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## Social Polarisation and Housing Market Change: A Case Study of Melbourne, 1986 to 1996

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*Maryann Wulff and Margaret Reynolds, Social Polarisation and Housing Market Change: A Case Study of Melbourne, 1986 to 1996*

## **Introduction**

This paper is concerned with the role of urban housing markets in the processes of spatial and social polarisation. In the last decade, Melbourne, like many cities in the world, has experienced the effects of globalisation, economic restructuring, shifting social and demographic patterns and technological change. A substantial body of international literature has developed concerning how these broad macro social and economic processes have affected the nature of the social distribution within particular cities (see, for example, Sassen 1999; Musterd & Ostendorf 1998, Murphy & Watson 1994; Baum 1997; Wessel 2000). One common outcome is described as 'social polarisation', or the growth in both the bottom end and the top end of the socio-economic distribution at the expense of the middle.

The measures adopted to position Australia as favourably as possible within the wider global economy undoubtedly affected the outcomes: lower real wages, high unemployment, an increasing number of families with no parent in the workforce (and others with two), and increasing poverty, particularly amongst single female parents. The overall result has been a growing gulf between the haves and the have nots (Murphy & Watson, 1994).

The impacts of economic restructuring have been geographically uneven across regions and cities (Fagan & Webber 1994; O'Connor & Stimson 1996; Gregory & Hunter 1995; Peel 1995). Localities are now being described in terms of 'winners' and 'losers' or 'hot spots' and 'cold spots' or places of 'opportunity' or 'vulnerability'.

Most discussions of polarisation tend to overlook the housing market as a force that may intensify inequalities both socially and spatially. An exception is found in the work of Lee, who writes that 'new patterns and concentrations of poverty are better explained by an approach which incorporates the housing dynamic as it relates to structuring where the poor live' (1994, p. 1191). In a case study of a town in the north-west of England, Lee's research demonstrates how the housing market 'encourages deprivation' particularly through the private rental housing sector. Low income household who are able to access Council housing end up in a more favourable position compared with poor private tenants. Lee describes the problems encountered by low income private renters as including 'discrimination and excessive rents, often inadequate housing, and sometimes exclusion by landlords (1994:1203). The housing dynamic, states Lee, needs to be reincorporated into accounts of spatial segregation in localities.

In a similar vein, Murie and Musterd (1996) have argued that different forms of housing restructuring in both Britain and the Netherlands have resulted in different spatial outcomes. In particular, within the social rented housing sector, different

targeting policies, which shape the social composition of tenants, have influenced patterns of social segregation. In the Netherlands, for example, social housing is open to a much wider range of income groups, whereas council housing in Britain is described as becoming increasingly residualised and only the neediest households are eligible.

### **Research question**

This paper draws upon the literature related to spatial and social polarisation and asks: To what extent (or, in what way) do changes in the housing market mirror or parallel changes in the economic structure of regions (as reflected in changing patterns of household income)

### **Data and method**

The analysis is based at the household level and spatially disaggregates Melbourne into 16 statistical subdivisions. We examine changes between 1986 and 1996 in first, the economic and social structure of these regions and second, the housing markets. The central thesis of the research is that these structures (and the nature of change between 1986 and 1996) will be inter-related with changes in the housing market – as observed in changing patterns of house prices. (In further work, we intend to examine rent changes and tenure shifts, but this paper is focused on house prices as a key indicator of housing market trends.)

A number of data sources are used:

1. ABS Special Request Matrices, 1986 and 1996: based upon Australian Bureau of Statistics Census data, these matrices contain social, demographic, dwelling structure and housing cost information for each household for the respective census, with 1986 rents and incomes adjusted to 1996 dollars by the CPI index (see Yates & Wulff 2000 for further detail on these data files and on the methodology employed to ensure comparability over the two time periods and the imputation procedure used to adjust for not stated income.)
2. Valuer General's House and Flat Sales Records: individual records for each residential property sale by type of dwelling in the calendar years 1986 and 1996, geographically coded to the statistical subdivision level
3. ABS Special Request Matrix: private rental market rent distributions for 1986 and 1996 for the Melbourne statistical sub-divisions

The measurement of spatial polarisation has been generally quite loose. Different authors employ different measures and indicators to determine spatial inequality and/or polarisation. What polarisation 'looks like' in particular places is perceived variously as a increasing gap between poor and rich households; a disappearing middle; or the development of a sizeable 'underclass'. In our work, we specifically set out to develop a measure that could capture 'degrees' of polarisation; that is, a

measure that could be used to classify regions as more or less polarised along a continuum of polarisation.

In brief, the measures employed are as follows:

- (a) the degree of spatial polarisation: this is measured by employing shift share analysis to changes in household income within each region. Regions are then classified into a typology of polarisation.
- (b) housing market change: the focus in this analysis is on changes in quartile house prices in the two years (1986 and 1996). (In work still to be undertaken, we intend to inter-relate house price changes with rental market changes.)

- (c) The link or association between housing market change and spatial polarisation: this is examined by assessing the quartile changes in house prices (indexed to 1996 dollars) within each of the polarisation categories. This analysis examines whether a pattern can be detected in house price levels and changes within regions experiencing different degrees of polarisation.

Shift share analysis is employed to assess the differential growth between 1986 and 1996 in various household income categories. This approach can reveal the increase in each household income segment relative to the overall household growth in a particular region. While shift share analysis is widely used in regional economics and labour economics (Wood & Bushe-Jones 1989), in this paper it is used to measure the differential growth in household income within among households headed by 25-64 year olds. The measure is premised on the notion that if household income patterns remained the same between 1986 and 1996, each income group could be expected to grow at the same rate as overall household growth in the region under examination. An index score of 100 would indicate this situation. But if a category grew by more or less than the expected rate, then the index score is correspondingly below or above 100. The index score is based on two figures, the actual number of households in a particular category in 1986; the expected number based on the household growth rate for the region between 1986 and 1996; and the actual number of households in 1996.

## Results

Figure 1 presents the Melbourne statistical sub-divisions that form the basis for this analysis along with the population growth experienced in these regions between 1986 and 1996. As has occurred in many Australian cities, the fastest growing regions tend to be located on the outskirts. Regions with declining populations are found in the middle ring, while Melbourne's inner and bayside regions register slow growth. For inner Melbourne, this growth reverses a longer-term trend towards population decline and has been hailed as an indicator of urban rejuvenation.

### See Figure 1

Debates over polarisation, whatever measures employed, invariably incorporate income change - in particular, the idea that the economic gap between rich and poor households is expanding over time. Figure 2 disaggregates household income into five income categories and presents the rate of change between 1986 and 1996. In order to control for the effects of age (i.e the presence of a large retired population in a region artificially depresses the income status of the area), only references persons between the ages of 24 and 64 years are included. While Melbourne's household income distribution altered in a similar fashion to the trend for Australia as a whole, the effects of economic recession in Melbourne are apparent. Against the national trend, low income households grew considerably faster (almost doubling in number) and high income households lower.

**See Figure 2**

In Table 1, the results of the shift share analysis for each Melbourne region confirm the trend that registered for Australia and for the Melbourne statistical division. In each region, the middle income groups did not expand in accordance with household growth. Instead, Table 2 portrays the decline of the middle income groups in each Melbourne region. In contrast, the number of low income households increased disproportionately to their share in that region in 1986. A shift share score of 100 would suggest that the particular income category grew at the same rate as the region.

For example, in the case of Inner Melbourne, between 1986 and 1996, households increased by 6.4 per cent. If household income patterns had remained stable within Inner Melbourne during this period, then each household income category would have increased by 6.4 per cent. The processes of polarisation, however, suggest that this is not the case. Some income classes grew much more than expected, while others declined. Shift share analysis provides a picture of regional shifts in income distribution during the ten year period under study.

**Table 1: Results of shift share analysis of annual household income change by region, 1986-96, Melbourne statistical subdivisions (\$96), (reference persons 25-64 years)**

REGION	Below \$15,500pa	\$15,500- \$26,000	\$26,000- \$41,600	\$41,600- \$62,452	Above \$62,452
	0	1-0	1-0	0-2	2 pa
Inner Melbourne	123	101	72	93	130
Western Melbourne	183	129	81	80	109
Melton-Wyndham	239	183	84	77	109
Moreland City	185	136	84	83	91
Northern Middle	176	134	85	81	102
Hume City	241	155	89	79	95
Northern Outer	203	157	86	79	110
Boroondara	141	124	82	80	113
Eastern Middle	204	156	96	80	97
Eastern Outer	178	165	88	81	105
Yarra Ranges Shire (A)	180	150	85	81	108
Southern Melbourne	156	128	84	82	109
Greater Dandenong	220	177	87	72	86
South Eastern Outer	185	150	86	85	102
Frankston City	197	172	89	80	89
Mornington Peninsula	161	121	85	82	104
<b>Melbourne SD</b>	<b>170</b>	<b>139</b>	<b>85</b>	<b>82</b>	<b>104</b>

Source: ABS Special Matrix Files, Census of Population and Dwellings, 1986 and 1996

Several points are worth noting in Table 1. First, as commented on previously, the overall trend within each region has been a disproportionate growth in low and high income households at the expense of middle income group.

The rise in low income households has been particularly pronounced in regions such as Melton-Wyndham, Greater Dandenong, Hume and Easter Middle. In these areas, the number of low income households in 1996 is twice what might have been expected if the 1986 income distribution had remained stable. Inner Melbourne experienced the slowest growth in low income households and, conversely, the highest increase in high income households.

These figures can be used as the basis for developing a typology of polarisation. Our approach has been to examine the change in the income distribution at both ends of the income scale, low and high income households. In order to standardise these two scores for all regions, the index score for each region has been tagged to the score for the Melbourne statistical division. The results of this exercise are shown in Figure 3, which plots each region on two axes that represent change in low and high income groups.

### **See Figure 3**

In Figure 3, the relative positioning of each Melbourne region with respect to change in low and high income households can be seen. The resulting picture suggests three broad regional types: advantaged, polarising, and disadvantaged. Advantaged regions, such as Melbourne inner region and Boroondara, experienced a relative decline in low income households and a corresponding increase in high income groups. Disadvantaged regions, typified in the extreme by Greater Dandenong, saw the rise in low income households and the reduction in higher income groups. In this emerging typology, polarisation is characterised as the process whereby regions experienced growth at both ends of the income spectrum, that is, in both low and high income households. Polarisation is best depicted in this figure in the case of a region such as Melton-Wyndham.

A telling indicator of a polarised city is the absence of any regions in the lower left hand side of Figure 3. For a region to appear in this category, the household income structure would have needed to alter in such a way that both low and high income households declined, leaving the middle classes to expand. As shown in Table 1, this outcome did not occur in any of the Melbourne regions.

Figure 4 displays the spatial outcomes of polarisation within Melbourne's regions. In this map, regions are ranked along a continuum with respect to the polarisation process. There appears to be a systematic geography taking place with respect to the outcomes of polarisation. Inner Melbourne has been greatly advantaged by the events of the past decade, while a band of emerging disadvantage can be seen in the regions bordering more advantaged areas. Polarising regions (a continuing growth in both low and high income households) are generally found in the outer suburban areas, where the outcomes of this process are still to be determined.

### **See Figure 4**

Our final table provides an exploratory test of the robustness of our polarisation typology. Table 2 examines the potential association between house price changes, by quartile, and the polarisation level of the region. Prices are given in 1996 dollars. Turning first to quartile 1, it can be seen that house prices in the advantaged regions grew rapidly during the decade while at the same time the disadvantaged regions suffered a drop in house prices in the lowest quartile. A similar pattern of change can be observed with respect to median house prices. Median prices rose substantially in the advantaged regions and declined in the disadvantaged. Within the polarising regions, lower quartile and median house prices declined, suggesting a trend more in accordance with a shift towards disadvantage than advantage.

**Table 2: Quartile house prices and house price change by polarisation type, 1986-1996 (\$96)**

	<b>Rapid advantage</b>	<b>Growing advantage</b>	<b>Slow polarisation</b>	<b>Fast polarisation</b>	<b>Slow disadvantage</b>	<b>Fast disadvantage</b>
Quartile 1 house prices 1986	\$118,500	\$127,717	\$102,713	\$110,837	\$106,057	\$108,230
Quartile 1 house prices 1996	\$157,500	\$137,133	\$94,333	\$93,062	\$95,500	\$93,400
% change in quartile 1 prices	32.9	4.0	-8.0	-16.0	-10.1	-14.2
Median house prices 1986	\$150,100	\$158,263	\$119,027	\$121,255	\$120,040	\$123,588
Median house prices 1996	\$210,000	\$179,667	\$116,000	\$112,500	\$116,050	\$113,000
% change in median house prices	39.9	11.0	-2.4	-7.7	-3.5	-9.0
Quartile 3 house prices 1986	\$216,855	\$219,620	\$144,833	\$142,397	\$142,200	\$146,434
Quartile 3 house prices 1996	\$295,000	\$256,333	\$150,542	\$147,500	\$146,000	\$139,400
% change in Quartile 3 house prices	36.0	15.0	4.3	3.4	2.4	-4.8

Source: Valuer General House and Flat Sale records, unit record files, 1986 and 1996

Quartile house prices also demonstrate the growing gap between advantaged and disadvantaged regions. In 1986, for example, within the lowest quartile, approximately \$25,000 separated the lowest quartile prices from the highest. By

1996, this gap had expanded to \$67,000. This reinforces the existence of economic polarising, suggesting that some households are effectively shut out of particular regional housing markets. The same growing disparity can be observed in median house prices and even in the highest quartile range. Median house prices in 1986 ranged from a low of \$120,000 in the polarising and slowly disadvantaging regions to a high of \$158,000 in the growing advantaged regions. This gap of \$38,000 by 1996 had widened to \$88,000.

In the highest quartile price range, the advantaged regions continued to experience substantial increases. It is worthwhile to note, however, that within the polarising regions, house prices at the top end of the market rose, albeit slightly. In other words, the housing markets within polarising regions are dropping at the lower end (thereby attracting more low income households) while simultaneously rising at the upper end. The outcome of this housing market shift operates to reinforce the economic polarisation already underway within the region. Disadvantaged regions, however, appear to be moving towards further disadvantage – at each quartile, house prices declined in the period 1986 to 1996.

### **Concluding remarks**

Our analysis demonstrates that a link exists between the extent of polarisation within a region and the housing market. At this stage, the causality of this connection is uncertain – do house prices decline (for whatever reason, such as labour market restructuring) and consequently attract lower income households or, conversely, does the existence of increasing numbers of low income households suppress regional house prices? This issue requires further consideration of the range of forces that operate to alter economic structures within regions.

Government housing policy also plays a hidden role in this dynamic. The presence of large public housing estates in certain regions undoubtedly interact with private market forces (although high rise inner area estates do not seem to have stemmed the rapid rise in inner urban advantage) and the move towards Commonwealth rent assistance has placed unknown pressures on the lower end of the private rental market. Greater Dandenong, for example, typifies a region with declining house prices, but with a demonstrable increase in the rental market, particularly at the low cost end of the market. In fact, nationally, low cost rental stock declined over the period 1986 to 1996, but the extent of decline varied among cities and regions (Yates & Wulff 2000).

The research results presented in this paper form the first step in an on-going analysis into housing markets and spatial polarisation. In order to further test our thesis concerning the inter-relationship between housing markets and polarisation, two issues in particular will be pursued more fully. The first relates to developing a method that can capture the totality of the housing market dynamic within particular regions. This might involve, for example, relating our analysis of house prices change to shifts within the rental market and to the restructuring of tenure in general. The

second issue goes to the heart of geographical analysis – that of scale. The statistical sub-divisions presented in this paper represent large spatial areas that incorporate a number of identifiable local areas. What constitutes the boundaries of a housing market has been debated in the academic literature as much or more than the question of polarisation. Accordingly, we intend to examine whether the patterns observed on the regional scale can be replicated at the local level. Nonetheless, the results of this present analysis provide confidence in our thesis that polarisation cannot be understood without taking the housing market into account.

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Figure 1: Population growth rate 1986 - 1996  
Melbourne Statistical Subdivisions

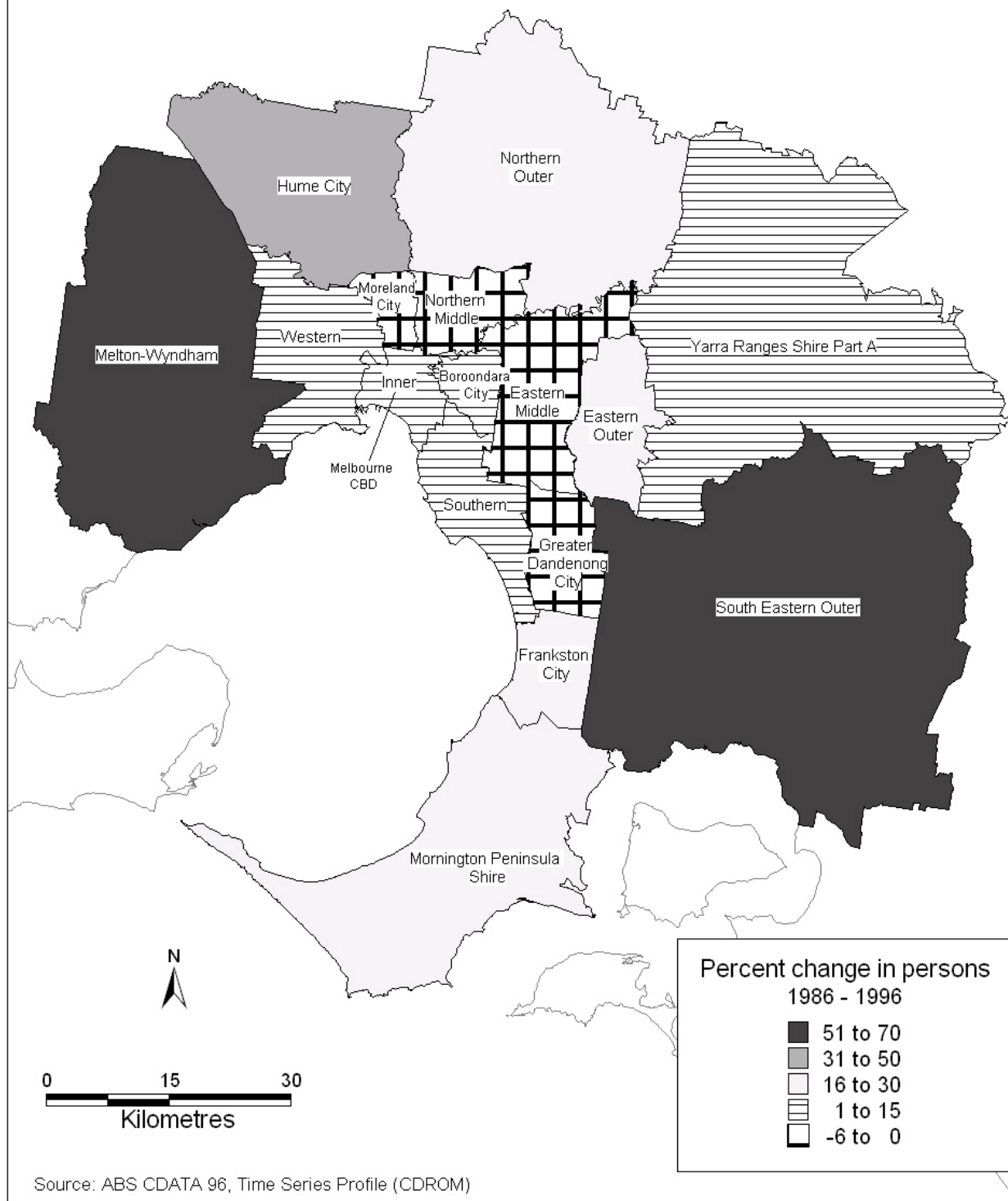
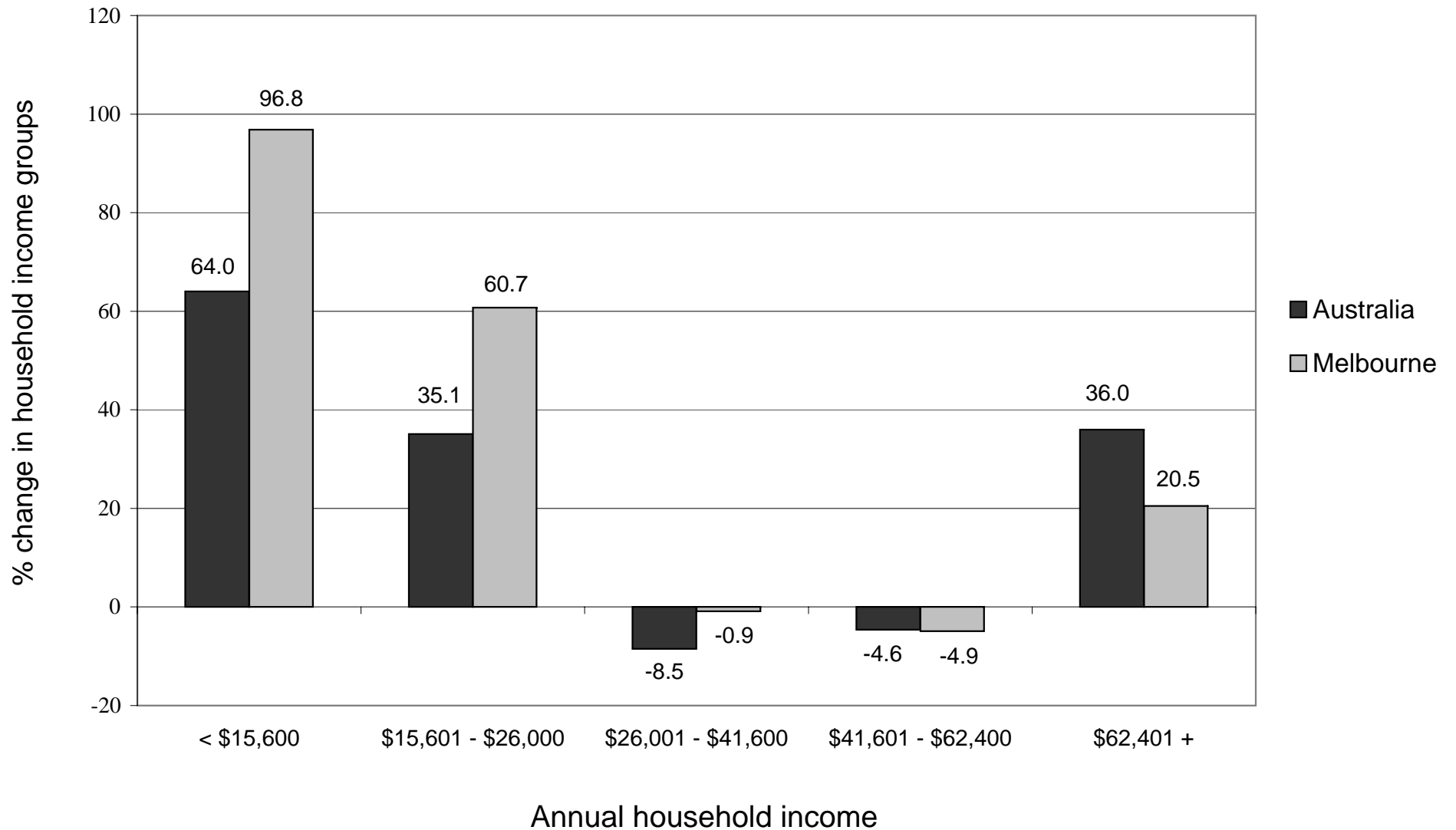
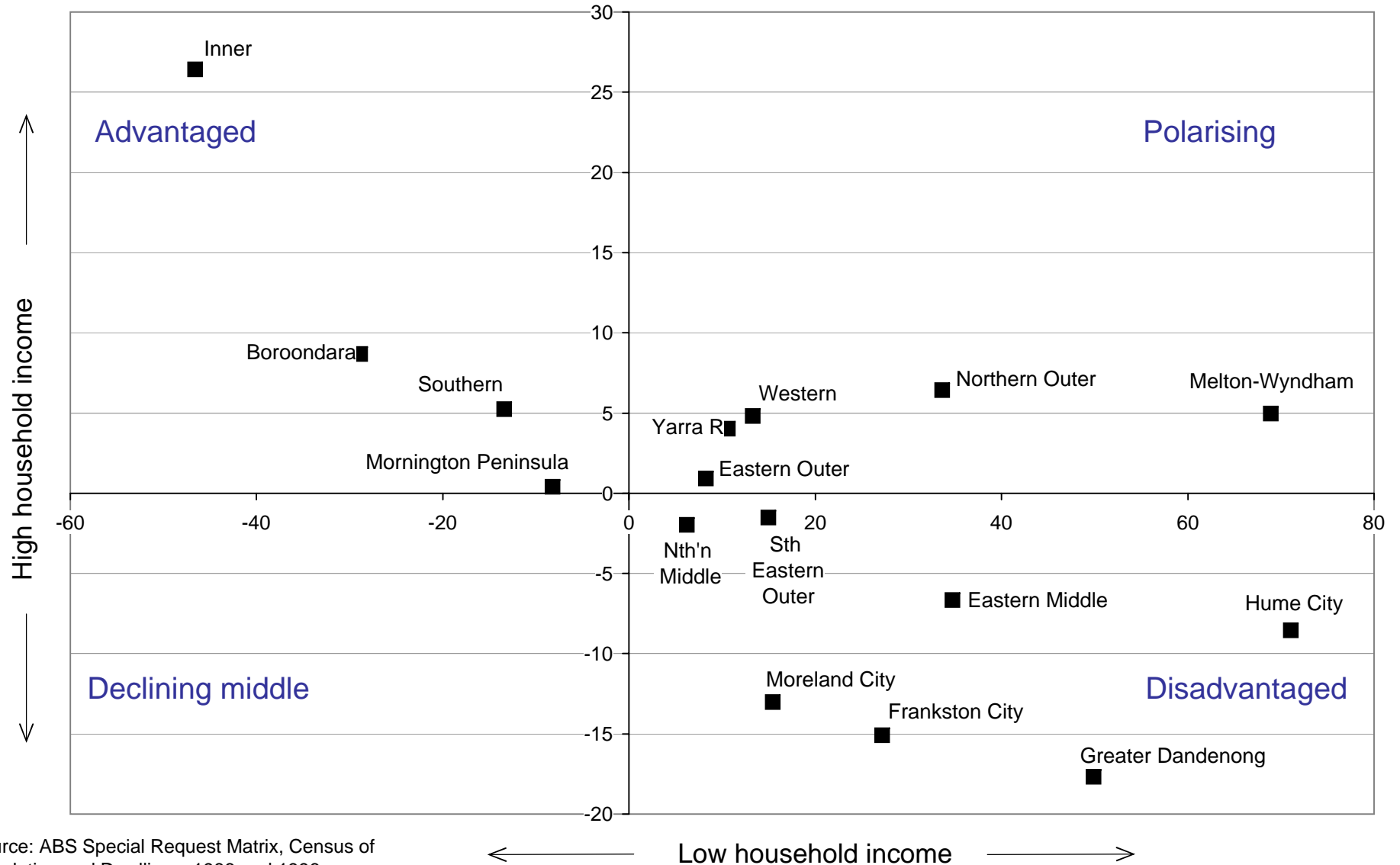


Figure 2: % change in annual household income (\$1996)  
 Australia and Melbourne Statistical Division, 1986 to 1996  
 (reference persons 25-64 yrs)



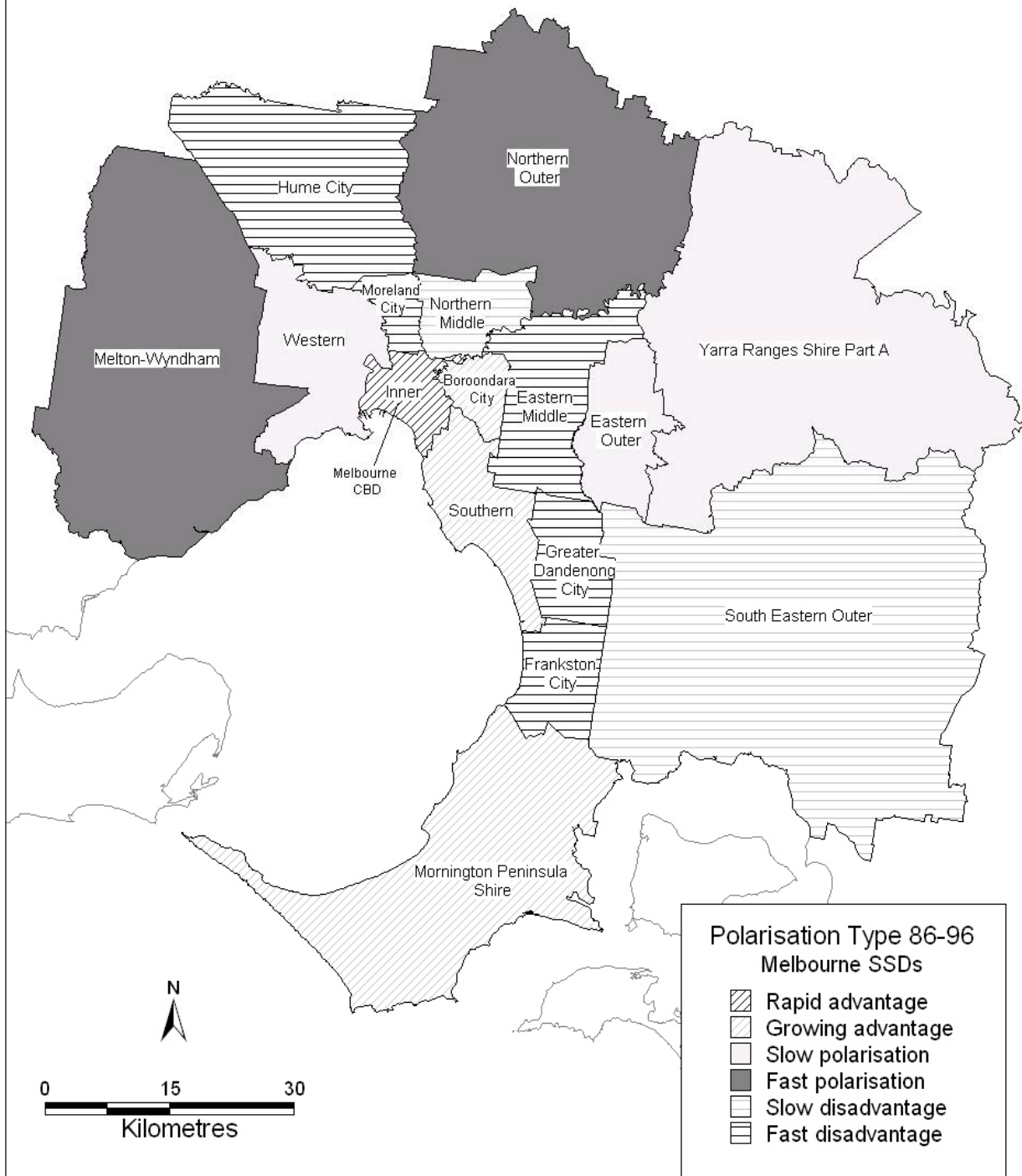
Source: ABS Special Request Matrix, Census of Population and Dwellings, 1986 & 1996.

Figure 3: Melbourne SSDs plotted by standardised shift share scores on household income change 1986 - 1996  
(reference persons 25-64 yrs)



Source: ABS Special Request Matrix, Census of Population and Dwellings, 1986 and 1996.

Figure 4: Economic Polarisation 1986 - 1996  
Melbourne SSDs



Source: ABS Special Request Matrix, Census of Population and Dwellings, 1986 and 1996