

A mismatch between housing affordability and employment opportunity in Melbourne?

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EXECUTIVE SUMMARY

This Positioning Paper investigates the connections between housing affordability and employment opportunity in Melbourne to determine the extent to which there is a 'spatial mismatch' between locations where low-income earners can afford to live, and locations where employment opportunities are greatest.

The paper sets out a research program which will investigate the phenomenon of spatial mismatch through a review of the relevant housing and labour market literature, consideration of opportunities to intervene in current knowledge about spatial mismatch, the relevance of government policies to the research and the selection of appropriate data and statistical and mapping techniques.

Initially the empirical and policy context for concerns about the connections between locations of affordability and employment opportunity are reviewed. Next the paper assesses how labour markets have been restructured sectorally and spatially in the past two decades, with a focus on the Australian context. The importance of the differences in concentration of employment within and between localities across metropolitan Melbourne is noted.

The paper then examines how housing markets have responded spatially to labour market restructuring in recent decades, particularly in terms of the differentiation of socio-economic groups. The Section notes the increase in socio-economic polarisation in the Australian setting and the extent of this polarisation and social exclusion in Australian cities, including Melbourne.

The paper then introduces the potential problem of a spatial mismatch between housing affordability and employment opportunity and the links between transport disadvantage and social exclusion. International literature on spatial mismatch is reviewed and evidence for the extent of transport related social exclusion in Melbourne is noted. On the basis of the available literature, there is reason for strong concerns about the presence of a mismatch between affordable housing locations and employment opportunity in Melbourne, with inadequate public transport potentially a major component of this problem. The relevance of spatial mismatch research to Federal and State government policies is then considered, with both levels of government having an interest in ensuring minimisation of any spatial mismatch in Australian cities.

The paper concludes by setting out a clear set of research questions to be pursued in the research and sets out a more detailed discussion of the methods used to respond to these questions.

1. INTRODUCTION

1.1. Project purpose

This project is situated within a set of contemporary literatures concerning the spatial development of large urban areas, within the context of the ongoing restructuring of urban employment and housing markets. These restructuring urban markets are themselves responding to processes of increasing globalisation and inter-metropolitan integration, but are also throwing up new problems for urban and social policy makers. The spatial dispersion of high employment opportunity within urban regions does not necessarily match the distribution of lower socio-economic status households via residential housing markets. The lack of sufficient means of transport by low income households which would enable them to traverse this spatial divide and access employment opportunities within the city, could have serious implications for issues of economic and social development, and social equity.

This project examines the links between labour and housing markets in terms of whether there is a 'spatial mismatch' between locations of high housing affordability for low-income households and locations of high employment opportunity. The purpose of the project is to examine the extent of spatial mismatch, determine some of the causal factors which contribute to the phenomenon and to assess the potential for policy changes which could address some of the adverse socio-economic consequences of these patterns, and reduce the extent to which they impact on the achievement of other government goals, such as welfare and urban sustainability.

The project is set within broader processes of metropolitan structural change and global economic shifts, which have wrought major changes to the development patterns of cities both within Australia and globally. Such changes have been particularly prominent during the period from the late-1970s and are associated with ongoing re-structuring of the organisation of production and consumption between globally integrated capitalist economies. A wide literature has described these shifts and their effects on urban areas and this globally aware literature informs the present study. While in many cases these shifts are the result of forces beyond the direct control of governments, there remains a responsibility for governments to identify means by which these impacts can be avoided, remedied or mitigated through attending to the local conditions which support or constrain the opportunities faced by individuals and households.

A specific concern of the project is the role that urban transport systems have in mediating between areas of high housing affordability and areas of high employment opportunity. If, for example, areas of high housing affordability have poor access to public transport, then reliance on other modes of transport such as car ownership can result in high relative costs for low-income households who are travelling to high-employment opportunity destinations.

1.2. Policy Relevance

This project traverses a range of government policy interests.

Federal governments are interested to ensure that individuals receiving income support are encouraged and enabled to access employment opportunities, thus potentially reducing the assistance burden on the government. The Federal government outlays a large sum each year via unemployment assistance and income support programmes. Under these programmes it is expected that unemployed individuals seek employment, thus reducing the government's fiscal burden. But if there is a strong spatial separation between locations where the unemployed are able to afford housing, and locations where employment is located, then the ability of the

unemployed to access employment opportunities may be diminished. By assessing the extent to which urban structure mediates between housing affordability and employment opportunity, the project will assist in identifying avenues for adjustment or reconsideration of Federal income support policies.

Likewise, state governments have an interest in ensuring socially equitable outcomes from their urban spatial planning policies. Where these policies can be identified as creating socially inequitable outcomes, whether from the unfettered operation of spatial housing and employment markets, or through spatially uneven levels of transport service provision, then it would appear to be incumbent upon these state governments to undertake policy re-adjustments to ameliorate these adverse socio-economic consequences. Recently established State government goals of encouraging new urban development to locate around high quality transport nodes (Department of Infrastructure 2002) may assist to overcome some aspects of spatial mismatch, but the likelihood remains that areas of highest housing affordability will remain those where access to services and employment is poor.

This positioning paper seeks to position this project within a wider literature on spatial mismatch, the forces that have been attributed to its cause, and the potential solutions that may be sought to overcome it.

1.3. The Structure of this Positioning Paper

Section 2 of this Positioning Paper examines spatial aspects of urban labour markets. The Section considers what have been the major shifts in the labour market within international, Australian and Western metropolitan areas during recent decades. In particular, changes in the industrial and occupational composition of the labour market including within metropolitan areas are considered.

Section 3 shifts attention to the role of housing markets across the world, particularly in relation to the way in which different metropolitan areas have experienced structural spatial housing change in different ways. The Section continues to detail ways in which housing markets have played an important role in translating the income and wealth dimensions of changing global labour markets into spatial patterns. Particular attention is given to the Australian experience of housing market change in relation to metropolitan structure, and the way in which Melbourne, in particular, has been affected by differentiation among high and low labour market status groups, and the spatial affordability of housing. Tenurial dimensions of spatial housing market change are also considered.

Section 4 brings together the discussion of the previous two Sections by introducing the theory of a 'spatial mismatch' between housing affordability and employment opportunity in metropolitan areas. The implications of any 'spatial mismatch' for low-income and other types of households who are vulnerable in the housing market are explored, and differing viewpoints on both the presence and causes of any spatial mismatch are noted. The Section concludes by establishing the relevance of spatial mismatch theory to the Australian context.

Section 5 continues some of the themes identified in Section 4 through a discussion of the relationship between social exclusion and transport provision. Overseas and local research is reviewed, the majority of which identifies the inadequacy of public transport as a major barrier to the participation of socio-economically and spatially disadvantaged households in employment and their ability to access social and community services. The extent of social exclusion and transport literature in Australia is noted, and recent research pertinent to Melbourne is reviewed. The Section concludes by noting the policy relevance of research into the connections between general mobility and social exclusion.

Section 6 extends the discussion alluded to in Section 5 regarding the policy relevance of conducting research into any spatial mismatch between housing affordability and employment opportunity in the Australian context. The Section argues that spatial mismatch research is relevant to both the Federal and State government. Federal interests include the role of Commonwealth Rent Assistance and the New Start Allowance as well as the Auslink transport infrastructure investment programme. At the State level, the Melbourne 2030 Metropolitan Strategy and public housing programmes were noted as being particularly likely to benefit from spatial mismatch research.

Section 7 focuses on the research questions that will be addressed in this research project in the Final Report. This Section addresses each question with a detailed description of the methodology to be used in responding to the research questions. The Section notes that the methodology will concentrate on quantitative methods, drawing primarily on data obtained through the 2001 Census and subsequent databases established to enable spatial analysis of this data.

2. RESTRUCTURING URBAN LABOUR MARKETS

2.1. Introduction

Since the 1970s, urban areas around the world have undergone a profound phase of re-organisation, as changes in the organisation of international capitalist relations have flowed into changes at the metropolitan economic level. This phase is typically referred to as 'globalisation' and has had a series of important effects on the spatial arrangement of metropolitan areas. This Section sets out the basis for recent metropolitan labour market shifts in areas in western countries, under globalisation, and focuses initially on general changes in the sectoral composition of labour markets and their spatial organisation. Following the discussion of international labour market issues, the Section then considers the Australian experience of labour market changes, focusing both on sectoral shifts as well as patterns of labour market disadvantage. The Section concludes with understandings of recent labour market change in Melbourne, and potential problems for policy makers which these changes have presented.

2.2. International labour market change

Since the late-1970s urban researchers have documented significant shifts in the way that labour markets have operated, and the relationship between these shifts and broader international capitalist restructuring (Harvey 1989). Prominent among accounts of the way production and consumption in developed capitalist nations has been reorganised in recent decades has been the shift from an historical 'Fordist' mode of production to a 'post-Fordist' mode (Scott and Storper 1986; Amin 1994; Massey 1995; Sabel 1997). Put simply, this terminology refers to the general trend in industrial and corporate organisation to move from a hierarchical production line approach under which all facets of production are managed by a single often 'monolithic' organisation, to a set of productive arrangements whereby a company might outsource or sub-contract many of its production and management functions to a set of independent flexible, and often specialised subordinate organisations. Importantly, this 'flexible specialisation' has been identified as also having wrought greater flexibility in the use of labour in production processes.

Associated with shifts in the production arrangements of capitalist organisations during the past few decades have been shifts in the spatial arrangements and scales around which that production is organised. Recent concern with and interest in the phenomenon of globalisation, in large part, is due to the increasing organisation of large firms at an international scale, rather than within the traditional confines of the city or the nation. This increasing global connectedness of both capitalist production and consumption has been enabled and accompanied by greater flexibility in financial flows, particularly international financial movements. Indeed, recent financial globalisation, and particularly some adverse outcomes, has been particularly prominent in scholarly understandings (Leyshon and Thrift 1997). This enhanced importance of international financial and associated business organisations and allied institutions has also raised the profile of labour employed in these sectors, and has affected scholarly understandings of how contemporary labour markets are organised and segmented.

One of the more influential descriptions of late-twentieth century labour markets has been Reich's (1991) typology. Reich's (1991) suggested that since the late-1980s, work in advanced western nations can be understood as falling within three broadly identifiable occupational groups. These groups, Reich suggests, are 'routine production services', 'in-person services' and 'symbolic-analytical services'. Routine production refers to conventional factory or manufacturing employment, and is referred

to by some authors as 'old economy' work. By comparison, 'in-person services' describes employment that involves the provision of personal or associated services, such as hospitality or retail work. The third category under Reich's typology refers to employment in which the main skill or competence revolves around the interpretation and manipulation of symbolic information. Such conceptual work therefore largely depends upon conceptual rather than manual capacities and includes business, legal and financial services, research and policy development and information management and processing, among others. Some authors, such as Brain [ref] refer to this kind of employment as 'informational' or 'new-economy' employment. Since Reich proposed his typology of late twentieth century work the increasing prominence of labour within what is known as the 'informational economy' has suggested that there is some empirical validity to the typology of 'symbolic-analytical' work.

For cities, the implications of shifts in labour markets have been marked, particularly in the way that the spatial organisation of capitalist activity has served to highlight the sort of labour market shifts identified by Reich. The prominent work of Sassen (Sassen 1988; Sassen 1991; Sassen 1994) and others (Fainstein 1990; King 1991; Dear 1996; Knox 1997) has been particularly noted in describing and assessing these changes. Knox, for example, demonstrated that during the period 1970-1995, many major US cities, such as Atlanta, New York City and Pittsburgh, experienced major decreases in the proportion of their employment provided by the manufacturing sector. By comparison, the service sector underwent a strong increase in its share of total employment during the 1975-1995 period, with the importance of this sector almost doubling in major US cities, including Chicago, Los Angeles, and New York.

Sassen paid particular attention to spatial labour demand in the 'globalising' cities of London, New York and Tokyo (1991). Her analysis of spatially disaggregated labour market data suggests that globally connected informational, or symbolic-analytical employment has been increasingly located in the 'core' or spatially central areas of global cities. The location of this employment is associated particularly with corporate headquarters, particularly those companies whose organisational structure extends beyond the boundaries of the specific city in which those headquarters are located, and typically internationally. Furthermore, the development of this globally connected employment concentration has displaced traditional manufacturing activity from central city areas. Such 'routine production services', in Reich's categorization, have migrated to the urban periphery, taking advantage of reduced spatial densities as well as improved capital-to-rent ratios resulting from the cheaper suburban and fringe land prices. This effect has been noted in Australia by Freestone and Murphy (Freestone and Murphy 1998).

Thus, as Sassen has noted (Sassen 1991; Sassen 1994), while central city areas have become key locations for symbolic-analytical employment, this employment has also attracted jobs which provide services to the informational labour force. Hence, the increasing importance of central city areas for symbolic-analytical workers has been accompanied by an increasing importance of such areas for low-wage in-person service sector workers. Thus, in the global cities which Sassen (Sassen 1991) investigated, she noted the phenomenon of high-wage and low-wage employment being co-concentrated in the city core, which was also the location of urban activity with the greater degree of connection to the global economy.

Sassen's work has not been left unchallenged. Some such as Sayer and Walker (Sayer and Walker 1992) have argued that rather than being the outcomes of global economic processes the transformations of urban economies observed in recent decades are the result of specific social processes arising from the re-arrangements of capitalist enterprises within specific national economies. Thus, the shifts in urban economic processes derive more from local factors than from global influences. However, Sayer and Walker's analysis is largely unconcerned with the way in which

such changes in the organisation of production and consumption have been expressed spatially. By focussing on the relationship between urban labour market restructuring and urban industrial restructuring, in terms of their social characteristics, Sayer and Walker miss a significant opportunity to develop a strong socio-spatial understanding of urban restructuring.

Other authors have suggested that the re-arrangements in the organisation of capitalist organisations, such as those contributing to the emergence of post-Fordism, are unconnected to posited superordinate global processes. Elliot (Elliott 1999), for example, suggested that manufacturing decline is an important but subordinate factor in explaining changing labour market patterns. He suggests that shifts in the organisation of the local manufacturing sector, rather than its size, particularly the proliferation of small firms – post-Fordism – and diversification of industrial organisation is the key aspect of this spatial re-structuring process.

2.3. Australian labour market change

Like other global cities Australia's urban centres have also been transformed by the shifts in global economic arrangements during the past few decades. Australian scholars began turning their attention to the local urban effects of these shifts during the early-1990s. This section discusses the literature on the Australian impacts of global trends in urban restructuring, with particular focus on the way that labour markets, and the spatial location of employment have been similarly affected.

In their survey of Australia's links with global restructuring processes, Fagan and Webber (Fagan and Webber 1999) note four key economic changes that occurred during the 1980s, and which have mark the increasing links between the local Australian economy and the broader global economy. These changes were:

1. Rapid movement of financial capital between economic sectors, leading to a surge in service industries and a decline in manufacturing.
2. Rapid flows of investment in and out of regions and internationally.
3. Employers discovering new processes of production and organisation of work within plants.
4. Pressure on Federal governments to alter regulatory regimes and policies which encouraged manufacturing production.

These economic changes were accompanied by a change in the proportion of exports received by destination countries, particularly in the Pacific Rim. Agricultural exports declined, in favour of mining and manufacturing. However, despite this trend, only a very small proportion of inward capital flow during this period was directed to manufacturing, and while manufacturing exports increased, the proportional contribution of manufacturing to Australian economic output declined. Manufacturing constituted 25.1 per cent of gross domestic product (GDP) in 1970, but slipped to 19 per cent in 1985 and was only 15.8 per cent in 1995 (Fagan and Webber 1999: 83). This decline was also reflected in the proportion of workers employed in manufacturing, which constituted 24.2 per cent in 1971 but only 13.2 per cent in 1996 (Fagan and Webber 1999: 82). Describing the impact of such changes on Sydney's western suburbs from the early-1980s, Fagan (Fagan 1997) suggests that declining manufacturing employment in this region was due to factors such as technological change and rationalisation, intra-urban relocation of firms, ongoing reductions to import tariffs, changing corporate strategies within the Asia Pacific region, and the high level of dependence on the food industry. Nonetheless, Fagan suggests, while there have been net losses in manufacturing employment, the overall figures mask more complex shifts in the region's industrial organisation. For example, small and medium

size enterprises increased in number and importance, as flexible work arrangements enabled growth in part-time and casual employment.

While Australia's manufacturing sector declined from the 1970s onwards, the services sector of the economy expanded. The services sector comprised 23.8 per cent of employment in 1971, a proportion which grew to 40.4 per cent in 1996 (Fagan and Webber 1999: 82). This shift would appear to reflect the global trends observed by Sassen regarding the increasing importance of in-personal and symbolic analytic services.

The shifts in Australia's economic structure and in the way labour markets have operated within the Australian context have produced marked rearrangements to the spatial organisation and location of economic activity, particularly employment. Like the core areas of other global cities, the central business and activity districts of Australia's large cities have also undergone a resurgence in terms of their importance as the location of particular types of employment (Brain 1999). Again, Fagan's (Fagan 1997) work demonstrates the particular difficulties faced by suburbs facing manufacturing employment decline: the reduction in manufacturing employment in Sydney's west has not been balanced by a concomitant increase in service and 'informational' or 'producer services' sector employment. Western Sydney is under-represented in both service and informational employment, when compared to the city's eastern suburbs, which contain the central business district.

Searle (1998) and Freestone and Murphy (1998) have both investigated globally effected urban spatial employment change in Sydney. Searle explains that planning for global activity has been focussed on redevelopment of existing inner urban brownfields sites. However, Searle notes, suburban and greenfields sites have been increasingly successful in attracting, for example, regional business headquarters, particularly to areas such as Huntingwood in Sydney's west (1998). Freestone and Murphy (1998) assess the extent of the suburbanisation of Sydney's metropolitan employment, specifically in terms of the importance of suburban employment centres. They conclude that despite some similarities with US cities, Sydney and other Australian cities have not experienced the same degree of suburbanisation of higher-order employment, as that which has occurred in many US cities.

Brain's (1999) work agrees with the global city hypothesis regarding metropolitan restructuring as proposed by Sassen (Sassen 1991; Sassen 1994). Brain suggests that globalisation has created urban 'push/pull' forces of centralisation and decentralisation, which attract financial and producer services into the city core, and push manufacturing and similar industries to cheaper outer suburban land. Meanwhile, the outer suburban regions also 'pull' manufacturing, industrial and distribution/logistics operations away from their traditional inner city locations, in a manner comparable, but not as marked as the US experience (see Freestone and Murphy (1998) above).

Echoing the earlier categorisation of 'symbolic analytical' work provided by Reich (1991), Brain identifies a set of 24 '21st century' occupational types ('C21s') as exemplifying globally linked financial and producer services. These include business analysts, computing professionals, legal professionals, finance manager, media producers, IT managers, and policy and planning managers, and are claimed by Brain to be associated with superior real income gains compared to occupational groups falling outside this category. It is this differential in income growth, and the apparent economic prosperity which accompanies C21 work, that has driven the interest in informational or C21 employment from researchers and policy analysts.

2.4. Melbourne labour market shifts

A number of authors (Brain 1999; O'Connor and Healy 2002) have examined labour market shifts in Melbourne in terms of the quality of employment and its spatial location within the metropolitan area. Brain's research used 1996 Census data to establish the sectoral composition of employment in Melbourne's central business district. Central Melbourne is identified by Brain as an area which exhibits a particular concentration of C21 employment, although this concentration is less extensive than that of Sydney. By comparison, workers in outer suburban areas have 'medium' to 'very low' concentrations of such employment, under Brain's calculations. Brain (Brain 1999) contends that the longer term implications of this inner urban C21 concentration will be for C21 workers to 'push' lower income households away from the inner city and towards economically more marginal outer metropolitan areas. The implications of this shift are that, in the future, lower income households are more likely to be located in economically marginal areas than in the past.

Brain's work has been largely supported by O'Connor and Healy's (O'Connor and Healy 2002) research on the spatial aspects of Melbourne's housing and labour markets. This support is not surprising given that 1996 Census data provided the basis for both studies. O'Connor and Healy examined the linkages between workers' employment and residential locations within Melbourne, focussing specifically on symbolic-analytical or 'new economy' work when compared to routine production or in-person services. They found that in Melbourne's central suburban region the 'new economy' group of workers had the highest level of self-containment and the highest location quotient. Self-containment refers to the proportion of residents of an area who also work within that area, while the employment location quotient indicates the proportional prevalence of a particular type of work within an area relative to the aggregate proportion of that type of employment.

By comparison, O'Connor and Healy noted that outer-suburban areas were overly represented in terms of 'old economy' or 'routine production' work. For example, Melbourne's outer northern region had a location quotient of approximately 1.8 for old economy jobs and a location quotient of approximately 0.35 for new economy jobs. By comparison, Melbourne's core had location quotients of approximately 0.6 and 1.5 for old economy and new economy employment respectively (O'Connor and Healy 2002). In the central Melbourne area approximately 85 per cent of new economy workers also lived in the area, whereas the figure for old economy workers was approximately 55 per cent (O'Connor and Healy 2002). In the outer north, new economy self-containment was less than 14 per cent, compared to just over 30 per cent for old economy employment.

The implications of these findings are that the inner suburbs of Melbourne are becoming increasingly the sites of high-wage employment, which is co-located with highly priced housing. The result is that the increased demand for inner city housing by high-wage workers is reducing the supply of low-cost housing, with the effect that apart from public housing, low-income households are becoming progressively less able to afford housing in these central locations (O'Connor and Healy 2002).

That low-income households are becoming increasingly spatially excluded from the job-rich core is of much concern, particularly given that low-income households typically exhibit greater employment insecurity. Exclusion from an area of high employment opportunity can therefore potentially reduce such opportunities for low-income households. This issue of spatial mismatch is discussed in a later Section in this Positioning Paper. However, the importance of the housing market in determining socio-spatial outcomes, and the extent to which these have impacted upon socio-economic opportunity in Australian cities in recent years, also deserves significant attention, and forms the basis for discussion in the following Section.

3. RESTRUCTURING URBAN HOUSING MARKETS

3.1. Restructuring Global Housing Markets

As urban labour markets have been dramatically restructured both in Australian and international cities during the past two decades, so too have urban housing markets. Housing markets to a great extent are affected in a more complex way than labour markets. While labour is a direct component of capitalist production, housing is not essential to the capitalist labour process but is a commodity that has an essential function in assisting the reproduction of the labour force. Housing (and the land upon which it is situated) operates both as a consumption commodity but also as a form of fixed capital.

Housing is therefore subject to a more complex set of forces than either simple commodities, or more flexible and mobile forms of capital. Obtaining housing in a market context is largely left to individuals and households, such that income and wealth levels become determining factors in housing consumption decisions. Hence, there is a strong interaction between labour markets and housing consumption patterns. Households with a strong labour market position are likely to have greater housing opportunities than those with weaker labour market status. These differential socio-economic effects due to labour market position are then translated into differential socio-spatial patterns through housing markets, typically based on household income and wealth, but in some cases, such as the US, this differentiation is also based on ethnic differences.

This Section explores the way in which the socio-economic patterns of urban housing markets have been transformed spatially, during recent decades. The discussion begins by considering how the restructuring of housing markets has occurred in urban centres around the world. Consideration is also given to the issues of socio-economic differentiation through housing markets and the extent to which such effects are related to the broader restructuring of metropolitan labour markets and to the organisation of capitalist production at the metropolitan scale. The discussion then examines these processes in the Australian context.

Given the extensive degree to which urban scholars have been concerned with the way in which urban labour markets have been transformed by processes of global capitalist restructuring, it is somewhat surprising that there has been relatively little explicit consideration given to the way in which such processes have subsequently affected urban housing markets. The greater proportion of literature dealing with urban housing in a global context has been concerned with socio-spatial segregation, polarisation and exclusion. Before dealing with this important component to debates regarding urban housing in a global context, it is worthwhile examining literature that looks at more general housing issues.

In an explicit attempt to connect issues arising from globalisation with urban housing, Bartelt (Bartelt 1997) examined the shifts which have occurred in global financial regulation to the extent that these have affected the arrangements governing mortgage lending in US cities. One of Bartelt's findings was that US housing investment declined during the period 1965-1995, as a proportion of GDP, despite residential investment dollars rising by a factor of ten during the period. In the case of the US city of Philadelphia, which Bartelt examined as part of his study, he found that the globalisation of capital had altered the urban processes of job development and residential capital formation in favour of the suburbs over the older urban core. Central Philadelphia, like many other US cities thus faced the problem of declining central city housing values and subsequent out-migration to suburban locations by the 'economically viable' (p.6) resulting in housing abandonment and concentration of

poverty in the inner city. The mobility of both global capital and regional labour pools had also made housing markets more volatile, and highlighted the inability of local political structures to cope with housing issues in a globally driven economic environment.

In the European context, MacLennan and Pryce (1996) examined the 'global competition' aspects of housing policies and the impacts of a more flexible economic order on housing markets. MacLennan and Pryce (1996) note from the outset, that changes in income have more effect on housing prices than vice versa, but they caution that the economic channels and markets through which monetary expansion and incomes flow within economies will have marked differential impacts on output, employment, prices and the pattern of economic development. Changing wage and income patterns have resulted in higher incomes for the richest quintile of households, while those in the lowest quintile have become relatively poorer. Differences in labour mobility resulted in the concentration of poorer households in the cheaper council housing sector, while inadequate design quality and declining maintenance standards on council estates compounded the labour market shifts (MacLennan and Pryce 1996). Households who succeeded in the labour market have been able to enter home-ownership, and this tenure form expanded at a high rate, conferring socio-economic benefits during economic downturns to many households able to access this sector. MacLennan and Pryce (1996) conclude their discussion by remarking that the global labour market processes need to be appreciated when designing housing policies, to ensure that any measures undertaken do not simply focus on housing outcomes but on the links between housing and labour markets in a broader global urban context.

3.2. Divided Labour and Housing Markets

The urban processes described by Bartelt and MacLennan and Pryce above - which are viewed as exacerbating socio-economic divisions in globalised urban regions - have been described as occurring in other jurisdictions, by a number of authors, such as, for example, Fainstein et al (Fainstein *et al.* 1992), Van Kempen and Marcuse (1997), and Hamnett (1994). During the latter part of the 1990s much of this 'divided cities' (Fainstein et al. 1992) literature came to focus increasingly on the ways in which socio-economic patterns were polarising, and the ways in which an increasing number of individuals and households in major metropolitan centres were being excluded socially from full participation in society (Hamnett 1994; Abramson *et al.* 1995; Andersen 1998; Hamnett and Cross 1998; Wacquant 1999; Wessel 2000; Walks 2001).

Much of this work on social exclusion, and social polarisation in particular, refers back to Sassen's global city hypothesis, and centres on the socio-spatial divisions opening up within major metropolitan areas since the 1980s. Van Kempen and Marcuse (1997, p.7), for example described these dividing processes as being a new form of urban pattern:

Although many low-skilled people have jobs in services that can be seen as ancillary to highly paid jobs, and in certain areas the number of such jobs is growing, it is also clear that a pool of 'unneeded' labour is increasingly being created in many cities, posing problems of social peace and social justice. Segregation and concentration of 'unneeded' people in specific urban areas lead to ghetto-like structures that are new.

The work of Madden (1996; 2003) and Abramson et al (1995) demonstrates that during the period from the late-1960s to the early-1990s the largest US cities became increasingly spatially segregated. Both Madden and Abramson et al note the importance of the departure of the 'non-poor' from inner city areas during the period under investigation. The effect of this process was that the poor were increasingly concentrated in distressed areas which conferred negative 'neighbourhood' effects on such households and individuals (Abramson et al. 1995, p. 67-68). Abramson et al (Abramson et al. 1995) also note the importance of racial segregation as a compounding factor in the socio-spatial segregation in US cities, a phenomenon which is not generally replicated in Australian cities, despite the suggestions of some researchers (Birrell *et al.* 1999) that such a pattern is developing.

Sassen's (1991; Sassen 1994) and Fainstein et al's (1992) 'divided global cities' hypothesis was developed using US cities as the major empirical sources, with other urban centres in market liberal societies such as the UK as further examples. Musterd and Ostendorf (Musterd and Ostendorf 1998) cite Massey and Denton (Massey and Denton 1993) as claiming that residential segregation is the principal feature of American society that is responsible for generating an underclass. This may be the case in a largely market liberal society such as the US. But a number of authors have pointed out that in countries which lend greater emphasis to the welfare state and redistributive welfare policies, the outcomes from the urbanisation of global restructuring have not been as marked. Musterd and Ostendorf (Musterd and Ostendorf 1998), for example, suggest that despite long standing ethnic and cultural differences among the populations of European cities, the type of extreme segregation which characterises the US has not developed. In the case of Berlin, for example, Kemper (1998) has suggested that since re-unification of the east and west halves of the city, the segregation of foreign ethnic groups has in fact declined. In Copenhagen, Andersen (1998) found that the classical segregation model remains valid, but that inertia within the urban landscape and social relations left the historical socio-spatial structure intact, while at the same time increasing the number of dimensions by which social differentiation occurs.

While the majority of authors who have dealt with housing market restructuring have addressed issues relating to socio-spatial exclusion, there have been some attempts to understand tenurial issues in housing market change. Lyons (Lyons 2003), for example, in a study of seven UK cities, investigated the longitudinal effects of globalisation on home-ownership. Lyons (Lyons 2003) found that in London, the sole global city in her study, the rate at which low labour market status households were becoming increasingly under represented in high housing market status areas was slower than for 'second-order' cities such as Manchester or Birmingham. Nonetheless, Lyons (Lyons 2003) noted that two processes operated simultaneously in the seven cities under investigation: reduced socio-spatial segregation of better-off homeowners within 'better-status' areas but increased segregation of poorer homeowners in 'worst-status' areas.

By comparison to Lyons, Ford and Wilcox (Ford and Wilcox 1998) examined the 'sustainability' of home-ownership in the United Kingdom, in terms of ongoing labour market change. Ford and Wilcox note that labour market instability has increased since the early-1970s, a shift which is marked by most new jobs in the UK, as elsewhere (Ford and Wilcox 1998), being short term and of limited tenure, such as casual and part-time work. The result has been to make unemployment more common among mortgagees, which in turn has led to an increasing potential for financial difficulties among this group. Ford and Wilcox report that three-fifths of mortgage defaulters attributed their financial difficulties to labour market changes, due to either unemployment or reduced wages under more flexible employment conditions (Ford and Wilcox 1998). While they note some moderation of mortgagors' financial

stress via private mortgage insurance, Ford and Wilcox conclude that given the likely degree of future labour market change, the existing levels of home-ownership in the UK are unsustainable.

These findings suggest that the kinds of shifts in labour markets which were noted in Section 2, combined with the shifts that are occurring in housing markets, including housing finance markets, are threatening home-ownership in two ways. The first is by making home-ownership increasingly socio-spatially differentiated in terms of household wealth, with poorer households increasingly located in low status areas, while, secondly, labour market shifts have made home ownership a more marginal form of tenure for those households who have experienced greater labour market instability due to labour market restructuring processes operating at the global scale. These effects are of concern on spatial equity grounds, and raise doubts about the future socio-spatial and socio-tenorial dimensions of urban social sustainability. However, such concerns are only just emerging in the Australian context, where the research has been less certain regarding socio-spatial and socio-tenorial linkages between housing and labour markets.

3.3. Restructuring Australian Housing Markets

Since the late-1980s and early-1990s, Australian authors have been documenting and analysing socio-spatial change in Australian cities, particularly in terms of patterns of social polarisation and social exclusion (Murphy and Watson 1994; McDonald 1995; McDonald and Matches 1995; Murphy and Watson 1995; Badcock 1997; Baum 1997; Winter and Stone 1998; Baum et al. 1999; Wulff and Reynolds 2000; Beer and Forster 2001; Gleeson and Randolph 2001; Stimson 2001; Yates 2002). This section surveys this local literature, in terms of the extent to which Australian urban housing markets have been affected by global economic changes, and the social and spatial outcomes (including tenure effects) arising from these shifts.

One of the earlier contributions to Australian discussion of issues of socio-spatial segregation as mediated through residential housing markets was that of Murphy and Watson (1994; 1995). Murphy and Watson's (1994) study examined how globalisation was affecting socio-spatial patterns in Australian cities. The authors noted that changing economic arrangements were altering the sectoral composition of the workforce, such as the declining manufacturing sector and the increasing service sector, as well as rising (albeit spatially uneven) rates of unemployment. Importantly, housing affordability, Murphy and Watson reported, had decreased, due to a 'demand-push' (p.581) arising from deregulated mortgage finance markets. Home-ownership was in decline, Murphy and Watson claimed, particularly in the large metropolitan areas, such as Sydney.

Interestingly, Murphy and Watson (Murphy and Watson 1994) also noted that Australian socio-spatial segregation was exhibiting different patterns to UK and US cities. In the Australian context the central city appeared in 1994 to have been re-valued in urban restructuring processes, while the outer suburbs were areas of least opportunity in terms of employment and access to services. Of interest to the present research is Murphy and Watson's observation that Australia's outer suburban residents faced long commutes to access employment, when compared to those in the inner city, or those living in the outer suburbs of US cities.

During the period of the mid- to late-1990s the concerns about socio-spatial inequality and segregation and the relationship between these issues and housing markets increased in the research literature on Australian cities. This is reflected in the work of McDonald (1995) and McDonald and Matches (1995). McDonald found that the most socio-economically disadvantaged areas were the old industrial districts, such as the west, north and south-east of Melbourne (McDonald 1995). These residential areas were also noted as experiencing higher unemployment, housing and income

disadvantage, lower labour force participation, higher rates of early retirement for men and women, and high youth unemployment, relative to the metropolitan remainder, all indicators of disadvantage (McDonald and Matches 1995).

Subsequent work by Baum et al (1999) on the socio-economic differentiation of Australian cities and regions found that nine distinct social groupings could be observed in Census data between 1986 and 1996. These groups ranged from 'Global economy/high opportunity' clusters in affluent Melbourne and Sydney areas, to 'extremely vulnerable old manufacturing economy' clusters at the other end of the socio-spatial spectrum (Baum et al. 1999). Baum et al's research demonstrated that Australian cities are significantly divided along socio-spatial lines, with distinct areas demonstrably experiencing high levels of relative social disadvantage when compared to other localities within the same metropolitan area. While Baum et al's work was a useful depiction of the socio-residential patterns in Australia's cities, it didn't address to any significant degree the dynamics of metropolitan labour markets, nor the interaction between labour markets and housing markets. Subsequent work by other authors has, however, attempted to address such issues.

Stimson's (2001) research examined increasing socio-spatial divisions in Australian cities, including housing tenure and affordability issues, as well as some of the political implications of these changes. Stimson's analysis was conceptualised in terms of the financial and labour market understanding of globalisation which has typified the Australian understanding of these processes, albeit with a focus on a 'divided society' (see also O'Connor *et al.* 2001; Stimson 2001) rather than the globalisation literature's 'divided city' (e.g. Fainstein et al. 1992). Like that of Murphy and Watson (Murphy and Watson 1994; Murphy and Watson 1995) and Baum et al (Baum et al. 1999), Stimson's analysis noted increasing spatial disparities in income and employment in Australia's large cities. In Brisbane, for example, the percentage of high income households in inner areas increased during 1986-1996, while the proportion of low income households declined (Stimson 2001). Stimson noted stark metropolitan and regional differences in house price inflation, which were increasing regional inequalities, as well as changing patterns of housing tenure, such that the proportion of households who are outright owners and renters increased (suggesting potential wealth polarisation) while purchasers declined. Stimson advocated the need for a refocussing of social concern on the drivers and outcomes of these globalised economic and social processes (Stimson 2001).

While the work of Murphy and Watson, McDonald, Baum et al and Stimson has covered general issues of social polarisation and socio-spatial segregation as a general pattern emerging from the operation of housing markets, other Australian researchers have more closely examined how these processes have been specifically mediated through housing markets. Wulff and Evans' (1999) research for example, examined the spatial segregation of low-income households throughout the Melbourne metropolitan area. To do this they mapped the location of households receiving the Commonwealth government's Rent Assistance (CRA) payment, or renting public housing. CRA provides cash assistance with housing costs to eligible households who are in receipt of commonwealth income support, such as the Newstart unemployment allowance. Wulff and Evans (Wulff and Evans 1999) found that the operation of the housing market appeared to be entrenching the effects of socio-spatial segregation in Melbourne, with CRA recipient households concentrated either in inner-city suburbs replete with public-housing, or in declining industrial outer-suburban areas such as Sunshine and Dandenong. This research would appear to confirm the findings of Baum et al (Baum et al. 1999) regarding the spatial location of socio-economically vulnerable communities in Melbourne.

In a subsequent study Wulff and Reynolds (Wulff and Reynolds 2000) examined the effects of housing market processes on social polarisation within Melbourne's metropolitan areas. They found that there appeared to be a connection between the degree of social polarisation within a region, and the housing market. The causality within this relationship however remains unclear, Wulff and Reynolds noted, such that it was uncertain whether a decline in house prices attracts lower income households, or whether increased numbers of lower-income households within a region depresses housing prices.

Wulff and Reynolds' concerns appears to have been answered in part by Birrell et al (Birrell et al. 1999), who investigated the causes of increased concentration of poorer residents within metropolitan Melbourne. Birrell et al (Birrell et al. 1999) found that in areas where poverty was concentrated (such as Dandenong, Sunshine and Broadmeadows), this concentration effect was in part the result of out-migration to other residential areas by the least disadvantaged households. The result has been that the most disadvantaged segments of the population are being left behind in less desirable residential areas of Melbourne. As Birrell et al conclude, "winners and losers in the economic race are sorting themselves out geographically through the agency of the housing market" (1999: 62). A further dimension of Birrell et al's research was the consideration of ethnic dimensions of poverty concentration. Birrell et al found that out migrants from the more disadvantaged areas tended to be from an English-speaking background, while those who moved in tended to be from a non English-speaking background (1999). While this ethnic effect is not of significant relevance to the Australian context, some similarity to the US situation (see Section 3) is worth noting.

The obverse of the Birrell et al research appears in the study undertaken by Dodson and Berry (2003) which examined the creation of new residential estates on Melbourne's outer fringe. Dodson and Berry found because of concerns with problems of locational disadvantage, which were prominent in the late-1980s and early-1990s, changes to the standards for new residential estates, in terms of urban design and community services, were made. The result has been that during the late-1990s the most recent fringe estates have been developed in accordance with these high standards, but the result has been that they are now largely only affordable to those on medium to high incomes. Thus, these new estates, such as Caroline Springs in Melbourne's west, have become enclaves of socio-economic advantage. By comparison, the older less advantaged 'middle-outer suburbs' such as Sunshine and St Albans are passed over by new investment, and remain concentrations of socio-economic disadvantage. Such patterns have implications for state and federal government policies which rely on private sector development and market processes to alleviate disadvantage (Dodson and Berry 2003).

A further recent investigation of the Melbourne housing context was undertaken by Burke and Hayward (Burke and Hayward 2000) as part of the background research for the Victorian government's *Melbourne 2030: Metropolitan Strategy* strategic planning process. Burke and Hayward noted a number of aspects of Melbourne's housing market that are relevant to the present discussion. The first feature is that the operation of the private rental market is restructuring Melbourne into two socio-economically distinct regions: the affluent inner area and the less affluent outer areas. The inner-eastern area of Melbourne, Burke and Hayward suggest, was in 2000 'extremely non-affordable' (p.54) with rental costs for a person on a Centrelink benefit requiring 60 per cent of their income for a (average) flat and 84 per cent to rent a (average) house.

Likewise, Burke and Hayward warned about the increasing costs of home-ownership in Melbourne. They note that the ratio of median house price to average income had been increasing in Melbourne since 1996, and that similar to the patterns for rental housing, home-ownership had become less affordable for those on middle or low

incomes in the inner and middle suburbs of Melbourne. In particular, Burke and Hayward note that it has been the best located suburbs in terms of access to social and economic resources where house affordability decline for those on modest incomes has been greatest. The authors also observe that there is a growing socio-economic group who constitute a 'sandwich class' (p.72) who are ineligible for public housing but unable to access suitable private market housing. As Burke and Hayward demonstrate, this sandwiching effect has a marked spatial dimension. This spatial dimension is particularly important in light of the present research, as it relates to the questions posed by the present project, in terms of whether lower income households are able to afford locations where they have good access to employment and services. The literature on this dimension of housing affordability and location will be discussed in Sections four and five.

The issue of changing socio-economic structures of home ownership was also addressed in research conducted in the late-1990s by Winter and Stone (1998). Winter and Stone examined the interrelationship of housing and labour markets in Australia. The authors used the notion of a 'tenure hierarchy', which ranged from high status 'outright home ownership' at the top of the hierarchy, through owner-purchasing, private rental, and finally public housing at the lowest end of possible tenures. Winter and Stone then investigated the extent to which households were being concentrated in particular tenures on the basis of their income status, to assess whether a 'socio-tenurial polarisation' effect was occurring in Australian housing markets. Polarisation implies the concentration of high-income households in the higher status tenures and lower-income households in the lower status tenures. In fact, Winter and Stone found that rather than socio-tenurial polarisation occurring, a 'marginalisation' effect was taking place, such that lower-income households were increasingly situated in the lower status tenures, but that there was no corresponding concentration of high or middle income groups within the higher status tenures. Winter and Stone's conclusions suggest that an affordability barrier has developed which is excluding less skilled and low-wage workers as well as other socio-economically vulnerable groups from access to higher status housing tenures. This conclusion appears to be supported by Burke and Hayward's (2000) findings regarding the 'sandwich' class.

A final set of research findings which is relevant to the present project are those provided by Yates (Yates 2002). Yates examined the spatial and socio-economic and spatial implications of recent declines in the rate of home-purchase among younger households. Yates found that there was evidence to suggest spatial polarisation of income was occurring in Australia's large metropolitan areas, such as Sydney and Melbourne, and that this effect was more marked than any shifts towards tenure polarisation. Inner Sydney, Yates found, had become largely exclusively an area of high income households irrespective of tenure (Yates 2002). In middle and outer Sydney, however, patterns of tenure polarisation could be observed. Household incomes of home owners in these areas are both higher and increased to a greater extent than household incomes of renters in these areas (Yates 2002).

3.4. Conclusions: Housing Market Restructuring

The research described above has demonstrated that the effects on labour markets both globally and in Australia have been accompanied by ongoing rearrangements to respective housing markets. As labour market outcomes have become marked by increasing polarisation of both remuneration and spatial location (at the metropolitan scale) so too have housing markets displayed spatial polarisation based on socio-economic status, and there has also been a tenurial effect operating.

Lower income households are being pushed through the operation of the private housing market into locations which are less favoured by households generally. In the Australian context this has translated into a marked decline in housing access for low-income households in the inner areas of Australian cities, particularly in Sydney and Melbourne. Hence, households with limited labour market status are being excluded from these inner areas such that their locational choices are increasingly restricted to middle and (especially) outer suburban locations. The exception to this general pattern is that of the new high-status residential areas that are being developed on the outer fringe of Australia's metropolitan centres, such as Melbourne's Caroline Springs. These privately-developed master-planned communities appear to be attracting those existing home owning households who have achieved some degree of labour market success and are able to purchase the higher priced properties offered by these developers. This effect however seems to be bypassing the older declining residential areas, with some implications for the entrenchment and perpetuation of concentrated socio-economic disadvantage within those older areas.

There appears to be a strong interaction between labour markets and housing markets which is contributing to these exclusionary effects. Labour markets seem to be creating the income inequalities which are then translated into locational inequalities, which spatially are configured as the segregation of high-income and labour market status households from those who are of weaker labour market status. It is the locational dimension of this process which should be of concern to public policy makers. The locations to which lower labour market status households are driven by the operation of the housing market are potentially where there are fewer jobs and social and community services than the favoured central areas. Labour market opportunities for those in outer locations, particularly the declining industrial areas on or near the fringe of the metropolitan areas are thus likely to be more constrained than are the opportunities for centrally located households. Given that it is those households at the lower end of the labour market who are most vulnerable to adverse economic and labour market shifts, it is this group who are most likely to draw on direct government assistance, whether for income or for housing (or both). Governments therefore have an interest in the locational distribution of opportunities such that such opportunities are more available to those whose situation could best be improved through taking up such opportunities. It is this issue of the locational dimension of labour market and housing geography which is addressed by the present research project and which is discussed in greater detail in the following Section.

4. EXCLUSIONARY LABOUR AND HOUSING MARKET INTERACTIONS: SPATIAL MISMATCH

4.1. Spatial Mismatch: Introduction

That the labour market produces income inequalities which are then translated into spatial segregation on the basis of income by the housing market is not in and of itself a concern to researchers and policy makers. However, when the locational allocation dynamics of the private housing market result in lower labour market status households being separated into lower status housing areas, there is the potential for the residential concentration of such households. Problems potentially emerge from this concentration effect, given that households with weaker labour market status are more vulnerable to the effects of employment decline, such as unemployment. In such situations, the concentration of socio-economically vulnerable households in particular residential areas can be a problem, if the residential location confers relatively fewer advantages to such households when compared to other locations. Such advantages may include access to employment opportunities and social or community services such as educational facilities or health care.

This locational disadvantage can therefore compound the effects of weak labour market status, leading, for example, to diminished opportunities to obtain employment for members of households in that situation. The employment dimension of locational disadvantage in this situation relates to the geographic differential between locations where housing is more accessible or affordable for those on low incomes, and locations where employment opportunity is greatest. This differential is referred to in the academic and policy literature as 'spatial mismatch'.

4.2. Spatial Mismatch: Theory and evidence

Spatial mismatch has been the subject of a great deal of empirical and theoretical debate since the first description of the empirical dimensions of the phenomenon by Kain (Hhlanfeldt and Sjoquist 1998). Typically, 'spatial mismatch' is referred to as an 'hypothesis', given the somewhat contested definition and observations among the scholarly literature. The remainder of this section reviews the 'spatial mismatch' (*the hypothesis*) literature and considers the relevance of this material to the Australian context and the relevance and need for the current investigation on the extent of this phenomenon in Melbourne.

Kain's (1968) investigation of the spatial mismatch hypothesis was the first major research statement which highlighted the effects of the geographic differential between where particular social groups were concentrated in the housing market and the effects this had on their relative employment opportunities. Using socio-economic data from US cities, Kain argued that residential segregation along racial lines had resulted in low socio-economic status – particularly ethnically 'non-white' - households being located within inner-urban areas, while employment opportunities were predominantly locating in suburban locations adjacent to middle-class white residential areas. The phenomenon of the suburbanisation of employment has been ongoing in US cities since the 1950s, with the emergence of decentralised road and automobile oriented suburban residential development and industrial and commercial activity (Garreau 1991; Freestone and Murphy 1998).

Housing markets in the United States are notoriously segregated along racial lines (Massey and Denton 1993), albeit with a significant class component. As a result of this residential geography, the spatial mismatch hypothesis contends, inner city African-American households experience both diminished access to employment opportunity as well as long commutes for those who were able to travel to work in the

suburbs. This diminished access to employment opportunity is viewed as a factor which perpetuates the lower socio-economic status of inner city African-American communities (Kain 1968).

Kain's hypothesis has been hotly debated by urban researchers (Holzer 1991; Ihlandfeldt and Sjoquist 1998) since the publication of the original article which set out his argument. A comprehensive discussion of the literature is not necessary here, given that much deals with the ethnic dimensions of spatial mismatch (i.e. the socio-economic conditions of African-Americans) rather than the housing-employment dimensions, particularly affordability. What is of most relevance to the present discussion are studies where explicit links between housing affordability and residential location are developed. Of course it could be argued that ethnic residential segregation in the US has a strong affordability dimension, given the way that ethnic discrimination interacts with the class dimensions of employment and housing markets, and assuming that African-Americans in higher income brackets have greater capacity to overcome segregationary processes.

Ihlandfeldt and Sjoquist's (1998) review of the spatial mismatch literature surveyed a significant body of this research, particularly that which had been conducted after 1990. Ihlandfeldt and Sjoquist concluded that while there had been some strong early criticisms of the hypothesis, the majority (21 studies out of 28) of the research papers on spatial mismatch published since 1990 supported the hypothesis, with some even suggesting that the earlier research underestimated the extent to which these types of geographic factors impacted on the ability of inner-city minority groups to access employment opportunities in the suburbs.

An alternative view has been put forward by authors such as Moore and Laramore (1990). They suggest that spatial mismatch is the result of changes in the types of jobs present in areas where poorer residents live, rather than the departure of employment to other regions within the metropolitan area. Hence, due to the rise in global informational 'post-fordist' activity, the jobs located in the inner city now require a different set of skills to those which were present during the 'fordist' era. Inner-urban residents, Moore and Laramore (1990) suggest, do not possess the requisite skills to avail themselves of the opportunities presented by such employment. In this characterisation, spatial mismatch is understood as a mismatch of demand and supply in the transition to a 'higher order' employment market, which is combined with the ongoing effects of the historic patterns of racial residential segregation. Moore and Laramore's suggestion contradicts the proposition that there is a geographical dimension to the mismatch between the location of workers with modest skill levels and the location of suitable employment.

A further argument which focuses on some of the transport dimensions of spatial mismatch has been put forward by Taylor and Ong (Taylor and Ong 1995) regarding automobile ownership. Ong and Taylor have suggested that spatial mismatch is not in itself a problem but that an 'automobile' mismatch exists, such that low-income inner urban households have lower rates of automobile ownership than suburban households, and as a result are unable to access suburban employment opportunities to the same degree. By comparison, Sanchez (Sanchez 1999) modelling for Portland and Atlanta in the US, for example, suggests that proximity to public transport is a positive factor in determining labour participation.

Understandings of the patterns of racial residential segregation, which have been a highly visible factor in US urban areas, are of limited applicability to the Australian context. Australian cities (as noted earlier) generally lack strong socio-ethnic segregation, and rather than being areas of low socio-economic status, Australian cities' inner-urban areas typically contain high levels of employment and socio-economic opportunity. However the socio-economic dimensions of the spatial

mismatch hypothesis remain applicable in Australia given the context of the ongoing restructuring of urban housing and labour markets. If Australian housing markets segregate households on the basis of socio-economic status, and spatial patterns of employment growth do not favour areas where such households are concentrated, then comparable socio-economic opportunity problems to those experienced by US cities are likely to arise, albeit without such a strong ethno-racial dimension.

4.3. Spatial Mismatch in Melbourne

The review of spatial labour market and housing market literatures, within the context of ongoing global economic restructuring identified in Sections 2 and 3, suggest that there is an imperative to understand how these two major features of socio-spatial change are affecting the opportunities of vulnerable and disadvantaged households across Australian metropolitan regions. The purpose of the present research is to investigate the spatial concentration of labour market opportunity relative to the concentration of spatial socio-economic housing opportunity, in the Australian context, focussing on Melbourne to evaluate the extent of any geographic mismatch. A second component of the study will examine the role that transport systems play in overcoming any spatial mismatch outcomes that appear to be emerging.

The relevance of spatial mismatch research to Australia has not been significantly addressed. O'Connor's work over the years has examined journey-to-work patterns in Melbourne, but this hasn't specifically considered spatial mismatch as an empirical phenomenon or as a policy issue. Nor has there been systematic research conducted into the extent to which the public transport system is capable of connecting residential areas with areas of high employment opportunity. This research project therefore has the potential to fill an important gap within the empirical and policy literature on housing affordability and employment opportunity.

5. TRANSPORT AND SOCIAL EXCLUSION

5.1. Transport effects in social exclusion

A further issue that is related to spatial mismatch and the concentration of socio-economic disadvantage is that of access to transport services in urban areas. There is a strong overseas understanding of the importance of transport, particularly public transport in reducing the effects of social exclusionary housing markets on socio-economically disadvantaged households (Murray *et al.* 1998; Sanchez 1999; (DLTR) Department of Transport Local Government and Regions 2000; Gleeson and Randolph 2001; National Shelter 2001; Social Exclusion Unit 2002; Litman 2003). A UK government study (DLTR 2000) of the links between social exclusion and transport, for example, concluded that:

Households without a car, in a society in which household car ownership is the norm, are “socially excluded” within our definition of the term since they cannot fully participate i.e. behave as the vast majority behaves. Even non-possession of a driving licence can be a disadvantage in that, to take a specific example, it reduces job opportunities. (p.76)

This issue has only been given sporadic attention in Australian urban research and policy discussions. Morris (1981) for example, noted that one-sixth of Melbourne’s households did not own a car, such that:

The consequences of inadequate or inappropriate public transport are far from trivial. Car ownership is an expensive necessity for most low income families and imposes an undue strain on their budgets. (p.21)

Morris (1981) also noted that while Melbourne had very good public transport infrastructure, the geographic spread of these services, was focussed on the central and middle suburbs, rather than those areas on the fringe, where services were considered poor.

Similar concerns were echoed in the Australian Social Justice Research Program into Locational Disadvantage (Travers Morgan 1992) and by the National Housing Strategy (1992) in the early 1990s. The National Housing Strategy (1992) concluded that:

People without private transport, especially where public transport is not readily available are likely to be disadvantaged. In particular older people, young people and members of a car-owning household who cannot use the car, are more likely to have problems and/or longer travel times to services and jobs. (p.57)

More recently, the Victorian State Government has noted the poor spatial coverage of public transport services in Melbourne’s outer suburbs in *Melbourne 2030* (Department of Infrastructure 2002). There is a strong rhetorical focus within this strategy on redressing inequities in the spatial coverage of public transport services. However, the underlying basis for the strategy, which is supported by the most recent expenditure decisions, is that transport in Melbourne’s outer areas will remain focussed on roads, including freeways, and the private automobile, for the foreseeable future (Dodson 2003). For those households who are unable to drive, or who lack access to adequate public transport, their access to community services and employment opportunities are likely to remain constrained. While spatial mismatch is the primary focus of the

present paper, a second component of the project will focus more closely on the transport dimensions of social exclusion.

The transport and social exclusion link was also addressed recently by the housing advocacy group National Shelter (2001) which examined the connections between housing location and employment opportunity in Australia. While this report relied largely on secondary data, there was a strong conclusion that locational disadvantage continued to exist in Australian cities, and that this was accompanied by spatial mismatch between housing affordability and employment location. The report advocated a number of policy areas that needed to be considered, such as labour market training schemes targeted to disadvantaged locations, housing assistance regimes and taxation arrangements relating to home-ownership. Oddly however, given the strong focus on geographic mobility relating to housing and employment, the spatial mismatch data didn't to any significant extent consider the role of transport services in overcoming the geographic problems which the report identified. Such a common omission in locational disadvantage research serves to justify the contention within this report, that transport services are an important dimension of the affordable housing-employment access link.

5.2. Transport related disadvantage in Melbourne

One of the best recent examples of empirical research on transport exclusion in Australia is Cheal's (Cheal 2003) consideration of 'transit-rich' and 'transit-poor' areas of Melbourne. Cheal mapped the areas of Melbourne where high quality public transport services are available, based on 'best-practice' international standards of public transport service. The criteria for an area to be 'transit rich' included minimum service interval times of 30 minutes, the capacity to travel in more than one direction (i.e. north-south and east-west), 5 am to midnight services and weekend services. Based on this standard, Cheal (Cheal 2003, p.32) found that 82.5 per cent of Melbourne's population lived outside of 'transit rich' areas. Cheal then compared the socio-economic characteristics of the populations in the transit-rich and transit-poor areas, and found that transit-poor households tended to be socio-economically worse off when compared to those in the transit-rich areas. Among Cheal's conclusions were the following observations (p.54):

Obviously, those living in transit poor Melbourne without cars are severely restricted in the times and destinations to which they can travel. This means that many people face a curtailment of their ability to participate in a range of activities that other people take for granted. Often they are reliant on the generosity of friends and family for simple and regular trips such as shopping. Where such generosity is not available they must either go without that trip or make the journey by taxi, both potentially costly options in their own ways.

While Cheal doesn't specifically consider the transport dimension of the relationship between housing affordability and employment opportunity the strong conclusions that Cheal's research offers suggests that this is an important issue that deserves much closer research and policy attention. The implication that those living outside 'transport rich' Melbourne are socio-economically worse off than those within this area, suggests that transport contributes a significant component to the existing levels of social disadvantage. Given what is known about the parts of Melbourne where housing is most affordable, as outlined above, these less advantaged locations are likely to be outside of the 'transport rich' areas.

The research identified above demonstrates that there is a significant issue to be understood regarding transport services and their contribution to the capacity of socio-economically disadvantaged households to meet their own needs, including accessing employment, within Melbourne. The recent evidence discussed above suggests that there is a major problem of transport disadvantage. This project anticipates shedding further light on the issue, and on the relevance of such issues to government's policies. The following Section discusses these policy issues in greater detail.

6. SPATIAL MISMATCH, SOCIAL EXCLUSION AND GOVERNMENT POLICIES

The discussions provided in the foregoing Sections examined the empirical and theoretical dimensions of spatial mismatch in terms of housing affordability and employment opportunity. This Section provides a brief exposition of the policy relevance of spatial mismatch research at both the Federal and State government levels in Australia. This discussion leads into the methodological considerations in Section 7.

6.1. Relevance to Federal Government policies

The main Federal policy to which spatial mismatch research is of relevance is income assistance for unemployed individuals and households. The Federal government expended \$4.8311 billion on the New Start Allowance (NSA) unemployment income assistance program in 2002/2003 across 521,677 recipients (Department of Family and Community Services 2003). While the number of NSA recipients has been declining in recent years due to positive economic conditions, an imperative remains at the Federal government level to improve the rate at which the unemployed are able to access employment. But, almost by definition, the unemployed are also on low incomes when compared to those who are employed. Unemployed individuals are likely to be those who are most vulnerable to the global shifts impacting on labour markets identified in Section 2; and the unemployed are likely to experience the concentrating effects of the housing market, a phenomenon which appears to have occurred in Melbourne, as previous studies described above have determined (Section 3). It remains uncertain whether these locations of concentrated unemployment, which are also areas where housing affordability is greatest are also areas where employment is sufficiently spatially concentrated to provide opportunities for those receiving NSA to move into employment.

Hence, there is a clear Federal government imperative to understand the relationship between housing affordability and employment opportunity and any spatial mismatch dimensions which might exist in this relationship. Such considerations are thus also of relevance to housing assistance policy, particularly Commonwealth Rent Assistance (CRA). At present rent assistance maximum payments are uniform across Australia, such that there is limited capacity to adjust CRA to account for variations in metropolitan rental prices. As a result households which seek to maximise the affordability of their housing are directed through the housing market to areas where housing is cheapest. It is no surprise therefore that, as outlined above, households receiving CRA tend to be concentrated in the metropolitan areas where house prices are relatively cheaper.

A final consideration is the Federal government's Auslink transport programme which commences in July 2004. This programme will amend the existing Roads of National Importance (RONI) programme, which funds major road projects, so that rail projects will also be eligible for Federal government funding. This means that there is potential for a greater quantum of funding to be available for urban passenger public transport projects. The Auslink programme may thus be able to contribute to the alleviation of transport related social exclusion in Melbourne. It should be noted that the Auslink programme is primarily focussed on large infrastructure projects, and is thus unlikely to be available for local projects such as improved bus services.

6.2. Relevance to State policies

The issue of spatial mismatch between localities with relatively better housing affordability and those with high employment opportunity is of relevance to State government policies in a number of ways. The first of these is the State government's control over land-use and transport planning. Through such strategies as the recently released *Melbourne 2030 Metropolitan Strategy* (DOI 2002) the state government is able to influence the location of employment and residential development as well as the priorities for future infrastructure investment. For example, Direction 8 specified in Melbourne 2030 proposes to "Plan urban development to make jobs and community services more accessible." as well as improving the public transport network. Melbourne 2030 also sets out a series of social justice objectives, such as Objective 6.2.2 "Give particular priority to social disadvantage in the outer suburbs..." (DOI 2002). The lack of adequate public transport services in outer areas, for example, has been identified by a number of commentators (Morris *et al.* 2002; PTUA 2002; Dodson 2003) as a key dimension of current planning and transport policy which is failing to meet the equity objectives set by Melbourne 2030. By understanding the relationship between areas of housing affordability and employment opportunity, the Victorian State government will thus be better informed about the necessary planning policies that are required to address current spatial inequities in the availability of employment and transport services.

Similarly, the Victorian State government should find this project of relevance in terms of housing policy. Housing affordability has become a key concern in urban policy, both at the State and Federal levels, as evidenced by the statements regarding housing affordability in *Melbourne 2030* (DOI 2002), and the establishment of the Federal Productivity Commission *Inquiry into First Home Ownership* (Productivity Commission 2003). Melbourne 2030 seeks to concentrate a substantial proportion of new residential development into a set of mixed-use 'activity centres' based around public transport nodes. These activity centres are also intended to contain a substantial proportion of affordable housing. Because they are mixed-use, such activity centres will provide ready access to local employment opportunities. However, the question of what will happen to existing suburban areas where a spatial mismatch between housing affordability and employment opportunity remains unanswered. Will these existing areas receive upgrades to public transport services to enable ready access to employment by unemployed residents? And would such upgrades be a quicker less expensive means of achieving housing-employment accessibility, given that activity centre consolidation will take some time?

Responses to such questions are likely to be provided by this research project into the spatial relationship between housing affordability and employment opportunity.

7. METHODOLOGY

The methodology undertaken in this research project will differ to some extent from research undertaken in previous spatial mismatch research. The majority of spatial mismatch research, particularly that which has been undertaken in the US has involved complex modelling of housing and employment interactions. Given budgetary constraints and the particular research questions posed by this project, it is not envisaged that there will be a substantial modelling component. Nor, as has been the case with research into social exclusion and locational disadvantage, as in the UK and Australia, will there be a strong survey or qualitative dimension to the research project. Instead, the methods used to respond to the research questions will primarily be based on Australian Bureau of Statistics Census and other data. The remainder of this Section sets out the specific treatment of this data per research question.

7.1. Research Questions

This project will address a set of 6 interrelated research questions focusing on the location of housing affordability and employment in Melbourne and associated transport and policy issues.

1. What are the spatial patterns of housing affordability, unemployment concentration and employment location in Melbourne?
2. What tenure effects are present in the spatial patterns of housing affordability and employment location?
3. Is there evidence for a spatial mismatch in Melbourne between the locations of affordable housing and the location of employment opportunity, and if so, how is this associated with housing tenure?
4. What transport modes are available in locations of higher unemployment, and conversely, in locations of employment concentration?
5. What transport modes are used by households in locations of higher unemployment or higher housing affordability, and conversely, in locations of employment concentration, and what financial burden do alternative transport modes imply for low-income households
6. How might Federal and State governments better respond to issues of locational disadvantage and affordability relative to employment opportunity, housing affordability and transport provision

7.1.1. *Research Question 1.*

The project will respond to research question 1 by using Census 2001 data to map the distribution of housing affordability, unemployment concentration and employment location in Melbourne. This mapping will be conducted at the Statistical Local Area (SLA) scale. ABS Census data on housing expenditure is categorised and is thus less flexible for analysis that would typically be desirable. However, combinations of categories for rental expenditure and mortgage costs can provide strong insight into the proportion of households within a given location who will be paying above a particular threshold. Accurate recent rental price data is not available, as the most reliable source, the Victorian Office of Housing Rental Report has not been published since June 2002. Were rental price data available then this could be used to calculate relative spatial rental affordability for a given income level, but it appears this will be unlikely. However, as good quality house price data is available, it is possible to calculate relative spatial mortgage affordability. Accordingly, these will be calculated using households of differing income levels (i.e. average 1 male/1 female income; average 1 male/0.5 female; 1 male). These spatial mortgage affordability calculations

will identify where households of particular income levels are able to afford home-ownership.

ABS Census data will be used to assess areas of high unemployment concentration. An assessment of the extent of concentration will be made through use of location quotients calculated for each SLA.

Employment concentration will be assessed using specially purchased ABS Working Population Profile tables for both the 1996 and 2001 Census. This will also enable the relative degree of employment growth per SLA to be determined and will provide insight into temporal changes in spatial employment patterns, including spatial employment growth.

7.1.2. Research Question 2.

Research question 2 will be addressed through the use of location quotients to establish whether concentrations of public housing tenants, rent assistance recipients or home owners are disproportionately co-located in the SLAs of high housing affordability and high unemployment identified above.

7.1.3. Research Question 3.

The project will respond to research question 3 by selecting as case studies a set of SLAs which exhibit both high levels of housing affordability and high levels of unemployment. GIS mapping will then establish the geographical distance between these clusters and employment concentrations. The geographical distance between the affordable housing clusters and employment clusters will be converted to a measurement of 'access' for households accessing employment. Based on these case studies, a basic 'model' of the relationship between affordable housing and employment will be constructed.

7.1.4. Research Question 4.

The project will respond to research question 4 by examining transport modes which are available to residents within the selected affordable housing SLAs and the hours of operation and frequency of service which these provide. Assessment of whether these services provide an adequate commuting service will be undertaken, both in terms of Australian and international standards, and relative to contemporary flexibility in working hours. Analysis of services will be through both GIS and timetable and route information for the case study SLAs

7.1.5. Research Question 5.

The response to this research question will utilise ABS census journey-to-work data for the SLAs with high housing affordability to assess the modal split in the journey to work. The project will also examine the level of household car ownership, relative to the metropolitan average. Further analysis using ABS income data will assess the financial burden of alternative transport modes for households in these locations, based around a standardised calculation of weekly travel costs for individual modes. The quantitative assessment of the implications for households of spatial mismatch will be supported through a set of interviews with relevant local government officials, and local Centrelink managers, from the selected locationally disadvantaged areas. These interviews will assess the extent to which the problems of spatial mismatch are viewed as contributing to locational disadvantage, and concomitantly affecting the objective of encouraging low-income households to access paid employment. Based on the case studies, a basic 'model' of the relationship between affordable housing and employment and transport costs will be constructed.

7.1.6. Research Question 6.

Research Question 6 will draw on the empirical findings from the previous five research questions, as well as insights developed in the literature review portion of the project Positioning Paper, to examine how current Federal and State policy influences the observed geographical and behavioural patterns.

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