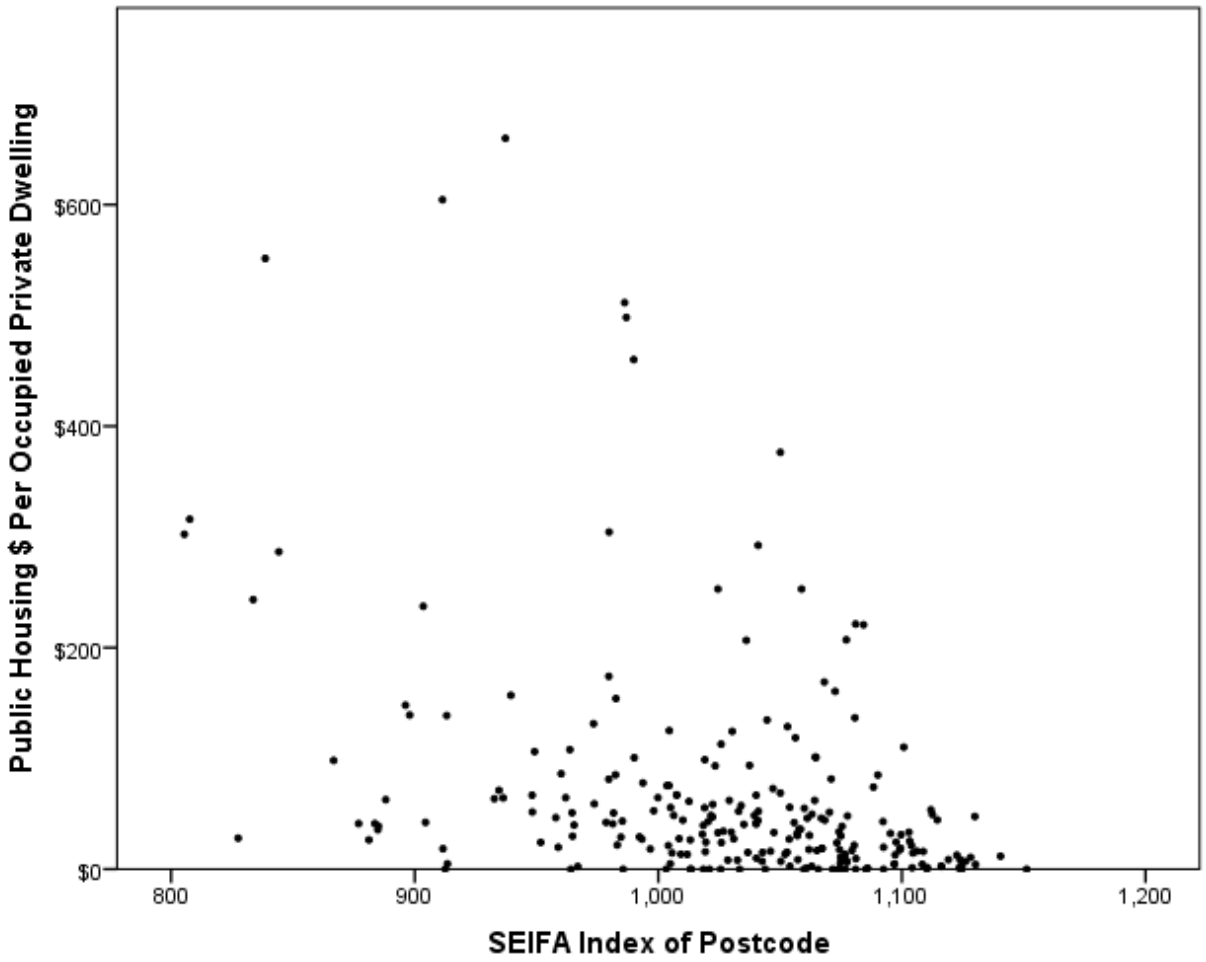
Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, ValuerGeneral 2011

Figure 2 above shows the location of the total top 10 per cent of all expenditure types by OPD, by postal area (postcode). The postcodes receiving the highest rate of expenditure by ODP included Cardina, Officer and Clyde at the urban fringe to the south east. These are locations with very high levels of FHOG for new dwellings in the analysis year. There was also a cluster of suburbs in the inner east and bayside, including Camberwell, Canterbury and Brighton. These are locations with high house sales prices and therefore large CGE, and a high level of residents with negatively geared investment properties.

3.2 Spatial expenditure by postcode

3.2.1 Public housing

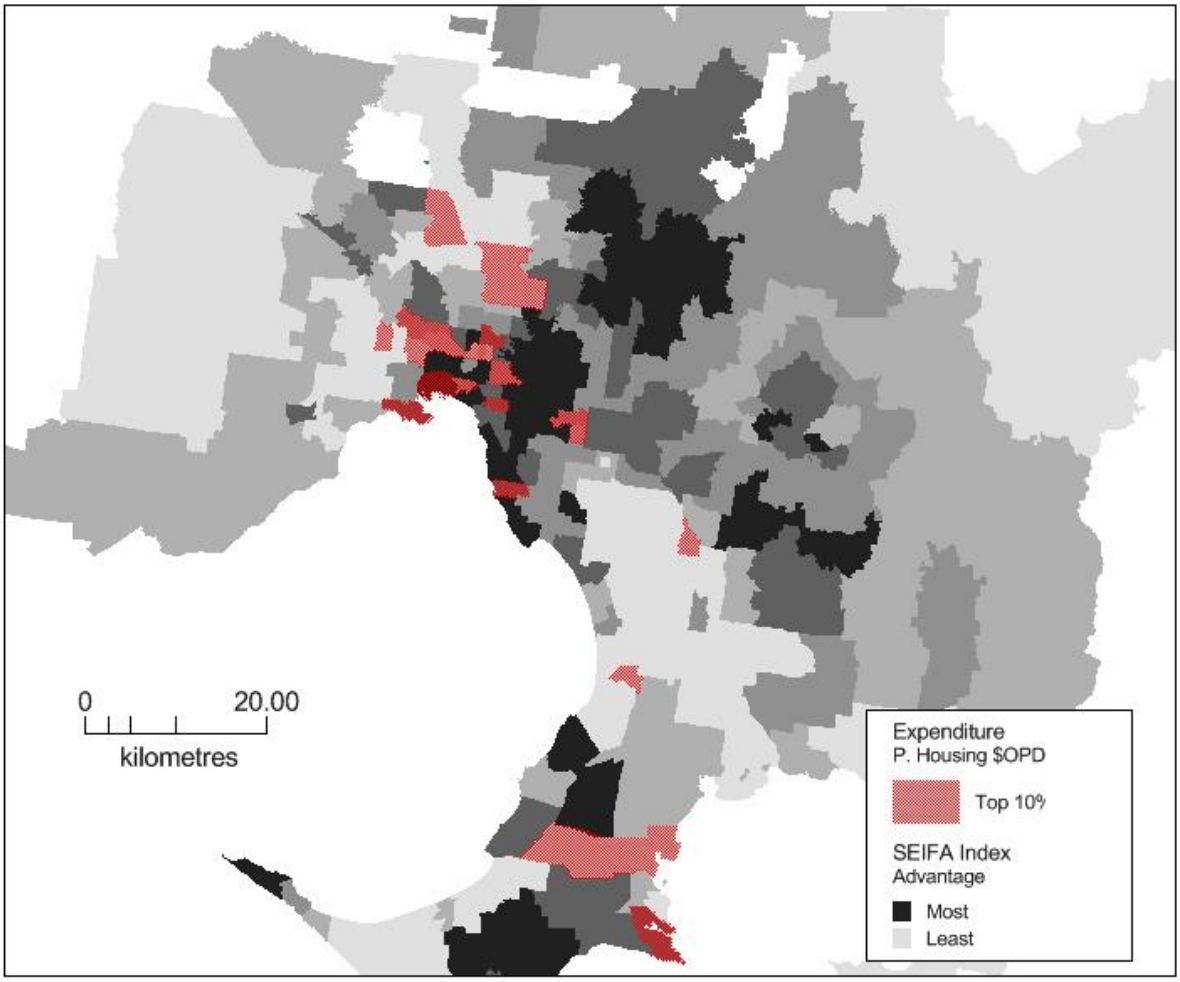
Figure 3: Public housing $ per OPD by SEIFA, postcode, Melbourne GCCA, 2011–12



Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 3 above plots the public housing expenditure by OPD against the SEIFA score of each postcode. As a higher SEIFA score indicates a relatively higher level of socio-economic advantage, this chart suggests a weak negative relationship between public housing expenditure levels and SEIFA index. To test this relationship, a linear regression analysis was undertaken between public housing expenditure by OPD and the SEIFA score (see Appendix 2). The result was a co-efficient of –.591, so for every 1 point increase in the SEIFA score, the model predicted public housing expenditure per OPD to decrease by $0.60. This relationship was confirmed as significant by the regression model.

Figure 4: Spatial distribution top 10 per cent public housing $ by OPD, postcodes, Melbourne, 2011–12, by SEIFA

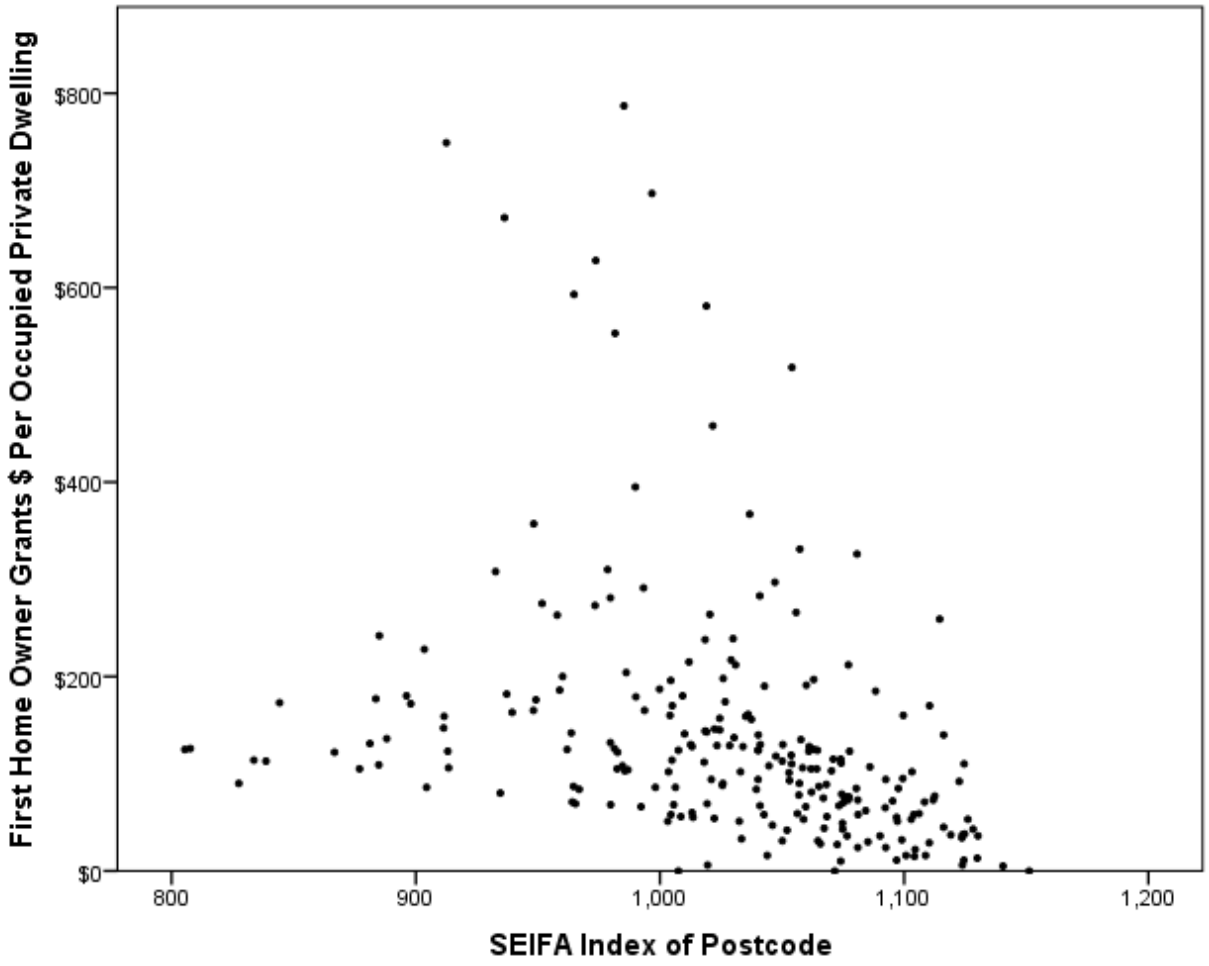


Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 4 above shows the location of public housing expenditure by OPD, by postcode. This reflects concentrations of public housing stock across Melbourne, with the top postcodes housing high rise estates such as Carlton, Kensington and Richmond. These high rise estates are located in the inner city where the SEIFA index is high, indicating the role that public housing plays in providing affordable accommodation for lower income households in socio-economically advantaged areas.

3.2.2 First home owner grant

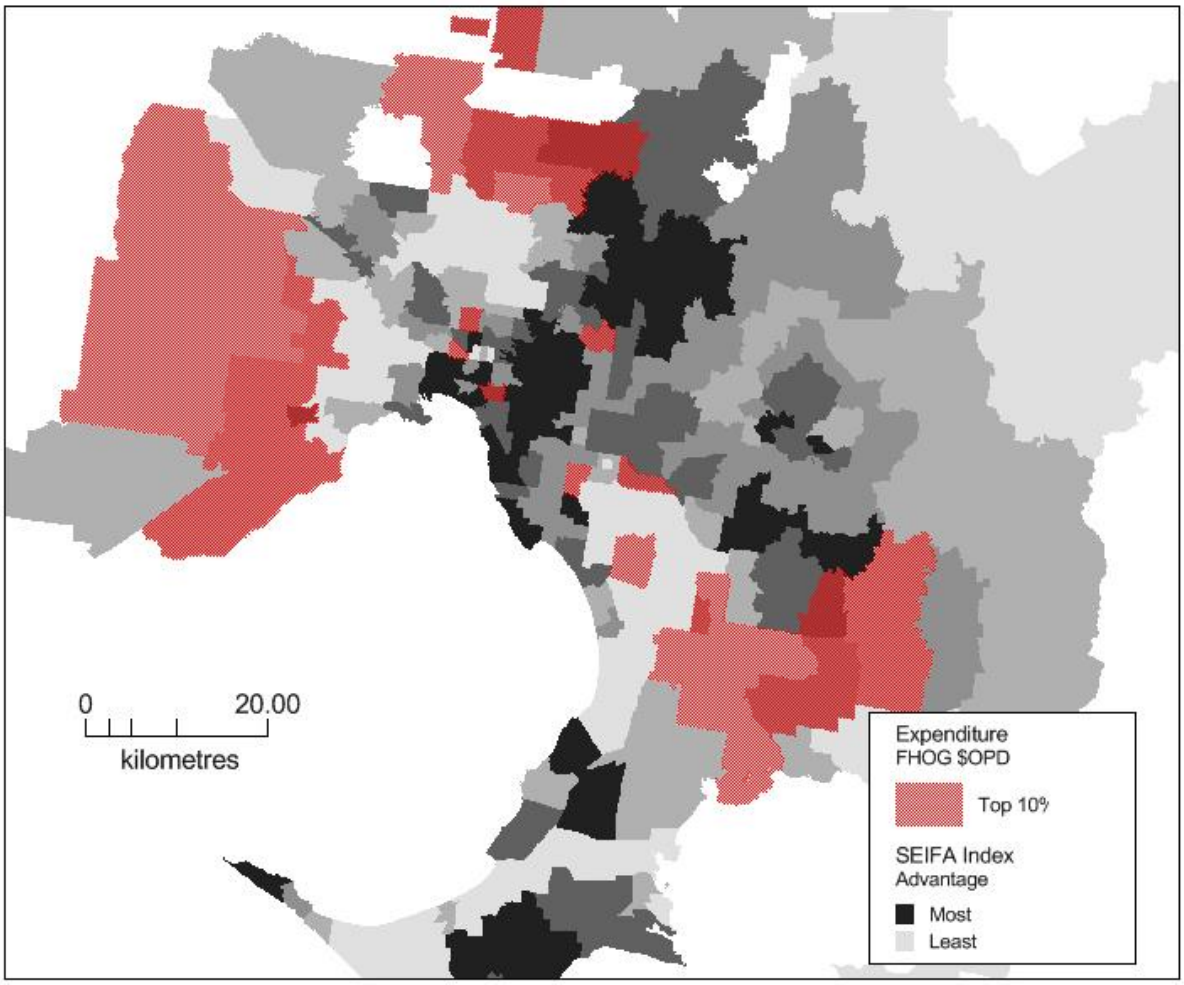
Figure 5: First home owners grant $ per OPD by SEIFA, postcode, Melbourne GCCA, 2011–12



Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 5 above plots the FHOG expenditure by OPD against the SEIFA score of each postcode. There were seven postcodes with very high FHOG per OPD (over $1000). These outliers were removed from the analysis, but not the mapping exercise. As a higher SEIFA score indicates a relatively higher level of socio-economic advantage, this chart suggests a weak negative relationship between FHOG expenditure levels and SEIFA index. To test this relationship, a linear regression analysis was undertaken between FHOG expenditure by OPD and the SEIFA score (see Appendix 2). The result was not statistically significant.

Figure 6: Spatial distribution top 10 per cent FHOG $ by OPD, postcodes, Melbourne, 2011–12, by SEIFA

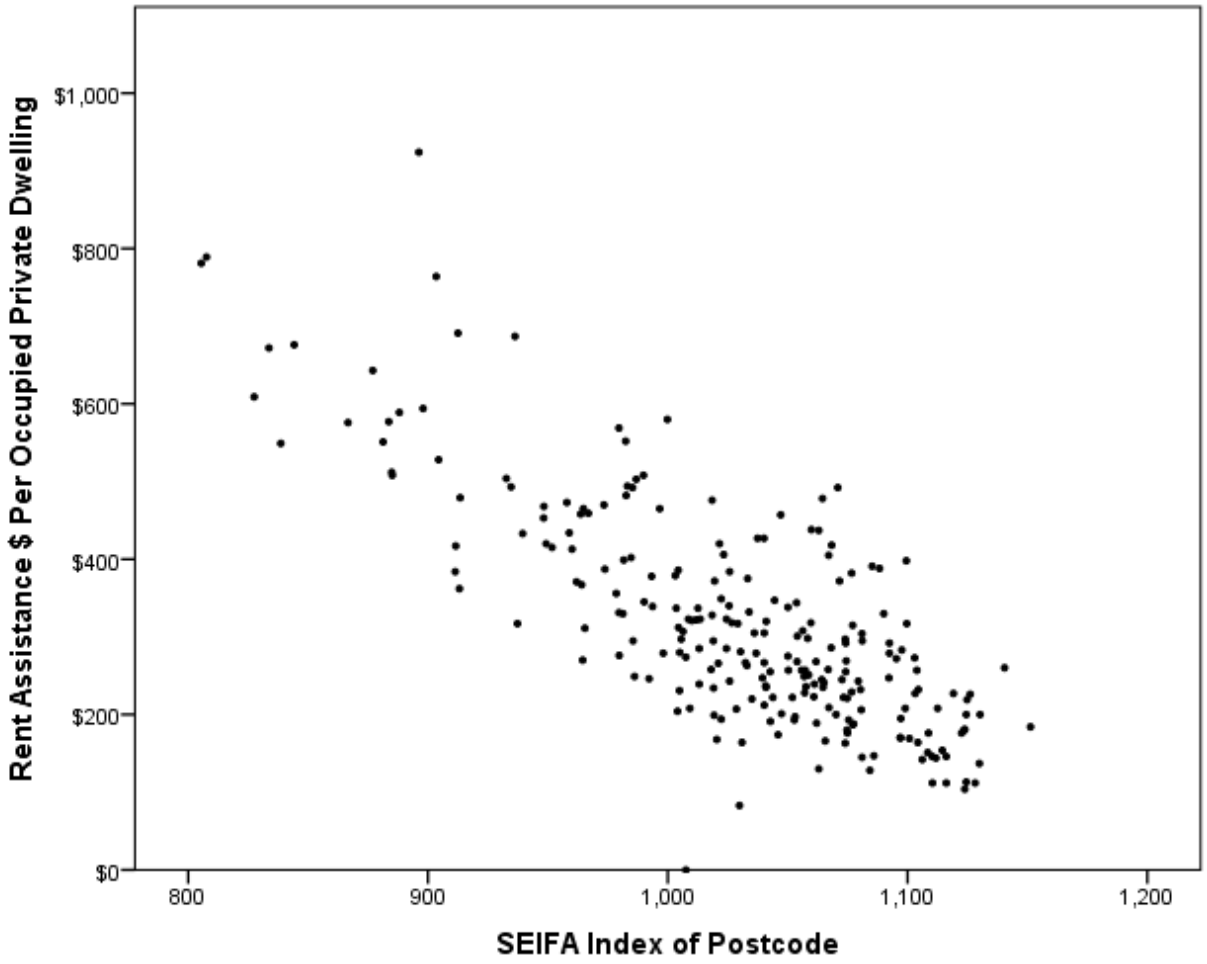


Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 6 above shows the location of the top 10 per cent of FHOG expenditure by OPD, by postcode. This includes FHOG for new and existing dwellings. The top postcodes were on the urban fringe, in locations with high proportions of housing stock affordable to first home buyers, and a high number of dwellings for sale as a ratio to total occupied dwellings. There were two main geographical clusters in this category. The first runs from Point Cook in the west, through Hoppers Crossing to Melton. The second cluster is to the south east, including Cardina. There were smaller pockets of high FHOG expenditure in the inner and middle suburbs, around Carlton and South Yarra. This is likely to reflect the purchase of apartments by first home buyers.

3.2.3 Rent assistance

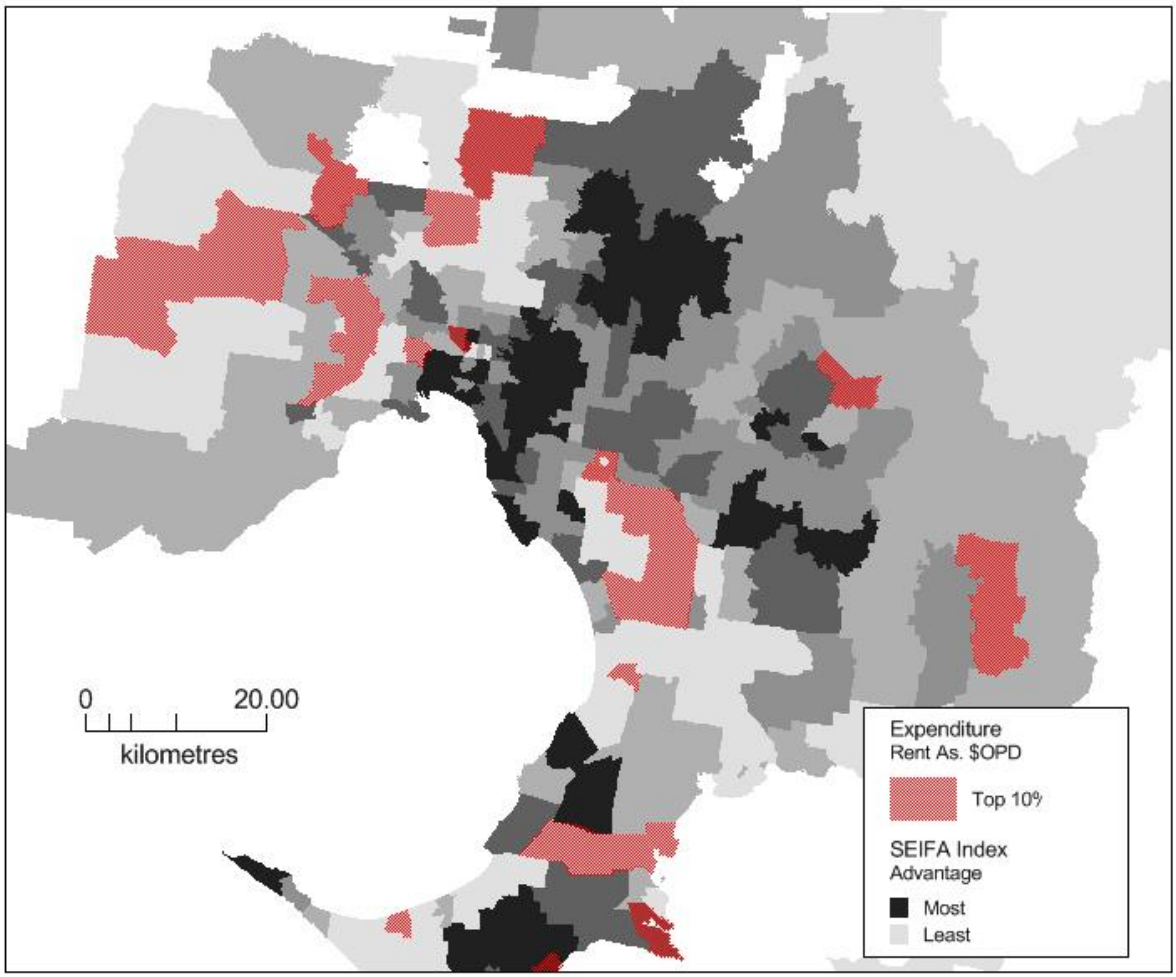
Figure 7: RA $ per OPD by SEIFA, postcode, Melbourne GCCA, 2011–12



Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 7 above plots the rent assistance expenditure by OPD against the SEIFA score of each postcode. As a higher SEIFA score indicates a relatively higher level of socio-economic advantage, this chart suggests a negative relationship between rent assistance expenditure levels and SEIFA index. To test this relationship, a linear regression analysis was undertaken between rent assistance expenditure by OPD and the SEIFA score (see Appendix 2). The result was a co-efficient of –1.58, so for every 1 point increase in the SEIFA score, the model predicted rent assistance expenditure per OPD to decrease by $1.58. This relationship was confirmed as significant by the regression model. This is not surprising given RA is a means tested income supplement that is targeted based on income.

Figure 8: Spatial distribution top 10 per cent RA $ by OPD, postcodes, Melbourne, 2011–12, by SEIFA

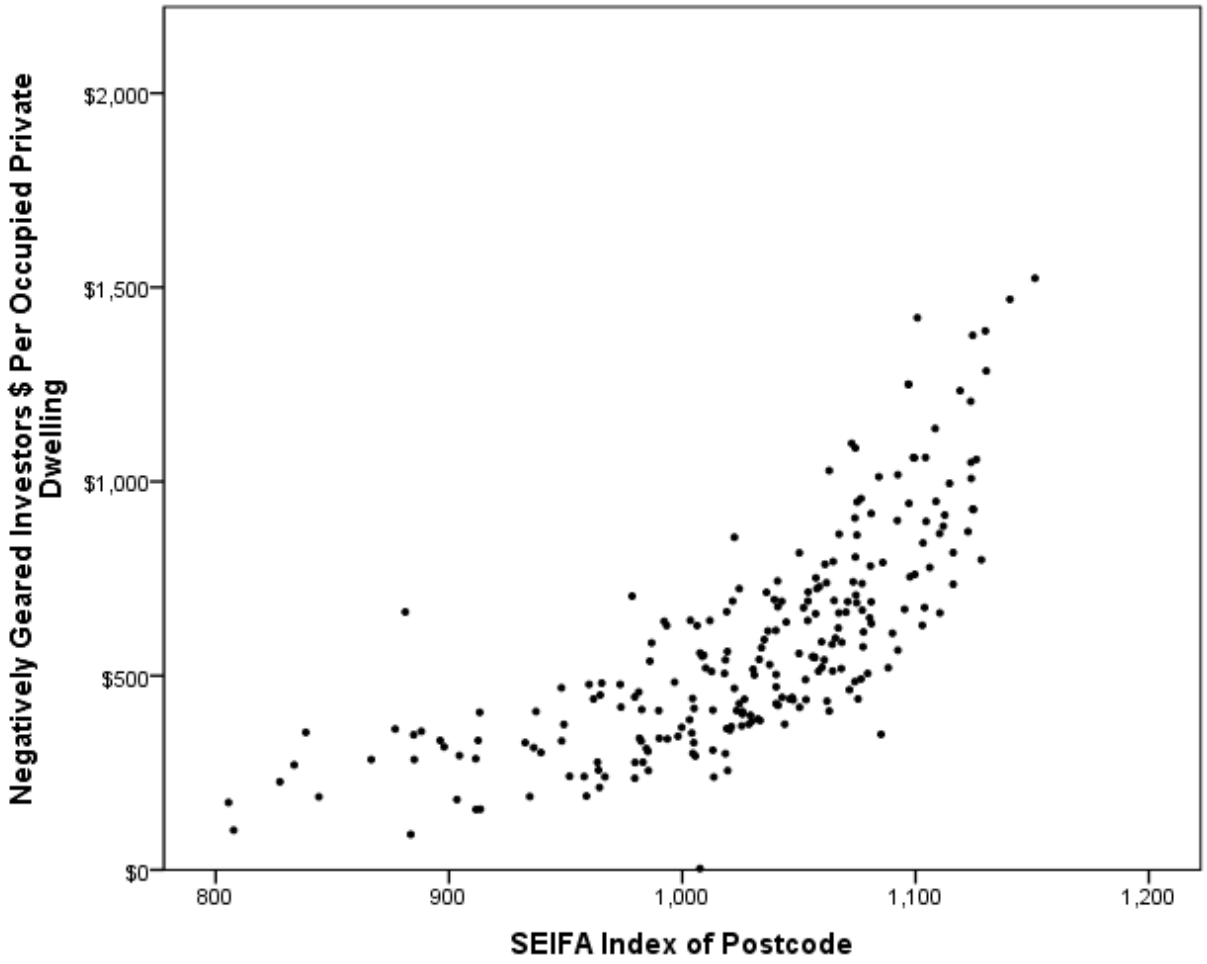


Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 8 above shows the spatial distribution of the top 10 per cent of RA by OPD postcodes in the Melbourne metropolitan area. These were outer suburbs with uniformly low SEIFA scores, meaning they were socio-economically disadvantaged relative to the rest of Melbourne. The highest level of RA by OPD was in Dandenong and Frankston to the south east, Broadmeadows to the north and Melton to the west.

3.2.4 Negative gearing

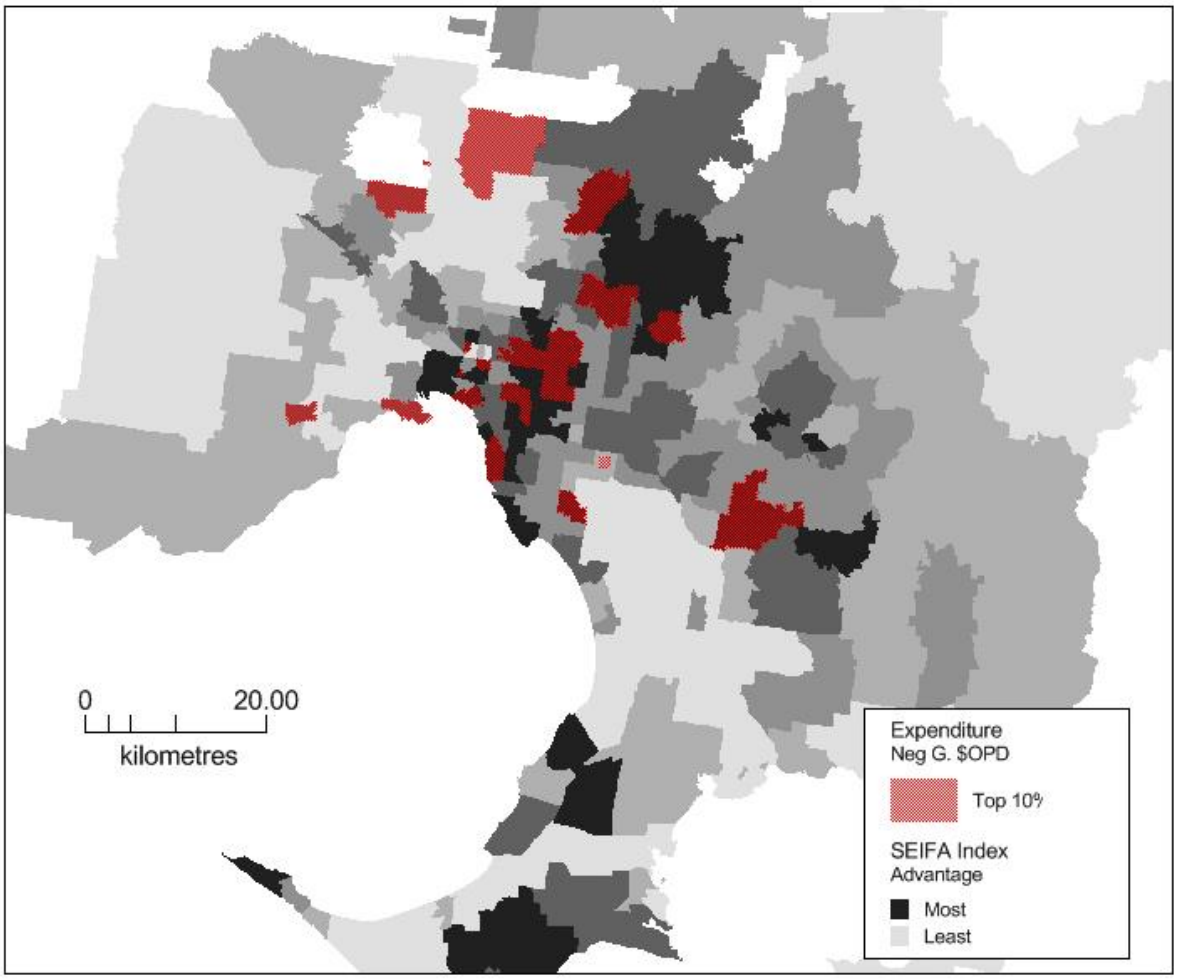
Figure 9: Negative gearing $ per OPD by SEIFA, postcode, Melbourne GCCA, 2011–12



Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 9 above plots negative gearing expenditure by OPD against the SEIFA score of each postcode. As a higher SEIFA score indicates a relatively higher level of socio-economic advantage, this chart suggests a positive relationship between negative gearing expenditure levels and SEIFA index. To test this relationship, a linear regression analysis was undertaken between the negative gearing expenditure by OPD and the SEIFA score (see Appendix 2). The result was a co-efficient of 3.03, so for every 1 point increase in the SEIFA score, the model predicted negative gearing expenditure per OPD to increase by $3.03. This relationship was confirmed as significant by the regression model.

Figure 10: Spatial distribution top 10 per cent negative geared investors $ by OPD, postcodes, Melbourne, 2011–12, by SEIFA

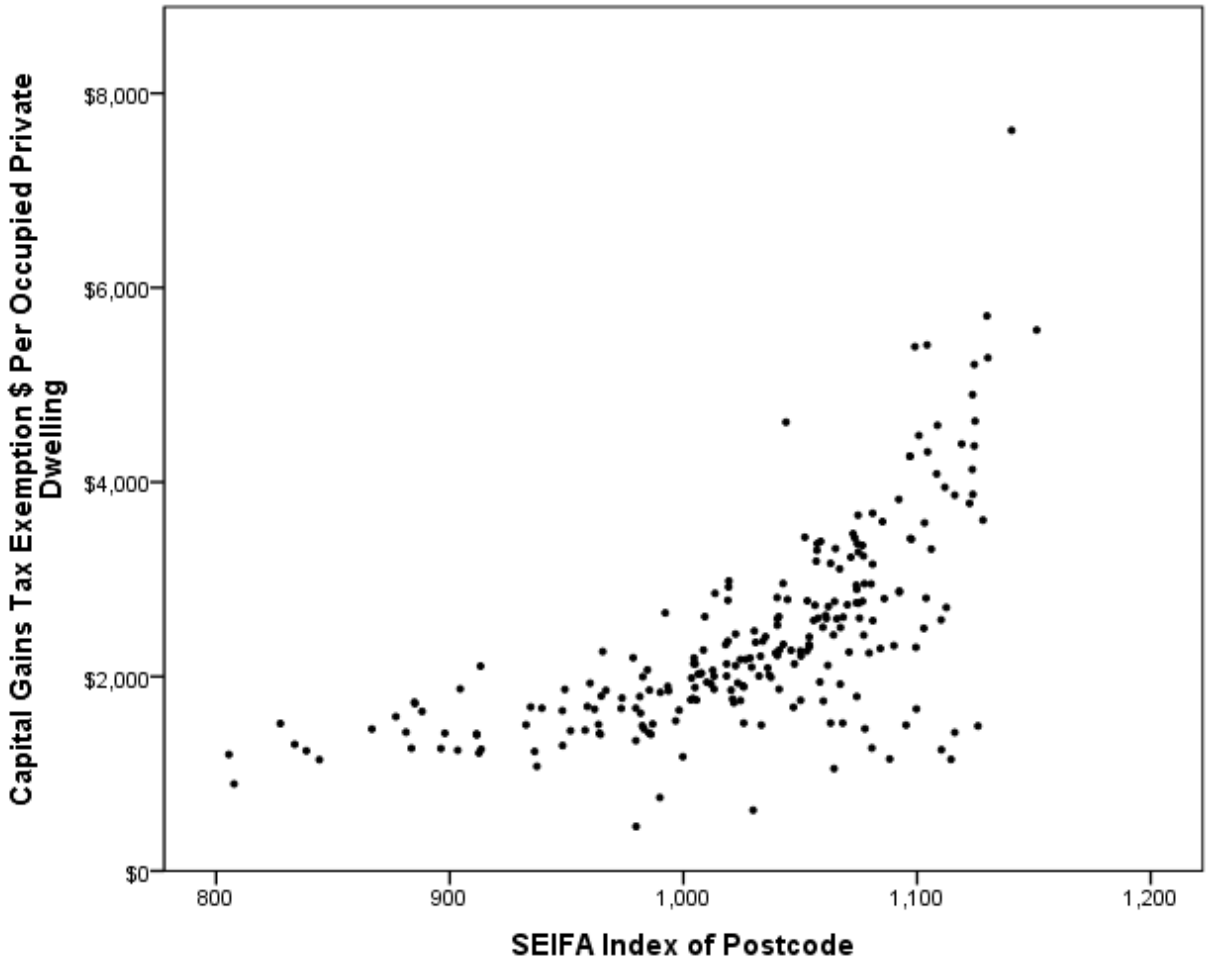


Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 10 above shows the location of the top 10 per cent of negative gearing expenditure by OPD, by postcode. This is the residential location of the owners receiving the tax benefit, not the location of the rental dwelling. These are postcodes with uniformly high SEIFA scores, meaning they were socio-economically advantaged relative to the rest of Melbourne.

3.2.5 Capital gains exemption

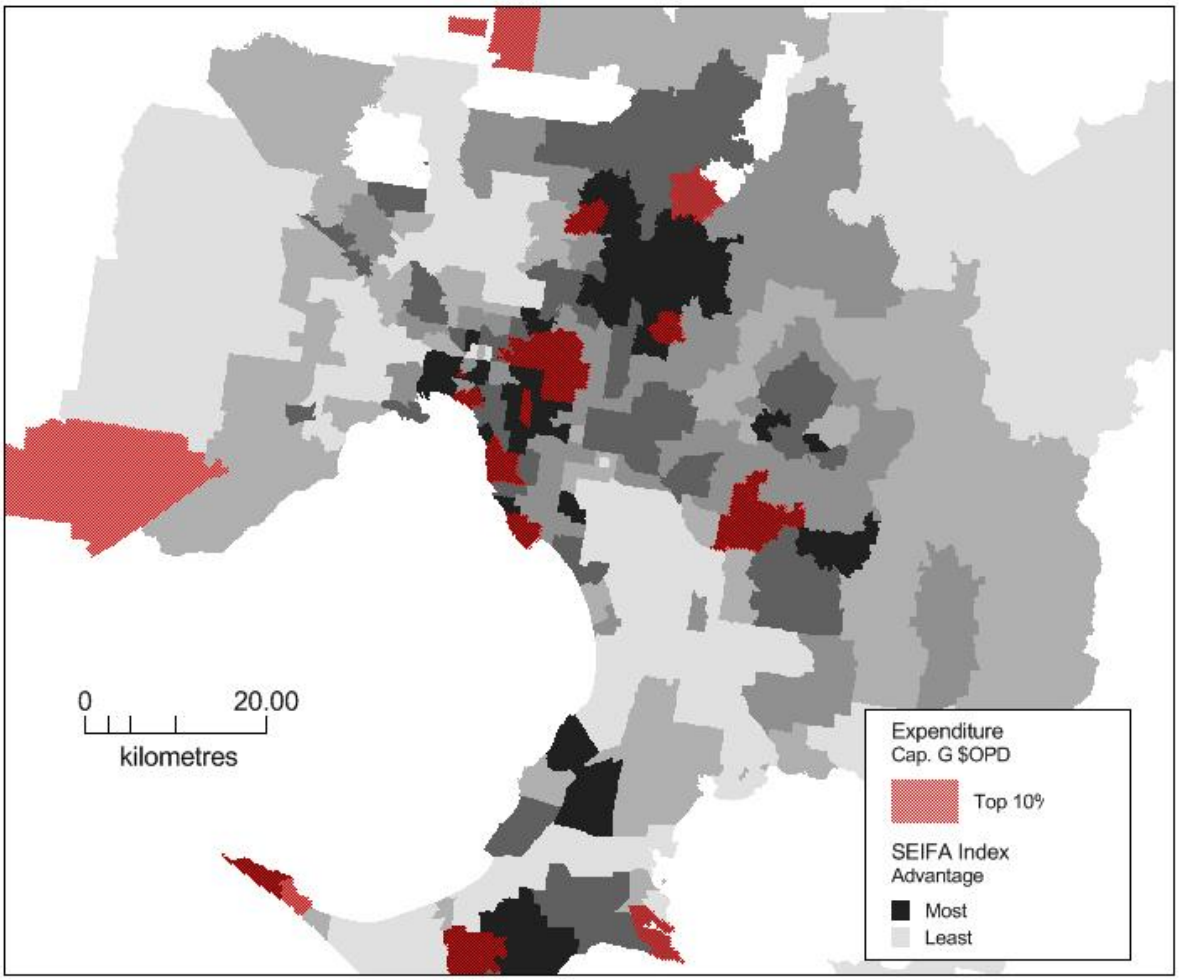
Figure 11: Capital gains exemption $ per OPD by SEIFA, postcode, Melbourne GCCA, 2011–12



Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 11 above plots capital gains tax exemption expenditure by OPD against the SEIFA score of each postcode. As a higher SEIFA score indicates a relatively higher level of socio-economic advantage, this chart suggests a positive relationship between capital gains tax exemption expenditure levels and SEIFA index. To test this relationship, a linear regression analysis was undertaken between the capital gains tax exemption expenditure by OPD and the SEIFA score (see Appendix 2). The result was a co-efficient of 9.90, so for every 1 point increase in the SEIFA score, the model predicted capital gains tax exemption expenditure per OPD to increase by $9.90. This relationship was confirmed as significant by the regression model.

Figure 12: Spatial distribution top 10 per cent capital gains exemption $ by OPD, postcodes, Melbourne, 2011–12, by SEIFA



Source: Author's calculations using ABS 2011b, Australian Department of Social Services 2012, ATO 2012, SCRGSP 2014, Valuer-General 2011

Figure 12 above shows the location of the top 10 per cent of capital gains exemption expenditure by OPD, by postcode. This is the residential location of the owners receiving the CGE on their place of residence. As with negatively-geared investors, these are locations with uniformly high SEIFA scores, meaning they were socio-economically advantaged relative to the rest of Melbourne. The exception is Werribee to the west, where newly built properties with relatively high sales values and high percentages of owner occupiers delivered a high CGE result.

4 FINDINGS AND IMPLICATIONS

The aim of this scoping paper is to (a) map government spending related to housing in order to contribute to an understanding of how government housing expenditure mitigates—or exacerbates—spatial disadvantage in Australian cities; and (b) to further the development of methods to estimate housing expenditure spatially. The findings from the analysis are set out here.

It should be reiterated that this paper is a scoping study that is geographically and temporally limited to one city (Melbourne) and one year (2011–12). The main empirical findings can be summarised as follows:

- Locations (postcodes) with higher levels of socio-economic advantage as measured by SEIFA received higher levels of total housing expenditure than disadvantaged locations.
- Direct housing expenditures through public housing and rent assistance were very well targeted to disadvantaged locations. However, this could also be interpreted negatively in that these expenditures are concentrating socio-economically disadvantaged households in spatially disadvantaged locations. This is especially true for rental assistance, which is concentrated in Melbourne's outer suburbs with relatively poor access to transport, jobs and services.
- First home owner grants were reasonably well targeted to disadvantaged and 'middle' locations. This is likely to reflect housing market dynamics, with first home buyers able to afford properties in these locations. It raises questions about whether encouraging home ownership can be a factor in negating certain aspects of spatial disadvantage (see Wood et al. 2013 for analysis of lower income households and home ownership).
- Indirect housing expenditure through negative gearing and capital gains tax exemptions were very poorly targeted, with the majority of these expenditures going to advantaged locations.
- Indirect housing expenditure comprised over 80 per cent of all expenditure measured in dollar terms, so poorly targeted expenditure types were also by far the largest expenditure types.

These empirical findings reflect those of earlier research, that the tax system provides 'most assistance to those households who need it least' (Yates 2003, p.6) and indirect assistance is poorly targeted (AIHW 2004). The findings also support the hypothesis set out in the introduction that the spatial impacts of public spending and taxation do not privilege disadvantaged areas. This finding extends Yates's conclusion that housing tax expenditures benefit most people who need such assistance least; the same could be said of locations.

There are methodological issues raised by the analysis. A major question is the relationship between one-off versus ongoing expenditure. Public housing reflects capital investment over decades, and has the ability to provide ongoing benefits through below-market rents in future years. Rent assistance and FHOG, however, are an annual or one-off payment. There is no capital component. Further, existing public housing is spatially fixed and its location in the city reflects investment decisions made over a long period of time. Rental assistance moves with the household. Thus, measuring public housing through recurrent expenditure ignores current benefits that accrue from historic investment, but also excludes benefits to future tenants that are provided by maintaining public housing through depreciation expenditure. This issue is noted in the AIHW report (2004). The analysis presented in this paper may prompt debate over how public housing expenditure is measured. While this is an important question, the scope of the report is not sufficient to tease out all possible iterations. The proportion of total expenditure allocated to public housing versus indirect assistance is also very small (2% versus over 80%) and changing the way public housing expenditure is calculated is not likely to change this proportion significantly.

A second issue is whether this analysis would reveal the same patterns in different cities, given the varied socio-spatial dynamics revealed by the MYRP report on socio-economic diversity and housing markets in Melbourne, Brisbane and Sydney (Hulse et al. 2014). Public housing expenditure levels would be different, as the Victorian Office of Housing has the lowest level of public housing expenditure per dwelling of any state or territory (SCRGSP 2014). Subject to data availability, the extension of this scoping study to other Australian cities would provide valuable insight into similarities and differences. The analysis could also be replicated across time, to measure changes in expenditure patterns within the city. This would provide a useful measure of the effectiveness and efficiency of government policy, should that policy aim to direct expenditure to disadvantaged locations.

Thirdly, while expenditure has been shown to privilege socio-economically advantaged locations in absolute terms, this may not be the case in relative terms. For example, the size of the average expenditure as a proportion of median household income per SEIFA quartile might show that expenditure comprises a larger proportion of the typical household's income in the lower SEIFA quartiles. This could be estimated by calculating average housing expenditure as a proportion of the median income in each postcode. Finally, the analysis presented here is about expenditure only, and does not calculate housing-related tax revenues such as local property taxes and stamp duty.

In conclusion, the main finding of this scoping study is that *direct and indirect government expenditure on housing privileges socio-economically advantaged locations*. Households in the top 25 per cent most advantaged postcodes received, on average, $4600 in direct and indirect government housing benefits in 2011–12. Households in the 25 per cent least advantaged postcodes received, on average, $2800 in direct and indirect benefits. This raises serious questions about the spatial targeting of government housing expenditure in Australia, particularly the indirect benefits provided to advantaged households through the tax system. It suggests that careful consideration needs to be given to the spatial consequences of direct and indirect housing assistance if this is intended to produce social good outcomes which mitigate some of the effects of housing market processes.

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APPENDICES

Appendix 1: Housing expenditure types

Expenditure types estimated in the analysis are explained below.

Direct expenditure on housing:

→ Government provision of public housing through State Housing Agencies (SHAs)

Public housing is administered by the states and territories, which provide publicly owned dwellings that are funded by the Federal Government through the National Affordable Housing Agreement and used to provide appropriate, affordable and accessible shelter for low to moderate income earners who are unable to enter the private market. Eligibility for public housing is determined by criteria designed to identify those most in need. Low-income public housing tenants pay reduced rents to housing authorities, and the level of rent paid is based on household income (see AIHW 2004).

→ First home owner grants and boosts (FHOG)

In 2000 the Federal Government reintroduced assistance for first home buyers in the form of a non-repayable grant, the First Home Owner Grant (FHOG). Initially this was intended to offset the impact of the new Goods and Services Tax (GST) on home ownership. It has been retained as a means of assisting first home buyers, with contributions from both Federal and state governments. FHOG is provided at different levels in each state, and varies over time.

→ Private rental assistance (RA)

Rent Assistance (RA) is provided to social security recipients in the private rental market as a means tested non-taxable income supplement. It is paid by the Federal Government to income support recipients or individuals and families who receive more than the base rate of the Family Tax Benefit Part A, in recognition of the housing costs they face in the private rental market.

Indirect expenditure that provides housing benefits through the tax system (or housing 'tax expenditures'):

→ Negative gearing for housing investors

'Negative gearing' is net losses on an investment arising from borrowing costs. In Australia, the Federal Government allows investors to deduct losses, inclusive of borrowing costs, against income from other activities in the same period through the tax system. While this is available for all asset classes, it has a particularly strong impact on housing (see Abelson et al. 2007, p.149). In 2004, the Productivity Commission found that of the 17 per cent of taxpayers who report rental income, nearly half report losses on their rental investment (Abelson et al. 2007, p.151).

→ Capital gains tax exemption for owner occupiers

A capital gain realised when the main residence of owner occupiers is sold is generally exempt from capital gains tax. In contrast, when an investment property is sold and a capital gain is realised, 50 per cent of the capital gain is considered income and is taxed at the individual's marginal tax rate.

Appendix 2: Regression outputs

Table A1: Linear regression output, total $ per OPD by SEIFA, postcode, Melbourne, 2011–12

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	-7,087.658	855.646		-8.283	.000
	SEIFA_2011	10.330	.830	.629	12.442	.000

a. Dependent variable: TOTAL $ OPD

Source: Author's calculations.

Table A2: Linear regression output, public housing $ per OPD by SEIFA, postcode, Melbourne, 2011–12

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	680.179	99.339		6.847	.000
	SEIFA_2011	-.591	.097	-.388	-6.114	.000

a. Dependent variable: PUBLIC_HOUSING_W_DEP_OPD

Source: Author's calculations

Table A3: Linear regression output, FHOG $ per OPD by SEIFA, postcode, Melbourne, 2011–12

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	609.766	266.849		2.285	.023
	SEIFA_2011	-.431	.259	-.108	-1.665	.097

a. Dependent variable: FHOG_per_OPD

Source: Author's calculations

Table A4: Linear regression output, RA $ per OPD by SEIFA, postcode, Melbourne, 2011–12

Coefficients[a]

Model		Unstandardised coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	1,949.149	112.635		17.305	.000
	SEIFA_2011	-1.582	.109	-.686	-14.472	.000

a. Dependent variable: RA_OPD

Source: Author's calculations

Table A 5: Linear regression output, negatively geared investors $ per OPD by SEIFA, postcode, Melbourne, 2011–12

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	-2,527.635	184.660		-13.688	.000
	SEIFA_2011	3.025	.179	.740	16.881	.000

[a.] Dependent variable: NEGATIVE_GEARING_OPD

Source: Author's calculations

Table A 6: Linear regression output, capital gains tax exemption $ per OPD by SEIFA, postcode, Melbourne, 2011–12

Coefficients[a]

Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	-7,786.512	769.244		-10.122	.000
	SEIFA_2011	9.902	.746	.654	13.267	.000

[a.] Dependent Variable: CAPITAL_GAINS_OPD

Source: Author's calculations.

AHURI Research Centres

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AHURI Research Centre—The University of Adelaide
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