



**RESIDENTIAL MOBILITY AND CAPITAL ACCUMULATION**

**AN ASSESSMENT OF THE MAGNITUDE OF  
CAPITAL GAINS DERIVED BY HOUSEHOLDS FROM  
RESIDENTIAL MOBILITY WITHIN ADELAIDE AND  
SOUTH AUSTRALIA**

**by**

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I dedicate this work to Carol, Rhys, my Father  
and the memory of my Mother

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b>	<i>i</i>
<b>LIST OF TABLES</b>	<i>v</i>
<b>LIST OF FIGURES</b>	<i>viii</i>
<b>LIST OF EQUATIONS</b>	<i>x</i>
<b>LIST OF APPENDICES</b>	<i>xi</i>
<b>GLOSSARY OF TERMS</b>	<i>xii</i>
<b>ABSTRACT</b>	<i>xiii</i>
<b>DECLARATION</b>	<i>xiv</i>
<b>ACKNOWLEDGEMENTS</b>	<i>xv</i>
<b>1 PRELUDE</b>	<b>1</b>
1.1 Introduction	1
1.2 Interpreting residential mobility	4
1.3 The social relations of housing	5
1.4 Residential mobility and social relations - an intersection	7
1.5 Aims and objectives	11
1.6 The Adelaide context	16
1.6.1 Population trends	17
1.6.2 Dwelling trends	19
1.6.3 Real estate sales trends	23
1.6.4 Mobility trends	28
1.7 Summary	29
<b>2 METHODOLOGY</b>	<b>30</b>
2.1 Introduction	30
2.2 The Torrens system	33
2.3 Automating the Torrens system	36
2.4 LOTS and scholarly enquiry	38
2.5 Assembling the databases	40
2.5.1 Identifying the sample	40
2.5.2 Creating the housing history file	42
2.5.3 Creating the housing stock file	47
2.5.4 Coding the housing history file and the housing stock file	49
2.6 Some definitional approaches	50
2.7 Summary	52

<b>3</b>	<b>LITERATURE REVIEW</b>	54
3.1	Introduction	54
3.2	Early mobility research	55
3.3	Housing studies	65
	3.3.1 Explaining accumulation from ownership	67
	3.3.2 Housing studies and accumulation - the empirical evidence	73
3.4	Housing markets	77
	3.4.1 Housing sub markets	78
	3.4.2 Housing markets, accumulation and mobility	81
	3.4.3 House price inflation	84
	3.4.4 Housing markets, labour markets and mobility	91
	3.4.5 Summary	96
3.5	Mobility studies from 1980	98
	3.5.1 Policy, structural change and mobility	100
	3.5.2 Transaction costs	104
	3.5.3 Housing consumption and mobility	109
3.6	Measuring capital gains	115
3.7	Summary	125
<b>4</b>	<b>RESIDENTIAL MOBILITY</b>	127
4.1	Introduction	127
4.2	The data	128
4.3	Establishing the mobility context	129
	4.3.1 Housing demography at the metropolitan level	130
	4.3.2 Spatial differentiation and housing demography	136
4.4	Residential mobility	141
	4.4.1 Distance moved	145
	4.4.2 Spatial dimensions of mobility	147
	4.4.3 The geography of mobility	156
	4.4.4 Metropolitan to rural and rural to metropolitan moves	162
4.5	Residential mobility and upgrading	165
	4.5.1 House to house movers and upgrading	168
	4.5.2 Home unit to home unit mobility	170
	4.5.3 House to home unit movers and home unit to house movers	171
4.6	Individual household mobility	176
	4.6.1 Households which moved once	178
	4.6.2 Households which moved twice	181
	4.6.3 Households which moved three times	185
	4.6.4 Distance moved by households	187
	4.6.5 Length of ownership	188
4.7	Household disintegration and mobility	192
4.8	Conclusions	204

<b>5</b>	<b>CAPITAL GAINS AND RESIDENTIAL MOBILITY</b>	206
5.1	Introduction	206
5.2	Capital gains and sub-markets	208
5.2.1	The house sub-market	209
5.2.2	The home unit sub-market	213
5.3	Capital gains and time of entry to sub-markets	214
5.4	Spatial distribution of capital gains in the house sub-market	217
5.5	Capital gains and mobility	220
5.6	Proportion of equity in purchase price	233
5.7	Residential mobility and accumulation	236
5.7.1	Do households buy more expensive housing each time they move?	238
5.7.2	Levels of re-investment by mobile households - the relationship between price received for old dwelling and price paid for new residence	244
5.7.3	Levels of accumulation by mobile households	248
5.7.4	Explaining capital losses by mobile households	253
5.8	Summary	265
<b>6</b>	<b>CAPITAL GAINS AND HOUSING STOCK</b>	269
6.1	Introduction	269
6.2	The data	271
6.3	The profitability of houses - nominal and real accumulation	272
6.4	Investigative strategy	274
6.5	Defining dwelling profitability	275
6.5.1	Accumulation variability of dwellings with losses greater than profits	278
6.5.2	Accumulation variability of dwellings with losses equal to profits	280
6.5.3	Accumulation variability of dwellings with losses less than profits	281
6.6	Spatial variation of dwelling performance	282
6.6.1	Dwellings with more losses than profits - the poor performers	282
6.6.2	Dwellings with losses equal to profits - the balanced performers	283
6.6.3	Dwellings with losses less than profits - the good performers	283
6.7	Accumulation variability and residential mobility	287
6.8	Explaining capital gains behaviour of dwellings	290
6.8.1	Market cycles	291
6.8.2	Profitability and location	292
6.8.3	Profitability and housing demography	303
6.9	Conclusions	308

<b>7</b>	<b>CONCLUSION</b>	312
7.1	Introduction	312
7.2	The data	312
7.3	Outcomes and implications	314
7.3.1	Mobility patterns	314
7.3.2	Accumulation patterns and household net accumulation	317
7.3.3	Housing upgrade and equity release	320
7.3.4	Wealth gains and their impact on traditional class barriers	324
7.3.5	Capital gains and dwelling age, length of ownership and location	325
7.3.6	Accumulation and property cycles	327
7.3.7	Households which left the real estate market	329
7.3.8	The capital gains performance of the housing stock	330
7.4	Policy implications	333
7.5	Future research directions	336
7.5.1	Labour markets and housing markets	336
7.5.2	The capital gains equation	337
7.5.3	Home owners' attitudes to capital gains and inflation and their impact on mobility	338
7.5.4	Investment and holiday properties in housing histories	339
7.5.5	Explaining housing downgrades	339
7.5.6	Capital loss and equity release	340
7.5.7	Financial markets deregulation, ownership and mobility	340
7.6	A closing comment	341
	<b>BIBLIOGRAPHY</b>	381

## LIST OF TABLES

Table 1.1	Area of Local Government Areas in the Adelaide Statistical Division	17
Table 1.2	Population of Adelaide Statistical Division, 1966 to 1991	19
Table 1.3	Estimated resident population of capital cities, 1966 to 1991	20
Table 1.4	Dwelling data collected at censuses between 1966 and 19991	20
Table 1.5	Separate houses and other dwelling types, Adelaide Statistical Division, 1966 to 1991	21
Table 1.6	House and home unit sales, Adelaide Statistical Division, 1975 to 1991	23
Table 1.7	Annual change in actual sales, average and median price for houses and home units, Adelaide Statistical Division, 1975 to 1991	26
Table 2.1	Establishing the valid records in the database	45
Table 3.1	Selected housing cost estimates	122
Table 4.1	Prevailing style of dwelling in Adelaide's house and home unit sub-markets	134
Table 4.2	Index of dissimilarity for selected housing demography variables	137
Table 4.3	Mobility and owner-occupancy	143
Table 4.4	Sectoral destination of moves within metropolitan area	151
Table 4.5	Zonal destination of moves within metropolitan area	154
Table 4.6	Mean and median house prices in sectors	155
Table 4.7	Mobility between houses and home units	166
Table 4.8	House to house mobility and dwelling area	168
Table 4.9	Correlation analysis between selected origin and destination dwelling variables	170
Table 4.10	House to home unit and home unit to house mobility and area of dwelling	172
Table 4.11	Home unit to house and house to home unit mobility and dwelling condition	173
Table 4.12	Home unit to house and house to home unit mobility and dwelling age	175
Table 4.13	Number of residential moves by sample households	177
Table 4.14	Household mobility between sub-markets	178
Table 4.15	Dwelling area changes for single move households	179
Table 4.16	Area characteristics for households moving twice between three houses	183
Table 4.17	Distance moved by selected household types	187
Table 4.18	Reason for market departures	196
Table 4.19	Mobility behaviour of widow(er) after death of partner	197
Table 4.20	Mobility behaviour after divorce or separation	200
Table 4.21	Distribution of divorced/separated households between owned and rented sub-markets after dis-aggregation	200
Table 5.1	Capital accumulation by houses in the Adelaide metropolitan area, 1968 to 1991	211

Table 5.2	Capital accumulation by home units in the Adelaide metropolitan area, 1968 to 1991	213
Table 5.3	Capital accumulation by vacant land in the Adelaide metropolitan area, 1968 to 1991	213
Table 5.4	Nominal gain or loss based on period of house purchase	216
Table 5.5	Adjusted gain or loss based on period of house purchase	216
Table 5.6	Accumulation performance of households which moved within the house sub-market	220
Table 5.7	Period of purchase for origin dwelling of mobile households	222
Table 5.8	Annualised gain per move for households which moved from a home unit into houses for the remainder of their housing career	223
Table 5.9	Rate of accumulation, based on purchase price, for movers within and between sub-markets	224
Table 5.10	Annualised rate of accumulation based on equity	225
Table 5.11	Relationship between capital gain on equity and size of equity	227
Table 5.12	Relationship between return to equity and size of equity - houses purchased with a mortgage	229
Table 5.13	Annualised returns to equity for households which left the South Australian real estate market	230
Table 5.14	Equity to purchase price for home owners	234
Table 5.15	Equity to purchase price for residentially mobile home owners	235
Table 5.16	Comparison of purchase price of origin and destination houses	240
Table 5.17	Households which moved from house to home unit	241
Table 5.18	Households which moved from a home unit to a house	242
Table 5.19	Selling price to purchase price ratio for households moving from a house to a house, based on number of moves in a household's housing history	245
Table 5.20	Selling price to purchase price ratio by move for households moving from a house to a house	247
Table 5.21	Capital accumulation per move by residentially mobile households	249
Table 5.22	Annualised capital accumulation per move by residentially mobile households	251
Table 5.23	Correlation coefficients for time owned and capital accumulation for each dwelling owned by residentially mobile households	252
Table 5.24	Distribution of capital loss making ownerships between mobility type and moves within each type	254
Table 5.25	Distribution of loss making dwellings between various market conditions at time of purchase and sale	261
Table 5.26	Annualised losses of movers related to market conditions at time of purchase and time of sale	262
Table 5.27	Annualised gains of movers related to market conditions at time of purchase and time of sale	263
Table 6.1	Derivation of temporal series database from original database	272
Table 6.2	Accumulation performance of houses	274
Table 6.3	Profit and loss performance of houses	275



Table 6.4	Annualised profit/loss at end of dwelling accumulation career, based on 1989/90 values	276
Table 6.5	Relation between occurrence and annualised accumulation level for dwellings in specific profitability categories	288
Table 6.6	Correlation analysis between annualised accumulation rates at successive property ownerships	289
Table 6.7	Profitability of properties by sector	293
Table 6.8	Profitability of properties by zone	294
Table 6.9	Correlation analysis of profitability categories distributed zonally	296
Table 6.10	Profitability of properties by mosaic region	297
Table 6.11	Correlation analysis of profitability categories distributed by mosaic region	299
Table 6.12	Correlation analysis of profitability categories distributed by suburb	300
Table 6.13	Index of dissimilarity of profitability categories distributed by suburb	300
Table 6.14	Correlation analysis of profitability categories distributed by distance from the Central Business District	301
Table 6.15	Correlation analysis of profitability categories distributed by suburb arranged by distance from the Central Business District	302
Table 6.16	Correlation analysis of dwelling profitability and distance from the CBD	302
Table 6.17	Relationship between dwelling style and accumulation performance	304
Table 6.18	Correlation analysis of profitability categories distributed by housing style	305
Table 6.19	Correlation analysis between profitability categories distributed by selected dwelling characteristics	306
Table 6.20	Correlation analysis of profitability categories distributed by area (m <sup>2</sup> )	307

## LIST OF FIGURES

Figure 1.1	Relationship between housing history, housing stock and household departure databases	15
Figure 1.2	The study location	18
Figure 1.3	Median house prices in Australian mainland capital cities, 1979 to 1991	25
Figure 1.4	Annual percentage change in median house prices in Australian mainland capitals, 1979 to 1991	27
Figure 4.1	Age of dwellings in Adelaide's house and home unit sub-markets	131
Figure 4.2	Area of dwellings in Adelaide's house and home unit sub-markets	132
Figure 4.3	Wall material of dwellings in Adelaide's house and home unit sub-markets	133
Figure 4.4	Distribution of small and large houses in Adelaide based on area, m <sup>2</sup>	139
Figure 4.5	Distribution of top quartile of eight most purchased house styles	140
Figure 4.6	Moves by year of sale of original dwelling	144
Figure 4.7	Mobility and distance moved	146
Figure 4.8	Mobility within and between sectors	148
Figure 4.9	Mobility within and between zones	153
Figure 4.10	Origin locations of residential mobility	159
Figure 4.11	Destination locations of residential mobility	160
Figure 4.12	Residential mobility within the same urban location	161
Figure 4.13	Metropolitan to rural and rural to metropolitan moves	163
Figure 4.14	Mobility between sub-markets for households moving twice	182
Figure 4.15	Mobility between sub-markets for households moving three times	185
Figure 4.16	Duration of ownership at first dwelling for households which made one move	189
Figure 4.17	Duration of ownership at first and second dwelling for households which made two moves	191
Figure 5.1	Distribution of adjusted median values of gain or loss/m <sup>2</sup> /year in Adelaide metropolitan area, 1968 to 1991	218
Figure 5.2	Distribution of capital losses within the metropolitan area	256
Figure 5.3	Purchase year for all dwellings and dwellings recording capital loss on sale	257
Figure 5.4	House and home unit prices, 1975 to 1994: Adelaide metropolitan area	259
Figure 5.5	Relationship between purchase and sale years of capital loss making dwellings	260
Figure 6.1	Annualised accumulation per owner and annualised accumulation per dwelling, for dwellings which have generated more losses than profits	279
Figure 6.2	Annualised accumulation per owner and annualised accumulation per dwelling, for dwellings which have generated losses equal to profits	280

Figure 6.3	Annualised accumulation per owner and annualised accumulation per dwelling, for dwellings which have generated profits greater than losses	281
Figure 6.4	Distribution of dwellings with losses greater than profits	284
Figure 6.5	Distribution of dwellings with losses equal to profits	285
Figure 6.6	Distribution of dwellings with losses less than profits	286

**LIST OF EQUATIONS**

Equation 4.1	Distance moved by mobile households	146
Equation 5.1	House values adjusted for inflation	210
Equation 5.2	Capital gains as annualised rate of return on purchase price	224
Equation 5.3	Capital gains as annualised rate of return on equity	225
Equation 5.4	Proportion of equity to purchase price	233
Equation 5.5	Real gain from ownership	248
Equation 5.6	Annualised real gain per move	250
Equation 6.1	Annualised real gain for dwellings	273

**LIST OF APPENDICES**

Appendix 1	The housing history file	344
Appendix 2	The housing stock file	349
Appendix 3	Ownership characteristics of the sampled households	354
Appendix 4	Postcodes and zones, Adelaide metropolitan area	356
Appendix 5	Postcodes and sectors, Adelaide metropolitan area	359
Appendix 6	Postcode, zone, sector and mosaic region boundaries, Adelaide metropolitan area	361
Appendix 7	Mobility within and between mosaic regions	363
Appendix 8	Notes accompanying table 4.18: Reasons for market departures	364
Appendix 9	Selected house styles in the Adelaide area	365
Appendix 10	Tables related to Chapter Four	374
Appendix 11	Table related to Chapter Five	378

**GLOSSARY OF TERMS**

ABS	Australian Bureau of Statistics
ANR	Another
ASD	Adelaide Statistical Division
CBCS	Commonwealth Bureau of Census and Statistics
CBD	Central Business District
DENR	Department of Environment and Natural Resources
DHL	Debates of the House of Legislature
DM	Deutcshe mark
H	House
HU	Home unit
LGA	Local Government Area
LOTS	Land Ownership and Tenure System
LUC	Land Use Classification
ND	No date
ORS	Others
SAHT	South Australian Housing Trust
SPSS	Statistical Package for Social Sciences

## ABSTRACT

The thesis aims to assess the nature of any relationship between the level of capital gains realised by owner-occupied households and their residential mobility within the South Australian real estate market. The data derive from sales records produced by the South Australian Department of Environment and Natural Resources, and are used to pursue three principal goals:

- To analyse the residential mobility process, and its dominant characteristics, in the Adelaide region as well as investigate the process of upgrading through mobility.
- To investigate the levels of household capital accumulation realised by residential mobility.
- To examine the capital accumulation performance of the housing stock in the Adelaide housing market.

The data represent mobility and accumulation events that have occurred between 1968 and 1991. The thesis addresses the issue of accumulation beyond the superficial consideration of nominal values, and therefore all sales values used are adjusted to 1989/90 values to enable calculation of real levels of capital gain. The major finding of the thesis is that more than a third of owners have made a loss from owner-occupancy, and that the proportion of capital losers is greater for home unit owners than house owners. Moreover, for individual dwellings, the proportion of losses generated for their owners approaches 40 percent. Further, the accumulation performance of individual households and individual dwellings is subject to considerable variability. Therefore, for mobile households, there is an element of luck associated with their prospects of deriving a capital gain from ownership.

**DECLARATION**

I hereby declare that none of the material contained in this thesis has been accepted for the award of any other degree or diploma in any institution and that, to the best of my knowledge and belief, the thesis contains no material previously published or written by another person, except where due reference has been made in the text of the thesis. I consent to this thesis being made available for photocopying and loan, if applicable, and if it is accepted for the award of the degree.

Kevin Harris  
May, 1997



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## 1.1 Introduction

The principal aim of this thesis is to examine the relationship between the process of residential mobility and the generation of capital gains associated with home ownership. Hitherto, each process has tended to be examined separately by different arms of enquiry. Capital gains considerations have usually been linked with inequalities between different housing tenure types, and residential mobility processes have been examined in the context of their implications for urban demographic structure. Only isolated efforts have been made to explore the links between the two phenomena. Generally, these investigations (see especially Smith and Thorns, 1980: 11; Thorns, 1981a: 212-215; Thorns, 1982: 758; Thrall 1983: 224-225; Owen and Green, 1989: 122; Allen and Hamnett, 1991: 6; Forrest and Murie 1991: 63; Hamnett, 1992: 56; Owen and Green, 1992: 22-23) have conceptualised a relationship between house price inflation, or capital gains, and mobility which stems from linkages between a household's housing market position and its labour market position. It has been argued, on evidence from New Zealand and the United Kingdom in particular, that processes associated with globalisation since the 1970's have caused substantial regional inequalities in developed western economies. In response to changed regional labour markets occasioned by these events, households may have determined to shift to regions offering improved employment prospects. However, the propensity to move predicated by a changed labour market perception has been diminished by the reduced level of house prices which reflect lowered demand in regions with declining economies. Potential movers who might want to move because of improved

employment prospects at another location compared with those at their present location may be forced to adjust their plans because of the relatively low sale price they would receive for their house compared with the likely higher price they would need to pay for housing in a region offering improved labour market prospects.

Others (Boehm, 1980: 376; Clark, 1982: 35; Megbolugbe and Linemann, 1993: 670) have argued that transaction costs are significant factors in housing consumption, and given that capital gains can be embraced in the notion of transaction costs, these observers have suggested that capital gains considerations can play a role in a household's decision to move.

While there is a conceptual basis to a relationship between mobility and house price appreciation, it is the case that our understanding of the question at the moment is based on a mixture of theoretical speculation, guesswork and aggregate statistical models (Hamnett, 1992: 63). Furthermore, the basis of the conceptual relationship derives from considerations at the regional level and not at the intra-regional level. It is also the case that to this point little empirical work has been completed to explore the existence of a relationship. There are two possible reasons for this. Firstly, it may be because no relationship exists. Alternatively, the reason could be due to the absence of, or difficulty in obtaining, suitable data, particularly at the household level, which would enable close scrutiny of the question. This constraint has been overcome in the present investigation, and it is hoped that an objective assessment can be made as to whether, and if so how, capital gains and residential mobility are inter-related. Every person and household has a vested interest in housing. Housing serves a variety of purposes, be it simply shelter, a place to rest, a "home" in contrast to a "house", an investment, or an asset for the next generation to inherit. It is, without

question, an important and fundamental issue, regardless of global location, and a multitude of enquiry avenues have developed around it. Two of these research directions are relevant to the purposes of this thesis. The first has explored the process of residential, or intra-urban, mobility, caused as households, or individuals, move from one urban housing location to another, an exploration which commenced four decades ago with the publication of Rossi's (1955) *Why families move*. This group of researchers has comprised mainly planners, demographers and geographers and their mission has been to elucidate the demographic context of housing (Clark et al, 1994: 138). Questions related to the consumption of housing have occupied the analyses of the second group, generally comprising urban and housing economists, as they have attempted to explain the “social relations of housing” (Paris, 1993: *viii*) to show how social, political and economic environments influence the distribution and consumption of housing and create groups of “winners and losers” in the housing system. In Chapter three the development of these two arenas will be described in depth to show how each group’s research agenda gradually converged to the point where each recognised that the same general set of factors worked to influence outcomes in their respective research areas. This intersection of ideas and approaches resulted in a cross referencing of the two directions and influenced the direction of subsequent research. It is useful, however, to note some of the main elements which have characterised mobility and housing studies and how the two approaches have established a relationship between residential mobility and capital accumulation.

## 1.2 Interpreting residential mobility

Residential mobility has been defined as a re-location by households with varying socio-economic characteristics between different segments of the housing stock (Moore and Clark, 1986: 186). Importantly, it is a general and pervasive phenomenon with implications for both the individual and aggregate levels (Clark and Everaers, 1981: 322). At the individual level there are implications for household tenure, household costs and dwelling and location satisfaction, whilst at the aggregate level it can effect suburb change, population densities, housing densities, population composition and economic status. Initially, residential mobility research described and explained the process in behaviouralist terms, endeavouring to determine who moved, their destination and, to a lesser extent, what changes mobility caused to the origin and destination locations. Models developed from this research suggested that households moved due to dis-satisfaction with their present dwelling occasioned by family life cycle changes. As a household moved through the different family life cycle stages, it responded to a whole range of changing environmental stimuli. To some of these the household would react favourably, but others would cause stress on the household (Coupe and Morgan, 1981: 201). Where the sum of individual stresses experienced by a household reached a threshold level, it caused the household to become dis-satisfied with its location (Speare et al, 1975: 207-231; Bach and Smith, 1977:163) and to seek a housing adjustment so that place utility could be re-established. In this way the family life cycle paralleled a housing cycle, and the two cycles were linked because “housing needs ...are generated by the shifts in family composition that accompany life cycle changes (Rossi, 1955: 4).

Not surprisingly, the concept of satisfaction was subjected to considerable scrutiny and subsequent refinement. Newman and Duncan (1979: 161) found that perceived satisfaction had little impact on mobility, whereas factors such as age, income, tenure, presence of school aged children and single family households had highly significant effects on mobility. In other research (Michelson, 1977: 360-372) satisfaction was shown to be based on short term expectations, and did not predict mobility as well as the influence of long term housing goals held by a household. That is, a household could be satisfied with its location, but move despite that satisfaction. The residential mobility model was evolving to the point where a household's attitudes and preferences might play a role in the decision to move, but that decision was also likely to be caused by the household's position in an ongoing "...web of social relations" (Landale and Guest, 1985: 218; Moore, 1986: 498). Clearly, there were other relationships at work which caused a household to move, and these needed to be incorporated into any comprehensive mobility model. In this context, the likelihood increased that the concept of capital gains associated with ownership might soon also be assessed as a factor in explaining mobility, simply because the research emphasis had moved to a consideration of the linkages between mobility and other aspects of the housing system.

### **1.3 The social relations of housing**

The housing system concept was developed during the 1970's and comprised the multitude of inter-relationships between the housing stock, the households and the relevant institutions. In total, the housing system has seven components - consumers, dwellings, producers, exchange professionals, financial institutions, investors,

governments and statutory authorities (Paris, 1993: 28). These components provided the actors whose inter-relationships could create the various outcomes which represent the housing system, and which can be expected to influence a household's decision to move. There developed an appreciation that mobility patterns represented a diversity of contexts and motivations, and that the task of investigation was to determine what role was played, in developing these patterns, by a raft of factors. Some principal factors assessed included tenure type, tenure change, change of occupation, changes in personal circumstances, be they caused by change of life cycle or stage of life cycle, cyclical swings in the economy (Case, 1992: 173-174), injections of funds from government and changes in the nature of housing supply. Moreover, early mobility research had identified variations in propensity to move between renters and owners, and the different mobility patterns between the tenures had been explained by the higher transaction costs associated with ownership (Clark, 1982: 35; Speare et al, 1975: 177).

Transaction costs (see Section 3.5.2) therefore have a relationship to mobility because they will be taken into account in making a decision to move. At any time, the tenure undertaken by a household is a function of expected future mobility (Boehm, 1980: 375; Megbolugbe and Linneman, 1993: 670). When a household purchases a dwelling there is an expectation that future mobility will be limited because a longer time is required to amortise the transaction costs incurred with ownership than with rental. Further, an owner may not sell if there are risks associated with the transaction, particularly if the sale cannot generate sufficient capital gain to finance the deposit gap required to move to the next location. The high financial investment in home ownership is usually expected to be retrieved at time of sale, but this can act

as a constraint to mobility if, at certain times, this is difficult to achieve (Landale and Guest, 1985: 201; Coupe and Morgan, 1981: 202). Moore (1986: 506) has shown that although owners may indicate an intention to move the actual level of movement is considerably less than might be expected by their statements of intent. The reason for this may well lie in the fact that, at any particular moment, mobility might involve financial costs which are unable to be met, to the satisfaction of the owner, by the level of capital appreciation generated by the dwelling, which causes the household to arrive at a decision to remain at the present dwelling. In a similar way, the generation of a capital gain which does not represent a “cost” to the owner may encourage a decision to move.

#### **1.4 Residential mobility and social relations - an intersection**

The recognition that transaction costs influenced mobility may represent the point where an intersection commenced between housing mobility and housing consumption research. In all probability this was due to the residential mobility research being informed by the independent research of urban and housing economists who were describing housing costs as part of the social relations of housing.

Significantly, in the context of this thesis, the acknowledgement that capital gains considerations were a part of a household’s transaction costs established some need to examine the nature, if it existed, of any relationship between mobility and capital gains derived from home ownership.

More recently, the social relations of housing have been influenced by economic, financial and demographic restructuring processes which have occurred globally (Badcock, 1984: 151; Badcock, 1991: 129; Megbolugbe and Linneman, 1993: 675;



Maher, 1994: 17). These developments have had significant social implications for demography, by modifying birth rates, marriage tendencies, household formation, international and intra-national migration, as well as an impact on patterns of residential mobility.

Sociologists, rather than geographers, demographers and planners, were the first social scientists to become interested in the concept of capital gains generated by ownership of housing when they theorised that urban property markets might operate to modify existing social theory. Their interest dates back at least to the late sixties, and the observation that house prices were adopting a generally upward trend. At the time, Rex and Moore (1967) suggested that housing class, or tenure, could influence life chances, in much the same way as social class, by its capacity for wealth accumulation through capital gains on the sale of owned housing.

For more than a decade sociologists, with some input from geographers, pursued the generation of wealth from ownership, or capital gains, predominantly to show its impact on existing class structures and to explore any processes that might be operating within the phenomenon to establish a new “property class”. There was no research to show how wealth accumulation might influence the process of residential mobility until Thorns (1981: 211-212) linked the two processes through his pursuit of a relationship between accumulation and a household’s position in the labour market. In arguing for a relationship between position on the social scale and mobility, Thorns raised several questions of immediate relevance to this thesis. Firstly, do households have a conscious housing strategy whereby they move through a number of dwellings over time to achieve their final goal? Secondly, if such a strategy existed, it would be possible to conceive of a housing career existing alongside an occupational career. In

this conceptualisation, mobility is implicated because an individual's, or household's, occupational career impacted on its housing career through the process of residential mobility. Finally, what is the extent of temporal housing mobility from low cost to high cost sub markets, and if mobility does exist, is it upwards, downwards or horizontal?

It is clear that there are conceptual aspects of the household decision making process which might reasonably lead to an expectation that mobility could be associated with capital gains considerations. For example, the price received for a household's current dwelling will influence the type of dwelling to which it moves. If the price of their current dwelling is insufficient to purchase the quality of housing sought, the household may modify its mobility options. On other occasions, the sale of a dwelling may be used to release equity, which in turn will influence the mobility behaviour of the household. There does seem, therefore, to be a conceptual basis for linking residential mobility to capital gains considerations, and it is a range of questions raised by this conceptualisation which will be addressed in this thesis.

The concept of capital gain as a transaction cost was shown to have significant implications for the residential mobility process. Specifically, where capital gains have not accrued at the rate a household might have expected it has been seen as a constraint which has worked to raise the household's threshold for dissatisfaction and thereby inhibit any tendency to move (Landale and Guest, 1985: 201). More significantly, however, capital gains expectations have been incorporated into the mobility model as a factor which has encouraged many household moves, even though the household may have no dissatisfaction with its current dwelling.

Morrow-Jones (1988: 1177) has used the accumulation capacity of ownership to explain some interesting, and new, implications for mobility models. She found a negative correlation between housing price and buyer age, and explained this new tendency by suggesting that as housing became increasingly expensive during the 1970's and 1980's, younger buyers ignored the traditional model and opted for ownership as a more desirable tenure because of the perceived hedge against economic problems it provided, in contrast to rental. In addition, she reported a negative relationship between unemployment and age of transition from rental to owned accommodation, and suggested that where young households are unemployed, or under employed, they might try harder to achieve ownership through both partners seeking employment, in the case of couples, and delaying marriage and having children, so that the economic hedge inherent in ownership could be obtained. What these observations suggest is that increased awareness by households of the accumulation potential of housing caused certain life cycle events, such as the transition from rental to ownership, to be brought forward. However, other demographic events, including time of marriage, departure from workforce, and child rearing, were delayed. At the same time the tendency towards two income families increased.

As early as 1981, Coupe and Morgan were trying to understand residential mobility more in terms of constraints and competition than in terms of emphasising the role of the stage of life cycle. Their view was that constraints and competition created by institutions established pervasive reasons for mobility by households. Their research showed that the role of space in movement was significant, but more importantly, the desire for more space for its own sake, or for prestige, seemed to be more important

than had previously been recognised (Coupe and Morgan, 1981: 213). Indeed, there was developing a view that the more expensive is housing, the more people want to buy it (Morrow-Jones, 1988: 1181). The refinement to the model suggested by these developments suggest that households may establish, at a very early stage in their housing career, housing goals which might not be achieved immediately. Therefore, they plan to achieve the goal by a series of steps, so that each departure from a residence is not due to stress or dissatisfaction with that house but because the move is part of the household's plan to achieve its housing ambitions. In the previous model, trading up was incorporated, and explained by the need for more space by a growing family. The increased cost of the larger house was managed by the household because of the direct relationship between age and income. In the new model, trading up takes on a different meaning, and the role of capital accumulation in this plan needs to be examined to determine how much of the plan is based on the notion of acquiring wealth from capital gains on the way through the housing cycle. This possibility will be explored in subsequent chapters of this thesis.

## **1.5 Aims and objectives**

The intersection of mobility and housing studies research has established the context in which the present study into the investigation of any linkages between mobility and capital gains has been undertaken. Accordingly, the over-riding purpose of this thesis is to examine the mobility behaviour of home owning households, and evaluate the evidence for a role for capital gains generation in driving the mobility process. A number of more specific aims are embraced within this goal and their order of

presentation below is an indication of the direction the analysis will follow in the thesis.

- The mobility behaviour of the sample households will be described and explained. The approach will emphasise the spatial characteristics of mobility at both the intra-urban and the urban-rural levels, as well as analyse household mobility patterns within and between the house and home unit sub-markets.
- The magnitude of capital accumulation derived by households at each ownership in their housing history will be computed so that a number of aspects of the relationship between capital accumulation and residential mobility can be explored.
- The data will enable an examination of the relationship between residential mobility and housing upgrade, as well as an investigation of the levels, and incidence, of equity release to households on the sale of their dwelling at each stage of their housing history.
- The research will resolve whether huge wealth gains are possible from ownership. These findings should therefore provide further evidence to assess the theorised relationship between wealth accumulation and the erosion of traditional class barriers (Saunders, 1978: 246; Pratt, 1986a: 367; Ball, 1985: 27), and contribute to the debate between those who argue a powerful role for accumulation (Pahl, 1975: 291) and those who believe it is over-rated (Edel, 1982: 215).
- The literature centred around capital gains generation has theorised a relationship between a dwelling's age, the length of its ownership and its location, and the size of any capital gain it creates. These relationships will be analysed using actual house price data which have been adjusted to discount for inflation, and using

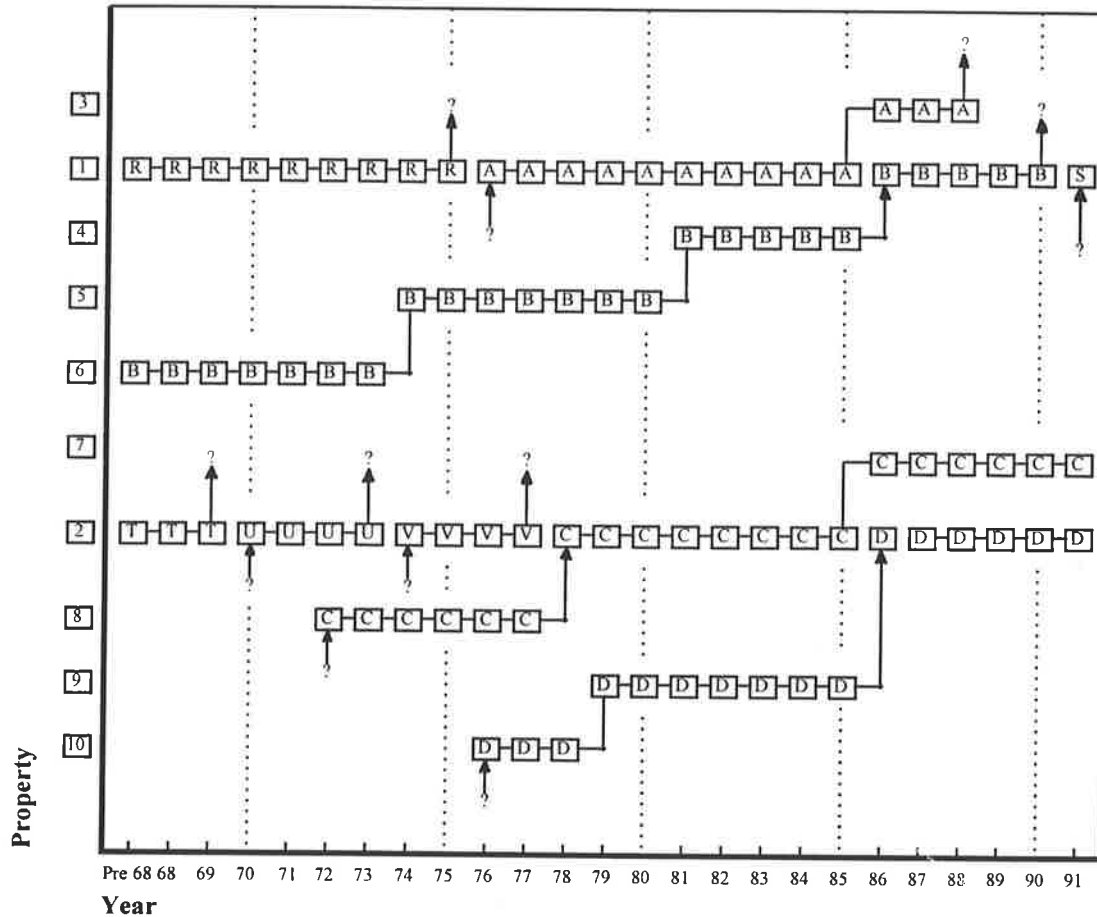
variables which control the level of gain for size of dwelling and length of ownership. Significantly, these variables are linked to actual house price data.

- Actual house price data which have been compiled specifically for this thesis, and the accumulation levels they suggest have been generated, will be matched with real estate market conditions which have prevailed throughout the study period so that the impact of cyclical “boom” and “bust” periods on both mobility and accumulation can be gauged.
- Households which left the ownership market will be identified and reasons determined for their departure. Further, the subsequent location and housing tenure of these households will be investigated, with the expectation that their destination details might provide useful, and possibly new, insights into the internal migration process in South Australia.
- For previous owners identified as moving into the rental market, their ownership record will be analysed to provide possible explanations for their tenure change. This strategy is a test of a view that the deregulation of the Australian housing finance market in 1986 affected the cost relativities between owning and renting and therefore made it possible for marginal households to become owner-occupiers, often for the first time. Support for that view may be established if it can be shown that this group entered the market at the relevant time, was highly geared to effect their purchase and incurred a financial cost from home ownership.
- Finally, the thesis will explore the capital gains generation capability of the actual housing stock to resolve a number of pertinent questions. For example, has each dwelling provided enduring rates of return for each of its owners or have returns been cyclical, or even spasmodic? Further, have all dwellings generated the same

rate of return at the same time, representing a form of temporal harmony in terms of the creation of capital returns? Is there variation between housing classes, or housing types, in the generation of benefits, in that the style, or the size, of a dwelling may influence the financial performance of the dwelling? And finally, what is the role played by location, or space, in the ability of a property to generate capital gains? It is expected that these questions will provide more insights into the prospects of any household for achieving sizeable capital gains through home ownership and the residential mobility process.

One of the main features of the thesis is the unique and rich dataset which has been assembled. The aims of the study will be pursued through analyses of three unique datasets - a housing history file, a housing stock file and a household departures file. The housing history file contains data for each household which bought or sold a house or a home unit during June, 1986 in the Adelaide metropolitan area. This file records extensive details about each property these households owned between 1968 and 1991. The housing stock file includes each of the houses and home units which were sold during June, 1986. Within the file have been collected the sales history details for each of these dwellings between 1968 and 1991. The household departures file goes beyond the housing history and housing stock databases to provide details on why households left the real estate market between June, 1986 and July, 1991, and where these households were located in 1994. The first two databases will be described extensively in Sections 2.5.2 and 2.5.3, and the third database will be described in Section 4.8. The relationship between them is illustrated in Figure 1.1.

**Figure 1.1: Relationship between housing history, housing stock and household departure databases**



**Notes:** Owners *A* and *C* sold their respective properties 1 and 2 in June 1986. *B* and *D* bought properties 1 and 2 respectively in June 1986. Therefore, *A*, *B*, *C* and *D* form part of the sample household population. Details of their ownerships will comprise the Housing history database. *A* owned property 1 from 1976-1985, and property 3 from 1986-1988. At that point *A* left the market. *B* owned property 6 from pre 1968-1974, property 5 from 1975-1980, property 4 from 1981-1985, property 1 from 1986-1990, and then left the market. *C* owned property 8 between 1972-1977, property 2 from 1978-1985, and property 7 from 1986 to the end of the study period. *D* owned property 10 between 1976 and 1978, property 9 from 1979-1985 and property 2 from 1986 until the end of the study period. These ownership details of Owners *A*, *B*, *C* and *D* are contained in the housing history file. Properties 1 and 2 represent the sample housing stock, because they were sold during June 1986. Property 1 was owned by *R* from pre 1968 to 1975, by *A* from 1976-1985, by *B* from 1986 to 1990 and by *S* from 1991 to the end of the study period. Property 2 was owned by *T* from pre 1968 to 1969, by *U* from 1970-1973, by *V* between 1974 and 1977, by *C* from 1978-1985 and *D* from 1986 to the end of the study period. This ownership detail of properties 1 and 2 form the detail of the housing stock file. Housing history details for owners *A* and *B* could not be traced through to the end of the study period. They therefore became the subject of further investigation, the details of which are contained in the household departure file.



The important feature of these databases is their composition of precise data derived from actual housing transactions which have occurred throughout the study period. Most studies which have investigated capital accumulation through home ownership have been based on assessments of macro scale aggregate data which may have masked differences at a number of levels. These differences could be particularly significant at the household level. Therefore, the present data, based at the individual household level, may provide important refinements to the conclusions reached by earlier studies.

### **1.6 The Adelaide context**

Adelaide is the capital city of South Australia, and occupies a coastal strip on the eastern side of Gulf St Vincent (Figure 1.2). The South Australian Colonisation Act was passed by the British parliament in August, 1834, and in the following year a Board of Commissioners, with Colonel Robert Torrens as Chair, was appointed to oversee the establishment of the colony. His son, Robert Richard Torrens, was to migrate to the colony in 1839 to become Collector of Customs, and subsequently was appointed to the Legislative Council in 1851, became Treasurer in 1852 and Premier and Colonial Secretary in 1857. In that year he introduced into the parliament his Real Property Act aimed at simplifying the transfer of freehold land between parties. Further details of this initiative, and its impact on the data used in this thesis are presented in Chapter Two.

### 1.6.1 Population trends

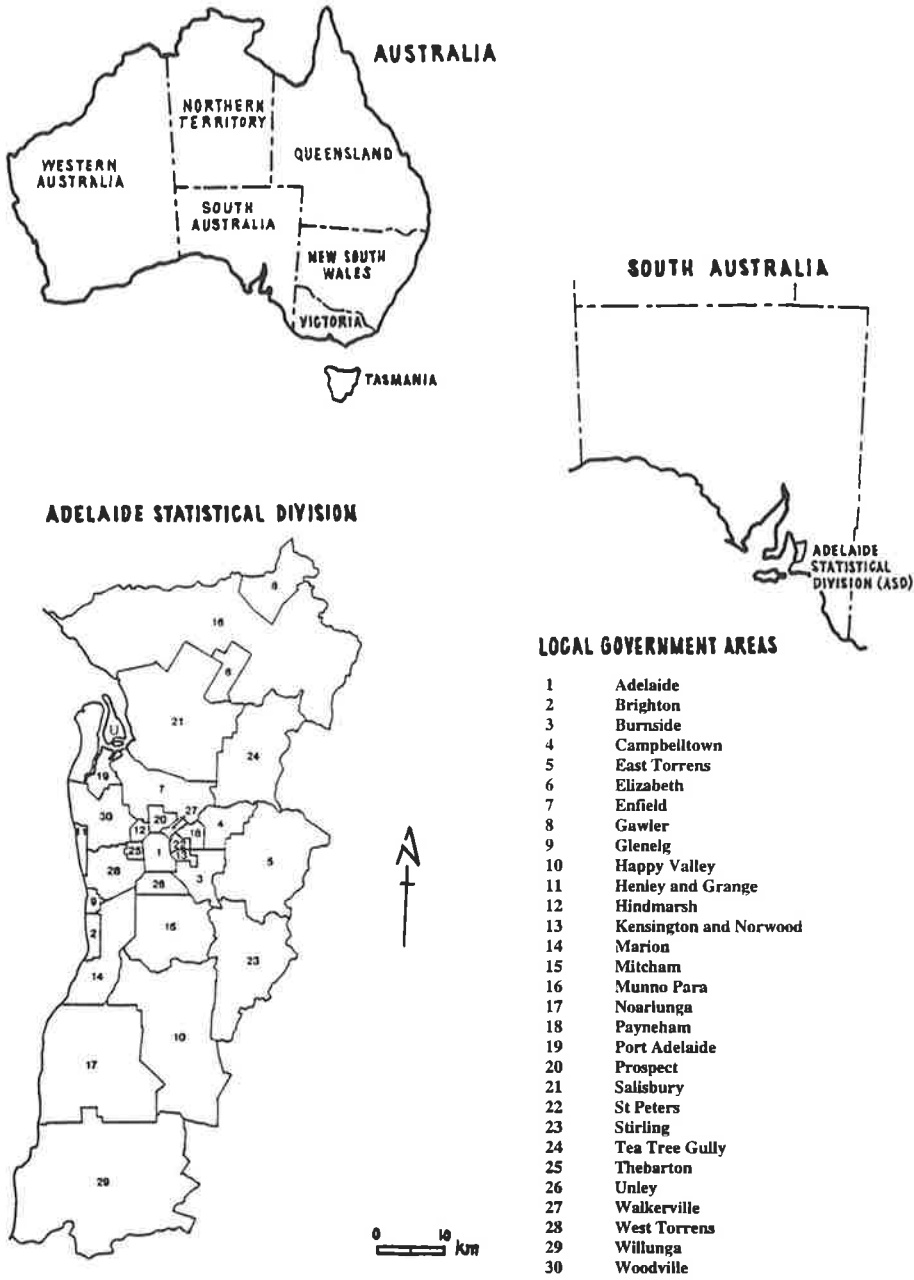
Presently, Adelaide and its metropolitan area is contained within the Adelaide Statistical Division, occupies 1,841 square kilometres, and contains 30 Local Government Authorities (LGAs), or councils. As indicated in Table 1.1, these LGAs vary in area from 3.5 square kilometres to 350 square kilometres, with an average area of 61.4 square kilometres and a median area of 23.7 square kilometres. Those LGAs adjacent to the central business district of Adelaide, located within the Adelaide LGA, are characteristically small, with a median area of 4.8 square kilometres, whereas the peripheral LGAs are substantially larger and have a median area of 124 square kilometres.

**Table 1.1: Area of Local Government Areas in the Adelaide Statistical Division**

Local Government Area	Area, km <sup>2</sup>	Local Government Area	Area, km <sup>2</sup>
Walkerville	3.5	Burnside	24.2
St Peters	3.7	West Torrens	31.2
Kensington and Norwood	3.9	Port Adelaide	35.1
Thebarton	4.2	Woodville	43
Glenside	4.8	Enfield	50.6
Hindmarsh	4.8	Marion	54.3
Henley and Grange	6.9	Mitcham	71.5
Payneham	7.1	Stirling	107.7
Prospect	8.1	East Torrens	121.4
Brighton	8.6	Tea Tree Gully	124
Gawler	8.8	Salisbury	159.1
Unley	14.2	Noarlunga	166.1
Adelaide	15.3	Happy Valley	175
Elizabeth	19	Willunga	191.3
Campbelltown	23.3	Munno Para	350.3
Total Adelaide Statistical Division area, km <sup>2</sup>			1841.00
Average LGA area, km <sup>2</sup>			61.37
Median LGA area, km <sup>2</sup>			23.70

Source: Commonwealth Bureau of Census and Statistics, 1973: 20-21

Figure 1.2: The study location



During the study period, Adelaide's population has been recorded at six national censuses, details of which are shown in Table 1.2.

**Table 1.2: Population (millions) for Adelaide Statistical Division, South Australia and Australia, 1966 to 1991**

Census Year	ASD population	Intercensal change, %	SA population	Intercensal change, %	Australian population	Intercensal change, %
1966	771		1095		11599	
1971	843	9.3	1200	9.6	13067	12.7
1976	924	9.7	1274	6.2	14033	7.4
1981	931	0.8	1319	3.5	14923	6.3
1986	978	4.9	1383	4.9	16018	7.3
1991	1024	4.7	1446	4.6	17284	7.9

Source: 1966 data from ABS, 1978: 117  
 1971 data from ABS, 1982: 122  
 1976 and 1981 data from ABS, 1984: 121  
 1986 and 1991 data from ABS, 1994c: 53

During the second half of the 1960's Adelaide's and South Australia's population growth almost matched the national population growth rate. In the first half of the 1970's, Adelaide's rate of growth was greater than that recorded for South Australia and Australia. However, since 1976 the population growth rate of Adelaide has tended to match that of South Australia, but has not kept pace with Australia's population growth, nor the growth rates of the other Australian capital cities (Table 1.3). As result, Adelaide is the smallest of the mainland capitals.

### 1.6.2 Dwelling trends

The Australian Bureau of Statistics has collected dwelling statistics at each of the six censuses conducted during the study period. However, the only category of dwelling which has remained unchanged throughout the period is separate house. For non house dwellings there has been a lack of consistency associated with their counts at each census, mainly because of changing construction trends in dwelling types other

than separate houses. The form of dwelling data which have been collected at censuses from 1966 is presented in Table 1.4.

**Table 1.3: Estimated resident population of capital cities, 1966 to 1991**

City	Population and percentage change in:					
	1966	1971	1976	1981	1986	1991
Sydney	2542207	2935937	3143750	3279500	3472700	3672900
Percentage change		15.5	7.1	4.3	5.9	5.8
Melbourne	2230793	2503022	2723700	2806300	2931900	3156700
Percentage change		12.2	8.8	3.0	4.5	7.7
Brisbane	778193	869579	1000850	1096200	1196000	1358000
Percentage change		11.7	15.1	9.5	9.1	13.5
Adelaide	771561	842693	924060	954300	1003800	1057200
Percentage change		7.2	9.7	3.3	5.2	5.3
Perth	559228	703199	832760	922040	1050400	1188500
Percentage change		25.7	18.4	10.7	13.9	13.1
Hobart	141311	153216	164400	171110	179000	191000
Percentage change		8.4	7.3	4.1	4.6	6.7
Darwin	18695	37060	44200	56500	74800	76700
Percentage change		98.2	19.3	27.8	32.4	2.5

Source: CBCS, 1970: 129-130; ABS, 1994d: 117.

**Table 1.4: Dwelling data collected at censuses between 1966 and 1991**

Separate house	Self contained flats	Home units	Flats or apartments	Semi-detached houses	Row/terraced house	Other medium density dwelling	Semi-detached, row/terraced or townhouse	Flat or apartment, 2 or less storeys	Flat or apartment, 3 or more storeys
1966	1966								
1971	1971	1971							
1976			1976						
1981				1981	1981	1981			
1986				1986	1986	1986			
1991							1991	1991	1991

It is, therefore, difficult to use census data to provide an assessment of trends in home unit type housing within the study period. At best, the census data allow two broad dwelling types comprising separate houses and other dwellings, excluding caravans, improvised houses and houses/flats attached to shop/office, to be defined. The other dwellings group comprises those dwellings types which have been recorded separately

at various times between 1966 and 1991, and the conflation of these data is shown in

Table 1.5.

**Table 1.5: Separate houses and other dwelling types, Adelaide Statistical Division, 1966 to 1991**

Year	Separate Houses	Intercensal change, %	Other dwelling types	Intercensal change, %	Total occupied private dwellings	Intercensal change, %
1966	192009	*	21995	*	216297	*
1971	220515	12.9	30548	28.0	251063	13.9
1976	231668	4.8	71688	57.4	289350	13.2
1981	243560	4.9	71892	0.3	320160	9.6
1986	263310	7.5	80369	10.6	349048	8.3
1991	284761	7.5	88763	9.5	379551	8.0

Source: 1966 data from Commonwealth Bureau of Census and Statistics, 1969: 244-247  
 1971 data from Commonwealth Bureau of Census and Statistics, 1973: 20-21  
 1976 data from ABS, 1978  
 1981 data from ABS, 1988, Table 25, Structure of Occupied Private Dwellings, Dataset P  
 1986 data from ABS, 1988, Table 36, Summary of Dwellings, Dataset C  
 1991 data from ABS, 1994e, Table 45, Structure of Dwellings, Disk 2

For separate houses, the data reveal that growth was strong in the last half of the sixties, but that growth in the other dwelling type, which involved mainly home unit type dwellings, experienced a growth of 28 percent. These growth rates were a reflection of the boom economic conditions which were experienced in this period, but as these conditions deteriorated during the seventies changes in dwelling preference occurred. Growth in separate houses reduced by some two thirds, but there was continuing expansion of the home unit type of dwelling, caused by changes in family structure and size. Consequently, the growth rate for total occupied private dwellings matched that of the previous period. In all probability, these trends are a response to the world wide economic downturn which commenced at the beginning of this period and demographic changes which lead to an increasing demand for smaller dwellings. Between 1976 and 1991, the proportion of single person households in Australia increased from 15.7 percent to 19.8 percent (ABS, 1994f: 35), whilst the

proportion of family households reduced from 84.3 percent to 80.2 percent. In the Adelaide Statistical Division, between 1986 and 1991, lone person households increased from 20.1 percent to 22.3 percent and households comprising families declined from 79.9 percent to 77.7 percent (ABS, 1989, Table 45 and ABS, 1994c, Table 42). These tendencies, and their impact on housing type demand, were caused mainly by plummeting marriage rates and increasing divorce rates, but also by the development of an ageing population. During the second half of the seventies, the prevailing trends intensified and housing development in Adelaide reduced almost to a standstill.

In the eighties, both separate house and home unit, row/terrace houses and other medium density housing achieved steady growth. For separate houses, growth rates were nearly twice the rate recorded during the seventies, and higher density housing recovered substantially from the almost negligible growth rate recorded in the 1976-1981 period, probably reflecting demand caused by the youngest cohort of the baby boom population as it entered the ownership stage of life cycle. This recovery occurred despite a prevailing economic environment in which interest rates increased from 9 percent at the beginning of 1981 to 17 percent at the end of the decade, and house price inflation increased by 63.6 percent as average house prices in the Adelaide Statistical Division rose from \$39,475 in 1980 to \$108,506 in 1989 (DENR, 1994).

The preceding sections have described the changing characteristics of the Adelaide Statistical Division's population growth and housing stock between 1966 and 1991. This population has created households which have filtered through the dwelling stock, and some of these have provided the data on which this thesis is based.

The purpose of this section has been to describe a context in which residential mobility and real estate transactions have occurred in South Australia. In the following section some details on the sales activity of houses and home units are provided so that an indication of the proportion of the total stock changing hands in any one year can be gauged, and an indication provided of the fluctuations in sales, or boom and bust characteristics, experienced temporally in the Adelaide metropolitan area.

### 1.6.3 Real estate sales trends

In South Australia, the Department of Environment and Natural Resources (DENR) is responsible for monitoring property sales, and has published time series data on the number of house and home unit sales, and their average price, since 1975 as well as median price information since 1985, and these details are provided in Table 1.6.

**Table 1.6: House and Home Unit sales, Adelaide Statistical Division, 1975 to 1991.**

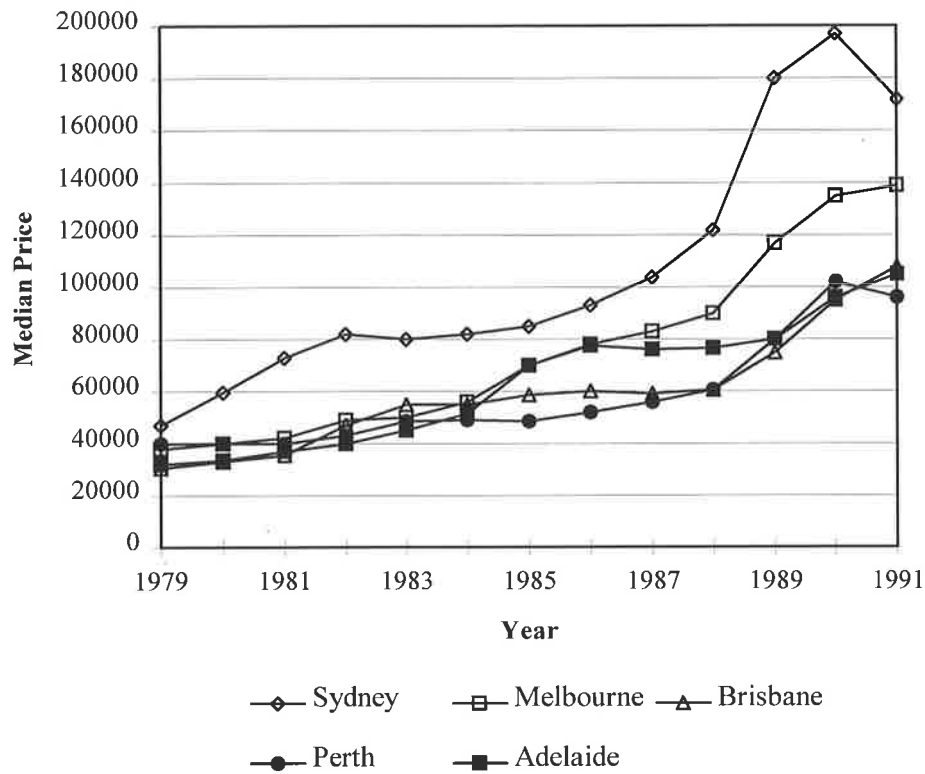
Year	Number of House Sales	Average House Price	Median House Price	Number of Home Unit Sales	Average Home Unit Price	Median Home Unit Price
1975	4856	28440	*	3027	24345	*
1976	9675	32376	*	3384	29599	*
1977	12752	35421	*	3153	31537	*
1978	13058	35979	*	2618	30750	*
1979	14104	36672	*	2882	31979	*
1980	15370	39475	*	3623	31997	*
1981	15323	42803	*	3802	34334	*
1982	14655	46927	*	3937	38887	*
1983	16399	52025	*	4568	45213	*
1984	19610	67060	*	5824	58238	*
1985	17456	79224	72200	5409	66352	61600
1986	15952	83437	73500	4204	70354	65400
1987	16691	85291	74500	4095	68268	64200
1988	20796	94266	80400	5642	73555	67000
1989	18598	108506	90400	5344	80973	72900
1990	19040	114894	97200	5659	91641	81300
1991	18061	118558	103900	5317	95680	86000

Source: Department of Environment and Natural Resources, 1994.



Using data from Table 1.5 and Table 1.6, it can be shown that 4.18 percent of Adelaide's stock of houses were sold in 1976, whilst the proportion of houses sold in 1981, 1986 and 1991 was just over 6 percent in each year. Similar results are obtained when the number of units sold is compared with the number of other dwellings. The proportion in 1976 was 4.72 percent, and this increased to 5.23 percent in both 1981 and 1986, and to 6 percent in 1991. Therefore, in any one year, about 6 percent of the available houses and medium density dwellings will be sold. Table 1.6 provides a detailed consideration of house and home unit price trends throughout the study period. In Figure 1.3, the South Australian trend in median house prices is compared with similar trends in the other mainland capital cities. This comparison suggests that prices in the Adelaide housing market have generally matched those of the Brisbane and Perth markets, except for the period between 1984 and 1989 when Adelaide prices surged ahead of those in Perth and Brisbane and virtually matched those recorded in Melbourne. However, throughout the study period Sydney has exhibited significantly higher prices than in the other cities, and from 1985 onwards Melbourne has clearly asserted itself as the second most highly priced housing market in Australia.

**Figure 1.3: Median house prices in Australian mainland capital cities, 1979 to 1991**



Source: Based on Real Estate Institute of Australia data derived from Maher, 1994: 10.

During the study period the market has been characterised by cyclical surges and depressions in price levels paid for houses and home units (Amling, 1989: 23-27; Sirota, 1996: 5-7; Dunstan, 1996: 26). The nature of this phenomenon can be described by analysing annual changes in the number of sales and prices for houses and home units. In Table 1.7 the percentage change in number of sales for houses and home units is presented, together with the annual change in average and median price. This analysis reveals that houses and home units have experienced sales volatility

throughout the period and that the spacing of peaks and troughs in number of sales has tended to reduce through the eighties.

**Table 1.7: Annual change in actual sales, average and median price for houses and home units, Adelaide Statistical Division, 1975 to 1991**

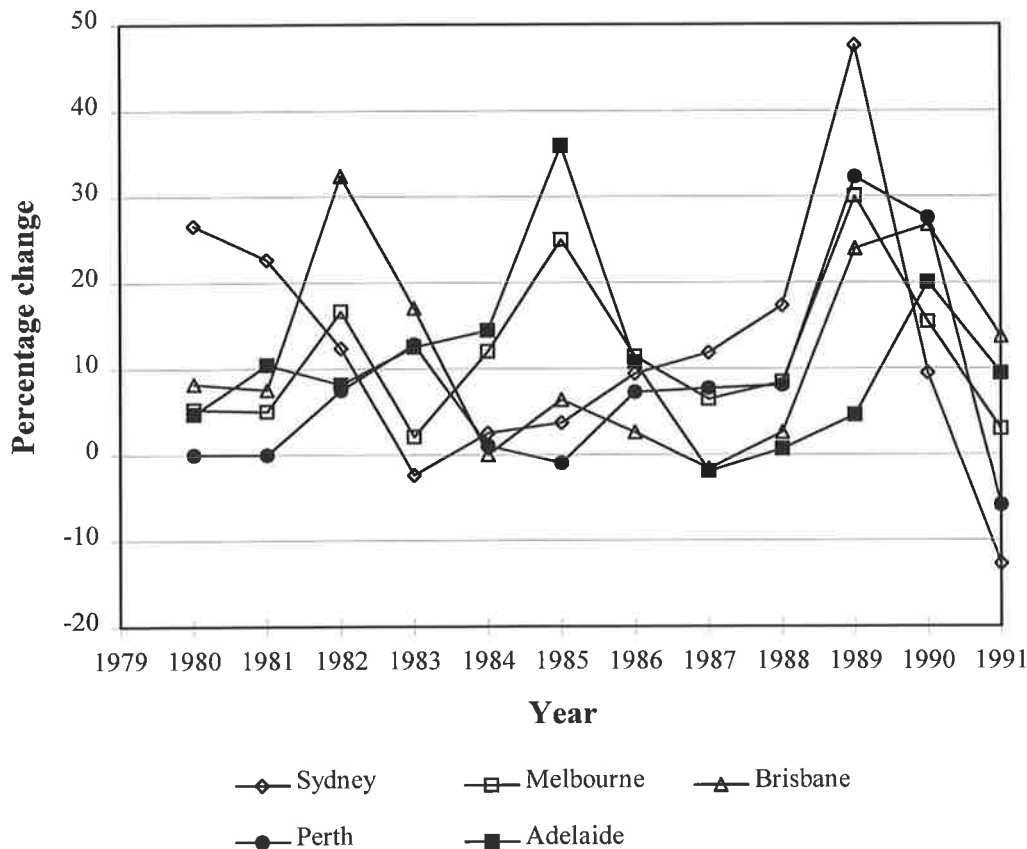
Year	Percentage change in number of sales of houses	Percentage Increase Average House Price	Percentage Increase Median House Price	Percentage change in number of sales of home units	Percentage Increase Average Home Unit Price	Percentage Increase Median Home Unit Price	Percent Change CPI Adelaide
1975	*	*	*	*	*	*	*
1976	49.81	12.16	*	10.55	17.75	*	12.23
1977	24.13	8.60	*	-7.326	6.15	*	11.86
1978	2.34	1.55	*	-20.44	-2.56	*	7.02
1979	7.42	1.89	*	9.1603	3.84	*	7.85
1980	8.24	7.10	*	20.453	0.06	*	9.03
1981	-0.31	7.78	*	4.708	6.81	*	8.99
1982	-4.56	8.79	*	3.429	11.71	*	9.83
1983	10.63	9.80	*	13.813	13.99	*	9.80
1984	16.37	22.42	*	21.566	22.37	*	3.89
1985	-12.34	15.35	*	-7.672	12.23	*	6.82
1986	-9.43	5.05	1.77	-28.66	5.69	5.81	7.95
1987	4.43	2.17	1.34	-2.662	-3.06	-1.87	7.47
1988	19.74	9.52	7.34	27.419	7.19	4.18	6.33
1989	-11.82	13.12	11.06	-5.576	9.16	8.09	7.02
1990	2.32	5.56	7.00	5.5664	11.64	10.33	6.47
1991	-5.42	3.09	6.45	-6.432	4.22	5.47	3.90

Source: Department of Environment and Natural Resources, 1994.

Whereas in the seventies, troughs in sales growth might have been as many as four years apart, their periodicity had reduced to alternate years by the end of the eighties. A similar conclusion can be arrived at from considering the annual percentage change in average price for houses and home units, although in this series the periodicity has not reduced as significantly as for actual sales data, and from a trough in 1978, prices grew consistently to their highest rates for the period in 1984. From there, price growth dwindled each year to 1987, after which prices began to recover, occurring over the next two years, for houses, and three years for home units. As can be seen from Table 1.7, prices for houses were subdued after 1989 and after 1990 for home units.

Figure 1.4 compares the cyclical performance of house prices in Adelaide with the performance of housing markets in the other capital cities. These markets, too, have experienced peaks and troughs at fairly similar intervals to those experienced in Adelaide. On this evidence, the Australian housing market has peaked three times during the 1979 to 1991 period, although both Adelaide and Perth did not experience the same level of market buoyancy in 1982 as occurred in the other markets.

**Figure 1.4: Annual percentage change in median house prices in Australian mainland capitals, 1979 to 1991**



Source: Based on Real Estate Institute of Australia prices derived from Maher, 1994: 10

#### 1.6.4 Mobility trends

In this thesis, details of house and home unit sales in the Adelaide housing market between 1968 and 1991 will be used to derive estimates of residential mobility. The methodology by which mobility can be deduced from sales records will be fully explained in Chapter Two, and the patterns of residential mobility identified from the data will be described and explained in Chapter Four. In setting a context, however, the aim of this section is to provide a brief illustration of the level of mobility occurring in Adelaide and to compare these levels with those which prevail in the other Australian capital cities. There is considerable variation in the nature and rate of residential mobility in Australian cities. For example, between 1986 and 1991, total population turnover for Adelaide was 41.5 percent. That is, for every one hundred persons living in the Adelaide metropolitan area, 41.5 did not live at their 1991 location in 1986. Rather, they might have lived elsewhere in the metropolitan area, elsewhere within the state, in another state or overseas. By comparison, the other capitals recorded higher population turnover rates, but there was considerable variation between Perth, with a level of 50.5 percent and Melbourne with 41.8 percent. In between these two extremes were Brisbane (49.8 percent) and Sydney (43.6 percent) (Maher and Whitelaw, 1995: 14). Regardless of city, however, more than half of all moves are intra-urban moves, made by individuals and households moving within the metropolitan area. This phenomenon is most pronounced Melbourne, Adelaide and Sydney, where 62.9, 61.5 and 60.1 percent of all population turnover is categorised as intra-urban. The level of intra-urban mobility in Perth is 56 percent of all moves and in Brisbane records the lowest level at 51.6 percent (Maher and Whitelaw, 1995: 19).

## 1.7 Summary

The primary task of this chapter has been to show how the aims and objectives of the thesis have stemmed from an environment created by the intersection of residential mobility research, on the one hand, and research which had given priority to the social and economic relations of housing, on the other. When the mutual inter-relationships between the two areas were recognised the exploration of any relationships which might exist between residentially mobile households and their levels of capital accumulation became a possibility. This thesis hopes to realise that possibility.

Whilst a full consideration of the development of the intersection between residential mobility studies and housing studies will be detailed in Chapter 3, a brief statement has been provided in this chapter to establish a context against which the aims and objectives have been presented. These aims will become the foundations on which the analyses in Chapters 4, 5 and 6 will be conducted. The research findings, their implications for theory, policy and further research will be based on data sources and methodologies which will be discussed and assessed in Chapter 2. In Chapter 7 there will be a summary of the investigation, together with a statement indicating the outcomes of each of the aims of the thesis. This statement will identify a number of conclusions as well as indicating some future directions for research.

## 2.1 Introduction

Studies which have investigated house prices *per se* have generally utilised aggregate data, be it based on average or median values or some other indicator of change. This has been an appropriate strategy for studies which have sought to demonstrate temporal changes in house prices at either the city, state or national level. Similarly, it is an appropriate data form for studies which seek to show a relationship between house prices and other factors, for which data are also aggregated. There is a problem, however, associated with aggregate data which ultimately means that any conclusions can only represent an average situation, but will actually mask the fact that an individual's capital gain will depend on factors such as date of purchase, size of deposit and the cost of housing finance (Badcock, 1989: 77). If conclusions are sought with more specificity so that they can relate to consequences for the individual household, then data must be obtained at a unit record level, usually specific to a household. In recent housing research, Thorns (1981: 708) has been the first to acknowledge this need. In his Auckland study he employed temporal valuation data as a surrogate measure of house price change to relate capital gains from housing to labour market position of households and in turn to particular suburbs. Munro and MacLennan (1987: 65) were able to extract data from the Register of Sasines in Glasgow, in which details of price and source of finance for every transaction in Scotland are recorded, in order to base an analysis of intra-urban house prices on actual data. They noted, however, that a major problem with housing price studies was associated with generating a representative sample and sustaining any sample

through time. Similarly, Badcock in an early investigation into the accumulation potential of housing in Adelaide, advised that “[T]he measurement of accumulation in the domestic property market is a major undertaking...(which) should ideally be approached as a longitudinal study. But in the interim one has little choice but to impute capital gains and rates of return from aggregate data on house prices” (Badcock, 1989: 77). Badcock’s earliest research into household accumulation was based upon aggregate sales data (Badcock, 1989) but in a subsequent investigation he created a database based on the housing transactions of a sample drawn from eight suburbs in the Adelaide metropolitan area (Badcock, 1994: 612). Hamnett’s (1984; 1989) studies in the UK have been based on aggregate house price data from building societies to show relationships between levels of house price inflation and labour market changes, and to derive from these relationships implications for inter-regional migration at the household level. Cadwallader (1993: 308), used median values for house prices in major American cities and correlated these with a number of variables to explain house price variation across the United States. Engelhardt and Poterba (1991: 540) used indices of constant quality new house prices, prepared by the US Bureau of Census and Statistics and Statistics Canada as measures of house prices and their relationship with several indicators of demographic change.

Any research can be conducted at a number of levels. The use of aggregate data positions the research at a particular level. There are important implications associated with the use of aggregate data, the most important of which is the difficulty of arguing at the individual level based on conclusions founded at the aggregate level. In the case of housing studies which use aggregate data for house prices and then relate this to the accumulation potential at the household level, there are clear dangers



(Thorns, 1981: 708) that any conclusions may not represent the real situation, and therefore there is a possibility that such conclusions are spurious.

Despite this potential problem at the household level, there have been very few studies which have used data generated at the household, or individual level, in researching house price change and its impact on mobility and accumulation. The reason lies in the fact that empirical data are difficult to assemble at the individual level, for two reasons. Firstly, the data may not exist. In the United Kingdom, for example, there is no central organisation which maintains records of all official house prices at the individual level (Saunders, 1990: 125). As a result, researchers are obliged to use indices prepared by the various building societies in the United Kingdom. There are, however, some deficiencies with these indices, as they generally relate only to houses which have been purchased with a mortgage (Barlow, 1990: 86). The Inland Revenue survey is based on all sales, but is confined to data collected in one week in each year in England and Wales (Fleming and Nellis, 1981: 1109). A further problem with these indices is that they are based on prices data for all types of dwellings. However, as housing is not an homogenous product conclusions based on these data are unable to be controlled for differences between houses and home units, for example, and size of dwelling.

The second reason why research tends to use aggregate data despite a preference for data collected at the individual level is that its collection is difficult (Munro and MacLennan, 1987: 65; Badcock, 1989: 77). Saunders (1990: 41-55, 384), in his three towns comparison, did use actual house price data obtained from a questionnaire survey, but admitted that there were some problems involved with this method, mainly associated with respondents' ability to recall precise details associated with

purchase price and sale price of dwellings they had owned during their housing career. In the present study, there is no doubt about the accuracy of the data, as they have been extracted from databases maintained by the South Australian government as part of its legal responsibility to register prescribed details of all real estate transactions which occur in the State. Nevertheless, the compilation of the three databases on which this study is founded has involved a great deal of effort in terms of accessing the sources and retrieving those data required for the investigation. However, given that the study is concerned with the relationship between household residential mobility and capital accumulation, both processes occurring at the individual level, the data are particularly suited for arriving at conclusions which are real and meaningful, which may not be the case for conclusions based on aggregated data. In this chapter, the main task is to detail the character and quality of the sources from which the data sets have been derived so that the findings of the thesis can be appropriately interpreted. The datasets are the result of a painstaking, and time consuming, data collection procedure which has employed ownership and sales statistics maintained by the South Australian government. The end result is three databases which provide the evidence on which the findings of Chapters 4, 5 and 6 are based.

## **2.2 The Torrens system**

Prior to 1858 property transactions in South Australia were conveyanced under general law (Whalan, 1982: 5-8; Stein and Stone, 1991: 17-26). The system was extremely complex because each time a property was transferred there was a requirement that the history of the property be traced back to the original grant from

the Crown, and that every mortgage deed, release, conveyance and settlement be produced and examined by the purchaser's solicitor to ensure that no outstanding equities existed to affect the title. It was unacceptable to rely on the history of the property prepared by the owner's solicitor at the time of the property's last transfer (DHL, 4 June 1857, C264). Against this background R R Torrens introduced a private member's Bill into the Legislative Assembly on 4 June 1857, claiming that

“...the existing law relating to the transfer of real property is complex and cumbrous in its nature, ruinously expensive in its working, uncertain and perplexing in its issues and especially unsuited to the requirements of the community” (DHL, 4 June 1857, C202).

Torrens's Bill, the Real Property Bill, proposed to

“...abolish a system irremediably wrong in principle and to substitute a method which [would be]...consistent with commonsense, perfectly feasible and effectual for all the purposes required” (DHL, 4 June 1857, C203).

From the Real Property Bill of 1858 emerged the Torrens Title System, which required, for every parcel of land created, the establishment of a Certificate of Title which was guaranteed by the government. To guarantee the Certificate of Title, the Torrens System insisted that all aspects of a property's transfer be registered with the Registrar-General of the Lands Title Office. Purchasers of property would need to submit details of the transfer and any associated encumbrances before a Certificate of Title, confirming every aspect of the transfer, was issued. Whenever details of the Certificate of Title changed, such as a mortgage being discharged or a property being transferred to a spouse after the death of an owner, these details were noted by memorial on the Certificate of Title.

The Torrens system enabled any enquirer, at any time, to ascertain the legal status of any property simply by viewing the title with its various memorials relating to transfer, mortgage, discharge of mortgage, encumbrances, leases and caveats. It upheld the claims Torrens made for it by increasing enormously the efficiency with which property transfers occurred, and was soon adopted by Queensland in 1861, Victoria, Tasmania and New South Wales a year later and Western Australia in 1874. The Northern Territory adopted the system in 1886 and the Australian Capital Territory in 1925 (Whalan, 1982: 8-9). As well, the system was subsequently introduced to many countries throughout the world.

In creating the Torrens system a database containing substantial amounts of socio-economic data was created. Not only does the Certificate of Title contain a wealth of data, but Transfer documents provide name, address and occupation details for both vendors and purchasers as well as the price paid for the property. Mortgage documents describe various arrangements entered into by the purchaser and the mortgagor, including details of the amount borrowed, interest rate, repayments and period of repayment. However, the research potential contained in this database remained latent and untapped, mainly because of procedures employed by the Registrar-General. As documents associated with the Real Property Act are deposited at the Lands Title Office, they are given a document number and filed in order of receipt. In 1994, the Lands Title Office housed nearly 9 million Real Property Act documents, all in order of lodgement, with the result that all documents associated with a particular property transfer are not necessarily lodged successively, may not even be located relatively close to each other, and some may not be lodged until some considerable period after the others were lodged due to delays of various kinds.

Therefore, although each of these documents is available for public perusal, the difficulty confronting any researcher wishing to utilise this significant database lay in locating documents relevant to their investigation.

### **2.3 Automating the Torrens system**

In 1979 the Department of Lands, which was responsible for the Lands Title Office, moved to automate property transfer procedures by creating a Land Ownership and Tenure System (LOTS). This was to be a multipurpose database, gathering data from a number of sources, centralising it in one comprehensive recording system and making the data available on-line to various users, including government departments and agencies, banks and finance companies, land agents and brokers, solicitors and other interested parties. LOTS comprises a number of separate systems, each with its own authority to input data and update files, but which are integrated by the interdependence of the systems (LOTS, nd: 1). The seven systems of LOTS are:

- Automated Registration Indexing and Enquiry System (ARIES)
- Title System
- Valuation System
- Sales History System
- Land Tax System
- Debtors Ledger System
- Government Property Register

ARIES receives all Real Property Act documents as they are lodged at the Lands Titles Office, at which point a bar code is affixed to each document to facilitate the recording of their progress through the registration process. In this system, details from the documents are entered into the system, validated against the LOTS database and used to update ARIES in real time.

The Title system is the basic component of LOTS. It contains a title file, plan and/or allotment index and ownership files, and other selected information for every land parcel, in South Australia, regardless of whether the land parcel be freehold, Crown lease, reserve or unallotted Crown land. The system monitors all ownership and title changes, new land parcel creations and maintains current addresses on the ownership files. Ownership and mortgage data are fed automatically into it from ARIES, and other changes emanate from other government sections. The title system is updated each night.

The Valuation System is used to provide valuation data for each of the state's 660,000 rateable properties, each of which are uniquely identified by a 10 figure valuation number, and it provides these data to other government departments, local government authorities, the private sector and the general public. Within the Sales History System an historical record of property sales throughout the state is maintained, based upon input from ARIES and the Valuation System.

The Land Tax system is designed to calculate, maintain and facilitate the collection of land tax, whilst the Debtors Ledger System's main function is to create accounts for outstanding debts associated with occupancy of Crown land. Finally, the Government Property Register assists the management of government owned property.

The key objective of the Land Ownership and Tenure System was to make possible the automation of Certificates of Title, and this occurred in May 1990, when computerised Certificates of Title were issued in South Australia, using an eighth component of LOTS, the Torrens Automated Title System (TATS). From a scholarly viewpoint, LOTS has provided a very convenient pathway into a mass of socio-economic data which had previously been inaccessible, mainly because each record of

the database was filed on an “as received” basis. Through LOTS, any researcher can make very efficient and systematic enquiries of the database to utilise its information. With LOTS, data of a kind which have been collected since 1858 have been made available for analyses.

#### **2.4 LOTS and scholarly enquiry**

The present author used LOTS data to investigate aspects of mortgage commitments by home and home unit buyers in the Adelaide metropolitan area during May and June, 1986 (Harris, 1989). Through LOTS, a Sales Report, providing name and address details of vendor and purchaser, purchase price and numerous other details, was generated for all houses and home units sales which had occurred during the study period. Key elements of the Sales Report enabled access into other systems of LOTS so that details of size of mortgage and name of lending institution could be obtained for each of the properties which had been bought with a mortgage. The insights into LOTS which this research provided allowed further uses of its data to be considered.

Two significant products created by LOTS are the Sales Reports and the Ownership Lists. Sales Reports are produced each month from the Sales History System of LOTS, and each year the twelve monthly summaries are consolidated into a calendar year Annual Sales Report. These reports provide 28 pieces of information for each sale which occurred during the year. The more significant data for each sale include name and address of both vendor and purchaser, date of sale and price, the address of the subject property, a selection of property characteristics including number of rooms, roof and wall materials, size and number of rooms, style and year of

construction, allotment size and frontage and the actual land use classification and the legal (zoned) use of the property. Sales Reports record sales in valuation number order, and this allows links to be made between them and other outputs from LOTS. In understanding the compilation of the Sales Reports, there are a number of questions which can be asked which have a relevance to the residential mobility process. For example, each dwelling sold represented a household leaving the dwelling and another household moving into the dwelling. Where had the purchasing household lived before moving (or buying) into the present dwelling, and where did the vendor locate after selling the present dwelling? Further, how long would the purchaser remain in the dwelling before selling, and if they did sell, was another property purchased and, if so, where was this new property located and what kind of property was it? The details of the Sales Reports also allowed questions to be raised which queried how much funding owners might bring from their previous ownership(s) into the current ownership, and how much capital the current ownership generated for them to take into any succeeding ownership. These questions lead to a consideration of capital gains, and not only capital gains generated by ownership of a single dwelling, but also capital gains generated by previous and subsequent ownerships. In this way capital gains became linked with mobility, and the research topic for the thesis was established. Therefore, as was indicated in Chapter 1, the present investigation has been encouraged not only by the conceptual links which exist between mobility and house price inflation, but also by the opportunities inherent in the LOTS database. Further, as has been indicated in the introduction to this chapter, this type of investigation might not have been possible in another country, simply because of the un-availability of the type of data which have been compiled in South Australia. It



might be expected, however, that the incidence of systems such as LOTS will be employed increasingly throughout the world by agencies charged with registering real estate sales data, and that the techniques used to generate the data for this thesis can have a wider applicability.

## **2.5 Assembling the databases**

Each year the Land Tax System of LOTS produces an Ownership List, which provides, in surname order, the valuation number, address of owner and property address and Certificate of Title number for each property owned by every owner in South Australia. The link between the Ownership Lists and the Sales Report are the owner's name and the properties' valuation number. Owners' names from the Sales Reports allow access into the Ownership Lists for additional information, and the valuation numbers in the Ownership Lists allow access into the Sales Reports for additional information. Between them, the two products can be used to create additional databases, and for the purposes of this study two were created.

### **2.5.1 Identifying the sample**

Firstly, through utilising a time series of Ownership Lists an ownership history could be created for any owner, showing the portfolio of properties owned in each year of the history. By linking this information to the Sales Reports, additional data could be appended to each property owned, including type of property and other characteristics, date of purchase, price paid and date of sale and price received, where relevant.

Secondly, for any one property it was possible to produce a property history by determining the number of times it had been owned, and the price paid and received

for it at each sale. The production of these ownership history and property history databases is time consuming, and will be elaborated upon later.

As its first step, the research proposal required that a sample population of households be identified, and it was resolved that an existing computer print-out file be used.

This sample had been used in a previous research effort (Harris, 1989) and comprised a Sales Report for all houses and home units sold in the metropolitan area during June 1986. The Sales Report contained 1319 dwellings and therefore, because each sale comprised a vendor and a purchaser, 2638 households, defined as an individual, or group of individuals, who owned a dwelling. However, not all of these sales were considered, and 176 were discarded from the outset because a company, rather than a household, was involved in the sale transaction. A company was defined as a proprietary company, a trust, a government department, semi-government agency, local government authority, or an housing association. In these cases, a company was usually the vendor, sometimes the purchaser, but rarely both vendor and purchaser. The presence of a company in the sale of a property was considered not to be part, or in the spirit, of the residential mobility process and were therefore excluded from the analysis.

Microfiche copies of Sales Reports were obtained for each year from 1978 to 1991, together with a consolidated set of Sales Reports for the years 1968 to 1977. The consolidated Sales Report listed all sales occurring during these 10 years, in valuation number order, so that if any property had experienced more than one sale during the time, all the sales would be grouped together in consecutive date of sale order. Copies of Ownership Lists, also on microfiche, were obtained for each year between 1978 and 1991. These datasets were used in conjunction with the Sales Report print-out for

June 1986 to create two new databases - a housing history file and a housing stock file.

### **2.5.2 Creating the housing history file**

The purpose of the housing history file is to record the property ownership chronology of each of the sampled households. This file would then enable the housing history of any household to be extracted for analysis. In the present context, a household's housing history is defined as those dwellings which it has occupied since entering the ownership tenure, and through which it has moved sequentially as part of the residential mobility process. In this respect, the concept of housing history is different from that of housing career, principally because housing history emphasises the owner-occupancy of a household. Davies and Pickles (1991: 632) refer to the sequence of dwellings that any household has occupied from its formation to its dissolution as a household's housing career. They add that it is the plot of a household's progress through the housing market, regardless of tenure type within the market. This definition has been adopted by Gober (1992: 175) who asserts that a housing career identifies the way in which people change their housing as they progress through their life course. The concept is linked to the family life cycle model and therefore to most residential mobility models and a household's career is influenced principally by changes in its economic resources (Kendig, 1984: 273; Paris, 1993: 52). Housing career considerations would seem to be interested in the changing relation between household circumstances and housing types. Housing histories, in the current context, are interested in ownership and its influence on accumulation, and the consequences of this relationship for a household's location in

an urban area. The term has been adopted simply because of its emphasis on chronology and not through any rejection of the housing career concept. Forrest and Murie (1991: 73) used the same term in the same sense that it is used in this research, as a statement of the dwellings which a household has owned during its lifetime.

They have a preference for this term because the concept of a housing career implies that households consciously plan their mobility from one dwelling to another with the deliberate intention of progression and betterment (Forrest, 1987: 1624). Of course, there are those who believe that this has been exactly the intention of mobile households, particularly since the period of rapid house price inflation at the beginning of the 1980's (Saunders, 1990: 641).

When the June 1986 Sales Report had been used in an earlier research project (Harris, 1989), each property sale had been assigned a four figure reference number. In the present study, this number was assigned to the vendor of the property, and the purchaser was assigned the same number, plus the letter "P". In this way each record in the housing history file could be linked back to the June 1986 Sales Report which provided the sample. The primary task in creating the housing history file was to determine, for each vendor and each purchaser on the June 1986 Sales Report, the details of their housing history between 1968 and 1991.

Housing history details were to be entered on a sheet of A4 paper identified with an appropriate reference number at the top right hand corner. The process took the name of the vendor of the first property in the sample and searched for it in the 1991 Ownership List. If the name were found, then the ownership details for 1991 were recorded - valuation number, address of property and Certificate of Title number - on the A4 sheet of paper. Where the owner's address coincided with one of the property

addresses on the ownership list, the owner was deemed to be an owner-occupier of that property and an appropriate notation was made. If there was no coincidence between the owner's address and that of the properties listed, the owner was deemed to be a land-lord and, again, an appropriate notation was made. In some cases, intuitive judgements had to be made. For example, where the owner's address was a Post Office address a decision had to be made as to whether one of the properties was likely to be the owner's residence. Sometimes, the data suggested strongly that one of the properties might be used as a holiday house, and it would therefore be inappropriate to assert that the owner was a land-lord at this property. If the name were not found on the 1991 Ownership List, then a notation "No Property Owned" was entered for 1991, indicating that the household left the South Australian property market at some point after June 1986. The process was then repeated for 1990, and for each year back to 1978, creating the property ownership record during these years for a single household - the vendor of the first property in the sample. In an identical fashion, an ownership history was created for the purchaser of the first property in the sample, and these details were entered on the reverse side of the A4 sheet containing the vendor's ownership history, and the four figure reference number ended with the letter "P".

This task was repeated for 2 286 vendors and purchasers to provide property ownership details for the period 1978 to 1991. On completion of this task, a number of the histories could be categorised as developers because they revealed that owners were buying properties which were either converted into units or were demolished for units. Thirty-one housing histories were placed in this category and therefore eliminated from the analysis. Decisions were also taken to categorise a further 27

owners as investors, based on the nature of their ownership portfolio, and they too were removed from the analysis, simply because the prime intention of the research was not to investigate the profits of developers, speculators or investors, but to examine an important urban process - residential mobility - and to identify any bonuses and/or costs associated with the process accruing to individual householders. The impact of these deletions on the database is detailed in Table 2.1.

**Table 2.1: Establishing the valid records in the database**

Number of sales in June, 1986	1319	
<i>less</i> Sales involving a company	176	
Number remaining sales	1143	
<i>multiply</i> by 2		
Number of households for which housing histories are to be completed	2286	
<i>less</i> developers	31	
<i>less</i> investors	27	58
Number of households for which sales data to be obtained	2224	
<i>less</i> histories for which assembly of record difficult <i>or</i> sales data missing	50	
<i>less</i> duplicated histories	132	182
Number of histories in database	2042	

The information extracted from the Ownership Lists only provided data on how many properties a household owned and where they were located. Determining what kind of properties were owned, when they were bought and sold and their transfer price required another stage using data contained in the Annual Sales Reports.

Each of the remaining ownership histories contained information to identify the period when specific properties in any history had been purchased and/or sold, but to determine the price paid and/or price received for these properties required access to the Annual Sales Reports. The link between the Ownership Lists and the Annual

Sales Reports was the valuation number, and this was used to discover the price involved each time a property was added to, or removed from, each housing history. Normally, the Sales Reports provided additional data, and if these were available they were recorded. Where-ever possible, date of sale, number of rooms, condition of dwelling, roof material, wall material, area of dwelling (m<sup>2</sup>), year of construction, style of building, description of dwelling, land use classification (actual use of the land) and planning zone description (legal use of the land) were recorded. These data were recorded on the A4 sheets in red to ease the subsequent identification of this information. Sales Report data were obtained for more than 3700 properties identified in the housing histories. Furthermore, during this stage the consolidated Sales Report, 1968-1977 allowed ownership details to be extended to one of two possible conclusions. For any property owned at 1978, the consolidated Sales Reports 1968-1977 could be used to determine the date at which the property had been purchased between 1968 and 1977, together with other relevant sales data, such as zone and house description. If the consolidated Sales Reports contained no reference to the property, it could be asserted that the property had been purchased before 1968. Hence, this survey is based upon ownership data relevant to the period from 1968 to 1991.

At this point a further 50 housing histories were discarded from the analysis either because difficulties of various kinds had been experienced in assembling some ownership histories from data in the Ownership Lists or because full sales data could not be obtained from the Sales Reports for some properties. Furthermore, a number of histories had been duplicated, because individual households appeared on the June 1986 Sales Report on two or more occasions. These households were a sizeable

group of 132, which had bought and/or sold more than one property during the month. As double entry of duplicated histories into the database was pointless, these records were deleted from the investigation. The various reductions which have been made to the number of households which were potentially available to the investigation have been detailed in Table 2.1.

### **2.5.3 Creating the housing stock file**

The housing stock file was created to investigate the sales turnover record and capital gains performance of the dwellings which comprised the June 1986 sample. Each of these dwellings were bought and sold during June 1986 and each of them therefore appears as an entry on their respective vendor and purchaser housing histories. It is also possible that some of these dwellings were subject to sale before and after June 1986. The housing histories of vendors identified the fact of a previous sale, together with the year in which it occurred, whereas the housing histories of purchasers identified the fact of any subsequent sale and its date.

For ownership changes before June 1986, the Sales Reports could be accessed to discover the name of the person from whom the property had been purchased. Then, that person's period of ownership of the dwelling could be traced by systematically working back through the annual Ownership Lists until no record of ownership of the property was found. The year in which ownership last occurred was then used to enter the Annual Sales Reports to determine the name of the vendor on this occasion. This process was used to determine ownership changes back to 1978, the first year for which Ownership Lists were produced. However, the housing history could be extended back to 1968 using the consolidated Sales Report for 1968 to 1977. To



ascertain ownership for any property between 1968 and 1977, it was simply a matter of using the property's valuation number, obtained from the 1978 Ownership List, to locate it in the Sales Report. Any sales which had occurred in the ten years from 1968 would be consolidated together in descending date of sale order. If Sales Reports from 1968 to 1991 had been consolidated, the task of creating the housing stock file would have been much simpler, as all sales of a given property during the period would have been located together in a single Sales Report.

At each change of ownership, Sales Report data for date of sale and sale price data were recorded, together with number of rooms, condition of dwelling, roof material, wall material, area of dwelling (m<sup>2</sup>), year of construction, style of building, description of dwelling, land use classification (actual use of the land) and planning zone description (legal use of the land) if it were available. In a similar manner, using information from the Ownership Lists and the Sales Reports, each dwelling's ownership changes after June 1986 were detailed, except that in this case the annual Sales Reports provided the names of persons to whom the dwellings were sold. At each ownership change after 1986, data were recorded to match that taken for the pre-1986 owners.

Where a dwelling had existed before 1968, the procedure allowed the "pre-1968" owner, and all subsequent owners, to be identified. Where a dwelling had been constructed after 1968, the procedure allowed the first owner of that dwelling to be identified, and also enabled the sales history of the land on which the dwelling had been built to be recorded, either back to its "pre 1968" owner, or back to the time at which the allotment had been created from broad acre rural land.

The concept of the housing history and the housing stock files has been described earlier in Figure 1.1 of Chapter One. The housing history file contains all the properties which a household has owned during its housing career. These properties may include houses and home units which were occupied by the households or dwellings and other properties which were used for investment, recreational or leisure purposes. The housing stock file contained details on all ownerships of an individual property, particularly those details concerning the price paid and received by each owner, and the duration of each ownership.

The data for the housing stock file were recorded manually on the same sheets of A4 paper which held the housing history file data. Assembling this mass of handwritten information required 620 hours of laborious microfiche work to extract the relevant material from the Ownership Lists and the Sales Reports. The next two stages, data entry to create two computer files - the housing history file and the housing stock file - took another 242 hours. Each file was created in an SPSS Windows environment, and most of the findings in the thesis are based on analyses executed by SPSS and Microsoft Excel software packages.

#### **2.5.4 Coding the housing history file and the housing stock file**

To enable computer based analyses of the data contained on each side of the more than 1 000 A4 sheets, their information needed to be converted into two sets of systematic code, one for each of the files. For the housing history file 39 variables were identified with each variable defined by one or more characteristics. Each of the variables was given a name, or a label, and each of the characteristics of any variable was assigned a number value which, in SPSS terminology, became the variable value.

The variables, and their variable values, were then used to translate the details of the housing history file onto a computer file. Full details of the variables employed in creating the housing history file, and their values, are presented in Appendix 1. In an exactly similar fashion, the housing stock computer file was compiled. In this case there were 38 variables, and their details, together with a description of their characteristics, have been presented in Appendix 2. For both Appendix 1 and Appendix 2, there is attached a comprehensive set of notes which fully explain the meaning and interpretation that has been placed on certain variables in each of the files. For those variables whose description is virtually self explanatory, no notes have been provided in the appendices.

## **2.6 Some definitional approaches**

The preceding sections have detailed the methodologies employed to create the databases which provide the essential foundation for this research. However, the interpretation of these databases also depends on the definitions assigned to a number of key concepts. These definitions are fully explained in the relevant sections of Chapters Four, Five and Six. However, several definitions of key significance to the thesis are:

- **Household.** A household is a single person or group of persons who have purchased real estate (typically a house or home unit) in South Australia between 1968 and 1991.
- **Mobility** is defined as the movement of a household from one owner-occupied dwelling to another owner-occupied dwelling (see Section 4.4).

- Distance. To measure the distance moved by mobile households, the study has employed straight line distances between the origin dwelling and the destination dwelling. Each suburb in the metropolitan area was assigned a geocode, and when these geocodes were applied to Equation 4.1 (see also Appendix One), the distance moved by a household could be computed.
- Capital gain. The measure employed uses Australian Bureau of Statistics Consumer Price Index (CPI) data to convert all house prices to 1989/90 values. The difference between selling price and purchase price represents capital gain, which was annualised by dividing by the number of years the household had owned the property (see Section 5.2).
- Equity release. The procedure to compute this concept involves deflating the price of any new dwelling purchased by a household back to the year they purchased the house they are selling and taking the difference between the deflated value and the purchase price of their present house. A positive value will indicate equity release and a negative value will indicate a reinvestment of accumulated equity into the new dwelling (see Section 3.4.5)
- Sectors, zones and mosaic regions are spatial units employed to describe the spatial aspects of mobility and the generation of capital gains in the Adelaide metropolitan area. Eight sectors, centred on the Central Business District, have been used, as well as eight zones, based on distance from the CBD. Each zone is five kilometres wide. The intersection of sectors and zones has created a spatial unit called a mosaic region. Each spatial unit is comprised of discrete postcode areas, and their full definition, together with an indication of the postcode areas which fall within their boundaries has been fully explained in Appendices Four, Five and Six.

- Upgrading. Although there are a number of approaches to defining the concept of upgrading, the thesis employs a measure based on the area, in m<sup>2</sup>, of a household's origin dwelling compared with its destination dwelling (see Section 4.5 and Appendix One).

## 2.7 Summary

South Australia has a proud history associated with pioneering initiatives to facilitate the transfer of property from one party to another. In 1975 it added to this record when the Lands Titles Office of the then South Australian Lands Department set upon an ambitious programme to automate its procedures. In so doing, it made available to scholars a dataset which had previously been nigh impossible to access. Real Property Act documents, associated with the transfer of property in South Australia, contain a wealth of socio-economic data, and have always been available for public perusal. However, the means by which these documents were stored, in strict receipt order, meant that locating relevant documents often involved tedious manual searching procedures. The establishment of a computerised Land Ownership and Tenure System (LOTS) in 1975 meant that the rich database of the Lands Title Office could be accessed electronically, thereby reducing the tedium, and near impossibility, of previous search procedures involving the database. The output of a number of components of LOTS has been used to create a unique dataset to analyse some of the relationships between residential mobility and capital accumulation, and this chapter has been primarily concerned with detailing the mechanics which have been employed to produce that dataset. Essentially, data for a sample of households, drawn from those which purchased a home or home unit during June 1986, have been

assembled into two files to allow two discrete analyses to be undertaken. The housing history file was designed to facilitate investigations into the movement of households within South Australia, and the kinds of capital gains which might accrue to these households as a result of ownership. The second file, the housing stock file, has been constructed to investigate the performance of the actual housing stock in terms of its temporal capacity to generate capital gains for its owners. Relevant data for these files were extracted from LOTS output, particularly its Sales Reports and Ownership Lists, and coded against selected criteria. These two databases are somewhat unique, in that they provide data for a range of variables, at the individual household level, which have previously been difficult, if not impossible, to assemble in the past. They will be employed to examine the capital gains performance of households, as they move from one location to another, and the temporal performance of individual houses and home units, with each analysis seeking to report on local patterns, issues and implications, rather than those which might derive at the macro level. In Chapter 3 the literature exploring mobility and accumulation will be examined so that the present investigation and its research avenues, which were detailed in Chapter 1, may be positioned relative to existent theory and findings.

### 3.1 Introduction

The literature reviewed in this chapter is, in the main, confined to that produced since the late seventies, but in order that an appropriate context be established there is a brief consideration of relevant research during the preceding two decades. Most of the latter relates to residential mobility, as the investigation into wealth accumulation through home ownership did not commence until Saunders' work of the late seventies. However, there are a number of somewhat oblique references in the early mobility literature to the potential role of capital gains in driving the intra-urban mobility process, and these will be highlighted. The aim of this chapter is to position the current research project within the relevant body of literature and to show how the efforts of urban sociologists and economists, on the one hand, and geographers and demographers on the other, have explained the residential mobility process.

Accordingly, this chapter will establish the reasons why households move and, more importantly, the implications of these moves for urban structure, policy, and equity issues between the various groups owning homes. It will also delve into a number of important areas including the relationship between capital gains from housing and social cleavage, labour markets, housing markets, space and time, and how each of these factors impacts upon the mobility process. Further, it will consider the various measures available to quantify capital accumulation through ownership and the range of problems associated with measuring this phenomenon.

### 3.2 Early mobility research

No review of residential mobility can start without mention of Rossi's pioneering work *Why People Move* (1955), in which the mobility process is conceptualised as principally based on the notion of "dissatisfaction" which in turn is established by changing characteristics of households, usually associated with transition through stages of life cycle. For Rossi, the choice of any new dwelling is made on the basis of the household's needs and mobility reflects "adjustments" made in response to these changing needs. His work established the pattern of investigation for the next decade during which most research was generally descriptive and sought to discover who moved, together with where and why they moved. In this sense, the research was extremely geographical, except that in these early years the research omitted to investigate the implications of residential mobility, but this early oversight was soon redressed.

Within this research effort two broad approaches could be identified. There was the macro, or ecological, approach, which used aggregate data, often from censuses, to define and explain intra urban movement from origin to destination locations. The attraction of this line of enquiry lay in its predictive power and, therefore, utility for policy makers. The various models (Huff and Clark, 1978; Varaprasad, 1980) developed could predict the dynamism of household flows and the consequences these have for population size and composition and therefore urban form and structure.

These studies emphasised the role of space, especially in terms of migrant flows, and neighbourhood and urban structure changes. This was neglected during the late seventies and early eighties, but was re-emphasised in more recent times as various commentators (King, 1990: 358; Maher, 1994:17; Badcock, 1990: 363; Badcock,



1994b: 284) stressed the role of location, and its relationship to housing price, in generating enduring wealth for home owners.

Although aggregate analyses were useful for policy purposes, they were limited in their ability to explain why mobility occurred. To provide these kinds of answers required data to be gathered at the individual or household level, and thus the micro approach to mobility enquiry was developed which tried to answer questions the macro approaches could not answer, especially relating to the motivation behind the flows. Therefore, these investigations were usually directed at the individuals responsible for the behavioural decisions which caused the flows (Clark, 1982: 29).

The early behaviouralists engaged in rigorous analyses, involving longitudinal studies and housing histories to demonstrate that frequency and timing of moves could be related to the household's stage of the life cycle. However, stage of the life cycle alone could not fully explain the propensity to move, and a new line of enquiry developed which considered the role played in mobility by socio-psychological influences. This approach explored concepts such as mental maps, stress, perception and information processing and their relationship to the mobility process (Wolpert, 1965: 162; Munro and Lamont, 1985: 1332).

The behaviouralist approach to residential mobility was threefold (Clark, 1982: 29), involving explanation, an examination of constraints on relocation and consideration of the contexts within which mobility occurred. Explanation revolved around a set of hypotheses based around models associated with demography, stress, housing expenditure, and search procedures.

Demographic models sought to explain residential mobility by emphasising the decisions of various cohorts through the demands they created for particular types of

housing. These models considered the influence of household age, socio-economic status and ethnicity, or racial composition, on the propensity to move. With time, other factors, including the impact of decreasing size of household and single person household, were incorporated into the models. The relevance of this latter group not only for mobility but also for its impact on capital accumulation through house price inflation was identified by, Rudel and Neaigus (1984), Rudel (1987), Linneman and Megbolugbe (1992) and Maher (1994).

The emphasis on household characteristics and the relationship of these to housing needs led several investigators to incorporate the concepts of satisfaction and dissatisfaction into the model. Speare and his associates believed that residential satisfaction was a major intervening variable in explaining mobility and developed an index of satisfaction based on questions relating to respondents' housing, neighbourhood amenity and locational characteristics (Speare et al, 1975: 207-211). This represented an advance on Rossi's concept of dissatisfaction, in that it acknowledged that a household could become dissatisfied with its location, or environment, as well as its dwelling. Speare et al reported a strong relationship between residential satisfaction and the wish, or desire, to move, although the relationship was not strictly linear. Nevertheless, they believed that their results provided substantiation for a stress-threshold theory of human mobility as proposed by Wolpert (1965), Brown and Moore (1970) and Clark and Cadwallader (1973), with the qualification that although a desire to move was different from an intention to move, it provided a strong indication that the household would give some consideration to moving (Speare et al, 1975: 230). In a similar vein, Newman and Duncan assessed the impact of the house and its environment on a household's

mobility, without discovering a relationship between dissatisfaction and mobility.

Almost in surprise, they reported that “(T)he most startling result of this analysis is the generally minimal total effect of housing and neighbourhood problems on actual mobility...” (Newman and Duncan, 1979: 155). One of the difficulties with the dissatisfaction model is that it assumed that satisfied households would not move, despite the possibility that a move for these households may contain considerable economic benefits. It also assumed that satisfaction could only be obtained by movement, although it had been suggested (Brown et al, 1970; Moore, 1972) that a number of possibilities existed to increase “place utility” without changing residence. Further, there was a curiousness about a model which was driven by “satisfaction” and did not consider other factors such as age, duration of residence and, most significantly, income (Quigley and Weinberg, 1977: 48). When income effects on mobility were considered, differing impacts were reported, ranging from assertions that movers had lower incomes than non movers (Abu-Lughod and Foley, 1960), to an inverted U-shape relationship between mobility and income, with middle income households having the greatest mobility, to results which suggest that mobility decreases with increasing income (Quigley and Weinberg, 1977: 54).

Some time later, a re-examination of Speare et al’s work reported that the concept of satisfaction only works partially as a predictor of mobility and that it was more significant in making people think about moving residence (Landale and Guest, 1985:217). It seemed that more significant processes, associated with constraints to relocation (Clark, 1982: 35; Quigley and Weinberg, 1977: 47) and with household’s achieving life time goals (Landale and Guest, 1985: 205), were at work and that these made it unreasonable to expect satisfaction to be closely related to actual moves.

The difficulty with satisfaction models in explaining mobility was that although dissatisfaction could be demonstrated it could not be associated statistically with mobility. A new approach developed in which dissatisfaction became housing stress, which developed with time spent in a given dwelling and was caused by changes in family circumstances and the house's environment. Simultaneously, other factors developed, and these established an inertia which operated to keep the household at its present location. In this stress-inertia model, a household's probability of moving became a trade off between the stress of the location and the inertia of factors which bind the household to its current location (Clark, 1982: 32). But if stress, or satisfaction or dissatisfaction were not principal factors in explaining mobility, what factors affected inertia? What factors worked to reduce inertia and caused the household to consider a move?

It was contended (Hanushek and Quigley, 1978; Quigley and Weinberg, 1977) that a housing disequilibrium model could be employed to better explain propensity to move. For any household, an equilibrium housing situation existed when it was satisfied with its housing, but when its housing became unsuitable then a disequilibrium situation would develop, causing the household to relocate so as to restore housing equilibrium. Whereas preceding models had tended to emphasise sociological factors to explain the mobility process, this model adopted an economic explanation for mobility which recognised the dynamic role of the housing market in which the price of housing could change in relation to other goods, thereby creating consumer demand which would lead to mobility. In these conditions, housing needed to be regarded as an investment, and in this light there would be times when a change would need to be made in the interests of the investment's financial performance.

Furthermore, it highlighted the role of the household's economic dimension in mobility considerations, because if consumers were moving to newly built homes they must have access to funds, through either personal equity or mortgage finance, to facilitate the move. A third factor impacting upon disequilibrium was changes in the cost of transportation and the influence this has on accessibility.

This model asserted that households would move when their housing did not suit their needs, and in this respect is very close to that proposed by Rossi in that instead of life cycle changes causing mobility it is "utility maximisation" which drives the mobility process (Clark, 1982: 33; Quigley and Weinberg, 1977: 57). Its explanation of mobility is simple:

"If the dollar value of the benefits derived from moving to a new dwelling unit exceed the costs associated with that move, a household will be more likely to move" (Quigley and Weinberg, 1977: 56).

The model is representative of a new direction in mobility research which emphasised household economic considerations as likely to be paramount in explaining residential mobility. The surprise is that it took so long to consider this as the driving force of mobility, particularly given that labour market economists had always used economic factors to explain inter-regional labour mobility and Alonso (1964) and Muth (1969) had, during the sixties, proposed models of urban location and housing markets which recognised the influence of economic factors in a range of decision making processes. Further, Grigsby (1963:79) had argued against the conventional wisdom and suggested that, in principle, mobility should be affected by the price and availability of housing, and had also cast doubt on the trading up phenomenon associated with

stage of life cycle models by demonstrating that whilst the majority of movers did move to a dearer dwelling, others moved “sideways” and downwards.

Near the end of the seventies a number of studies suggested that whereas life cycle could be correlated with mobility, the causal factors involved remained to be elaborated. Although the impact of life cycle events on mobility was important

“...they are not a sufficient explanation of that mobility” (Coupe and Morgan, 1981: 213)

and the observed relationships between life cycle events and mobility were

“...largely a result of changes in income and accumulated wealth” (Bonnar, 1979: 83).

Explaining residential mobility was becoming more complex and it was clear that

“...people act not only on their attitudes and preferences, but also because they are part of ongoing webs of social relationships” (Landale and Guest, 1985: 218).

The social relationships within which households exist create a series of contexts each of which potentially influence the household’s propensity and ability to move, and these contexts create the second and third lines of enquiry for behaviouralists interested in residential mobility.

The ability to move at will is not available to all households. Instead, households can find themselves subject to mobility constraints, and the assessment of constraints to mobility has become a second investigative avenue for mobility research. There are individual and institutional factors which operate to restrict the propensity of households to move within urban areas. For example, where an institution engages in redlining certain districts as poor investment propositions and encouraging investment in others, the mobility process is compromised for certain households and encouraged

for other household types due to differential availability of finance (Boddy, 1975: 58). Alternatively, there may be households whose family life cycle position presses for a move to a different housing type but this does not occur because the housing system cannot distribute resources according to need (Murie, 1974: 119). Further, government policies which rationed housing finance and made mortgage queues (Meen, 1989: 240) a general feature of housing markets in countries like Australia, New Zealand, Canada and the United States acted to constrain mobility. When housing finance was deregulated in these countries during the eighties a new dimension was added to the factors which worked to motivate households to move. Until their lifting, these constraining influences in the housing market created the phenomenon of the “urban gatekeeper”, where the decisions of rental managers (Hamnett and Randolph, 1988: 380) and bank managers (Smith and Thorns, 1980: 7) constrained individual household’s access to rental accommodation or to ownership tenure. There is, in these observations, the earliest hints of the role played by markets and capital shifting on mobility, and these issues would soon be developed by others. There were other constraints, and a number of them were bundled into a single group called transaction costs of moving and included the actual costs of shifting a household’s possessions from one location to another, as well as the collection of fees and charges levied by individuals and organisations associated with the sale and purchase of property. These costs meant that a household could be dissatisfied with its present location but not move, a prospect for which the satisfaction model did not allow. Moreover, the role of housing information could be regarded as a constraint on mobility due to the role it played in creating any feelings of “disequilibrium” with a household’s present location. If housing information were not accessed for its

information on ruling prices and the establishment of advantage or otherwise for the household if it were to move, then the household remains “satisfied” with its location and according to the satisfaction model of Speare (1975) it will not move. However, if a household avails itself of information, and on the basis of this recognises advantage for it in making a move, then the household will move despite it being “satisfied” with its current location. The advance of the economic model over the “satisfaction” model is that it offered a means by which a “satisfied” household could shift, whereas the Speare model asserted that a “satisfied” household would not shift. A third line of enquiry into residential mobility developed during the latter part of the seventies and further emphasised the role of filtering and trading up, and developed the housing market (Clark, 1982: 39) concept to explain mobility. Filtering was argued to be a consequence of trading up, which involved wealthier buyers moving out of housing they considered to be obsolete, and buying into newer, more modern and more expensive housing. In the process of trading up, their mobility created a housing vacancy which was filled by lower income households and it is from this sequence of events that the filtering concept has arisen. Filtering is a two dimensional concept whereby households progress up the housing scale and houses filter down the social scale. Significantly, filtering implies changes in occupant characteristics, dwelling quality and price (Jones, 1978: 551) because it is related to the ageing of dwellings. As a dwelling ages it declines in physical quality and value, and therefore becomes more attractive to lower socio economic groups. It is important to recognise, however, that filtering, which implies change (Bourne, 1976: 140), is not the same as mobility. Usually, mobility occurs in the absence of filtering, but when the two occur simultaneously the outcome is neighbourhood evolution and a consequent



modification to urban structure. Mobility which involved the incoming household having the same characteristics as the outgoing household does not cause change, and therefore filtering has not occurred. With time, and the ageing of the housing stock, there will be a transition and incoming households will differ from those leaving, and this will allow filtering to occur. Filtering has consequences for suburb, or neighbourhood, change which has been shown to have significant consequences for the mobility process. When gentrification began to occur from the mid seventies, a variation to the filtering model needed to be made because gentrification reversed the direction of neighbourhood change. Gentrification causes specific social groups to filter *down* the housing scale, in the sense that the higher socio economic groups turn to buying aged housing stock in the inner areas. Put another way, gentrification represents reverse filtering (LeGates and Murphy, 1981: 266-267; Gober, 1992: 183). Early studies showed that much intra-urban mobility in Australia is local, with a short distance between origin and destination, and later work tried to establish a link between these observations and the operation of housing markets. Michelson (1977: 317) regarded the housing market as the context in which mobility took place and argued that the market's objective qualities such as type of product available, the concept of supply and demand and the boom and bust phenomenon help drive the mobility process. These characteristics of the housing market meant that it was both sporadic and imperfect and at all times dynamic, so that "the housing construction process and family life cycle create and continuously transform the physical and social fabric of western cities" (Adams and Gilder, 1976: 159). Kendig (1984: 275) regarded the housing market and its processes as relevant to the concept of housing careers, or mobility, because moves could be explained in terms of household incomes

relative to the cost of housing and in terms of market conditions. With time, the role played by housing, and other, markets on mobility would be intensified.

### **3.3 Housing studies**

The 1980's saw an intensification of housing research which shows little sign of abating. Much of this research was initiated by a massive shift in tenure status in Britain which occurred from the late sixties, and which prompted some commentators to suggest radical class changes were possible as a consequence. These possibilities were also considered in other western countries and the debate around ownership and wealth accumulation from ownership developed. Slowly, the impact of these events on mobility has been incorporated into the research agenda, and this section will attempt to synthesise some of the conclusions reached from the various research efforts.

In Britain there has been steady growth in the proportion of owner-occupied dwellings since 1960, when 44 percent of all dwellings were of this tenure. By 1986 the proportion had risen to 59 percent, increasing to 64 percent in 1991, largely at the expense of the private rental market which had dwindled from 31 percent in 1960 to eight percent in 1986. In the same period, public rental housing expanded from a poor third to a clear cut second most dominant tenure type in Britain in 1986 (Thorns, 1982: 755; Gentle et al, 1994: 189). Government policies in Britain during this time meant that owner-occupier tenure became available to a broad range of the community, and to every occupational group. The developing trend caused some observers to propose that it would obscure the fundamental lines of class cleavage,

erode working class collectivism and absorb the working classes into the dominant ideology (Saunders, 1978: 233).

Although Saunders became the main spokesperson for these views, he did not initiate the debate, which commenced when Rex and Moore (1967) argued that the housing tenure system promoted a system of “housing classes” on the basis of advantage and disadvantage associated with each tenure type, and that an individual’s housing class could influence life chances in the same way as social class. Later, Pahl (1975: 291) asserted that a family could derive more from ownership in a couple of years than from a lifetime of work. Saunders pursued the notion of wealth accumulation through home ownership to develop hypotheses of social divisions and political conflict in advanced economies. Toward the end of the seventies, his view was that owner occupation leads to accumulation of wealth and that this will create interests within the tenure group which are different from the interests of capitalists and the interests of non-owners of capital. On this basis, owner occupation represented the basis for the formation of a distinct political force of “militant conservatives” (Saunders, 1978: 246), a distinct middle property class which had significant consequences for class structuration (Saunders, 1978: 234). Some years later he revised this position, replacing it with the opinion that owner occupation, at least in Britain, may well become a more significant societal force than traditional class alignments because of the differing consumption power it afforded non-owners. He believed that accumulation of wealth through ownership would cause “sectoral alignments” between owners and non-owners sufficiently different to create new social cleavages, or a new fault line in British society, which may well come to outweigh existing class alignments (Saunders, 1984: 203). The relevant point here is that the concept of

capital gains was being investigated for the first time. Significantly, the investigations were being made not by economists, but by sociologists whose interest was to examine the relationship between capital gains from housing and social structure. This interest posed three critical questions. First, was ownership an enduring source of wealth. Second, were owner-occupiers an homogenous economic and political interest and, third, how significant was housing tenure for social cleavage? (Saunders, 1984: 204-205). Answers to these questions were sought by other sociologists during the remainder of the eighties, and their conclusions attracted geographers' attention later in the decade, at about the same time as economists became interested in capital gains to explain the phenomenon of house price inflation. Importantly, all these developments added to the understanding of the relationship between capital accumulation and residential mobility.

### **3.3.1 Explaining accumulation from ownership**

Marxists argue against those who believe that substantial capital gains could be derived from home ownership. They claim that any gains from housing are illusory, caused by inflation and that high interest rates, falling inflation and a stagnant market lower the rate of return to owners. However, they do concede that there could be times when house prices competed favourably against inflation, but there would be other periods when they did not. For example, during the depression of the 1930s minimal demand meant that house prices did not compete with inflation. Marxists have also claimed that the introduction of public transport and motor vehicles operated to reduce demand inflation because the space for housing production could be expanded but still be accessed by consuming households (Edel, 1982: 215). To an extent, this point is

valid, but on the other hand, as long as the rate of return is positive, the owner will accumulate an absolute increase in wealth upon sale of the property. There have been instances in Britain, and other countries, where falling inflation and a depressed housing market have left some owners in a “negative equity” situation, in which the size of their mortgage is greater than the value of their house (Gentle et al, 1994: 191). The Marxist argument is that although an owner may sell for more than the purchase price, the difference is due to inflation, and will need to be expended on a new house whose price has inflated at an equal rate during the period the new owners owned their previous dwelling. In a capitalist system, Marxists say real accumulation by home owners is not possible, simply because of the operation of market forces. Their argument is that housing is a capitalist commodity and as its price rises more dwellings will be constructed so that the producers can capitalise on the increased demand. However, this inevitably leads to oversupply of, and lessened demand for, housing which drives prices back to the general inflation level. The result is that housing prices remain linked to incomes (Edel, 1982: 216; Ball, 1982: 64; Ball, 1985: 32).

The major problem with this argument is that it ignores the fact that virtually everything associated with the housing system is in short supply, be it land, finance or vacancies (Saunders, 1984: 204), as well as the fact that prices can rise relative to income, even over a long period of time. Specifically, in relation to housing, prices can continue to rise without regard to incomes if the supply of land for housing construction is restricted and/or if other alternatives for investment provide more attractive returns (King, 1989a: 455). In addition to these factors, demand can be expected to increase for as long as governments continue to subsidise owner

occupancy at the expense of other tenures. Where real gains can be made from ownership, Marxists assert that they are at the expense of the new buyers, and that, as a group, owners are exploiting each other, and that this has no implications for the establishment of a distinct property owning, tenure based, class.

Marxist arguments notwithstanding, there is within the literature a substantiated case that the accumulation potential of housing for owner-occupiers is real, and that the investment performance of housing has outstripped other forms of investment (Pratt, 1986a: 367). But is the evidence convincing on this point? Have data for a sufficiently long period been assessed to arrive at this verdict? Edel et al (1984) investigated long term housing price trends for Boston over an 80 year period from 1890 and determined that prices only kept pace with inflation. Moreover, these owners would have received a greater return on capital had they invested their equity in the share market. An Australian study reported that over a 15 year period the return to home owners in Adelaide was 5.5 percent per annum, compared with a share market performance of 11.7 percent per annum during the same period (Badcock, 1989: 77; Dunstan, 1996: 109). However, this finding has been criticised for its relatively short time frame, and King (1990; 360) has provided contrary data for Melbourne which supports the notion that home ownership is an enduring source of accumulation. The Australian Treasury has shown that since 1961 house prices, after adjustment for inflation, rose only 10.2 percent, or 0.3 percent per annum (Tomlinson, 1995: 61). In New Zealand, Thorns (1989: 297) is in no doubt that real gains have been made from housing and that the gains were better than those obtained from the share market and other financial institutions between 1961 and 1985. However, the same writer had earlier reported that capital gains from housing were not assured

(Thorns, 1981a: 207). Clearly, by the end of the eighties, the findings on whether ownership represented a source of enduring wealth were variable, mainly due to the sparseness of the evidence (Badcock, 1989: 72). The various issues relating to enduring accumulation through ownership are relevant to this thesis and data have been collected which will enable a number of the stances to be tested with rigour and for significant conclusions to be reached.

Demand for housing often outstrips the supply, causing house price inflation beyond the level of general inflation, but this is the least significant source of wealth accumulation (Saunders, 1978: 245). It is unusual for banks to apply the full effect of inflation, particularly during periods of high, and sustained, inflation, in arriving at their nominal rates of interest applicable on home loans - therefore these loans are charged at below market clearing rates (Meen, 1989: 240). Sometimes the difference between general rates of inflation and nominal interest rates on home loans is such that real rate of interest on home loans is negative (Phillips, 1988: 495). Under these circumstances, owners experience a windfall from ownership and are in fact subsidised by the banks' depositors. For a number of consecutive years during the mid seventies, in Australia, the United States and Britain, real interest rates were negative resulting in substantial increases to the accumulated wealth of owner occupied housing in these countries (Badcock, 1984: 219-220; Dunstan, 1996: 103). The most significant source for real accumulation from home ownership in each of the home owning democracies has been from government policies which provide benefits to owner occupiers at the expense of households in other tenures (Phillips, 1988: 488-492). In particular, tax relief associated with housing is not tenure neutral, with the result that resources have been allocated to owners at the expense of non-owners. In

Australia, the most significant of these is the non taxation of capital gains derived from the sale of a household's principal residence, a taxation advantage to owner-occupiers which also exists in the United States and Britain (Badcock, 1984: 217), provided, in the United States, that the tax payer moves to a new home of equal or greater value or is over 55 years old (Megbolugbe and Linneman, 1993: 673; Wood, 1990b: 811). There are other advantages which are afforded owners at the expense of non owners. In the United States, Canada and the United Kingdom, mortgage interest repayments are allowable taxation deductions (Rudel, 1987: 259; Peiser and Smith, 1985: 346; Saunders, 1984: 203). In the United States, interest repayments up to \$US1.1 million may be deducted on both the principal residence and the second home, and in the United Kingdom taxation deductions for mortgage interest repayments is allowed on the first 30,000 pounds of any mortgage for owner occupied housing (Wood, 1990b: 811). Additionally, local property taxes can be claimed as taxation deductions in the US, and in West Germany owner-occupiers can depreciate their property at 5 percent of the purchase price for the first eight years of ownership, up to a limit of DM300,000 (Wood, 1990b: 811). Within the owner-occupier tenure group, these substantial upper limits for concessions also mean that those who have spent the most receive the biggest advantages, and therefore the system tends to reinforce existing advantages held by those in the best labour market position and in the best housing market position (Champion et al, 1988; Coombes et al, 1991: 187). The value of these concessions to owner occupiers is considerable. For example, in 1972 they represented a transfer of \$US9,000 million from government to owner-occupiers, whilst in Canada taxation exemption for home owners in 1976 were estimated at \$Can1,570 million (Pratt, 1982: 489; Harris and Hamnett, 1987: 174-



175). By 1989, this level of taxation assistance for home owners had climbed to between \$US49.7 billion and \$US51.9 billion (Megbolugbe and Linneman, 1993: 673). In Sweden, 1972 data has indicated that the taxation benefit of mortgage interest payments meant that owners' housing costs were reduced by 33 percent, and this represented an income increase for owners of seven percent per annum (Kemeny, 1978: 319). Australian evidence for 1984-85 has revealed the level of taxation revenue foregone through the non taxation of capital gains at \$A930 million, which represents a subsidy of \$A5.11 per week per owner occupied dwelling (Flood and Yates (1987) quoted in Wood, 1990a: 873).

The non taxation of imputed income stemming from owner occupied housing is untaxed in the UK, Australia, Canada and the United States (Badcock, 1984: 217; Pratt, 1986a: 369; Walker and Marsh, 1993: 1547), but is taxed in Denmark, Finland, Greece, Luxembourg, Netherlands, Spain and Sweden. In Finland, it is computed at three percent of assessed dwelling value, less interest repayments and with properties below a certain level being exempt. (Wood, 1990b: 811). The estimated value of imputed income in Australia during 1982-83 was \$A6.6 billion, and if this untaxed income were taxed at a rate of 30 percent it would yield a taxation return to revenue of \$A2 billion (Williams, 1984: 39; Henderson, 1985: 7-8). Other estimates put the subsidy value of imputed income not being taxed at \$A3.24 billion foregone revenue in 1984-85 (Flood and Yates (1987) quoted in Wood, 1990a: 873). This represented a subsidy of \$A17.31 per week for each owner-occupier in the nation.

### 3.3.2 Housing studies and accumulation - the empirical evidence

Saunders developed a number of significant theoretical propositions concerning the relationship between property and social cleavage and enduring accumulation of wealth. A number of these were subjected to empirical analyses by several researchers. In particular, Thorns (1981a; 1981b) in New Zealand and Pratt (1986a) in Canada, examined aspects of the relationship between property and social cleavage. Pratt confined her work to the impact of home ownership on class and conservatism, whereas Thorns argued for significant links between ownership, labour markets and household mobility. In this respect, Thorns' work provides a number of pertinent considerations which inform this study and which can be further tested using the data which have been assembled here.

Pratt was particularly concerned to test empirically the relationship postulated by Saunders between ownership and political cleavage and political alignment. Although her work suggested that in Canada tenure does influence wealth and political behaviour, she concludes that housing class (that is, tenure) and social class do not overlap perfectly (Pratt, 1986a: 367). The reason lies, possibly, in the diversity of people in owner-occupancy tenure. Voting analyses in Britain suggest that although council, or public, tenants have a bias towards Labour politics, owner-occupiers are neutral as far as voting intentions are concerned. Further, these studies provide no support for the argument that owner-occupancy turns people towards Conservatism (Ball, 1985: 27-28). The main relevance of Pratt's work to this thesis therefore lies in its comments on the issue of capital gains from housing and its measurement. She found no evidence that gains from ownership have been experienced only by the middle classes, a reflection no doubt of the widespread distribution of owner tenure

throughout Canadian society. For example, in 1979, 50 percent of households categorised as working class owned their own home (Pratt, 1986b: 380). Further, between 1970-74, dwellings owned by households in more expensive areas appreciated in value by 75 percent, compared with a 68 percent increase for houses in the least expensive suburbs (Pratt, 1986a: 368). For Pratt, these results were at variance with conclusions reached by Thorns (1981), who claimed that the largest gains were generated by wealthy areas, and by implication, wealthy owners. She therefore argues that there is “hardly a compelling difference”, and refuted Thorns’ claim for a relationship between accumulation and position in the labour market.

These differences raise an important issue for the accumulation debate which centres around how data should be computed to indicate the level of accumulation, or capital gains, and the various approaches will be considered in a later section of this chapter. Thorns used nominal gains in value, not rates of gain as was used by Pratt, and these differences caused the two researchers to interpret their findings differently. As Badcock (1989: 216) states, possibly in defence of the Thorns stance, relative rates are one thing, but they can translate into quite compelling differences when applied to the original investment (Saunders, 1990: 131). For example, if a wealthy owner makes a 15 percent gain on a house costing \$200,000 the cash value of this appreciation is \$30,000, considerably more than the \$7,500 the owner of a \$50,000 dwelling would make if it also appreciated by 15 percent.

Thorns’ interest in Saunders’ theory of a property class was based around a number of questions raised by Saunders, particularly those which asked whether capital accumulation through ownership created a new middle class, and if so, where between the owners of capital and the working classes was it placed? Further, did the

accumulation characteristics of ownership weaken working class solidarity and therefore affect class structure? In addressing these questions Thorns sought to determine whether differentiation existed within a home owning group in New Zealand, by looking for any differences in rates of capital gains between different housing sub-markets. This analysis would enable him to gain insights into the way in which capital accumulation, or capital gains, affects the creation of a property class (Thorns, 1981a: 206), and he points out:

“The analysis of the rate of capital gains achieved by owners of domestic property is not an area which has previously been investigated” (Thorns, 1981a: 207).

Kemeny (1978) had attempted some work at the aggregate level but ignored the role of local housing sub-markets. Thorns, however, could not provide a clear cut identification of a link between accumulation and a developing property class. His conclusion was that there was a range of potential for accumulation within the ownership group and that some owners did better than others. Further, capital gains were not assured and they depended on time of purchase, duration of ownership, location and position within the labour market. In his study of five suburbs in Christchurch, New Zealand, Thorns showed that the middle classes benefited most from ownership and that these benefits reflected existing class boundaries. Moreover, his findings identified a spatial dimension to class, and this was related to occupational status or position in the labour market. Since capital gains were related to class, there was a spatial bias to their distribution within cities and this reflected existing social structures. His major point was that, in opposition to Saunders' thesis, wealth created no new class divisions. What Thorns' work did reveal was a

relationship between accumulation and mobility and a link between gains and position in the labour market. Further, he maintains that

“These data on the relationship between capital gains and mobility raise two further questions. The first is whether people have a conscious housing strategy whereby they move through a number of houses over time to achieve their final housing goal. If such a strategy existed it would be possible to conceive of a housing career existing alongside an occupational career. The second is the extent of housing mobility from low to high cost sub-markets over time and whether the mobility which exists is upward, downward or horizontal” (Thorns, 1981a: 212).

The possibility of a juxtaposition of a household’s housing career and its occupational career encouraged Thorns to pursue the relationship between wealth accumulation from housing and the position of an owner in the labour market, reasoning that

“to explore fully the class dimensions of owner occupation it is thus necessary to examine the connections between income derived from the labour and property markets and the degree of mutual reinforcement which occurs” (Thorns, 1981a: 215).

The second question raised by Thorns is linked to the invasion and succession model of urban development. This model theorised that households would trade up by moving to progressively more expensive housing as they moved from one location to another. The proposition had been considered before (Grigsby, 1963) and was further pursued by Kendig (1984: 276) who found that about 60 percent of households moved to a more valuable dwelling, defined as more expensive by at least 10 percent of the price of the previous dwelling, whilst the remainder either moved sideways or downwards. If ownership generates enduring wealth, then mobility should be accompanied by upgrading of housing, unless households make decisions to release some of their equity in their home for other purposes. Exactly what happens with the

phenomenon as a result of the mobility process can be examined objectively using the data collected for this thesis.

Saunders' sociological interest in capital gains set off a research regarding the relationship between accumulation and mobility. In particular, Thorns' extensive enquiry into the link between the two phenomena has subsequently drawn further researchers into this arena of enquiry. In the following sections the expansion and refinement of these relationships will be examined.

### **3.4 Housing markets**

Housing markets have come to exist in order to mediate the transfer of housing from producers and vendors to housing consumers. The housing market is substantially no different from other markets in that it brings together sellers and buyers (Bourne, 1976: 113). Like the housing system, the housing market has its complement of "actors", including buyers and sellers as well as builders, brokers and policy makers. The development and growth of industrial cities, and the separation of home from workplace which they encouraged, meant that housing markets became a feature of industrialising countries. In Australia, the United States, Canada and New Zealand, housing markets have undergone significant expansion and diversification since World War Two, encouraged by government policies developed to promote housing production and consumption. Housing market expansion during the fifties and sixties has been described as a period of socialised consumption (Saunders, 1984: 209-210), in which cities became consumption artefacts (Badcock, 1984: 134; Harvey, 1985: 210; Harris and Hamnett, 1987: 175) based around low density sprawl and unrelieved consumerism.

There is, however, no universal definition of a housing market and different groups employ different definitions (Paris, 1993: 18). For example, neo-classical economists have a fairly precise definition of the housing market, in which their faith is placed in the perfectness of the market so that supply and demand work to create balanced, and predictable, outcomes. Others argue that housing markets are imperfect mechanisms in which supply and demand rarely operate in harmony (Whitehead, 1991: 872; Linneman and Megbolugbe, 1992: 370). For most lay people, the housing market simply represents the buying and selling of dwellings and the price at which these transfers occur. There are also other markets which are associated with the housing market, and which sometimes become confused with it, such as the land market and the housing finance market, and there are sectors of the housing market defined in terms of tenure - the home owner market, the first home owner market and the private rental market (Paris, 1993: 19).

#### **3.4.1 Housing sub markets**

Housing markets can be defined by their scale, and they can exist at the national, or macro, level and the regional/city, or micro, level. Whether considered at the macro or micro level, any market possesses a number of discrete sub markets. These exist due to the huge differentiation, segmentation and structuring within the housing market, and there are a variety of ways to define sub markets. They can be differentiated in terms cost of housing, and this is the pre-eminent method, or by predominant tenure type - public or private sector rental or owner occupation. Other criteria for identification of sub markets include age of dwellings, type of dwellings predominance of owners versus renters and ethnicity (Bourne, 1976: 119). Other

approaches to defining sub markets have employed the activities of lending institutions and the practice of red lining or blue lining certain districts, in which severe restrictions are placed on lending to buyers wishing to purchase houses located in areas deemed too risky for investment by the lending institution (Harvey and Chatterjee, 1974: 24-25), their ability to generate wealth, or capital gains, and the varying levels of affordability of their housing stock (King, 1989c: 866). In this thesis the sub markets identified are in fact sub sets of the owner occupier sub market, although they can nevertheless be referred to as sub markets. Principally, the study will distinguish sub markets on their ability to generate capital gains for owners, as well as by various attributes of dwellings, such as price, area, and number of rooms. Regardless of the definition employed, the sub market concept is useful because it enables the identification of systematic variations within markets (Paris, 1993: 19). Each of the sub markets can be likened to vessels in which various social, and housing system processes occur and which have significant implications for the city's geography. Indeed, a Glasgow study (Munro and Lamont, 1985: 1343-1344) revealed that 82.7 percent of all moves were in the same "sector", or sub market, of the city, and the 1981 British census indicated that 69 percent of residential moves were less than 10 kilometres (Owen and Green, 1992: 21). In Australia, Bell (1995: 42; 1996: 7) has used census data to show that 24 percent of all residential moves are less than 10 kilometres, with a further third of all moves being between 10 and 30 kilometres. Although the Australian data reflects the low density of housing in Australian cities, each statistic suggests that housing sub markets may act as a form of spatial constraint affecting intending movers.



In support of this view, it has been argued that the residential search procedure is subject to spatial biases, and these can significantly influence the outcome of the relocation process. The search process works to link mobility to markets, or perhaps sub markets, because there is spatial variation in the number of vacancies meeting a household's needs and there is a spatial bias in the search strategies employed by households (Huff, 1986: 209). Therefore, most moves will occur within specific markets, unless there is some form of upgrading occurring, or a household's work commitments cause it to move from one labour market to another, or filtering is at work and the local sub market is undergoing demographic, or structural, change. Generally, it is argued that the housing market in any city will develop "quasi-independent subsections" (Munro and Lamont, 1985: 1348) which will exist for relatively long periods.

Housing markets are intrinsically linked to residential mobility. When a household decides to shift residence, the move is usually effected by the household participating in the housing market and its processes to locate and purchase its next dwelling. The number of times a household uses the housing market to facilitate mobility is relatively low, and in the current study nearly half the sampled household entered the housing market only once during the period 1968 to 1991. Some 30 percent of households have used it twice to shift residential location. Despite this, there are many buyers and sellers at any one time, or during any one year. The number of movers is approximately two times the number of sales, since each sale involves a vendor and purchaser, although sales to institutions and investors do not normally impact on the residential mobility process.

In any one year, only a small proportion, rarely more than 5 percent (Paris, 1993: 22), of the housing stock of any housing market is for sale and, as was shown in Chapter 1, this fairly represents the situation in the Adelaide housing market where (see Section 1.6.3) in any one year about 6 percent of available houses and medium density dwellings will be sold. There are periodic booms and busts in housing markets, as prices rise and then fall in response to supply and demand changes, or market disequilibrium, and policies of government. Housing construction rates are never constant, and there are periodic booms in investment in rental properties which divert funds away from new housing construction. Moreover, the extent of these changes in housing prices can vary spatially, between cities, between regions and within urban areas.

### **3.4.2 Housing markets, accumulation and mobility.**

Thorns (1981) noted some factors related to homeowners' labour market position which impacted upon an owner's propensity to move. Among owners in low status areas of Christchurch he argued that the low interest rate applicable to State Housing Corporation mortgages, which was lower than the rates offered by other lending institutions, acted as a disincentive for these groups to move because if they were to move they would be ineligible for another low interest rate Housing Corporation loan. On the other hand, higher occupational status groups, with rising incomes, seemed not to be as restricted by the lower interest rates and were more prepared to be residentially mobile to both acquire better housing and to take advantage of the accumulation potential of ownership (Thorns, 1981a: 211). Thorns is, therefore, the earliest researcher to postulate a conceptual link between accumulation and mobility,

even though the relationship is restricted to households occupying a relatively high position in the labour market.

At the same time, Thorns' interest in housing markets and labour markets broadened in scale from a consideration of the intra-urban level to the regional level, and provided considerable insight into the relationship between a household's labour market position, housing market position and mobility. He examined labour markets and their relationship to property markets, as well as their modification by global economic changes which occurred from the beginning of the seventies. In a rigorous analysis he described how British labour markets had restructured spatially and how these changes had translated into significantly different opportunities for different socio-economic groups. He then considered the housing market in Britain and was able to determine that it, like the New Zealand urban housing market, was spatially unequal, and that the ability of owners to benefit financially from home ownership was unevenly distributed. Moreover, there was a strong positive correlation between the labour market and the property market, and a household's position in each, and this led to some pertinent hypotheses concerning links between accumulation and mobility.

The first mobility hypothesis related to persons living in regions which had become economically depressed and suffered, as a consequence, a possible lowering of house prices due to reduced consumer demand. Essentially, Thorns suggested that the depressed conditions in some regions resulted in depressed housing prices which prevented owners in these areas from improving their lot through migration to structurally favoured regions and the job opportunities they offered. Were these households to move from one labour market to another, they would need to sell their

existing house, which may mean that they incurred a loss, not necessarily an absolute loss, but in the sense that their level of capital gains from the sale of the property might not be as large as they might have expected had their property market not fallen in sympathy with the labour market. Further, a move to another labour market might involve higher costs of accommodation due to higher housing demand in that area with the result that the household may choose not to relocate. It followed, then, that unemployment in regions suffering persistent economic decline would intensify, and labour shortage was likely to occur in the structurally favoured regions.

Even in the prospering regions, there were mobility consequences. Owners might be reluctant to sell and move to another region for two reasons. Firstly, by selling they may deny themselves potential capital gains by quitting the market before it peaks, and secondly, by leaving the market they may find themselves priced out of it and unable to return to it at a later point. Thorns showed, upon assessment of land and house prices within selected New Zealand urban centres between 1960 and 1987, that labour and property markets were mutually reinforcing and that their impact on mobility was quite clear (Thorns, 1989b: 305). In fact, this was a more categorical assessment than that which he made for the UK. There, he concluded that the property market was more likely to be a reinforcement of the labour market than vice versa (Thorns, 1982: 761). In regions which became economically depressed, the level of unemployment would increase and the property market would slump, and mobility into and out of the region would be stymied. Inward mobility would diminish due to minimal employment opportunities and outward migration was made difficult because owners were tied to their homes through substantial asset depreciation associated with the slumped property market.

### 3.4.3 House price inflation

House price inflation became a common phenomenon in western countries during the seventies and the eighties. A deregulated money supply meant that latent demand for housing could be satisfied, thereby encouraging price increases. However, there is not universal agreement on this point, and Nellis and Longbottom (1981: 12) have argued that the supply of money was not to blame for house price inflation in the 1970s.

There is a view that incomes rose at a rate greater than inflation, especially among some occupational, and socio-economic, groups, and this was a key factor in the housing price spiral which occurred through the seventies (Hamley, 1992: 21; Hamnett and Randolph, 1988: 381-382), with interest rates and the supply side of housing as important secondary factors (Nellis and Longbottom, 1981: 19). As well, there was atypical demand factors generated as the baby boom cohorts began to enter the housing market, which worked to make supply and demand become unusually out of step. However, the most significant development during this period was a changed perception of housing from being regarded as a store of wealth and a hedge against inflation to one whereby housing was a source of wealth through capital gains (Hamnett, 1983: 98). From the late seventies, the upward trending spiral of house prices may have been self sustaining, encouraging home buyers to pay excessive prices in the expectation of earning generous gains at a time when inflation had eroded real earnings on other forms of investment (Phillips, 1988: 495; Case, 1992: 174). In Canada, home ownership rates actually increased between 1971 and 1981 despite substantial increases in house price inflation. This was because the housing market responded by building smaller, and cheaper, housing units to cater for a

segment of the market which might have been excluded from ownership by rapid house price inflation (Harris, 1986: 303). Murie (1986: 352) has proposed another factor, which he calls "leakage", to explain house price inflation. In the United Kingdom, since 1980 the amount of mortgage finance issued has outstripped the personal sector housing investment, with the implication that mortgage funds are circulating within the personal sector and being used for consumption purposes (Evans, 1991: 173). This is a variation to the normal means of achieving "equity release" through either trading down, or by borrowing more than might be needed to buy a dwelling, and then use some of the proceeds from the sale of the previous dwelling to fund consumption. An alternative method releasing equity from a dwelling is not to carry out necessary repairs and maintenance. Landlords, especially, are often accused of milking the capital value of properties in this way, in a process called dissaving. The normal way of dissaving is by borrowing against the value of the asset (Doling et al, 1986:54). These developments, it is argued, worked to establish significant consequences for the trends which occurred in regional variation in house prices, not only in Britain, but also in the US (Cadwallader, 1993; Phillips, 1988: 488; LeGates and Murphy, 1981) and Australia (Maher, 1994).

In Britain, Hamnett (1983;1989) has conducted extensive enquiry into house price inflation at the regional level and shown substantial variation between eleven regions. London is, by far, the most significant housing market, closely followed by the South East, and in these two regions house prices were 25 to 50 percent higher than the national average during the period 1969-1988 (Hamnett, 1989: 349). Other regions which performed well in terms of price increases were the South West and East Anglia. These regions were grouped as the South, and their performance contrasted

markedly with the performance of regions in the north of the United Kingdom. For example, the three regions of Northern, York and Humberside had house price levels 20 to 30 percent below the national average, and experienced a declining trend throughout the six years to 1989 (Hamnett, 1989: 349). Although these patterns remained generally static over the period, there were distinct and regular fluctuations in the variation between regional price differentials, so that the price gap between regions was not a continually increasing phenomenon. The price gap at the end of the period was greater than at the beginning, but this difference did not occur linearly with time. A second characteristic of the performance of housing markets in Britain in this period is that market peaks in one region have not coincided with peaks in other housing markets. Indeed, market lags have been noted, so that the London and South East markets peaked in 1972, the East Anglia market peaked in 1973 and the South West market peaked in 1974 (Hamnett, 1989: 352). Furthermore, this lagging phenomenon in the performance of markets has worked in such a way in Britain that when the processes which produce boom market conditions reached the regions of the north, their housing market performances were almost counter cyclical in relation to the southern markets.

Hamnett's interest in the spatial variation of housing markets concentrated on the processes which caused rapid price rises in the London and South East regions. He showed how internationalisation of capital had caused a change in emphasis from manufacturing to services in a number of key "global" cities. London was one of these cities, and its global significance caused an industrial shift into financial and corporate producer services and an accompanying occupational shift to professional, managerial and technical categories at the expense of the more traditional

occupations. With these changes came changes in income distribution, and a gulf developed between the well paid service occupations and the lesser paid servicing occupations (Hamnett, 1991: 192), with the result that there has been a reorganising of the class relations of cities, and therefore of housing markets. Put another way, western cities began to “disorganise” after 1973, and social and economic processes since then have worked to “reorganise” a number of aspects of cities’ urban structure (King, 1989a: 453; Beauregard, 1991: 93; Daly, 1988: 149). Significantly, there has developed within cities groups with high income and cultural views which impact on their levels and types of consumption. Since 1973 there have been processes working to create a more diverse class structure than previously existed, and these processes have created groups with varying amounts of economic, cultural and social capital (Bourdieu, 1984; quoted in King, 1989a: 453), each of which work to influence levels of housing consumption and housing preferences. Recognising these developments, various actors in the housing system, be they developers, speculators, landlords, institutional lenders, agents, or state planning agencies and other regulatory bodies, have catered for, and encouraged, the consumption tastes of these new groups, with significant impacts for certain sub markets within cities, especially in older, inner city, sub markets, and have created the gentrification phenomenon (Badcock, 1991: 130; Smith, 1987: 165-170).

Importantly, these occupational changes translated into housing market power which ultimately led to increasing social and spatial polarisation within the housing market, so that it was possible to note, simultaneously, changes in the labour market that were matched by changes in the housing market.



Hamnett argues that although these forces are autonomous there is no causal association between the two markets because they are created by two different processes. The origin of the increase in owner occupation tenure in London stemmed from private landlords' decisions to sell because rental income was less profitable than that obtained by developing flats for private occupation (Williams, 1978; Hamnett, 1980; Hamnett and Randolph, 1984). The changes to the tenure structure caused by these decisions created a change of social relations within the sub market as a result of

- increasing income differentials between groups within the sub market
- an increase in the size of one group compared with others
- changes in consumer preferences or tastes (King, 1989a: 445).

Changes in the London labour market were linked to changes in the operation of global capital, and the two markets were "contingently" (Hamnett, 1991: 204) related to changes in household income. This argument is similar to that employed by King, who has said that changes within housing markets are caused by two sets of processes. One involves modification to economic activity at the local, national or global scale labour market, and the other hinges upon changes in social relations (King, 1989a: 445). Thorns took a slightly different view, and argued for a causal link between the two markets in which the labour market "reinforced" (Thorns, 1982: 761) the property market. Although Hamnett acknowledges the work of Thorns as important and commendable, he is not prepared to accept the causal link, saying that housing market position is not something that can be simply "read off" (Hamnett, 1991: 191). The reason for this is that a household is a complex of different labour market participants, and that the housing needs of the household may therefore bear no direct relationship

to the labour market in which each participant is located (Randolph, 1991: 18).

Moreover, inheritance and the generation of capital gains from ownership can blur the relationship between an individual's, or household's, labour market position and their housing market position. What Hamnett says, and others agree (Randolph, 1991: 18; van Weesep and van Kempen, 1992: 981; Hamley, 1992: 21), is that the two markets are related by the intermediary, or mediating, role of households and their income levels, and their ability to pay. The relationship between income and house prices is a significant one. Indeed, Stutz and Kartman (1982: 230) have argued that the income level of a region is a surrogate for a number of cost of living variables, including not only housing but also food, clothing, transportation and utilities. Therefore, although Hamnett's point may be technically correct, it may also be a little pedantic and ignore the fact that labour changes have occurred, that these have modified demand for particular types of housing, that the producers of this housing have recognised this demand, provided accordingly and charged the appropriate price. That the market acts as a filter, whereby the pricing mechanism sifts and sorts different groups into different locations almost insists on a tight relationship between the two markets. If the owner occupiers can be shown to have occupations created by the internationalisation of capital, then I think that Thorns' view is upheld and the relationship is causal, and reinforcing.

In the literature, it has been Thorns who has sought to examine the role played by housing markets, through the ability of property to generate capital gains, on the creation and perpetuation of inequalities. In particular, the critical question is whether

“...life chances as structured by the labour market are similar to those structured by the property market” (Thorns, 1982: 745).

The evidence is compelling that the opportunities to accumulate capital from housing is unevenly distributed, or that house price inflation varies spatially (Thorns, 1982: 758; Maher, 1994: 17; Badcock, 1989: 81) and that these patterns reflect labour market patterns. Moreover, each of these markets has experienced temporal change, depending on whether they have been subject to economic decline or structural favouritism (Thorns, 1982: 753), and this will cause wealth transfers to be uneven throughout the country. Thorns carried out a detailed assessment of this relationship using British data and established a number of significant implications for mobility, inequalities and their intensification.

Thorns' has been criticised for basing his assertions on the relation between labour market and housing market on an assessment of housing market characteristics for 1979 only. Hamnett has claimed that had Thorns looked at housing market characteristics over a longer time period he would have noticed that the price gap between regions fluctuated and was not constantly increasing, and that housing market peaks in the various regions did not occur simultaneously (Hamnett, 1984: 152). The point here is that even in so called depressed regions there are boom and bust conditions occurring in housing markets, providing variable opportunities for owners to benefit from capital accumulation. Moreover, in all of the regions of Britain, there have been very few instances where average prices have fallen to levels below those for the previous year. Therefore, Thorns may have overstated the case when he claimed that house price inflation created inequalities which were enduring and cumulative. Hamnett's view is that although inequalities exist, they are not enduring and certainly not cumulative. Perhaps there is a middle ground which argues for the concept of a reinforcing relationship between labour markets and housing markets,

and this is explored in the next section. Nevertheless, Hamnett stresses that these observations in no way detract from Thorns conclusions concerning house price variation and inflation and its effect on mobility. He goes on to ask whether increasing unemployment levels at the intra regional level, particularly in the inner city areas where, in Britain, unemployment levels have been higher than those found at the regional level (Hamnett, 1984: 160), can have the same effect on housing market position, and what consequences this might have for propensity to move by households located within these regions. In this respect, the data accumulated for this thesis may be able to extend theory in this area by examining the level of accumulation achieved by owners selling and moving within different sub markets of the Adelaide housing market.

#### **3.4.4 Housing markets, labour markets and mobility**

Generally, labour markets and housing markets are approximately congruent, their spatial linkage effected by the journey to work (Allen and Hamnett, 1991: 5)

“Inasmuch as travel to work is an important consideration for many people, it would be expected that the boundaries of the local housing market will coincide, at least to a fair degree, with local labour market areas...” (Coombes et al, 1991: 169).

The spatial similarity between the two markets provides a framework for understanding many problems and issues which affect individuals and localities. When households change jobs within any labour market, there is usually not a requirement to also change dwelling. Similarly, when moves are made within a housing market, there is no need to change job. In both cases, the linkage between job and house is the journey to work, and it allows few constraints to be imposed on

individuals who decide to move within either market. However, where people move from one labour market to another, they usually have to change their job and their home. The decision to make these kinds of moves may be constrained by the differing performances of housing and labour markets (Allen and Hamnett, 1991: 6).

Regional variations in house prices have a number of social implications flowing from changed accessibility to ownership within and between different areas. The danger is that as house price inflation occurs at different rates from one region to another, the price gap will intensify and households' ability to transcend the gap may become impossible. The developing tendency also means that a dwelling's ability to generate capital gains will vary spatially, and this will impact upon residential mobility, access to mortgage funds and the perpetuation and intensification of inequalities in cities.

Regional variation in house prices affects mobility in a number of ways. Households which might want to move from low priced areas to high priced areas, particularly for employment reasons, may decide against the move because the developing price gap distorts the transaction costs considerations in the mobility equation (Thrall, 1983: 224-225). In Britain, it has been noted that even when house prices in the London/South East region began to slow, this did not encourage north-south mobility because the perception existed among potential movers that if they bought into the south-east under these changed conditions house prices would not appreciate sufficiently for a reasonable return on investment to be made (Hamnett, 1992: 56; Owen and Green, 1992: 22-23).

The housing market has long been regarded as a barrier to migration, or a "hurdle" over which movers had to jump if they wished to transfer from one labour market to another, a move which would normally involve a move from one housing market to

another. In Britain, a lack of suitable rental housing, and the difficulty in obtaining this form of housing, due to the operation of bureaucratic red tape, rules and procedures, used to be a critical factor inhibiting mobility (Forrest and Murie, 1992: 78). With the steady increase of owner occupancy in Britain since the end of the Second World War, and especially since 1970, when housing policy changes enabled more than 1 million households to change from council rental tenancy to owner occupation (Forrest and Murie, 1990: 617), it might be assumed that this constraint to mobility between labour markets would be reduced. Owner occupiers are considered to be able to move when they wish, simply because they do not have the encumbrances of location possessed by public renters. For owner-occupiers, movement between labour and housing markets is related solely to their ability to pay for varying quantities and qualities of housing at various locations. Household income is, therefore, the functional link between labour and housing markets (Randolph, 1991: 18). However, Owen and Green have argued that the high cost of housing and differential house price inflation has qualified the role of income on mobility between markets, and have become significant factors inhibiting mobility between both labour markets and housing markets (Owen and Green, 1989: 122; Forrest and Murie, 1991: 63). Essentially, the situation has arisen because owner-occupier tenure is not an homogenous group. "As more of the nation becomes home owners, so there are more nations within homeownership" (Forrest et al, 1990: 217). In fact, as ownership expanded, the process of marginalisation increased (Doling and Stafford, 1987: 103). Recognising the significance of constraints on mobility within the owner-occupier tenure has prompted the observation that

“Home ownership may be a game that we all can play, but the chances of winning are skewed heavily in certain directions.... For some, the stake in the system is indeed very limited” (Forrest, 1983: 214).

Therefore, the ability of owner occupiers to move needed to be seen in an appropriate context, one which acknowledged the interaction of opportunities and constraints, and accepted that choice could only exist within certain boundaries.

However, mobility between labour markets, and therefore housing markets, is not simply related to availability of rental accommodation or house price inflation.

“Housing does not generally have a primary effect on mobility” (Forrest and Murie, 1992: 96).

It is suggested that there are other more important factors. The propensity to migrate varies directly with occupation, (Murie, 1986: 354) and the British evidence suggests that the higher an individual’s occupational status the greater the propensity to migrate, to move further and move more often (Owen and Green, 1992: 30). On the other hand, unemployed people and those in low status occupations are relatively immobile, tending to trade off housing security against labour market insecurity. For this group, spatial immobility is a rational response (Owen and Green, 1992: 31).

However, there is some danger in “reading off” from the British experience of mobility because it is quite different from, say, the Australian experience where the spatial mobility of unemployed persons is higher than for most other groups (Bell, 1995: 35-36).

In summary, housing histories are structured by employment imperatives (Forrest and Murie, 1991: 87). Or, a household’s ability to move is increasingly determined by its “opportunity sets” (Munro, 1992: 6), and these take into account household factors

such as location, socio-economic status, labour market position, tenure type, cohort and housing history characteristics.

Barlow (1990: 95) adds a cautionary note that it is difficult to generalise about the precise effects of geographical differences in house prices on migration and Coombes et al (1991: 185) suggest that the complexity of the field means that there remain many additional empirical and theoretical issues to be addressed. Finally, as owner-occupancy has become increasingly diverse, so it has become increasingly more difficult to generalise as to its impact on propensity to move (Munro, 1992: 6).

Despite this, there has developed a view that if movement between labour markets is constrained in any way, then coincident labour and housing markets will reinforce each other in their performances (Coombes et al, 1991: 171; Champion et al, 1988).

This relationship has been described by Thorns (1982: 761) as mutual reinforcement, and simply means that processes of decline or expansion will build up cumulatively, through the operation of feedback processes between each market. Forrest and Murie (1989: 27) say that in Britain "...home ownership dominates housing provision in those areas where employment opportunities are greatest". Coombes et al (1991: 179) state the case as strongly as Thorns for a causal relationship between local labour market factors and local house price trends. Thorns has stated that in his opinion, the critical direction of the relationship is from labour market to housing market. In this respect, Thorns and Coombes et al are supported by Doling et al (1986: 49), who say that they are disposed to the view that any favourable position in the housing market is dependent upon an advantageous position in the labour market, and by Hamnett and Randolph (1988: 380) who assert that a weak labour market position is usually associated with a weak housing market position.



The implications of this relationship are generally agreed. Households wanting to move to higher priced areas will find it hard to do so, and those wanting to move from high priced areas to low priced areas may be reluctant to move, particularly if there is a chance that they will need to return later to the high priced area. In these circumstances, they may not be prepared to lose their foothold in the high priced area. Where factors such as these constrain mobility, firms experiencing labour shortages may be forced to subsidise housing for employees, with the result that house prices may rise further in the corresponding housing market (Coombes et al, 1991: 185), thereby reinforcing the cumulative advantage of one region over another.

### **3.4.5 Summary**

Despite the implications for mobility of Thorns work, and the conceptual grounds it has established for this thesis to investigate further the relationship between house price inflation and mobility, research at the individual level has yet to be carried out so that the causal inferences based on aggregate analyses can be substantiated. There has been no survey work completed at the level of the individual household to show that decisions to migrate is based on house price and equity considerations (Hamnett, 1992: 63). This will be addressed in this thesis as data exist to determine the size of housing to which households are moving and whether, and if so how much, equity is released. This can be determined by deflating the price of the housing being bought back to the year the household bought the house they are selling and taking the difference between the deflated value and the purchase price of their present house (Purchase price of current house minus deflated price of new house). A positive answer will indicate equity release and a negative answer will indicate a reinvestment

of accumulated equity into the new house. A negative answer will also indicate that the household has traded up, other factors being equal. Of course, this computation for equity release takes no account of the capital which might have been invested into upgrading a household's current dwelling. Although renovation is a factor which ideally should be incorporated into the calculation of both capital gain and equity release, reliable data to measure the amount spent in renovating particular dwellings are not readily available. Notwithstanding conceptual generalisations about mobility and capital accumulation which suggest that homeowners are aware of the potential for capital accumulation and that many of them develop strategies designed to maximise it, there is no hard evidence to support it (Hamnett, 1992: 63). Indeed, there have been assertions to the contrary which claim that the evidence to support the notion that housing moves are planned to maximise financial gains in the longer term is insubstantial, and that the greater likelihood is that those who make the most of accumulation through mobility are those households which move for job related reasons (Forrest et al, 1990: 157). It is possible, therefore, that much of the current knowledge surrounding house price inflation and equity and its influence on mobility may be based on a mixture of theoretical speculation, guess-work and aggregate statistical models (Hamnett, 1992: 63). Given that data for individual households form the basis of any findings made for this thesis, it is to be anticipated that a number of advances to theory can be made.

### 3.5 Mobility studies from 1980

This section will show how residential mobility studies in the 1980's changed their emphases from those conducted during the previous two decades. It will describe a movement away from studies which tried to explain mobility in terms of socio-economic characteristics of households and other demand-side considerations to an approach that saw more powerful factors at work involving transaction costs, and the role of policy makers and the housing system, particularly in terms of creating supply side factors which worked to influence the mobility process. The section will also show how many previous factors believed to influence the household decision making processes had, in fact, only a contingent impact on propensity to move and were, in reality, only surrogate measures of more powerful factors whose significance had not been appreciated until the eighties. Finally, this section will explain how processes connected with house price inflation were identified as being related to the intra urban mobility process.

In early behavioural investigations, the objectives were to describe and explain why a household chose one location in preference to another (Hall, 1979: 62; Clark and Everaers: 1981: 322). Coupe and Morgan (1981: 201) argued that early behaviouralists had utilised a paradigm which emphasised the role of variables which measured the current status of a household to explain questions of who moved and where they moved to, but tended to ignore the linkages between tenure and expected mobility (Boehm, 1980: 375). The problem with the early research approaches which emphasised the role of stage of the life cycle and its associated emphasis on family space requirements was that the links between these factors and mobility were based

on unsubstantiated theoretical foundations and that too many unjustified inferential leaps between correlates of residential mobility and reasons for it had been made (Coupe and Morgan, 1981: 202).

“Although...these types of...approaches are valuable within their limits they do not do justice to the theoretical conceptualisations of the decision to seek a new residence” (Coupe and Morgan, 1981: 202).

They saw mobility in terms of changes in the stress levels a household perceived as a consequence of changes in its relationship with both its dwelling and its environment (Coupe and Morgan, 1981: 201). Within the replacement, or new, paradigm, the definition of the family's environment was to become critical, and the definition was influenced by considerations of the role of allocative systems in the housing market as well as concepts of constraints and competition. Their firm perception was that housing institutions, and more broadly the housing system, held the key to understanding urban processes. This realisation developed from previous investigations which had found that although households might want to move, mobility did not occur. Explaining this apparent dilemma became the task for the next stage of enquiry into residential mobility (Moore, 1986: 499-500).

Very few households were now seen to have complete choice, and that more realistically, most households were perceived to have only a few effective choices at their disposal. One outcome of this new perspective was a refinement to a number of models which had been developed during the seventies to explain the search process associated with mobility. Choice, or compensatory, models had been based, usually, on utility theory which had households engaging in very sophisticated processes to select a new residence. Their principal flaw was that they considered the consumer was able to assess a complex array of options in choosing between dwellings available

in the market. In this sense these models were unrealistic, and were replaced with models which were informed by the developing paradigm which emphasised constraints to mobility (Talachek, 1982: 34). These newer mobility models recognised that human brain channel capacity is limited, and therefore complex processing was not possible. In their place non-compensatory models were developed which reduced the complexity of the decision making process. Their main feature was that a large number of possible housing alternatives could be eliminated after only a few attributes had been considered (Mackett and Johnson, 1985: 175-177; Young, 1984: 24-27).

Therefore, by the early 1980's, urban residential mobility theory had advanced to a point which acknowledged a minimisation of household choice and highlighted constraints on household mobility as significant factors influencing the mobility process, but at the same time stressed that a complete picture of the process must involve consideration of both perspectives. (Coupe and Morgan, 1981: 201).

### **3.5.1 Policy, structural change and mobility**

The behavioural approach, with its emphasis on demand side factors, ignored the capacity of supply-side factors to influence households, and therefore the mobility process. It failed to identify inter-relationships mobility might have with the wider urban system, and to appreciate the impacts that systems of various kinds could have on mobility (Clark and Everaers, 1981: 322). For example, housing policy, and the housing system it produces, can create a huge range of inputs to the mobility process, especially in the form of second hand housing and new housing. It can cause changes to existing markets, and the establishment of new markets, and provide a range of



supply side factors which impact on the mobility process. However, the housing system does not comprise only the housing stock, but a whole range diverse institutional and individual actors (Everaers and Clark, 1984: 242). A residential mobility model which emerges from any consideration of the role of the housing system would envisage a continuing realignment process between the existing housing stock, new housing products created from housing policy initiatives, other relevant actors and households (Everaers and Clark, 1984: 243; Hall, 1979: 62).

Early, or pre-1980 mobility research at the macro-level, sometimes called ecological studies, had their roots in the Chicago School's approach to urban differentiation. This approach emphasised the characteristics of movers and stayers, and based its enquiry around the decision to move, the search process and evaluation processes (Cadwallader, 1982: 458-459). As mobility has come to be seen as increasingly influenced by factors outside the household, the macro approach has enjoyed a revival, and is particularly relevant to housing markets. The new macro approach has identified a spatial distribution of mobility rates, and has sought to locate reasons for these variations within the prevailing systems of individual sub markets. More importantly, this approach recognised an important need to discover the extent to which two way relationships exist. From this there are two important implications. Firstly, the relationship between socio economic variables and mobility has long been demonstrated, but is it not the case that residential mobility could influence the socio economic configuration of a suburb? (Cadwallader, 1982: 460). Secondly, the approach reinforced the relationship between mobility and policy, but demonstrated for the first time the powerful effect that policy could have on mobility (Cadwallader, 1982: 460; Moore and Clark, 1980: 16-18).

Urban social change in advanced global economies has been caused by economic changes imposed on the system since the early 1970's. Moreover, these social changes have been accompanied by increasing income differentials between groups, with the result that discrete sub markets, defined principally by the consuming characteristics of their households, have been created. Within each of these sub markets, the forces of supply and demand operate differently so that whilst one sub market may experience over-heating another may experience stagnant sales activity (Whitehead, 1991: 872). The relatively recent housing market phenomenon of affordability stems from the fact that housing markets are imperfect mechanisms in which supply and demand rarely operate in harmony (Whitehead, 1991: 872; Linneman and Megbolugbe, 1992: 370).

The discreteness of these sub markets enables processes of urban structural evolution to occur through capital switching - the abandonment by capital of one sub market in preference for the enhanced accumulation possibilities identified in another sub market. For capital to move between sub markets it is necessary that sub market differences exist so that some sub markets can offer accumulation potential at the same time as others are devaluing, or overaccumulating (King, 1989c: 859).

Overaccumulation can occur at any level of the capitalist system. Usually, it occurs in the primary circuit, and stems from reduced demand for the output of capital. It is characterised by unproductive capacity or liquidity with no opportunities for accumulation. Under these conditions, capital usually turns to the secondary circuit of capitalism, represented by investment in consumption, be it housing or offices or infrastructure, for opportunities to encourage accumulation and simultaneously provide a fillip for the ailing primary circuit. Within the housing market,

overaccumulation can occur within the sub markets, so that areas within cities may have atypically high proportions of unlet buildings, will experience declining property values and possibly develop characteristics caused by neglect of the built environment. Harvey (1974) argued that despite periodic overaccumulation in sub markets, capitalism could successfully accumulate in the total housing market, at any level, by moving its investment attention between the various sub markets, so that the differentiation of the city varied both spatially and temporally (Harvey, 1974: 243-249), something that Smith referred to as seesawing uneven development at the urban scale (Smith, 1984: 150-151).

However, despite the uniqueness of sub markets, (Munro and Lamont, 1985: 1348) they are interdependent, in that changes in one will cause changes in another, with consequences for capital investment and urban structure. It is argued that residential mobility is a crucial force in the interdependence of sub markets. For example, where out migration from a sub market results in a new social group replacing the previous inhabitants then social change occurs in both the origin and destination sub markets and this kind of social see sawing has been evident in western cities for more than half a century. In Australian cities sub markets have evolved from processes associated with high fertility, the immigration programme, the maturation of the baby boom cohorts, as well as the internationalisation of capital, the rise of the service sector and the affordability crisis of the 1980's (Badcock, 1984; Forster, 1988; Daly, 1988; Maher, 1994). In the creation of these sub markets, residential mobility has been an enabling process.

When mass movement of households occurs from one sub market to another, the origin sub market is rendered under-used and devalued because the incoming



households usually have less access to capital than the departing households (King, 1989c: 866). This notion agrees with the traditional concept of filtering. In a reverse sense, gentrification is associated with revaluation of areas within cities, where incoming residents usually have more capital, in an economic and cultural sense, than the out-going residents. The important point is that both filtering and gentrification can be associated with spatial shifts of capital within the city. The gentrification process has presented the filtering concept in a new light, and its explanation has illustrated how social change could both occur, and be prevented, through policy initiatives deriving from a multitude of urban institutions in the urban housing market. Moreover, if capital gains were to be regarded as an institution, then perhaps this represented one of the earliest points at which a link between capital gains and mobility was envisaged, without being stated, by geographers and demographers engaged in mobility research. A number of these issues can be explored with the current dataset, by creating a subset of dwellings potentially capable of gentrification and analysing their sales history, and in particular their rate of price inflation and capital accumulation.

### **3.5.2 Transaction costs**

In the early 80's, transaction costs became an increasingly prominent factor in the analysis of mobility patterns. In this model, two sets of considerations were relevant to a household in deciding its tenure type. Firstly, households needed to be aware of the transaction costs associated with various tenures - that there were lower, but regular, costs connected with renting, and substantial, but often one off, costs involved with ownership. Secondly, the key factor in determining the type of tenure

for which to opt was the expected length of stay in that tenure (Boehm, 1980: 376). If a short stay was expected, the decision would come down to renting, but if a longer stay were anticipated, then the economics of the choice would select ownership as the appropriate tenure choice. Of course, the household's current wealth would be critical to the type of decision taken.

This developing model predicted that, regardless of the tenure chosen, future mobility will reflect the tenure choice made on the basis of the critical importance of transaction costs. Boehm (1980: 376) suggests that previous studies have ignored this set of "simultaneous equations", that is, a consideration of expected mobility and transaction costs associated with specific tenure, and as a result had assigned causal effect to certain socio-economic factors, such as age of household head when, instead, these factors were likely to be surrogates, or proxies, for the more critical factors of expected mobility and wealth of a family. Kendig (1984: 279) makes much the same kind of point when noting a relationship between stage of life cycle and income, caused by the fact that as people get older there is a tendency for the occupational position, and therefore income, to increase, which facilitates mobility. Further, as people get older partnership prospects increased, together with the opportunity, at least for a limited period, of double income (Myers, 1985; Wulff, 1982: 35), again with enhanced prospects for mobility. Further, with increasing income, trading up may have more to do with realising gains generated from ownership than with the need to buy a larger house (Kendig, 1984: 272). The 1980's saw the beginnings of an awareness of the potential for capital gains considerations to operate as a player in the process. Transaction costs were seen not only as charges associated with a property sale, but also in terms of risks and rewards involved with ownership. Nevertheless,

during this time there were virtually no references in the mobility literature to the concept of capital gains. Instead, surrogates for the role of capital gains were sought, and it was argued that high satisfaction, generated by pride of ownership and

“...the higher costs of moving from an owned home which increases the threshold for dissatisfaction” (Speare, 1977, quoted in Landale and Guest, 1985: 201)

rather than constraints, such as a substantial investment which, at certain times, might be difficult to retrieve through the sale of the dwelling, controlled propensity for owner occupiers to move.

One of the earliest oblique references to the role of capital gains on the mobility process involved research findings which suggested that space increasingly influenced mobility, and in particular space for its own sake, or for prestige, seemed to be more important than had previously been recognised (Coupe and Morgan, 1981: 213). This observation had also been noted by Clark et al (1984: 31), and was reinforced by another conclusion that the more expensive the form of housing the more people wanted to have it (Morrow-Jones, 1988: 1181). These views are, in all likelihood, forerunners to subsequent findings that space, which is related to size of house, and price, can be linked to a dwelling's ability to accumulate capital gains (Thorns, 1981a: 208; Badcock, 1989: 81). In the United States house prices outstripped incomes between 1970 and 1978, and it has been suggested that these developments helped commodify housing so that it increasingly came to be seen as an investment rather than simply an item of consumption (Rudel and Neaigus, 1984: 129). Consequently, house price inflation increased the attractiveness of housing as an investment, with a direct relationship between price of housing and return from investment. Therefore, affluent owners tended to upgrade to housing which was larger than might have been

necessary in order to capitalise on its investment potential, and other owners tended to trade up as soon as their finances allowed, again in order to take advantage of the accumulation potential of housing.

This developing explanation for trading up was a refinement on earlier proposals which had argued that households may have housing goals which cannot be achieved immediately but are planned for through a series of steps. This idea was advanced as early as 1977 when Michelson noted that the ideal tenure type among all subgroups in the United States was the self-contained, single family, house, and he went on to say that:

“There is no reason why people cannot and do not adhere to their aspirations...while making changes which incrementally satisfy pragmatic problems and interests which have arisen” (Michelson, 1977: 35).

This “deficit compensation” model saw households achieving their housing goals through mobility, although at this point the role of financing these goals through capital gains had not been defined. Nevertheless, within the deficit compensation model and hypotheses that had households acquiring space for the sake of it, the household did not leave its current location because of stress factors but because any move was part of the household’s housing plan (Coupe and Morgan, 1981: 213).

Seek was also aware of the impact of transaction costs and/or constraints on the mobility process when he argued that the decision to adjust housing is a two part process, where the first stage involves a decision to adjust, and the second stage a decision on whether to move or improve. Importantly, the first decision is encouraged by the recognition of a housing gap, which is created by changes in socio economic circumstances, tastes, preferences, changes in house prices and public policy. This model contains clearly implied financial cost considerations centring around the likely

capital gains to be accrued by the sale of the current dwelling, and the relationship of this to the expected cost of next dwelling, as well as the costs to the household of renovations which would satisfy the household's needs at the current location (Seek, 1983: 456).

This evolving view of the mobility process was, in fact, just one step removed from the discovery of important relationships between transactions costs, house price, capital gains and mobility. By recognising constraints, but explaining them as factors which increased satisfaction with an existing location, and linking satisfaction with the price of housing, they were just failing to grasp the relationship between market buoyancy and the generation of capital gains, and the significance of capital gains in financing housing goals. In trying to move on from the "satisfaction" model of residential mobility, without being sure with what to replace it, it was noted that:

"People act not only on their attitudes and preferences, but also because they are part of ongoing webs of social relationships" (Landale and Guest, 1985: 218).

Unquestionably, the housing system is part of the social relationships of communities in developed countries (Paris, 1993: 39-55) and its influence on residential mobility has become well understood over the last decade.

Geographers, too, were also failing at this time to elucidate the relationship between mobility and accumulation, and instead their emphasis seemed to be on understanding the association between mobility and housing markets. The research aims at this time were to understand mobility's role in changing urban structure so that it could inform public policy (Clark, 1986: 359). Researchers strongly asserted mobility's two way relationship with policy - that not only could mobility influence policy but, more significantly, policy could be implemented by encouraging specific aspects of the

mobility process. This view saw mobility linked increasingly with housing markets, so that

“...the challenge is to see mobility in terms of its relationship to different segments of the housing market...” (Moore and Clark, 1986: 186).

Further, the housing market was subject to change through public policy. Where public policy caused investment to occur in a sub market, levels of household satisfaction in these areas could increase with consequences for mobility. On the other hand, if investment in a sub market leads to increases in rents, one group may be forced to leave and another enter the sub-market through the process of filtering. If policy initiatives lead to overall rent increases across sub markets, additional policies may be necessary to house those who could not afford the increased rents (Moore, 1986: 499). Data have been generated for this thesis which will enable considerable insight into the relationships between mobility and space to be developed, and enable an examination of the ways in which capital gains from ownership might drive the mobility process.

### **3.5.3 Housing consumption and mobility**

The characteristics of housing consumption have received attention from urban and housing economists, and they have tried to relate these to aspects of the mobility process. On the other hand, geographers, demographers and planners have tended to explore the demographic characteristics of housing and theorise their significance to the mobility process. Interestingly, the two approaches have rarely intersected (Gober, 1992: 171-173), despite some commonality between the models, concepts, variables and ideas employed by the two approaches (Clark et al, 1994: 138). In this

section the key notions developed by economists to explain housing purchase and investment, and therefore parts of the mobility process, will be presented. The prime point to be made is that consideration of capital gains, the perception by buyers that housing is a commodity with investment potential, and that owner-occupancy should be attained as soon as possible in any housing career are powerful factors driving housing markets. Further, although these financial, or economic, considerations may have correlates with demographic variables, it is argued that the economic factors have the more causal consequences for mobility. This is not to say, however, that these economic factors do not then have consequences for household demography, and possibly for the household's housing career.

The internationalisation of capital, global and regional restructuring, inflation and boom/bust cycles for capital and economic development which have occurred since 1972 have many implications. The impact of these economic and social changes has been spatially and temporally uneven. Therefore, in the following discussion, the group or regions most affected by particular developments will be identified.

Evidence from the United States shows that between 1970 and 1978 inflation and restructuring resulted in rates of house price increase outstripping the rate of increase in income, with the result that household incomes did not, generally, increase at the same rate as the deposit gap (Rudel and Neaigus, 1984: 129). Later, the same phenomenon was observed in Australia where, during the late eighties, house price inflation accounted for more than 90 percent of the increase in the deposit gap (Wood and Bushe-Jones, 1990: 587). The lag between a widening of the deposit gap in the United States and its observation in Australia was due to housing finance regulation in Australia until 1986. After this time, finance for housing became increasingly

available, and unleashed the same kinds of demands which had been experienced in the US a decade earlier. In America, home ownership became problematical for a large proportion of middle American households, and for these households there were a number of possibilities. They could refrain from purchase while they saved the increased deposit gap, often achieved by establishing two income households which could have demographic consequences, or they could purchase less housing, such as units or other smaller housing which was being developed by the housing market in response to these developing conditions (Harris, 1986: 303). Another possibility was to downgrade, and in the American context this was seen as part of the “back to the city” trend, in which deteriorated, and/or smaller, inner city or near-inner city housing was bought instead of price inflated suburban housing. This tendency is generally, but not universally (see LeGates and Murphy, 1981: 266 for an opposing perspective), recognised as gentrification. Williams (1984: 49) says that it may be the case that capital has migrated back to the city, in the guise of gentrification, but gentrification is not a “back to the city” movement in the direct sense, because it is not an attempt by the in-movers to save on transport, and other, costs which they would incur if they lived in the outer suburbs.

The economic environment established in the post World War Two era has been called the socialised consumption phase of economic development (Saunders, 1984), and was succeeded by the privatised consumption phase as a result of global restructuring following the oil crisis of 1973. These changes created important new attitudes to ownership which highlighted the investment capacity of housing. The notion of the family home underwent a significant definitional change from being principally an item of consumption to a commodity with tremendous potential to earn



income for its owner. Accordingly, in an environment of increased housing prices, housing became more attractive, causing existing owners to buy bigger and more expensive housing and encouraging non-owners to enter the market and begin the trading up process as soon as possible so that they might begin to realise the investment potential of their dwelling (Rudel and Neaigus, 1984: 137; Harris, 1986: 303). In trading up, the existing owners created a vacancy chain which may have been filled by other owners, also moving up, or by new owners. Whether those households trading up did so to capitalise on the enhanced investment status of housing or because of the demand created by the incentives for ownership among non-owners, or both is difficult to say. Whatever the reason, non-owners were encouraged to enter the owner-occupier housing market in such a way as to modify existing mobility theory.

Accompanying house price inflation and an increasing deposit gap was a reduction in real interest rates which made ownership even more attractive (Saunders, 1978: 245). In some countries this phenomenon occurred for a number of years and was no short term occurrence. For example, Britain experienced negative real interest rates for nearly a decade after 1973, whilst Australia and the United States experienced the phenomenon for 5 and 4 years, respectively, from around 1973 (Badcock, 1994b: 283). This phenomenon had occurred previously in Australia in the period 1948-1951, with real interest rates as low as minus 15.6 percent (King, 1989b: 716) and then, as now, it caused purchasers to bid up the price of housing. In the seventies and eighties, these changes to the economics of ownership impacted on the concept of transaction costs, and their relationship to mobility, and modified the propensity for owner-occupiers to move, and the propensity for renters to shift their tenure to owner

occupancy. Further, the economic changes experienced by households caused, in all likelihood, a change to their demographic characteristics, which modified some of the previously accepted relationships between stage of life cycle and propensity to move residence. In the United States it was noted that, between 1973 and 1978, new home owners became more distinctive in terms of income and income-earning females in households, and less distinctive in terms of household size and number of children in their households (Rudel, 1987: 263). Similar disturbances to normal relations between demographics and ownership have been reported by Morrow-Jones (1988: 1177) who found that, in the period from 1977 to 1983, the higher the unemployment measure for households the lower the peak age for transition from renting to owning. This suggested that the existent economic environment encouraged young unemployed, or under employed, persons to strive for ownership by doing previously atypical things such as both partners working, and/or delaying marriage and having children, so that they might capitalise on the perceived advantages of home ownership (Phillips, 1988: 488). The same reasons caused an indirect relationship between price of housing and age of new owners, as young people, daunted by the prospect of prices continuing to increase, and affordability reducing, turned to ownership as soon as possible so as to benefit financially from ownership.

The concept of affordability developed out of the economic conditions created by the oil crisis of 1973. Rising house price inflation, an increasing deposit gap and stagnant or declining incomes encouraged the notion of affordability as households endeavoured to buy housing in an increasingly market-oriented housing system, containing as it did a number of imperfections which meant that developing demand could not be met (Linneman and Megbolugbe, 1992: 370). Concerns with

affordability reflected the social restructuring which was a consequence of global industrial restructuring. In terms of housing consumption, market place changes caused by house price inflation, unemployment or under-employment and lagging income growth meant that an increasing proportion of the middle classes and substantial proportions of the working classes found a new set of obstacles constraining home ownership. These groups are numerous and geographically widespread, and therefore they have considerable political power, and this has made affordability a political issue since the mid 1970's. It is a reality for those groups whose previous levels of consumption depended on industrial occupations which have been restructured out of their local economies to other regions or offshore to Third World countries. The significance of the phenomenon, together with the processes which create it, cannot be overstated, as it has consequences for housing careers, for residential mobility, for housing markets and for urban structure. King measured affordability by calculating an "access charge" (King, 1989b: 722). Others have defined affordability in terms of the "effort to purchase" (Thrall, 1983: 224) or "entry costs" (Doling et al (1986: 52). In Melbourne, between 1973 and 1977, the "access charge" for owner occupied houses increased by 53 percent, and by 38 percent for owner occupied apartments, or home units (King, 1989c: 869). More significantly, as capital shifts from one sub market to another, thereby affecting house price inflation and affordability, it causes a change in the spatial distribution of affordable dwellings. The observation that affordability varies spatially, as well as temporally, has substantial implications for residential mobility.

### 3.6 Measuring capital gains

This literature review has demonstrated the possibility of causal linkages between capital accumulation and modifications to traditional class definitions, the creation of new social classes within the community, and urban residential mobility patterns.

Housing can afford its owners the opportunity for capital gains. It is instructive to consider that "housing" comprises both a structure and land. Each component is subject to demand. In the case of the land, its demand is typically influenced by its location, particularly to the Central Business District, but also in relation to other activities which might be developed from time to time. It is possible, then, that the demand for land can fluctuate in cycles, depending on location and supply. In a similar fashion, the demand for housing which is deployed on land will also fluctuate. Factors which contribute to the demand for housing include a dwelling's size, style, age and condition. Dwellings will inevitably be subject to depreciation and obsolescence. Although these processes can be stemmed or even reversed by maintenance and renovation, usually the dwelling component of "property" or "homeownership" is subject to variation and with time is likely to not contribute to the generation of capital gains. Of course, these tendencies are always subject to demand, and where population increase characterises an area, the general tendency for the structure component to depreciate and not contribute to the generation of capital gains will be arrested.

These considerations notwithstanding, it is difficult to obtain data which only measures the value of land, and which is separate from the value of any structure constructed on it. Although rating systems have been implemented which utilised an

estimation of a property's land value, these systems have tended to be replaced with systems which use capital value and take into account the land and any associated structures. Therefore, although analyses of capital gains from home ownership might ideally be more informed if based on genuine land value considerations, it has not been possible to locate any studies which have used this kind of data. Instead, investigation into any aspects of capital gains from home ownership is obliged to use the sale price of housing as its fundamental data source.

With this in mind, the issue of measurement of capital gain is of basic importance.

Often, the significance of any relationship between capital accumulation and other variables has depended on the formula by which it was measured. There are, in fact, a variety of methods available to compute a value for the capital accumulated by a household through home ownership, and this section will describe the evolutionary refinements which have occurred in measures of capital gain.

Typically, when a household sells its dwelling, the initial reaction is to compare the selling price with the purchase price to obtain one of two *nominal* measures of accumulation. The monetary difference between the two values is an *absolute* measure of capital gain, but the selling price can be expressed as a percentage of the purchase price to provide a *rate* by which house price inflation can be expressed.

These are the simplest measures of accumulation and assume cost-free ownership. In South Australia such data are released each quarter by the Valuation Division of the Department of Environment and Natural Resources, and regularly published by the media. Home owners often base their decision to sell purely upon this information (Maher, 1994: 8). Indeed, the earliest empirical studies on capital accumulation through home ownership (Hamilton, 1976; Thorns, 1981a: 208; Pratt, 1986a: 368)

used these measures. None of these early studies discounted the selling price for the level of inflation which had occurred during the time since the property was purchased (Badcock, 1989: 72; Dupuis, 1992: 28). By the late eighties, however, this oversight had been addressed so that *real* levels of absolute gain and house price inflation were employed.

At the same time, there was dispute regarding the basis by which rates of house price inflation should be calculated, and whether the rate should reflect the increase/decrease measured on the purchase price, or the level of owner equity invested in the dwelling. This debate recognised that most households establish a mortgage to buy their house, with the difference between purchase price and mortgage representing the owner's equity or deposit. In Adelaide in 1986, 26.8 percent of house and home unit buyers purchased their dwelling without recourse to mortgage borrowing (Harris, 1993: 216). British evidence suggests that most people borrow up to 85 percent of the house's purchase price, and even previous owners have only about 42 percent equity in subsequent purchases (Saunders, 1990: 124). Therefore, the argument is that rates of return should be based on the owner's equity, so that it might be regarded as the interest rate earned on the capital (deposit) invested in the dwelling (Dupuis, 1992: 30). Badcock (1989: 80) and Peiser and Smith (1985: 348, footnote 10) go further and base their rate of return on the actual costs incurred by the owner. These costs are the sum of the deposit, interest payments, maintenance costs and transaction costs. Absolute gains should take into account the outstanding mortgage commitment at the time of sale. It also recognises that, for most households, ownership is rarely cost-free and that these costs need to be offset against any profits which might be created by ownership.

In these calculations the rate of return is indirectly related to the level of owner equity, or size of deposit; the smaller the deposit the greater the rate of return per unit (dollar) of investment and vice versa, except that the statistic cannot be calculated where a household has effected its housing purchase without mortgage finance. Interpretation of any spatial patterns created by this statistic is problematic, in that the patterns are influenced by the size of deposit, and do not reflect the accumulation potential of the dwelling. Indeed, the size of deposit may reflect a whole variety of processes operating in any area, including the proportion of first time owners and level of ethnicity (Saunders, 1990: 131). First time owners generally have low equity, and would therefore generate higher rates of return than previous owners whose level of equity is greater, and some ethnic groups demonstrate a propensity to invest heavily in their housing, despite the fact that this tendency results in lower returns to capital invested upon the sale of their house (Viviani, 1991: 123; Harris, 1995:195-196). On the other hand, any spatial patterns created by the house price inflation statistic are more likely to provide a measure of the accumulation potential of housing in different areas. Importantly, this is an early indication that there is no one perfect statistic to measure capital accumulation, and that each can be employed provided that the user is mindful of what can be implied from their use.

Of course, each of these calculations can be computed either as a nominal value or as a real value. However, the magnitude of any answers obtained using these computational approaches is directly related to the length of time that any property had been owned. Accordingly, it is important that length of ownership be incorporated into each of the calculations.

The early tendency to ignore mortgage considerations in computing capital gain measures stems mainly from the difficulties encountered in obtaining these data. The database on which this study is based contains a subset of owners for whom mortgage information has been obtained, and the rates of return on their level of equity, compared with rates of return on the purchase price of their house will provide useful comparisons on the worth of each measure.

Strictly speaking, the nominal and real statistics which have been described so far do not take into account any costs associated with generation of capital gains. Nominal estimates of gain use actual values, whilst real estimates of gain adjust the values for inflation. When mortgage and transaction costs (that is, buying and selling costs) are offset against strictly capital gains of ownership, the new statistic is a measure of wealth (Dupuis, 1992: 29). The calculation of *nominal wealth increase* involves subtracting from the selling price the final mortgage debt, the selling costs and the owner's deposit. *Real wealth increase* is computed by inflating the initial deposit to take account of inflation. As was indicated earlier, the results obtained from formulae which include size of deposit, or level of owner equity, can provide unexpected results, in that the greatest returns per unit investment are generated for owners with the smallest deposits. Nominal wealth increases during the ownership of a property do not change, regardless of size of deposit. However, real wealth increases are inversely related to the size of deposit (See Dupuis, 1992: 29 for calculations which demonstrate this).

While the wealth increase computation takes some account of mortgage and transaction costs, there are many additional costs which can be worked into the calculation of wealth gain from owner occupancy. Some of these allow for pure



housing prices (Duncan, 1990: 199) to be determined and used in the calculation of wealth increase. Pure house prices are real housing prices which have been deflated for quality and quantity changes. Quality changes are related to the level of repairs, maintenance and decorations completed by the owner and quantity changes occur through structural alterations, including space heating (Duncan, 1990: 200; Fleming and Nellis, 1981: 1118-1120). These refinements to the wealth increase calculation are significant, in Duncan's view, because quality maintenance is critical to maintaining premium value for housing and maximising capital gains. It may well be the case that poor maintenance has contributed to the link between capital accumulation and labour market position identified by Thorns (1981: 215). In inner Birmingham, between 1975 and 1979, the average house price was actually 22 percent below the average costs of repairs required to bring the house up to a 30 year life (Karn et al, 1985 cited in Duncan, 1990: 201). However, there are some major problems involved in establishing pure house prices. One is the availability of suitable data, which may involve official, unpublished or survey data, and the complexity involved in accessing or analysing it. Principally for these reasons, Duncan (1990: 201) could only apply his technique to two of the 11 regions in Britain. Secondly, official data are generally aggregate data, and there are methodological problems associated with applying these to individual cases because any conclusion derived may not reflect the situation of the specific case. One way around this problem is to ask individual households for details of expenditures they have made on their dwelling and apply these values to the computation of wealth increase. However, this creates a third problem, in that not all owners recall everything they have done to their house, not all owners reveal everything and

because maintenance and repair is a subjective concept, all owners may not consider the same activity in the same way. For these reasons, Saunders (1990: 127) resolved to omit housing costs from any computations of wealth increase.

Economists, however, are prepared to measure as many of the costs connected with home ownership as possible, and offset these against as many of the financial benefits of home ownership as is possible in constructing models to measure the gain from home ownership. The literature contains, therefore, a plethora of considerations that ought to be taken into account in determining the level of accumulation deriving from home ownership, an indication of which have been presented in Table 3.1.

**Table 3.1: Selected housing cost estimates**

Housing cost consideration	Estimate and source
Owner equity	20% of purchase price (Peiser and Smith, 1985: 348; King, 1989c: 868) 18% for first-time owners (Saunders, 1990: 126) 37% for second and subsequent owners (Saunders, 1990: 126) 25% of purchase price (Badcock, 1989: 80) 30% of purchase price (Bourassa and Hendershott, 1993: 36)
Length of loan	25 years (Peiser and Smith, 1985: 348; Badcock, 1989: 80; King, 1989c: 868)
Maintenance	1% of capital value per year (Badcock, 1989: 80)
Maintenance, insurance, rates and taxes	15% of loan repayments (King, 1989c: 868)
Maintenance and repairs	1.4% of current house value (Engelhardt and Poterba, 1991: 545)
Maintenance, repairs and insurance	0.9% of current capital value (Smith, 1990: 82)
Transaction costs	4% of purchase price (Badcock, 1989: 80; King, 1989c: 868) 3% of selling price (Doling et al, 1986: 53)
Selling fees	3% of selling price (Bethune, 1977)
Legal fees	1% of selling price (Bethune, 1977)
Depreciation and maintenance	3.5% of annual house value (Bourassa and Hendershott, 1993: 35)
“Physical decay” (depreciation)	2.5% of current value (Engelhardt and Poterba, 1991: 545)
Imputed rent	3% of capital value (Saunders, 1990: 125) 11.84% of current house value (Peiser and Smith, 1985: 345) 10% of nominal annual value (Badcock, 1989: 80)
Opportunity costs	Sum of deposit and transaction costs, inflated 1.25 times prevailing interest rate, discounted by marginal rate of taxation (King, 1989c: 868) 180-day Treasury Bill rate (Bourassa and Hendershott, 1993: 36) Treasury long term (15 years) bonds (Smith, 1990: 82) 90 day Treasury Bills (Engelhardt and Poterba, 1991: 545)

The principal considerations in the accumulation equation revolve around cost involved in buying a house, and costs associated with maintaining a house. In the first category of costs are expenses incurred in buying the house, which include agent's fees, stamp duties, conveyancing costs, bank or building society charges to prepare the mortgage. However, the principal cost in buying a house is the level of interest repayments attached to any mortgage. The second cost category includes household

expenses such as repairs and maintenance, insurance, rates and taxes and any other costs which would not be incurred by a household in rental tenure. In housing research, these costs are difficult to determine at the individual household level, and there is really little option to the use of estimates when these costs are used in any housing computations. However, the variety of estimates which have been employed enhance the degree of “averageness” which must consequently be read into any conclusions reached in these calculations.

The variation in some estimates is in large part due to government policies in different countries. In the United States, mortgage interest and property taxes are subject to taxation (Pieser and Smith, 1985: 346) and therefore there is an imperative that they be considered in any equation for level of capital accumulation.

In West Germany, depreciation is allowed as a deduction for taxation purposes at a rate of five percent of purchase price during the first eight years of ownership (Wood, 1990b: 811). Some transaction costs can be quite high in countries whose taxation base rests heavily on indirect taxes, or goods and services taxation, than in countries, like Australia, which raise most of their taxation income through direct levies (Strassman, 1991: 763).

As well as transaction and maintenance costs, other costs have been considered in the calculation of capital accumulation from home ownership. The role of imputed rent in accumulation is contentious, and the reasons for this can be understood by first defining the term. Since there has not been an outlay for rent by owners, the money retained by such a household can be conceptualised as imputed rental income.

Alternatively, imputed rent can be defined as the rent which would be received for the house if it were let to a tenant (Peiser and Smith, 1985: 345), minus various “housing

costs” such as interest on mortgage, rates and taxes and maintenance (Smith, 1990: 80). Imputed income from housing has also been defined as the difference between investment in housing and investing in the next best investment (Lerman and Lerman, 1986: 324). Where imputed rental income is not incorporated into any accumulation calculation, the justification revolves around the fact that owner occupiers are usually making principal and interest repayments on a mortgage so that mortgage costs are cancelled out by imputed rental income,

“...in which case they can be ignored for the purpose of calculating capital gains” (Saunders, 1990: 131).

There are two difficulties with this proposition. Firstly, it may be that mortgage repayments are less than rental payments for dwellings of comparable quality, and this is usually the case, simply because rents are based on all the costs of constructing and maintaining dwellings, plus a profit margin for the owner (Stretton, 1978: 40; Saunders, 1990: 132). Australian data suggest that owner-occupier weekly housing costs are lower than tenants’ rental payments (Badcock, 1984: 184 and 217; ABS, 1992b: 323). Secondly, when an owner-occupier becomes an outright owner the magnitude of imputed income becomes even greater (ABS, 1992b: 323). That imputed income from owner occupancy is not taxed stems mainly from the prevailing perception of housing as a consumption good which generates no “direct” cash benefit whilst occupancy occurs (Flood and Yates, 1987). Ideally, though, some measure of imputed rental income should be included in any assessment of accumulation from home ownership. Provided it is offset by the costs associated with any mortgage commitments, there seems to be little argument against its inclusion. However, the principal problem in considering imputed rent is its measurement. A range of

estimates have been proposed and these are presented in Table 3.1. These values are rent:value ratios and derive from expressing the rent which could be obtained for the dwelling as a percentage of the dwelling's value. However, the use of fixed rates to measure imputed rental income can become problematical, particularly in a volatile interest rate environment, and boom and bust property cycles, both of which can influence the value of the dwelling through house price inflation. The value of any dwelling also changes temporally as increasing amounts of mortgage debt are repaid. In the United States, between 1963 and 1981, the rent:value proportion decreased from 11.84 percent to 7.13 percent (Peiser and Smith, 1985: 354).

Finally, in buying a dwelling, home owners deny themselves the opportunity to invest any deposit and transaction costs they might pay into other more rewarding investments. A view exists, therefore, that any measure of accumulation from home ownership should take this opportunity cost into account by at least measuring the return that owner equity could generate on the bond market, or some other "safe" form of investment (King, 1989c: 868; Smith, 1990: 82; Engelhardt and Poterba, 1991: 545; Bourassa and Hendershott, 1993: 36). As with other measures, however, the difficulty is knowing what this opportunity cost actually is for individual households. Therefore, a range of estimates, shown in Table 3.1, have been derived which centre around returns which could have been obtained from alternative investment opportunities.

### **3.7 Summary**

This section has reviewed a number of considerations which need to be taken into account in computing measures of capital gains each household has generated for each

dwelling owned during its housing history. However, in being aware of the numerous factors which can operate to create capital gains, a dilemma is established. For virtually all of the factors involved, it is almost impossible to obtain data which are specific to each dwelling, or ownership. Instead, to make the computation of capital gain, it is necessary to resort to "average" values derived from aggregate analyses. This, then, is the dilemma, for although the thesis has collected precise data for individual dwellings, it has not been able to collect specific data for mortgage interest rates, council rates, transaction costs, opportunity costs, depreciation and repairs and maintenance. This means that although any calculations will appear to be precise, by the very nature of the formulae from which they are derived, they will lack the status which would accrue a statistic which completely represented the accumulation status for a specific property. Such a statistic is, however, unattainable and the enquiry must proceed on a compromise basis. In this kind of research, compromise cannot be avoided, and an assumption is made that the results of any computations will produce a statistical surface whose shape is likely to mirror reality, albeit that the magnitudes established will probably vary from absolute reality.

### 4.1 Introduction

The goal of this thesis is to relate residential mobility to household accumulation. To this end, a two stage procedure has been adopted, in which patterns of residential mobility exhibited by the sample households will first be identified, so as to compare mobility in Adelaide with that in other urban contexts. The patterns of mobility which are described will then be related to accumulation in Chapter Five. However, before describing and explaining the patterns of household mobility, a number of elements need to be discussed. First, the way in which the housing history file can be utilised for analysis of mobility will be discussed. Secondly, there will be an analysis of the demography of housing sub-markets in the Adelaide area, since these create the fabric, or framework, which fosters and structures residential mobility, but which is in turn also influenced by the process. Adelaide's housing demography is considered at the metropolitan area scale, before attempting to identify aspects of its spatial differentiation.

With the housing demography discussion as a contextual backdrop, the third objective is to extract each discrete residential move from the housing history database to create a file of single moves assessed in terms of distance moved, mobility within and between sectors and zones of the metropolitan area, as well as to and from regions outside the metropolitan area. Further, these moves will be analysed in terms of housing upgrade, and the relationship of mobility to the concept of filtering (see Section 3.2). Moreover, these analyses will be sub-divided into moves from a house to another house, a house to a home unit, a home unit to a house and a home unit to another home unit.



Fourthly, the mobility of households will be examined in terms of their movement between sub-markets, the duration of ownership at any location, the spatial patterning of mobility, and the relationship between mobility and housing upgrade. Finally, the chapter will focus on a significant proportion of the sample households who left the housing market between June 1986 and July 1991.

## **4.2 The data**

This analysis of residential mobility uses data extracted from the housing history file. The housing history file records the sales activity of each of the sampled households. It is important to appreciate that although a sale generally means a move, they are not the same thing. Nevertheless, it is possible to derive mobility estimates from sales records, and the methodology employed to ensure this derivation is detailed in Section 2.5.2 and Table 2.1. Households in the file have owned more than 3 600 properties during the study period. At the time of purchase, nearly 74 percent of these ownerships were owner-occupied. However, within the housing history file there are a number of households whose tenure changed during the course of their ownership. Those who changed to owner-occupier should be added to the group of potentially mobile households, just as those whose tenure changed from owner-occupier should be deleted. When these households are considered, the proportion of properties in the housing history file which were owner-occupied at the time of their sale increased to 81 percent. Full details of the number of properties owned by the sample households, their tenure at the time of purchase and changes to tenure during ownership have been provided in Appendix 3. It is from these properties that a smaller group of

residentially mobile households can be derived, and the behaviour of this group will be analysed in Section 4.5.

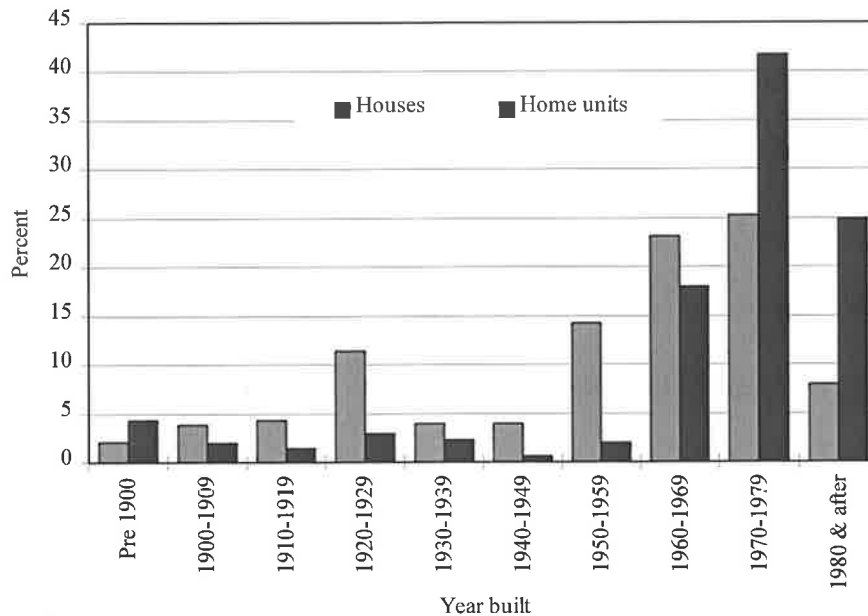
### **4.3 Establishing the mobility context**

The housing market is the context in which residential mobility occurs (Michelson, 1977: 317), and is segmented into a number of sub-markets. The relevance of housing markets to mobility has been detailed in Chapter Three. In this study, the house sub-market and the home unit sub-market are most significant. Of all the ownerships, 71 percent occurred within the house sub-market, with a further 14.1 percent occurring within the home unit sub-market. For each of these sub-markets data are available to define the demography of housing. Paris (1993: 78) has defined house demography as the physical characteristics of houses, and states that "...no systematic official records of physical condition or stock loss are kept in Australia" (Paris, 1993: 79). In respect to "condition", this can be challenged as the Valuation Division of DENR has been collecting a substantial amount of house demography data in a systematic fashion since 1968. These data have been used in the present study.

In the following demographic analysis of housing, data have been extracted from the housing history file for all houses and home units, to provide a demographic statement of the house and home unit sub-markets. In terms of the aims of this study, it is the demography of housing which is, in all likelihood, a major element driving the mobility process. Further, it is these characteristics of the housing stock which have influenced their individual accumulation performances, which is the subject of Chapter Six.

### **4.3.1 Housing demography at the metropolitan area level**

The age structure of dwellings in the Adelaide metropolitan area is shown in Figure 4.1. The low concentrations of older dwellings built before 1920 can be explained by analogy to the ageing process. Many have been demolished which has caused their proportion in the total population to reduce. The low levels of youthful houses built since 1980 can be explained by changing economic conditions associated with the internationalisation of the Australian economy (Daly, 1988: 149; King, 1989a: 453; Beauregard, 1991: 93). This period of Australia's, and South Australia's, housing history has been characterised by generally low levels of new housing approvals and housing starts. On the other hand, the large numbers of houses constructed during the "long boom" (Saunders, 1984: 209-210; Badcock, 1984: 134; Harvey, 1985: 210; Harris and Hamnett, 1987: 175) is reflected in the high concentration of houses built from 1950 to 1979. Like population age structures, significant catastrophes are often reflected in the shape of the structure, and the age of houses structure clearly shows the impact of the Depression and World War Two years from 1930 to 1949, which resulted in relatively little housing construction.

**Figure 4.1: Age of dwellings in Adelaide's house and home unit sub-markets**

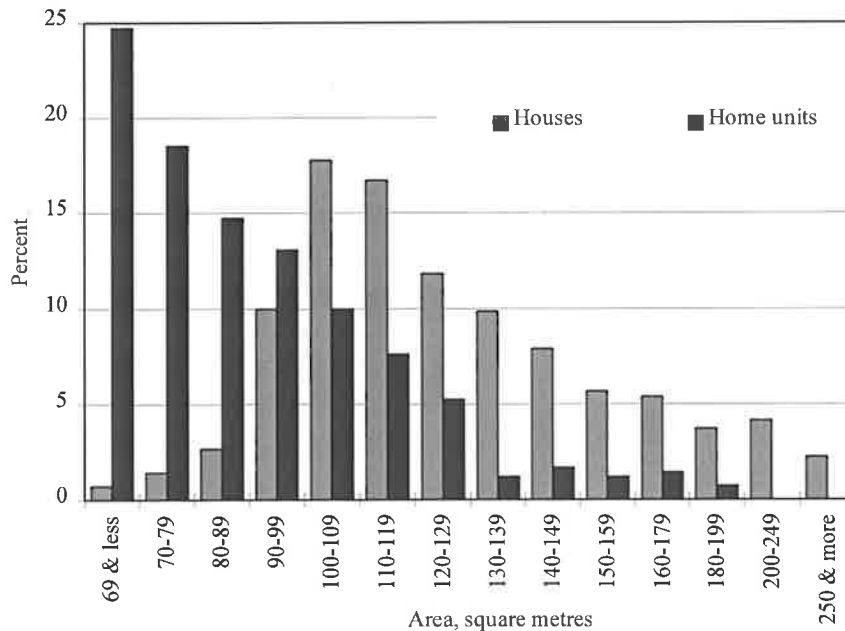
Source: Derived from tables generated in hsedemog.sps files

Given that home units are a relatively recent phenomenon in the Adelaide area, the presence of these dwellings built before 1940 would seem anomalous. However, it is most probable that at least some of these home units have been created from house conversions, possibly as part of the gentrification process (Hamnett and Randolph, 1984; Smith, 1987: 165-170; Badcock, 1991: 130). Indeed, 46 home units were in this category, distributed between 22 postcode areas, and all of them were located either in older inner suburbs adjacent to the CBD or in older coastal, or near coastal, suburbs such as Glenelg, Somerton Park, Alberton and Semaphore. Further, a full 50 percent of these older home units were located in just six postcode areas, four of which were inner locations and the other two were older established coastal suburbs.

The largest proportion of home units were built in the first half of the 1970's, with a slightly lower proportion built in the second half of the decade. However, from the beginning of the eighties, the home unit sub-market has responded to economic changes in much the same way as the house sub-market, and relatively few starts of home units were made from then through to the end of the study period.

Size of housing can be measured by its area, in square metres. The distribution of house sizes is shown in Figure 4.2, and is slightly negatively skewed. The distribution of area for home units is a reflection of the standard “smallness” of home units.

**Figure 4.2: Area of dwelling in Adelaide's house and home unit sub-markets**

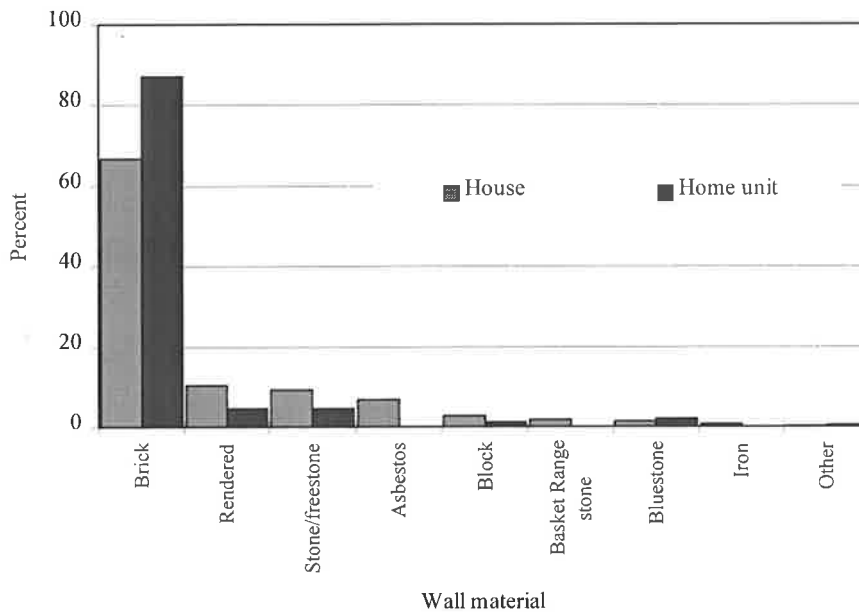


Source: Derived from tables generated in hsedemog.sps files

Brick is the most significant material from which houses and home units have been constructed, with two thirds of houses and an overwhelming 87 percent of home units built with this medium. Alternative wall treatments include cement rendering and

local stone, comprising mainly bluestone, freestone and Basket Range<sup>1</sup> stone. Figure 4.3 gives more complete details of the wall materials of houses and home units in the Adelaide metropolitan area.

**Figure 4.3: Wall material of dwellings in Adelaide's house and home unit sub-markets**



Source: Derived from tables generated in hsedemog.sps files

The almost singular preference for brick wall construction is reflected in a similar preference for either tiles or galvanised iron for roofing materials. For both houses and home units, these two materials have been used to roof more than 90 percent of dwellings. Paris (1993: 83) has criticised the “...continued absence of housing condition surveys...” in Australia, but in Adelaide the general well being, or healthiness, of the housing stock can be gauged by data recorded by the Valuation Division of DENR to measure the condition of dwellings. On a 9 point scale, ranging from very poor (1) to near excellent (9), 71.4 percent of houses are graded at 7 (good),

<sup>1</sup> A sandstone building material quarried at Basket Range, in the Adelaide Hills, located 25 kilometres east of the Adelaide CBD.

8 (very good) or 9 (near excellent). Only 3 percent are below average. On the other hand, the “health” of home units in Adelaide’s housing market is better than that of its houses probably because of this sub-market’s relative youthfulness. Of all home units, 80.2 percent are in good, or better, condition in contrast to only 0.7 percent being below average.

Finally, the mix, or “multiculturalism” or “ethnicity” of the housing stock can be considered by analysing the style of houses found in each of the sub-markets. There are more than 40 styles of dwelling recorded by DENR in its sales reports, and these have been detailed in Appendix 1<sup>1</sup>. Only those styles with 3 percent, or more, of occurrences within both the house and home unit sub-markets have been reported in this discussion. Those styles meeting these levels are displayed in Table 4.1.

**Table 4.1: Prevailing style of dwelling in Adelaide’s house and home unit sub-markets**

Style	Houses		Home units	
	Number	Percent	Number	Percent
Conventional	974	43.7	216	49.5
Bungalow	263	11.8		
SAHT conventional	190	8.5		
Contemporary	137	6.1	25	5.7
Villa	93	4.2		
Ranch	89	4.0		
Symmetrical cottage	77	3.5		
Colonial	72	3.2	52	11.9
Austerity	66	3.0		
High quality conventional			51	11.7
Single fronted villa			18	4.1
Spanish			15	3.4
<b>Total</b>	<b>2229</b>	<b>100.0</b>	<b>436</b>	<b>100.0</b>

Note: The styles of dwelling are described and illustrated in Appendix Nine.

Source: Derived from data generated from hsedemog.xls

<sup>1</sup> See Variable 31 in Table A.1.1.

Firstly, there is more diversity of styles for houses than there is for home units. In demographic terms this highlights the degree of cultural diversity which has developed between the post World War Two period, when very few styles of houses were built, and the more recent period which has witnessed a diversification (Persse and Rose, 1981). The community has become more wealthy and more sophisticated. Within the house sub-market, 69 percent of styles coded by the Valuation Division of DENR, or 34 individual styles, are represented, but this reduces to 31 percent for home units, reflecting, in large part, the recency of the home unit dwelling phenomenon and the fact that it occurred during a period of restructuring which tended to reduce the variety of housing styles in pursuit of cost efficiencies.

Secondly, conventional style houses and home units predominate, with each recording more than 40 percent in their respective sub-markets. Both markets also have lower, and relatively equal, shares of contemporary style dwellings. Thirdly, some styles are peculiar to the house sub-market and others to the home unit sub-market. For example, bungalow, villa, ranch, symmetrical cottage and austerity styles are restricted to the house sub-market, whilst high quality conventional, single fronted cottage and Spanish styles seem to be more predominant in the home unit sub-market. There are a number of factors which can explain these differences. The austerity style was built in large numbers immediately after World War Two, and as austerity turned to boom its style was discarded. Other styles do not lend themselves readily to home unit construction. More recently, the Spanish and single fronted cottage styles have become fashionable and have been built almost exclusively at the expense of other styles. Fourthly, the colonial style for home units is more evident than for houses, and



is due to a combination of fewer styles utilised for home units and the recency of the home unit phenomenon.

#### **4.3.2 Spatial differentiation and housing demography**

Within any entity there will be differentiation, and several approaches are available to describe any patterns which exist. An exhaustive treatment of the spatial variation in housing demography is not appropriate here but the existence and magnitude of differentiation is reflected in the index of dissimilarity. This measure defines the percentage of one variable which would need to relocate in order to have the same percentage distribution of another variable, which is typically a bench-mark variable. In this case, the distribution of houses has been used as the bench mark variable, and the levels of dissimilarity between this variable and other housing demography variables is shown in Table 4.2. The higher the index for any variable the greater the degree of differentiation because a high index indicates that a high percentage of the variable would need to re-locate in order to have the same percentage distribution as the bench mark variable.

**Table 4.2: Index of dissimilarity for selected housing demography variables**

Demographic variable	Index of dissimilarity	Demographic variable	Index of dissimilarity
Wall material		Condition	
- Brick	13.1	- Average or less	40.1
- Rendered	39.3	- Above average	7.2
- Asbestos, weatherboard	47.9	Dwelling style	
- Stone, bluestone	48.2	- Conventional	23.1
Roof material		- Contemporary	29.4
- Tile	17.9	- Colonial	40.3
- Galvanised iron	32.9	- Ranch	48.5
Number of rooms		- Bungalow	48.7
- 3 or 4	36.0	- SAHT conventional	56.3
- 5 or 6	8.5	- Symmetrical cottage	63.5
- 7 or more	29.6	- Villa	65.2
Area, m <sup>2</sup>			
- <100 m <sup>2</sup>	25.4		
- 100-139 m <sup>2</sup>	10.2		
- 140 m <sup>2</sup> or more	24.9		

Source: Based on data extracted from hsedemog.sps file

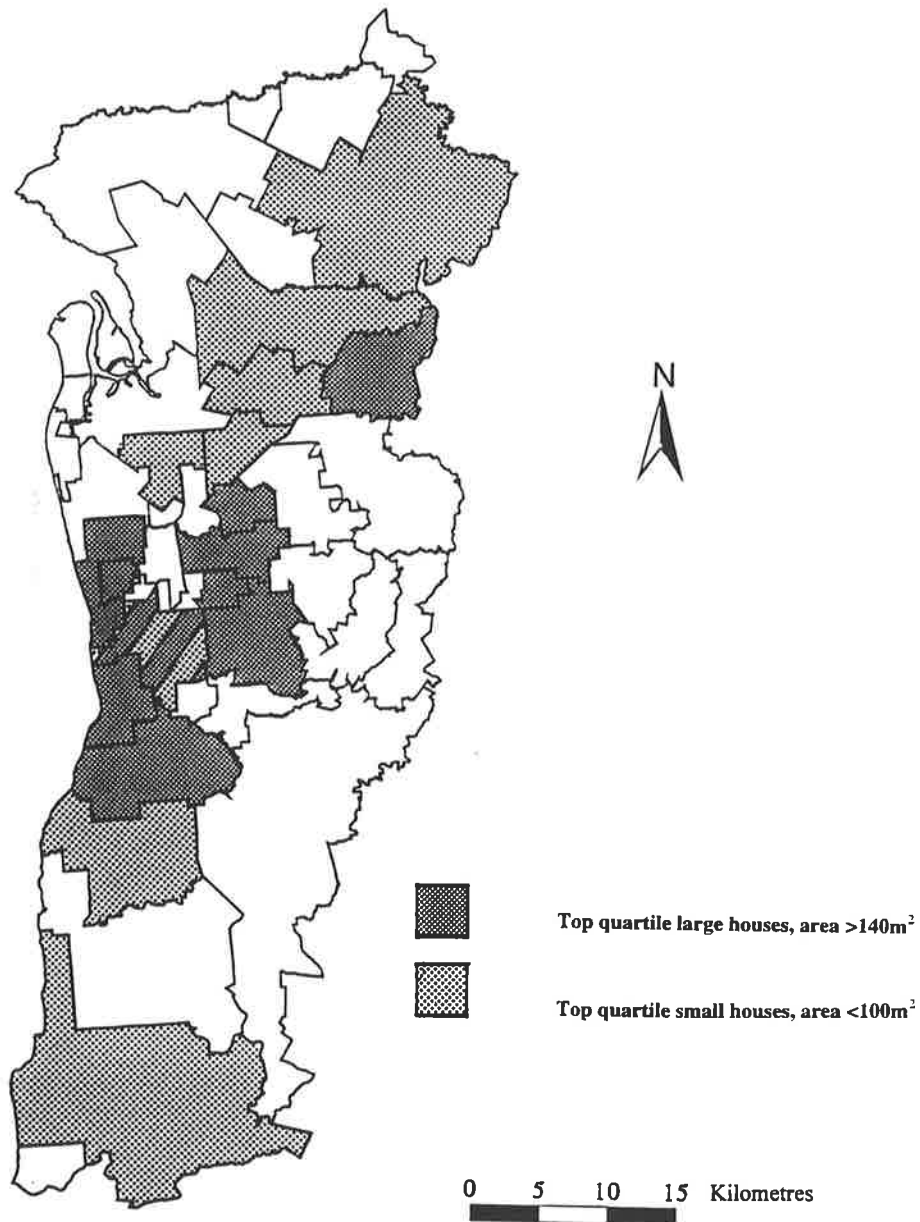
The indices of dissimilarity suggest that there is marked differentiation associated with the demographic characteristics of houses in the Adelaide housing market.

However, the distribution of brick wall materials and tile roofing materials throughout the housing market is ubiquitous. Similarly, houses with “average” numbers of rooms and an “average” floor area are also evenly spread throughout the Adelaide urban area, as are houses in “above average” condition. For many demographic characteristics, though, there are quite marked spatial variations, based on their index of dissimilarity, and these will have consequences for residentially mobile households if their housing goals includes any of these dwelling characteristics. As Figure 4.4 shows, households searching for particularly large or small houses will tend to have their search process confined to selected and discrete areas within the Adelaide region. The largest houses are located in areas relatively close to the CBD, excluding areas to the north and north-west. On the other hand, those areas containing small houses are

more distant from the CBD, located in the relatively newer suburbs to the north-east and the south where large tracts of budget priced housing has been constructed. The spatial variation of dwelling size is likely to guide the mobility patterns of households which are seeking to upgrade their housing through the purchase of a larger residence. Perhaps more significantly, if a household wishes to purchase a house of a particular style, or with walls which have been rendered, or built from stone, then the evidence of Table 4.2 would further suggest that the search process would be conducted in prescribed regions of the urban area.

The geography of housing styles is linked to the era of their popularity, and therefore their age. Older styles are therefore most concentrated in the inner areas, whilst more recent styles have highest concentrations in the post war suburbs and the newer areas which developed after the mid sixties. Therefore, the villa and symmetrical cottage are located close to the city centre because their construction period generally extended up to 1915, whereas the bungalow is more widespread because it was built up to the early 1930's. These specific geographies are represented in Figure 4.5

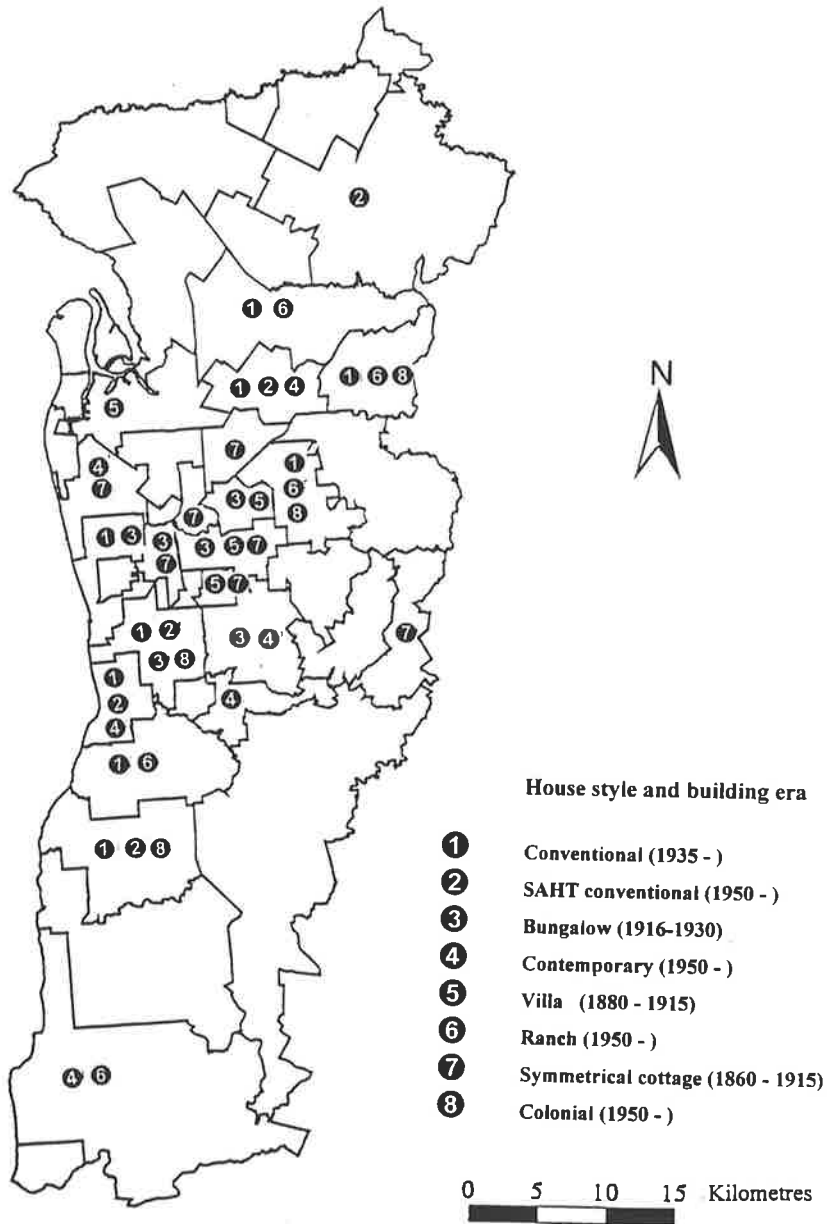
**Figure 4.4: Distribution of small and large houses in Adelaide based on area, m<sup>2</sup>**



Note: This map is based on mosaic regions - see description in Appendix 6.

Source: Based on data extracted from hsedemog.sps and dmog\_mos.xls files

**Figure 4.5: Distribution of top quartile of eight most purchased house styles**



Note: These styles are described and illustrated in Appendix Nine.

Source: Based on data extracted from hsedemog.sps file

The SAHT (South Australian Housing Trust)<sup>1</sup> conventional house is very much a phenomenon of the long boom of the 1950's and sixties, which saw widespread building activity in the then suburbs, as well as in the developing satellite city of Elizabeth, some 30 kilometres north of the CBD (Stretton, 1970: 154-157; Peel, 1992: 10-11; Peel, 1995: 39-42). The colonial style emerged during the sixties, when 41.7 percent of its number were built, but in the succeeding two decades its popularity has waned steadily down to 30.6 percent and 22.3 percent. There would appear to be very few colonial style houses being built at the present time. The ranch style is a product of the seventies, which saw 69.7 percent of its type built, but not withstanding its brief popularity, its distribution has been fairly widespread, particularly in suburbs located between 5 and 20 kilometres from the city.

#### **4.4 Residential mobility**

This section describes the patterns of mobility produced by mobile households represented in the housing history file. Household mobility is defined as movement from one dwelling at which owner-occupier tenure was held to another property with the same tenure. Normally, any definition of mobility would not use tenure as a classifying concept, simply because much intra-urban mobility is inter-tenure movement. Indeed, the investigation which is conducted in Section 4.8 is testimony to this fact. However, because the study's aim is to examine a possible relationship between mobility and capital gains generation it has been necessary to restrict the analysis to households which move within the owner-occupied tenure. Accordingly, a

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<sup>1</sup> See Appendix Nine for descriptions and illustrations of selected house styles in the Adelaide metropolitan area.

procedure was needed to extract from the housing history file those ownerships which represented residential mobility. At any location, owner-occupier tenure at the time of sale of the dwelling was deemed to exist if the owner had been an owner-occupier for the entire ownership, or if tenure had changed from landlord to occupier during ownership, or if a dwelling had been constructed on vacant land and the owner subsequently occupied that dwelling. Using these criteria, each household's property ownership details in the housing history file were interrogated to provide information about properties between which a household had been residentially mobile. In Table 4.3 the lower diagonal set of data show the number of households who moved from the first dwelling in their housing history to their second dwelling, and the number who moved from their second dwelling to the third dwelling in their history, and so on. However, there is an extra piece of information in Table 4.3 which is represented by the values above the lower diagonal set of values. For example, there were 51 households who moved from the first dwelling in their housing history into the third dwelling in their history, clearly suggesting that the second property they owned during their housing history was not a property at which they had been an owner-occupier, but one used for some other purpose such as a rental, investment or holiday property.

Significantly, the moves which have been identified in Table 4.3 represent 50.3 percent of all the properties recorded in the housing history file. It suggests, therefore, that in any real estate market only about half of all sales will be for owner occupancy purposes, and therefore be part of the residential mobility process. The remainder of properties are represented partly by the kind detailed above, and also by owners who

purchased only one property during the study period. Owners in the latter category represented 26.9 percent of all properties in the ownership histories.

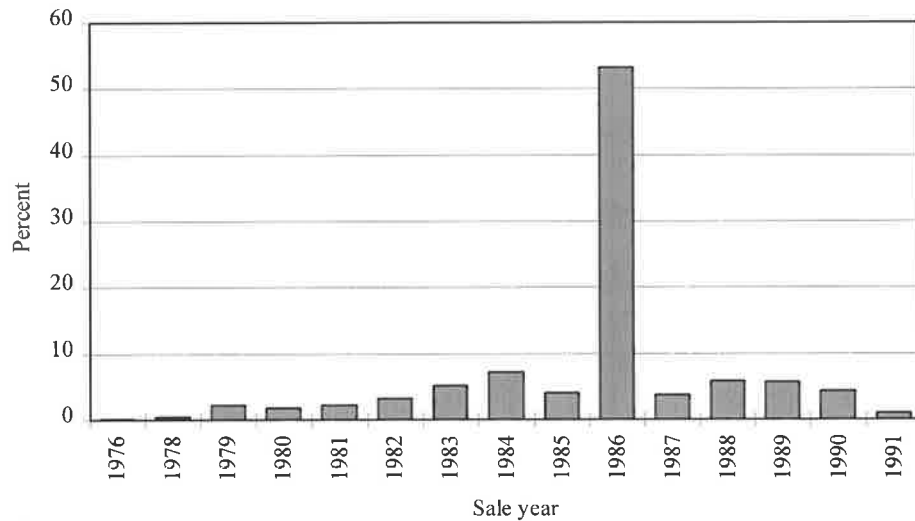
**Table 4.3: Mobility and owner-occupancy**

Origin dwellings	Destination dwellings										
	1	2	3	4	5	6	7	8	9	10	11
1		688	51	17	4	3					1
2			204	10	3	1					
3				70	3						
4					20						
5						9					
6							1				
7								1			
8											
9											
10											
11											

Source: SPSS syntax that extracted information for the movers.sav file.

In line with the definition of mobility provided above, it is critical to reassert that the moves in Table 4.3 represent the completion of sale of a dwelling at which the household was the owner-occupier and the purchase of a new dwelling where the household's tenure was also owner-occupier. In the subsequent discussion it is the characteristics of the origin and destination dwellings for each of these moves which have provided the bases for any analyses. Moreover, it needs to be noted that these moves occurred over the period from 1968 to July 1991, and an indication of the frequency of moves in each of these years is provided in Figure 4.6.



**Figure 4.6: Moves by year of sale of original dwelling**

Source: Frequencies of salyer\_or variable in mobility.sav file

The significance of the year 1986 in Figure 4.6 is caused by the fact that the sample of households was drawn from all households which bought or sold a house or home unit during June 1986 and that the table is based on the sale date of the original dwelling. Many of these households would have moved to a new dwelling, thereby creating a residential move as defined earlier and causing a high concentration of moves for 1986. Values for the years on either side of 1986 indicate the level of moves made by the sample households in their ownership histories leading in to and out of the benchmark year of 1986. It would seem that households have exhibited steady movement characteristics in the seven years before 1986 and the subsequent five years. As the study period concluded in July 1991, mobility levels for 1991 are lower than might otherwise be expected. These data suggest that owner-occupiers shift residence at a rate of 6.7 percent per annum, a level which supports census based

findings which have revealed that some 30 percent of owners and purchasers in Sydney and Melbourne had shifted residence between 1986 and 1991 (Maher and Whitelaw, 1995: 85-86).

#### **4.4.1 Distance moved**

The literature suggests that mobility is strongly influenced by location, or space. A household's intimacy with its location creates a more heightened awareness of their locality's qualities compared with their understanding of the qualities of other locations. This household characteristic then impacts upon the search process when a new residence is sought, and consequently nearby opportunities are more likely to be explored than opportunities situated in other locations, with the result that when any move is made it is probably a relatively short move (Michelson, 1977: 317).

Data on distance moved were obtained by geocoding each property purchased within the metropolitan area of Adelaide with an easting and northing value, or grid reference. Details of this procedure are presented in Appendix 1<sup>1</sup>. Properties located outside the metropolitan area were not assigned a geocode. The geocodes were used to determine a distance moved variable for each residential move, which represented a straight line distance between origin and destination location computed according to the formula in Equation 4.1. Although this approach may result in an underestimation of the road distance between residences for a proportion of moves, it has not been possible to determine the proportion of moves whose distance is underestimated or to employ a technique which relates distance moved to the shortest road distance between any two locations.

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<sup>1</sup> See Variables 10, 11, 17 and 18 in Table A.1.1.

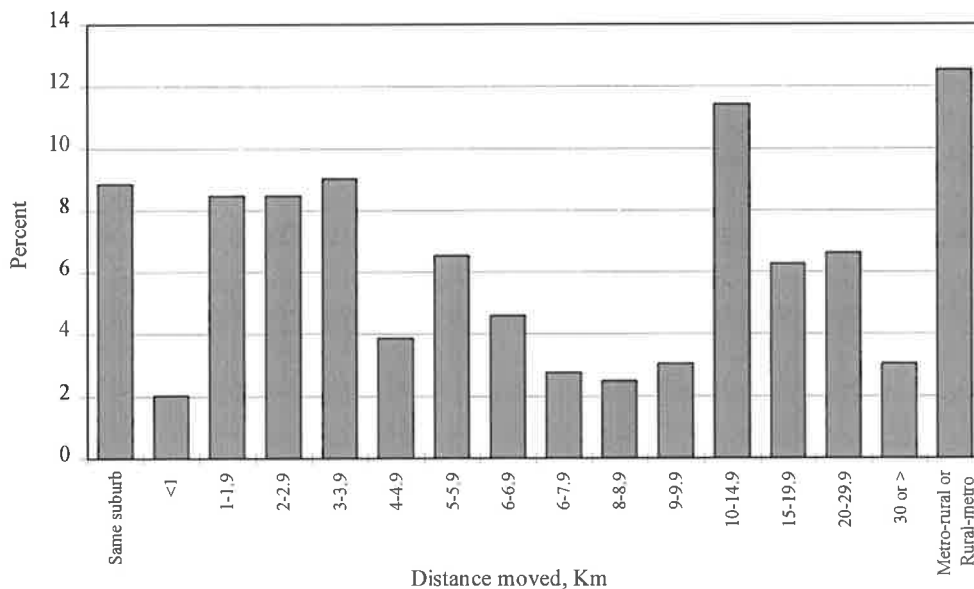
**Equation 4.1**       $\text{distance}_{ab} = \sqrt{(x_a - x_b)^2 + (y_a - y_b)^2}$

where

$x_a$  is the easting value for location a  
 $x_b$  is the easting value for location b  
 $y_a$  is the northing value for location a  
 $y_b$  is the northing value for location b

Data for distance moved between residences is presented in Figure 4.7, and reveals that nearly half of all moves are 5 kilometres or less. In a city such as Adelaide, whose north and south extremities are some 85 kilometres apart, this finding is a resounding confirmation of early residential mobility theory.

**Figure 4.7: Mobility and distance moved**



Source: Frequencies of variable distrcde in mobility.sav file

There are several observations which can be made from the figure. Firstly, about 11 percent of all moves are very short, being no further than one kilometre. Secondly, nearly 30 percent of moves are between one and five kilometres, and one fifth of

moves are between five and ten kilometres. Therefore, some 60.1 percent of moves were 10 kilometres or less, which compares with census findings in the UK, where 69 percent of residential moves were up to 10 kilometres (Owen and Green, 1992: 21).

In the early 1970s, Humphreys (1973: 33-34) showed that more than 80 percent of high socio-economic status households moved up to 8.5 kilometres. For low status movers, the proportion moving up to 8.5 kilometres was marginally higher.

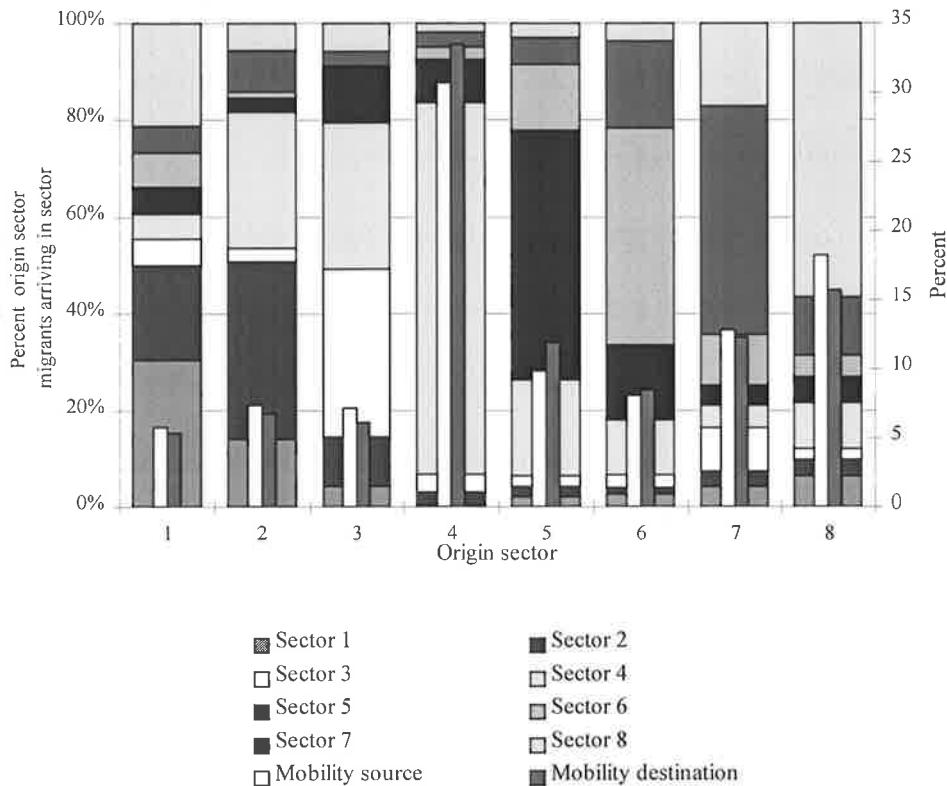
Simmons' (1974: 54) work in Toronto determined that 36 percent of intraurban moves were less than 10 kilometres, whilst other Australian studies have regularly reported that the majority of residential moves in urban areas are within the same LGA, or to an adjacent LGA (Maher, 1984: 47; Maher et al, 1985: 17; McDonald and Moyle, 1996: 303).

#### **4.4.2 Spatial dimensions of mobility**

Three spatial measures are employed here - sectors, zones and mosaic regions. Each of these dimensions of space have been defined in Appendices Four, Five and Six, and they have been used to facilitate the spatial interpretation of the mobility process in the Adelaide area. Analyses of selected processes in cities have revealed a sectoral pattern in their spatial distribution, and these patterns have often been related to socio-economic variables (Burnley, 1980: 174; Badcock, 1984: 8). Therefore if, in the present study, a sectoral bias can be attributed to the residential mobility patterns of households it may indicate that the process is grounded on socio-economic factors. Maher and Whitelaw (1995: 53) have pointed out that mobility has a distinct spatial bias, with links to the mental map used by households to facilitate their search process. Moreover, these mental maps have a sectoral shape which is a function of a

city's transportation routes and their relationship to the city centre (Adams, 1969: 317; Maher et al, 1985: 18). Figure 4.8 shows the sectoral nature of moves which occurred within and between the eight sectors of the metropolitan area. It is important to be guided by the notes accompanying the figure to interpret and fully appreciate the mobility patterns it represents.

**Figure 4.8: Mobility within and between sectors**



Notes: The figure comprises two parts. The cumulative percentage bars are read off the left hand axis and represent the proportion of moves originating in a given sector and ending in a particular sector. For example, using the Sector 1 bar, it shows that of all the moves which originated in Sector 1, 30.4 percent of households' new residence was also in Sector 1, whereas for 19.6 percent of households the new residential location was in Sector 2. Similarly, 5.4 percent of movers from Sector 1 relocated to each of Sectors 3, 4 and 5. The proportion of movers who originated in Sector 1 and relocated to Sector 8 is 21.4 percent.

The two bars superimposed on each cumulative percentage bar are read from the right hand axis. The left hand bar represents the proportion of all moves which originated in any particular sector and the right hand bar represents the proportion of all moves whose destination was a particular sector. For example, Sector 4 provided 30.7 percent of all households which moved, and it was the destination sector for 33.5 percent of all mobile households.

Source: Derived from crosstabulation of variables `secv1_or` and `secv1_de` in `mobility.sav` file

The moves which have occurred within the metropolitan area represent some 89.1 percent of all moves made by the sample population. The figure is revealing in terms of identifying sectors which are substantial origin locations of residential moves and those which are significant destination locations for movers. As might be expected, the sectors containing the bulk of Adelaide's new housing development over the last two decades are the most significant destination locations for residential moves. The sector with the most destinations is sector 4, the Southwest-south sector, but the Northeast-north (sector 8) and the Northeast-east (sector 7) sectors are also quite significant in this respect. However, these same sectors are also equally significant sectors for originating residential moves. It is therefore important to see these areas as regions acting not solely as destinations in the residential mobility process, but also making a significant contribution to the origin component of the process. Areas which are simultaneously origin and destination location for residential movers are regions within the sub-market with large real estate turnovers. These are the sections of the urban area where the greatest numbers of households are likely to be engaged in the process of housing adjustment.

The detail of Figure 4.8 can be dissected to provide some insights into the geographical, or spatial, constraints to mobility. In Table 4.4 residential moves have been classified in terms of the spatial location of the origin sector and the destination sector for each move. Table 4.4 provides strong evidence that mobile households are constrained in terms of their movement patterns, particularly given that well over half of all moves occur within the same sector, and that more moves occur between nearby sectors than between more distant sectors. Munro and Lamont (1985: 1343) have shown that in Glasgow 82.7 percent of all residential moves were within the same

“sector”. It is undoubtedly the case that socio-economic factors contribute to these constraints (Thorns, 1981a: 207; Clark, 1982: 35-38; Badcock, 1994b: 283), and the relationship between sale price of origin dwelling to purchase price of destination dwelling is also related to this concept. It has been argued (Maher et al, 1992: 33) that in the residential mobility process the housing market’s role is critical, in that it rations the availability of different housing types, styles and locations through differential pricing. Thorns (1981) and Badcock (1989) have demonstrated a relationship between house price and socio-economic status, with the implication, therefore, that higher socio-economic households will move within the higher land value areas of cities and lower socio-economic households will make their locational choices outside of the high land value areas. In the next chapter, these considerations will be explored in more detail.

These data also suggest that there is a radial component to the direction of moves, that they are predominantly likely to be centrifugal or centripetal, and this is clearly contributory to such a high proportion of moves being constrained within their origin sector. This tendency has been noted elsewhere, with Adams (1969: 317) pioneering investigations into “directionality” and intra-urban mobility. In a Melbourne study, Humphreys (1973: 34) observed a randomness for very short moves but a significant directional bias for longer moves. Others (Maher, 1984: 39; Maher et al, 1985: 18; Maher and Whitelaw, 1995: 53) have confirmed this characteristic of residential mobility in Melbourne, and in Adelaide, Ward (1976: 173) demonstrated a similar characteristic, especially in the inner and outer zones of the urban area.

**Table 4.4: Sectoral destination of moves within metropolitan area**

Type of move	Number	Percent
Within same sectors	535	55.6
To an adjacent sector	224	23.3
To a sector 2 removed from origin sector	100	10.4
To a sector 3 removed from origin sector	61	6.3
To a sector opposite origin sector	42	4.4
Total	962	100.0

Source: Derived from Figure 4.8, and based on crosstabs of sector\_o and sector\_d variables in mobility.sav file.

Spatial aspects of residential mobility can also be investigated in terms of concentric zones, as displayed in Figure 4.9. The interpretation of this figure is the same as for Figure 4.8, and again it is suggested that the reader use the accompanying notes to interpret and fully appreciate the mobility patterns it represents. The first four zones are the most significant as they have provided 86.5 percent of all origins and 84.5 percent of all destinations. This characteristic of intra-urban mobility has previously been identified by Ward (1976: 228) in Adelaide and by Maher and Saunders (1996: 231-234) in Melbourne. Furthermore, it would seem to be characteristic of mobility patterns in all large cities.

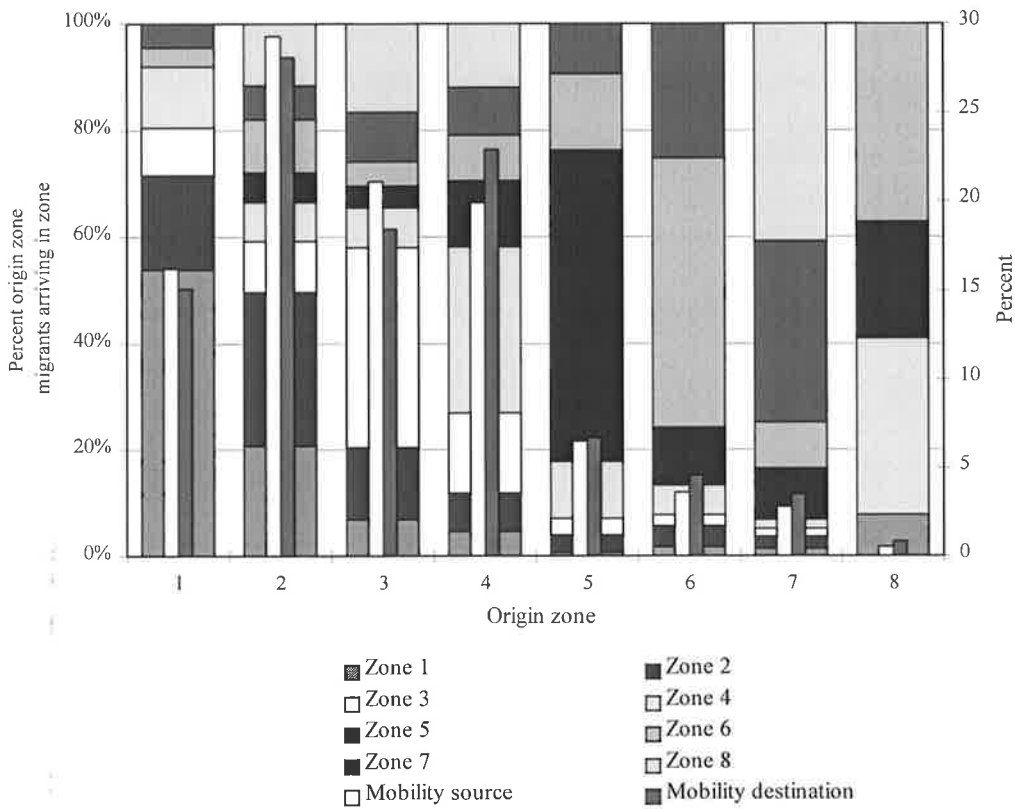
Zones 2 and 3 are the most significant for originating moves, whilst zones 2 and 4 are the most significant reception zones. The outlying zones have developed as housing tracts more recently, and therefore their relatively low numbers are the result of the zones' limited capacity to generate and receive movers throughout the entire study period. This has clearly not been the case for the inner four zones, which embrace an area radiating only 20 kilometres from the CBD.

In Table 4.5, origin and destination zone data have been aggregated to provide an indication of the nature of moves within and between zones. Earlier, it was suggested



that there was a radial character to residential mobility in Adelaide, and the existence of this quality would seem to be confirmed in the table. Only 46.9 percent of moves occurred within the same zone, and this has occurred because once moves became longer than 5 kilometres, even though they may remain in the same sector, they would terminate in another zone. Furthermore, within urban areas there are socio-economic processes which deter circumferential residential mobility (Maher and Whitelaw, 1995: 53) within a given zone. Households which moved too far in this fashion would find that they had moved from their origin sub-market to a destination sub-market whose land value surface was greater than the household could afford. Therefore, it would need to retreat closer to its original sub-market to locate new housing opportunities within its financial capabilities, which in turn would be conditioned by the price which had been received from the sale of the origin dwelling.

**Figure 4.9: Mobility within and between zones**



Notes: The figure comprises two parts. The cumulative percentage bars are read off the left hand axis and represent the proportion of moves originating in a given zone and ending in a particular zone. For example, using the Zone 1 bar, it shows that of all the moves which originated in Zone 1, 44.2 percent of households' new residence was also in Zone 1, whereas for 35.9 percent of households the new residential location was in Zone 2. Similarly, 8.3, 7.7 and 0.6 percent of movers from Zone 1 relocated to each of Zones 3, 4 and 5 respectively. The two bars superimposed on each cumulative percentage bar are read from the right hand axis. The left hand bar represents the proportion of all moves which originated in any particular zone and the right hand bar represents the proportion of all moves whose destination was a particular zone. For example, Zone 4 provided 19.9 percent of all households which moved, and it was the destination zone for 22.9 percent of all mobile households.

Source: Based on crosstabulation analyses of zonv1\_or variable and zonv1\_de variable in mobility.sav file

**Table 4.5: Zonal destination of moves within metropolitan area**

Type of move	Number	Percent
Within same zone	451	46.9
To an adjacent zone	294	30.6
To 2 zones removed from origin zone	116	12.6
To 3 zones removed from origin zone	56	5.8
To 4 zones removed from origin zone	27	2.8
To 5 zones removed from origin zone	13	1.3
To 6 zones removed from origin zone	4	0.4
To 7 zones removed from origin zone	1	0.1
Total	962	100.0

Source: Extracted from crosstabulation analyses of zone\_ori variable and zone\_des variable in mobility.sav file

To illustrate this point, Table 4.6 provides house price data by sector, based on the price movers paid for their original house. These prices have been adjusted to 1989/90 prices and clearly show the sectoral pattern of house prices in the Adelaide metropolitan area. These data illustrate how households in various sectors are “hemmed in” and somewhat constrained in their housing choices. For example, households in the northwest-north sector might expect to move to the northwest-west sector and possibly the northeast-north sector, based on median prices, but might also expect not to be able to buy into the southwest-west and the northeast-east sectors, simply because the difference in median prices between these sectors was sufficiently large to prevent households from entertaining any prospect of purchasing a dwelling in these sectors from the proceeds of the sale of their first house. Therefore, mobility originating in these sectors is likely to be constrained within these sectors. Similarly, movers originating in the higher land value sectors are also constrained, but for different reasons. They are unlikely to want to choose residences in sectors with lower median house values, particularly if residential upgrading is a motivating factor

in the decision to move, and therefore these households, too, will be constrained to selected sectors of the metropolitan area in searching for new residences.

**Table 4.6: Mean and median house prices in sectors**

Sector	Mean house price, \$	Median house price, \$
Northwest-north	78 774	66 500
Northwest-west	92 268	72 502
Southwest-west	100 068	97 728
Southwest-south	74 959	75 916
Southeast-south	121 567	112 677
Southeast-east	127 443	112 431
Northeast-east	92 695	92 910
Northeast-north	70 164	74 188

Source: Price paid for origin houses, extracted from mobility.sav file

In summary, then, the proportion of moves which occur within zones is lower than that occurring within sectors, whilst a higher proportion of moves are to an adjacent zone than to an adjacent sector. The reason for this would seem to be that the residential mobility process is constrained by socio-economic factors which influence the land value surface of any urban area. Evans (1973: 130-139) developed the concept of “social agglomeration” to describe the process underlying social differentiation in urban areas and which caused particular social groups to occupy specific areas of the city. From this feature of urban social geography, it might follow that people seek to live among their fellows with equal or similar socio-economic status. There will, however, be some individuals in any group who seek not to live among their social peers and aspire to better localities and surroundings. Despite their aspirations, their goals may remain unfulfilled due to the linkage between labour market position and housing market position, which has been demonstrated particularly well by Thorns (1981: 210) and Hamnett (1984: 159-160; 1991: 203-207). Their work has shown that the market allocates the available housing stock in

the various housing sub markets on the basis of price. As Maher and Whitelaw (1995: 89) have observed

“... socioeconomic differentiation is premised on the relationship between the structure of the housing market (particularly price differentials between areas) and the ability of households to afford housing of different prices”.

The market is, therefore, a rationing mechanism (Murie and Forrest, 1980: 13; Forrest and Murie, 1989: 30). For housing of any style, and in any location, which is in short supply, the minority which can afford the market price will obtain ownership. Harvey (1973: 171) has argued that “...the rich can command space...” and those below them are allocated to urban locations on the basis of their ability to pay.

The implication for mobile households is that their economic relationship with the housing market results in relatively short moves, because they are restricted to a particular price segment of the housing market. Further, the spatial distribution of house values in the Adelaide area, which have been described in the discussion, cause the majority of moves to be sectorally directed.

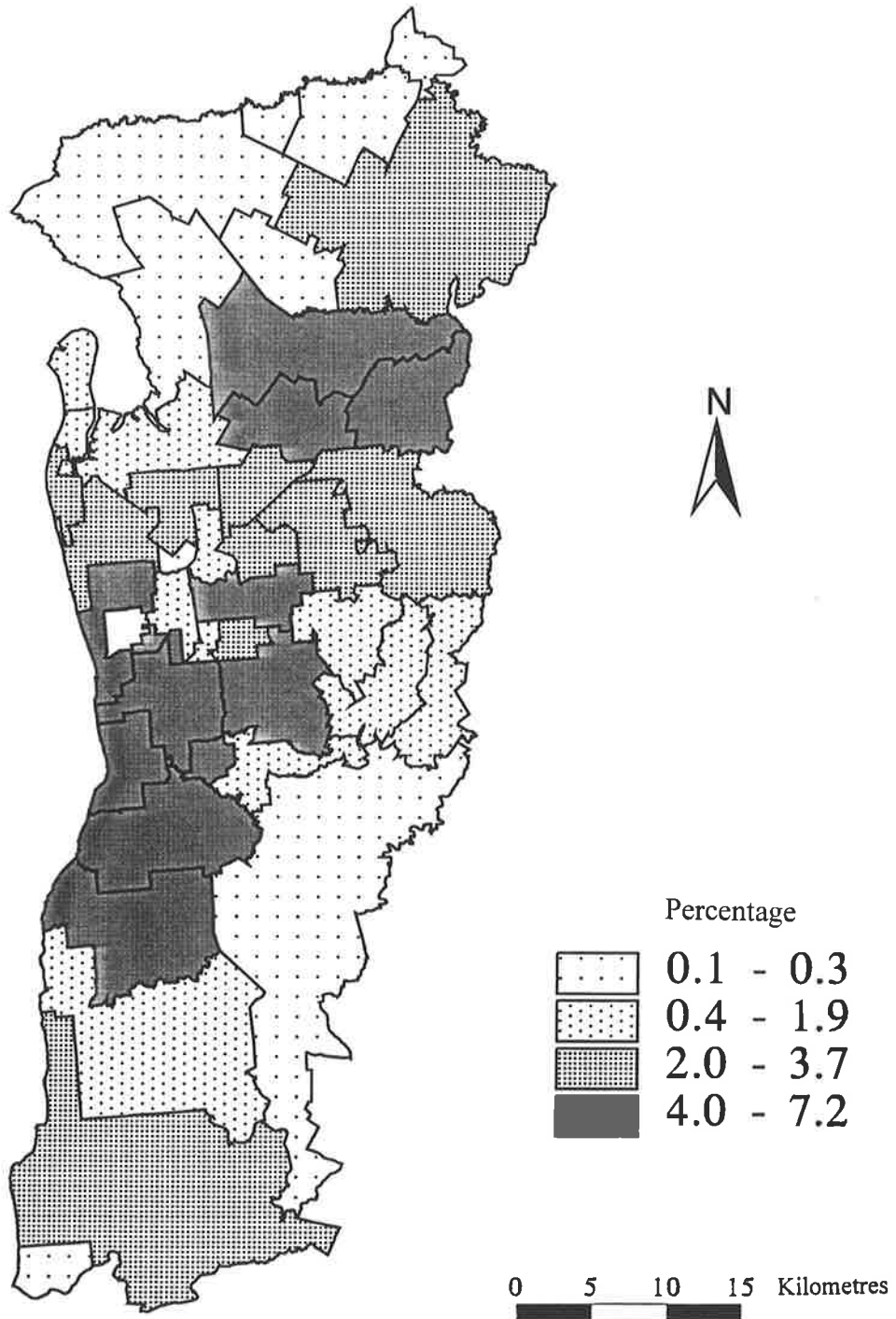
#### **4.4.3 The geography of mobility**

In the previous sections, spatial characteristics of mobility have been based on zonal or sectoral considerations. However, mobility can also be described using mosaic regions. Of all the moves, 33.4 percent of all moves occurred within the same mosaic region. Moreover, a correlation analysis of movement between origin and destination mosaic areas produced a coefficient of +0.941. Even when those moves which occurred within the same mosaic areas were removed, the correlation coefficient remained very high at +0.832. Both results confirm earlier assertions about the

constrained nature of residential mobility in the Adelaide area and its corollary that moves are generally of very short distances. Figure 4.10 and Figure 4.11 show the distribution of residential mobility origins and destinations respectively. As would be expected from the preceding comments, the two patterns are very similar because of the tightness of the link between origin and destination locations. However, the two maps between them highlight some important characteristics about mobility patterns in Adelaide. Firstly, the areas with the lowest propensity to mobility are almost opposites in terms of socio-economic status, with the south-east sector being predominantly high status and the north-west sector having generally low status (Badcock, 1984: 205-206; Glover and Woollacott, 1992: 32,38 and 92). The mobility similarities between these two socio-economically different regions are due, in all probability, to two different processes working to cause the same symptom. In the high status area, low levels of mobility occur not because there have been no opportunities for mobility during the study period, but because households living in these areas are satisfied with their location and do not wish to move. On the other hand, the low levels of mobility in the generally low socio-economic areas may not be due as much to satisfaction as to constraint, with constraining factors being low income, possibly high mortgage commitments and an inability to enter higher value housing sub-markets even if the wish existed.

The regions in between these two extremes, one to the north-east and the other to the south-west, are regions with a high propensity for residential mobility because so many households in these areas are in a state of flux, in that their housing histories, or housing career ladders (Paris, 1993: 52) are still evolving and because their middle socio-economic characteristics give them greater flexibility to move in order to

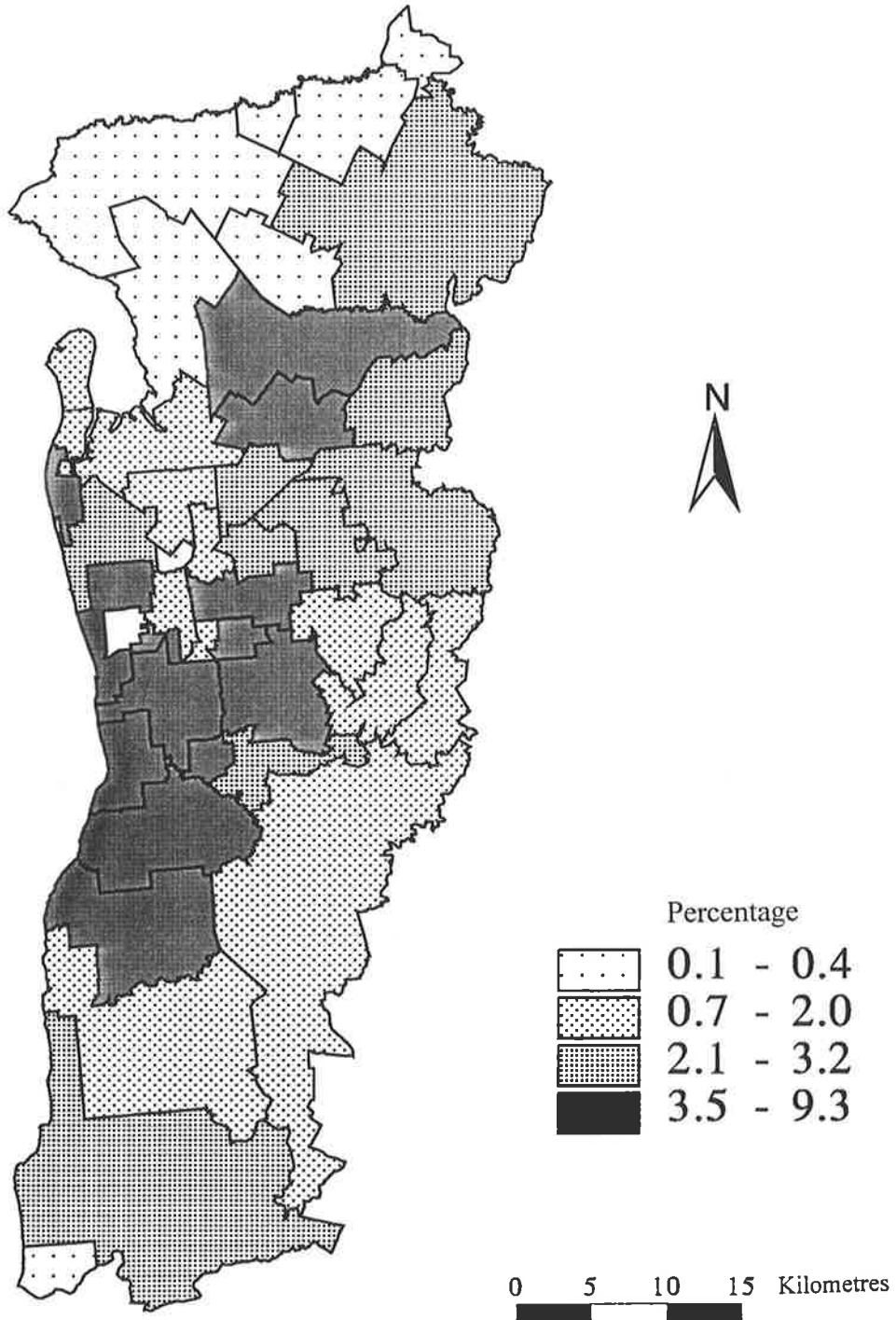
achieve housing satisfaction than households in the north-west sector, although not as much as households in the south-east sector. Households in these “middle” areas tend to move residence almost exclusively within the same region because they are not interested in opportunities in the north-west sector and there are relatively restricted opportunities, and a higher priced sub-market to penetrate, in the south-east sector. This proposition will be investigated more fully in Chapter Five. Moreover, these areas offer a diversity of housing choices for mobile households, which has enabled many mobile household to remain in the “same” area whilst simultaneously achieving their housing goals (Figure 4.12). These results suggest that there is a U-shaped relationship between socio-economic status and mobility, with lowest mobility at the extremes and highest mobility in the middle. Similar kinds of results have been reported in the past, with Brown and Kain (cited in Quigley and Weinberg, 1977: 54) suggesting in 1972 that mobility and income behaved in this fashion.

**Figure 4.10: Origin locations of residential mobility**

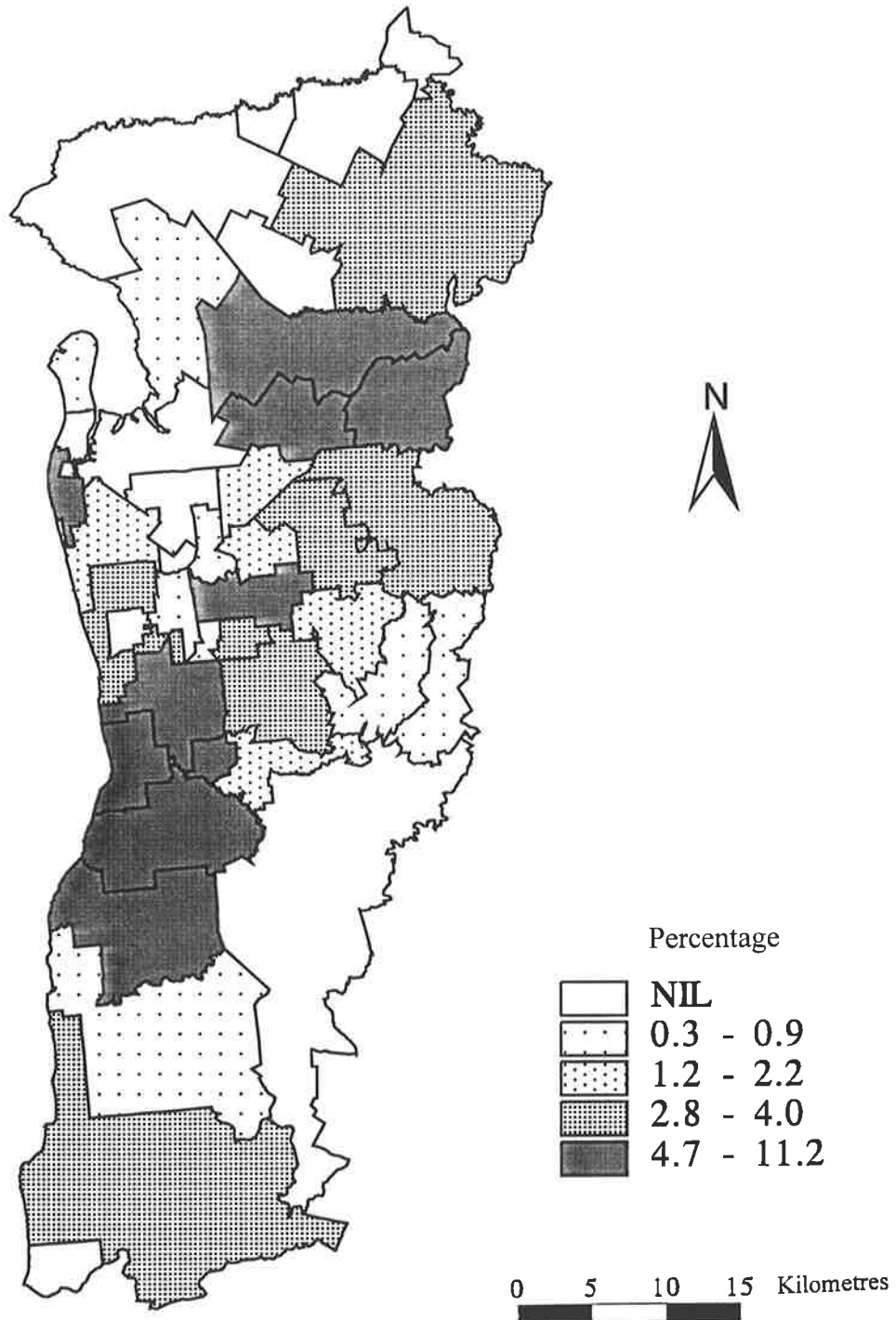
Source: Based on data presented in Appendix Seven



Figure 4.11: Destination locations of residential mobility.



Source: Based on data presented in Appendix Seven

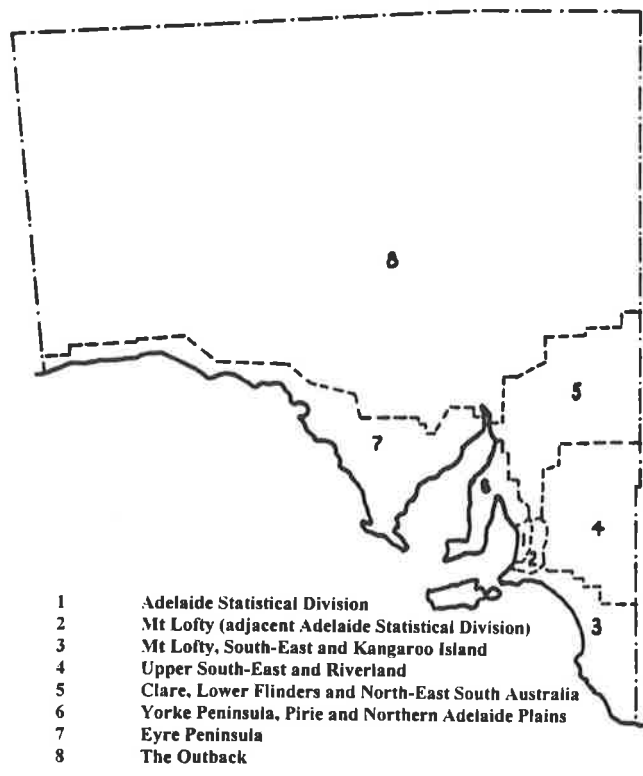
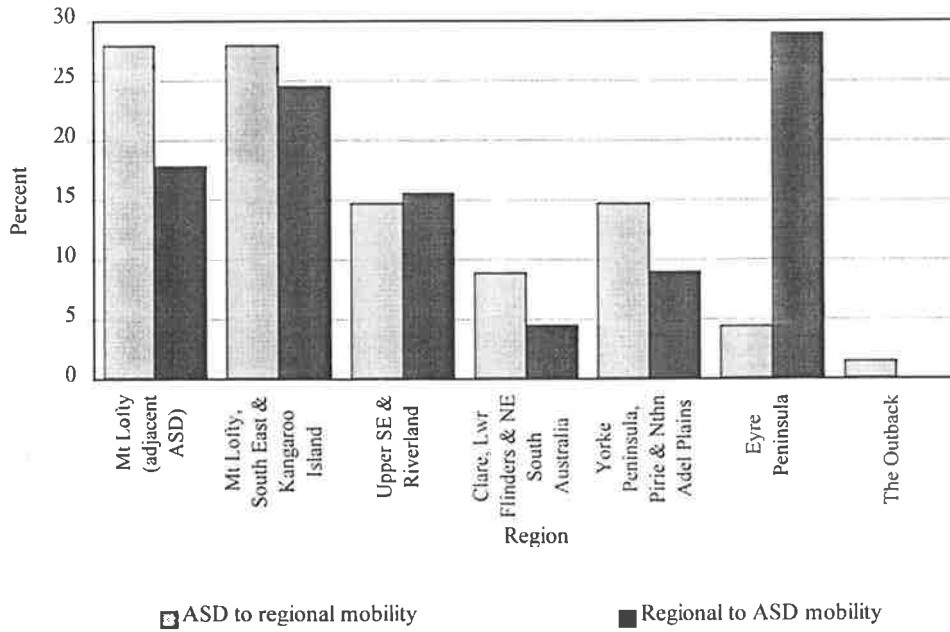
**Figure 4.12: Residential mobility within the same urban location**

Source: Based on data presented in Appendix Seven

#### 4.4.4 Metropolitan to rural and rural to metropolitan moves

Not all moves originate and terminate within the metropolitan area, and the map shows the mobility characteristics of households which moved from urban to rural locations and from rural to urban locations. Although Figure 4.13 is based on 10.5 percent of all moves, it is possible to make several observations. Firstly, throughout the entire period, metropolitan to rural moves outnumber those from rural to metropolitan, and in this there may be some evidence of support for the population turnaround hypothesis considered to have become operational in various economies affected by global structural adjustment since the early 1970's (Jarvie and Browett, 1980; Bell, 1980; Smailes, 1991; Salt, 1992; Hugo and Smailes, 1992; Bell, 1996: 15-16). However, one of the problems associated with turnaround analyses has been determining what proportion of the urban-rural mobility increase has been due to metropolitan overflow into adjacent non-metropolitan areas (Birtles, 1990: 71; Sant and Simons, 1993: 115-117; Bell, 1992: 63-68; Bell, 1995: 91-92). In the present investigation, a region adjacent to the Adelaide Statistical Division has been identified and labelled "Mt Lofty (adjacent metro area)". Its relationship to the ASD and other regions in South Australia is shown in Figure 4.13. Some 27.9 percent of urban-rural mobility ended in this zone. Similarly, 17.8 percent of rural-urban moves originated in the Mt Lofty (adjacent metro area) region. However, when these moves which had ended or originated in the Mt Lofty (adjacent metro area) region were removed from the analysis, support for the turnaround hypothesis continued to be sustained, with 59.5 percent more metropolitan-rural moves than rural-metropolitan moves.

**Figure 4.13: Metropolitan to rural and rural to metropolitan moves**



Source: Based on crosstabulation of mosv1\_or and mosv1\_de variables in mobility.sav file

The bulk of rural-metropolitan mobility has originated in the Mt Lofty (adjacent metro area) region and the Mt Lofty (remainder), South East and Kangaroo Island region. Significantly, in terms of population turnaround, or “renaissance” (Hugo and Smailes, 1992: 29; Hugo, 1994: 4), considerations the latter region has provided the greatest proportion of movers from these two regions. A further observation is that the Eyre Peninsula region has contributed the only other sizeable level of rural movement into the metropolitan area, and this has most likely been caused by adjustment processes (Smailes, 1991:37-39) which have operated in rural regions, commencing with the rural crisis of the early sixties, and continuing with the a range of structural changes caused by Australia’s evolving position in the global economy (Salt, 1992: 65; Hugo and Smailes, 1992: 36). On the other hand, it is clear from Figure 4.13 that four rural regions have received fairly significant proportions of households from the metropolitan area. These are Mt Lofty (adjacent metro area), Mt Lofty (remainder), South East and Kangaroo Island, Upper South East and Riverland and Yorke Peninsula, Pirie and Northern Adelaide Plains. These mobility patterns may be the result of a household’s increase in leisure time or retirement activities (Hugo and Smailes, 1992: 37), and involve, in all likelihood, a high proportion of older movers (Murphy and Zehner, 1988: 323; Drysdale, 1991: 271). Indeed, Bell (1995: 20) has shown a greater proportion of persons aged between 50 and 74 moving from the metropolitan area to other parts of the state than in the opposite direction. Finally, a number of residential moves were from rural origins to rural destinations, but the actual numbers involved were so small as to make a meaningful discussion impossible to sustain.

Of the moves which originate in the metropolitan area and end in the Mt Lofty (adjacent metro area) and Mt Lofty (remainder), South East and Kangaroo Island region, the largest numbers have been drawn from mosaic regions situated in zones 2, 3, 4 and 7, and the Southwest-south and Northeast-north sectors. More significantly, however, is the origin of moves which end in the Upper South East and Riverland and Yorke Peninsula, Pirie and Northern regions. Fully three quarters of these moves originate in mosaic regions located in the inner four zones of the metropolitan area, which adds support to the retirement hypothesis proposed earlier as a process which might be motivating these moves. The inner four zones are also significant for rural to metropolitan moves as they contain the destination mosaic regions for the three main origin locations - the Mt Lofty (adjacent metro area) region, Mt Lofty, South East and Kangaroo Island region and the Eyre Peninsula region.

#### **4.5 Residential mobility and upgrading**

It has been suggested (Rossi, 1955; Kendig, 1984: 276) that upgrading is often associated with mobility, although the reason why upgrading occurs has been less well documented. Initially, upgrading was regarded as a response to stage of life cycle (Rossi, 1955) and subsequently related to concepts linked with housing satisfaction and utility (Newman and Duncan, 1975: 155; Speare et al, 1975: 207; Quigley and Weinberg, 1977: 56; Clark, 1982: 33). Later, the notion of upgrading was related to a household's achieving lifetime goals (Landale and Guest, 1985: 205) and more recently its role in generating enduring wealth (Thorns, 1981a: 215; Coupe and Morgan, 1981: 213; Rudel and Neaigus, 1984: 129) for home owners.

In this section the available data are assessed to investigate whether dwelling upgrade occurs as part of the residential mobility process. Suitable data have been obtained in this research to enable an investigation into whether households upgrade their dwelling as a result of residential mobility. One aspect of mobility theory has suggested that mobility is a response to some form of dis-satisfaction with a household's current dwelling (Rossi, 1980; Speare et al, 1975: 207-11), and there is the likelihood that movement will result in a "better" dwelling for the household. Of course, "better" can be measured in a number of ways, and the concept of dwelling upgrade is only one of them. In the following discussion data are considered only for residential movers who have shifted dwelling within the metropolitan area. Land Use Classification (LUC) information in the housing history database was used to identify each dwelling as either a house or a home unit, and in Table 4.7 the movement of mobile households between these two dwelling types has been identified.

**Table 4.7: Mobility between houses and home units**

Origin dwelling	Destination dwelling		
	House	Home unit	Total
House	691	124	815
	84.8	15.2	87.8
	88.4	84.6	
Home unit	91	22	113
	80.5	19.5	12.2
	11.6	15.1	
Total	782	146	928
	84.3	15.7	100.0

Note: Each cell shows count, row percent and column percent respectively.

Source: Extracted from crosstabulation analysis of luc\_orig with luc\_de in mobility.sav file.

There are several points which can be made from these results. Firstly, nearly 85 percent of households leaving a house move to another house. However, the reverse is true for home unit owners, and when they move, some 80.5 percent move into a

house, having used the home unit as a stepping stone to home ownership. Secondly, nearly 20 percent of home unit owners move to another home unit, which may suggest that two separate processes are at work. On the one hand it may be that young households are moving to upgrade their existing unit accommodation with a longer term intention of moving into the housing market. On the other hand, it may be older households moving between home unit accommodation, possibly as part of a housing downgrade process. Ageing households may also account for those 15.2 percent of households which moved from a house to a home unit. It may be representative of households which have been forced to adjust their housing ownership out of the housing market and into the cheaper home unit market.

The findings for any upgrading are based on the evidence of four groups of movers - those who moved from a house to another house, those who moved from a house to a home unit, home unit to house movers and the small group who moved from a home unit to another home unit (see Table 4.7). Each of these groups of movers will be assessed separately in the following discussion to see how much upgrading of accommodation occurs in the process of moving residence.

Several sets of data are available to measure upgrading. Most emphasis has been placed on the size of the new dwelling compared with the size of the previous dwelling. Two approaches can be used to measure dwelling size - its area, in square metres or its number of rooms. However, only the former measure will be considered in the following discussion. It may also be that households consider the condition of any prospective dwelling as part of any upgrading equation, or a dwelling's age and its style of construction.



#### 4.5.1 House to house movers and upgrading.

As Table 4.8 indicates, nearly 16 percent of households moved to a house with the same area as the one they had left, but more interestingly, 55.6 percent of movers increased the area of their house as a result of moving. There is an inverse relationship between frequency and size of both areal increase and decrease, which might seem to suggest that both tendencies are related to ability to pay. Therefore, house buyers are trying either to increase the size of their housing as much as possible, within the limits of their budget, or resist a reduction in size of housing, again within the constraints of available finances (Maher and Whitelaw, 1995: 3). As a result, 71.3 percent of all movers from one house to another house buy a house which is either the same size as, or larger than, the previous house. This general tendency by movers to upgrade to larger dwellings has doubtless been a contributing factor in the observed increase in dwelling size in Australia, based on census data, between 1911 and 1986 (ABS, 1992a: 36-37).

**Table 4.8: House to house mobility and dwelling area**

Type of change	Number	Percent
None	58	15.7
Increase of 1-10 m <sup>2</sup>	49	13.2
Increase of 11-20m <sup>2</sup>	40	10.8
Increase of 21-30m <sup>2</sup>	29	7.8
Increase of 31-40m <sup>2</sup>	31	8.4
Increase of 41-50m <sup>2</sup>	24	6.5
Increase of >50m <sup>2</sup>	33	8.9
Decrease of 1-10m <sup>2</sup>	22	5.9
Decrease of 11-20m <sup>2</sup>	31	8.4
Decrease of 21-30m <sup>2</sup>	18	4.9
Decrease of 31-40m <sup>2</sup>	16	4.3
Decrease of 41-50m <sup>2</sup>	7	1.9
Decrease of >50m <sup>2</sup>	12	3.3
<b>Total</b>	<b>370</b>	<b>100.0</b>

Source: Extracted from crosstabulation analysis of a\_origin by area\_des variables for house-house movers in mobility.sav file.

No change in housing condition was experienced for 43.4 percent of movers, whilst 31.4 percent of movers bought a house which was in better condition than that which they had left (see Appendix 10, Table A10.1).

In the case of many consumables, such as housing, it may be that the concept of upgrading can be investigated in terms of the latest model, as well as in terms of bigger (area) and better (condition). In this case, age of dwelling can provide further evidence on whether upgrading of accommodation occurs when households move.

Within the sample, 71.3 percent of households bought a house whose vintage was either the same or more youthful than their previous house (see Appendix 10, Table A10.2).

The discussion has indicated a strong tendency for movers to at least maintain their housing standards, and at best improve them, in the mobility process. On balance, mobility has tended to result in an upgrading of residential standards, which is confirmed in the results of correlation analysis between area, rooms, condition and vintage of the households' origin house and their destination house. If there had been no change, then correlation analysis would have produced high positive coefficients, and if there had been a degradation of standards the coefficients would have been negative. As Table 4.9 shows, the relatively low levels of positive correlation between the variables indicates that, in general, the new accommodation had higher standards than that experienced at a household's previous house. Those shaded coefficients indicate support for this, and that for movers from house to house the mobility process provided significant opportunities for upgrading.

If a tendency to upgrade has been identified among movers who sell and buy a house, can the same tendencies be identified in the other categories of movers? It might be

expected that those households which moved from a home unit to another home unit would exhibit similar characteristics to house to house movers? Unfortunately, the numbers of movers in this category is, at 22, fairly small, but nevertheless some comments can be made about the mobility of this group.

**Table 4.9: Correlation analysis between selected origin and destination dwelling variables**

	Area- origin	Area- destination	Rooms- origin	Rooms- destination	Condition- origin	Condition- destination	Vintage- origin	Vintage- destination
Area-origin	1.0000	<b>0.3891</b>	0.7732	0.2891	0.3025	0.0603	-0.0260	-0.0632
Area- destination		1.0000	0.3553	0.7668	.1854	.2584	-.0706	.0371
Rooms-origin			1.0000	<b>.3372</b>	.2827	.0823	.0647	-.0363
Rooms- destination				1.0000	.1468	.2756	-.0277	.1048
Condition- origin					1.0000	<b>.2054</b>	.5112	.1543
Condition- destination						1.0000	.2270	.5709
Vintage- origin							1.0000	<b>.3814</b>
Vintage- destination								1.0000

Source: Correlation analysis conducted on house-house movers extracted from the mobility.sav file.

#### 4.5.2 Home unit to home unit mobility

Generally, these movers bought a new unit with more floor space than their previous unit. For 20 percent, mobility achieved no difference in area between their old unit and their new one, and for another 20 percent there was a reduction in area. In terms of condition, 73.3 percent moved either to a home unit in the same condition as, or better than, their previous unit, and 64.6 percent moved to a new unit which was either the same age as their previous unit, or newer. These tendencies to upgrade through mobility most likely occurred because these movers are actively using the move from one home unit to another as part of the stepping stone process towards eventual home ownership (Michelson, 1977: 35; Kendig, 1984: 280; Rudel and Neaigus, 1984: 137;

Rudel, 1987: 259-260). In this context, it is likely that the decision to move is founded upon the imperative to upgrade. When these movers are compared with house to house movers a number of fundamental similarities can be discerned which is largely due to their “sameness” in the sense that origin and destination locations for each are in the same sub-market.

In the next section households which have moved between different types of dwelling are analysed to determine whether their behaviour is different from that of the first two groups. If differences do exist, what is the influence of the fact that these movers are transferring from one housing sub-market to another?

#### **4.5.3 House to home unit movers and home unit to house movers**

As for the previous two groups, the task in this discussion is to assess the mobility process in terms of whether it has resulted in accommodation upgrade. Table 4.10 provides a number of interesting insights into aspects of the mobility process relating to households which switch sub-markets. Households moving from a home unit to a house are, overall, reluctant to make a move which results in the area of their accommodation remaining small. Instead, the shift from a home unit to a house results in a substantial increase in the area available to the household. Indeed, within this group there are two sub-groups. The first opted for a sizeable increase in floor space ranging between 20 and 40 square metres and the second used the change to increase substantially the household’s available floor space. Perhaps surprisingly, there is a small group in this category which moved to a house which was smaller than the home unit it vacated. While many factors might explain this observation, it may be that this group has been encouraged to change its dwelling type because of

perceived accumulation advantages made possible for house owners in an increasingly deregulated financial environment (Rudell and Neaigus, 1984: 129).

**Table 4.10: House to home unit and home unit to house mobility and area of dwelling**

Type of change	Home unit to house movers		House to home unit movers	
	Number	Percent	Number	Percent
None	3	4.2	10	12.8
Increase of 1-10 m <sup>2</sup>	5	6.9	6	7.7
Increase of 11-20m <sup>2</sup>	6	8.3	2	2.6
Increase of 21-30m <sup>2</sup>	13	18.1	2	2.6
Increase of 31-40m <sup>2</sup>	11	15.3		
Increase of 41-50m <sup>2</sup>	5	6.9	1	1.3
Increase of >50m <sup>2</sup>	22	30.6	1	1.3
Decrease of 1-10m <sup>2</sup>	5	6.9	9	11.5
Decrease of 11-20m <sup>2</sup>	2	2.8	12	15.4
Decrease of 21-30m <sup>2</sup>			11	14.1
Decrease of 31-40m <sup>2</sup>			4	5.1
Decrease of 41-50m <sup>2</sup>			6	7.7
Decrease of >50m <sup>2</sup>			14	17.9
<b>Total</b>	<b>72</b>	<b>100.0</b>	<b>78</b>	<b>100.0</b>

Source: Extracted from crosstabulation analysis of a\_origin by area\_des variables for house to home unit and home unit to house movers in mobility.sav file.

These observed behaviour traits for home unit to house movers can be contrasted with those observed for house to home unit movers. Within this group there are three sub-groups which can be identified.

- There is a small group whose members are somewhat reluctant to reduce the area of their dwelling too much as a result of moving from their former house to the new home unit. This may be predicated by the fact that for these households there is no real need for a reduction in the dwelling's area; that they have not yet reached a stage of life cycle where size of dwelling is critical. However, the actual size of the allotment on which the dwelling is located may be a critical factor explaining this mobility characteristic.
- A second group representing 41 percent of all house to home unit movers for whom the move has resulted in their new dwelling having an area of up to 30

square metres less than that of their previous residence. This group may represent those movers whom mobility theory would categorise as “empty nesters” (Hooimeijer et al, 1988: 306; McHugh et al, 1990: 89; Grundy, 1992: 169-171), caused by children leaving home and the parents acknowledging that they no longer have a need for a large house.

- A third group who have substantially reduced their home size through mobility. For this group, representing just over a quarter of all movers from a house to a home unit, the move has resulted in a dwelling with a floorspace of 40 plus square metres less than their previous house. This may represent a group which wants to be rid of a large dwelling because of the difficulties associated with these properties. Their members may be aged, in ill health and unable to properly maintain a larger house, as well as its associated garden area. In the process of moving, they have removed some of these problems, and in the process they may have freed up some of the capital which had been locked up in the former residence (Doling et al, 1986: 54; Evans, 1991: 173; Hamnett, 1992: 63). However, this matter will be more fully explored in the next chapter.

**Table 4.11: Home unit to house and house to home unit mobility and dwelling condition**

Type of change	Home unit to house movers		House to home unit movers	
	Number	Percent	Number	Percent
No change	30	41.7	24	33.3
Improved by 1 grade	5	6.9	24	33.3
Improved by 2 grades	3	4.2	11	15.3
Improved by 3 grades	2	2.8	7	9.7
Declined by 1 grade	13	18.1	2	2.8
Declined by 2 grades	9	12.4	4	5.6
Declined by 3 grades	10	13.9	0	0.0
Total	72	100.0	72	100.0

Source: Extracted from crosstabulation analysis of cond\_ori by cond\_des variables for house to home unit and home unit to house movers in mobility.sav file.

When the condition of the destination dwelling is compared with the origin dwelling's condition (Table 4.11), a number of contrasts can be identified between home unit to house movers and those who move from a house to a home unit. Conventionally, movement from a home unit to a house has been seen as a positive aspect of housing upgrading, but if a dwelling's condition can be related to the concept of upgrading, then some qualifications are required to existing theory. There are three aspects to this apparent contradiction. Firstly, over 40 percent of home unit movers experienced no change in accommodation condition as a result of buying their new house. Secondly, only 13.9 percent bought a house in better condition than the home unit they sold, and thirdly, and perhaps most significantly, 44.4 percent actually moved to a house with a lower condition rating than their home unit. As can be seen in Table 4.12, this phenomenon is in large part due to the relative youthfulness of the stock in the home unit sub-market compared with dwellings in the housing sub-market. Nevertheless, this is an interesting qualification of the generally accepted wisdom that upgrading accompanies the move from a home unit into a house. Once established in the house sub-market, however, owners can generally expect to improve the condition of their house when they move. Earlier (see Appendix 10, Table A10.1), it was shown that although 43.4 percent of movers experienced no change in the condition of their new house on moving from their old house, 31.4 percent improved the condition of their house. Moreover, only a quarter of these movers actually experienced a reduction in house condition on moving to their new house, compared with the 54.4 percent of home unit to house movers who experienced a reduction. The clear point here, therefore, is that opportunities for upgrading, as measured by dwelling condition, are substantially greater for house to house movers than for home unit to

house movers. However, the potential influence of the gentrification phenomenon, where households move into an older, sub-standard, dwelling with the intention of upgrading it, needs to be acknowledged in this discussion.

On the other hand, nearly 60 percent of households who sell their house and move into a home unit move to a unit which has a better condition rating than the house they left. Further, a third of these movers experience no change in condition between the dwelling they left and the one to which they went. Part of this explanation may be because these people are moving from a sub-market whose stock lies within a greater age range than occurs for dwellings in the home unit sub-market. However, there is likely to be another process contributing to the explanation, which lies in the fact that these owners have been in the housing market longer than the home unit to house movers and have more substantial financial resources at their disposal. They are, therefore, able to exercise more choice in the quality of their next home.

**Table 4.12: Home unit to house and house to home unit mobility and dwelling age**

Type of change	Home unit to house movers		House to home unit movers	
	Number	Percent	Number	Percent
Same vintage	10	13.7	7	8.9
More youthful by:				
1 category	8	11.0	6	7.6
2 categories	3	4.1	6	7.6
3 categories	1	1.3	8	10.1
4 categories	1	1.3	10	12.7
5 categories	1	1.3	10	12.7
>5 categories	1	1.3	23	29.0
More aged by:				
1 category	5	6.9	3	3.8
2 categories	8	11.0	1	1.3
3 categories	11	15.1	4	5.0
4 categories	5	6.9	1	1.3
5 categories	0	0.0	0	0.0
> 5 categories	19	26.1	0	0.0
<b>Total</b>	<b>73</b>	<b>100.0</b>	<b>79</b>	<b>100.0</b>

Source: Extracted from crosstabulation analysis of yrblt\_or by yrblt\_des variables for house to home unit and home unit to house movers in mobility.sav file.



As with other comparisons between home unit to house movers and house to home unit movers, there are several contrasts between the two groups in terms of the age of their destination dwelling (Table 4.12). Two thirds of the former group can expect to move to a house which is considerably older than the unit they left, and only a fifth can expect to move into a younger house. In contrast, four fifths of house to home unit movers purchased a home unit which was younger than the house they had sold. Indeed, the tendency displayed in the table above is that these movers were more likely to move into a unit considerably younger than their former house than they were to move into a unit of comparable vintage. Only a small proportion of house to home unit movers bought a unit which was older than their house, and when this occurred the age of the unit was unlikely to be much older than their house had been.

#### **4.6 Individual household mobility**

In this section, the single moves on which the previous analysis was based have been aggregated into the housing histories of specific households so that the mobility of individual households can be investigated. Most (72.6 percent) of the sampled households made just one move during the study period, with a further 26 percent making 2 or 3 moves. Only a very small proportion of households made more than 3 moves. Details on frequency of household mobility are shown in Table 4.13. Bell (1995: 38) has estimated an individual's propensity to move at 11.1 moves for males and 11.5 moves for females, a considerable exaggeration of the moves recorded by the sample. However, it needs to be borne in mind that the moves in Table 4.13 represent moves which have only occurred between owned dwellings, and exclude moves

within the rental market and interstate moves, and also do not relate to the entire lifetime of individuals and households.

**Table 4.13: Number of residential moves by sample households.**

Residential moves	Properties occupied	Households	Dwellings occupied	Percent
1	2	575	1150	72.6
2	3	157	471	19.8
3	4	49	196	6.2
4	5	8	40	1.0
5	6	2	12	0.3
6	7	0	0	0.0
7	8	1	8	0.1
Total		792	1877	100.0

Source: Derived from resid\_mo.sav file.

These households have moved within, or between, the house and home unit sub-markets (see Appendix 10, Table A10.3), with house to house mobility being the most prolific type of mobility. However, house to home unit mobility is the second most dominant relationship between the two markets and is probably a reflection of age selectivity in mobility caused by older owners moving from a house into more manageable home unit ownership. As the ageing process develops (Hugo, 1986: 24-35; Rowland, 1991: 57-78), this form of mobility might be expected to increase.

In addition to these tendencies, Table 4.14 also reveals that as the number of moves made by a household increases, the dominance of mobility within the house sub-market increases.

**Table 4.14: Household mobility between sub-markets**

Sub-market to sub-market	Move							Total
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	
House to house	592	157	45	8	3	1	1	807
House to home unit	106	20	7					133
Home unit to house	69	27	6	3				105
Home unit to home unit	11	9	2					22
<b>Total</b>	<b>778</b>	<b>213</b>	<b>60</b>	<b>11</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1067</b>

Source: Derived from crosstabs from resid\_mo.sav file

In sections 4.5 and 4.6 there was discussion as to whether mobility *per se* resulted in an upgrade in housing. The conclusions reached, however, related to all movers, and there was no discrimination between households with different ownership and mobility characteristics. In this section, households will be identified in terms of the number of moves they have made, and between which markets they have moved, in order to assess whether their mobility has resulted in a housing upgrade.

#### 4.6.1 Households which moved once

This category represented 72.6 percent of the sample. Just over three quarters of these households moved from a house to another house, and 13.1 percent moved from a house to a home unit. Households which moved from a home unit represented a tenth of all single move households, with the remainder moving within the home unit sub-market. In Table 4.15 details for the home unit to home unit movers have not been provided because their absolute numbers were too small to provide meaningful comparisons with other categories.

The overwhelming evidence is that these single move households upgraded the area of their residence in the process of mobility. The tendency was more pronounced for

HU-H movers than for H-H movers. Of course, with house to home unit movers, area increases would not be expected, but here there is evidence that for many of these movers the transition has not compromised actual dwelling living area available to the household, as shown in Table 4.15. It would seem that these movers have deliberately sought these changes, and therefore it is difficult to classify their dwelling area decrease as a housing downgrade. However, this kind of assessment might less easily be made for the 25.1 percent of households whose mobility from a house to a home unit resulted in an area decline of five or more categories. For these, the move may have been in response to other processes which necessitated a genuine downgrade of housing to meet a range of constraints experienced by the household.

**Table 4.15: Dwelling area changes for single move households**

Type of change	Movement between sub-markets					
	House to house		House to home unit		Home unit to house	
	Number	Percent	Number	Percent	Number	Percent
None	30	14.6	7	14.6	2	5.3
Increased by:						
1 category	40	16.7	2	4.2	2	5.3
2 categories	24	10.0	1	2.1	3	7.9
3 categories	18	7.5	1	2.1	7	18.4
4 categories	22	9.2			5	13.2
5 categories	19	7.9	1	2.1	4	10.5
More than 5 categories	24	10.0	1	2.1	14	36.9
Decreased by:						
1 category	15	6.3	4	8.3		
2 categories	20	8.3	10	20.8		
3 categories	7	2.9	6	12.5	1	2.6
4 categories	6	2.5	3	6.3		
5 categories	3	1.3	3	6.3		
More than 5 categories	7	2.9	9	18.8		
<b>Total</b>	<b>240</b>	<b>100.0</b>	<b>48</b>	<b>100.0</b>	<b>38</b>	<b>100.0</b>

Source: Crosstabs analysis of Area1 by Area2 of households which had owned 2 properties in resid\_mo.sav file

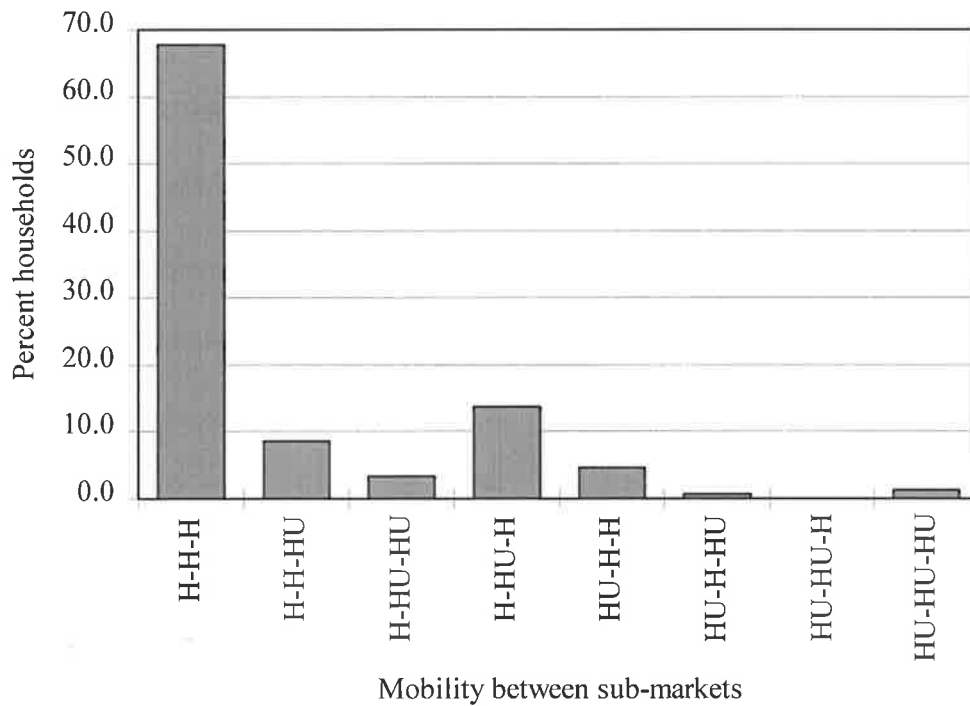
Nearly two thirds of house to home unit movers moved into units which were in better condition than the house they left (see Appendix 10, Table A10.4). The main reason for this is that the stock in the home unit sub-market is generally more youthful than the stock of the housing sub-market, simply because home units are a more recent phenomenon. However, the observation supports the earlier notion that many of these movers are making a conscious decision to move from one housing type to another with no intention of downgrading their housing. Indeed, the motivating factor may very well be to reduce the size of their allotment and its garden area. Accordingly, although the move may result in smaller rooms, often the number of rooms will be the same as, or marginally less than, the number in the former house, and this evidence suggests that they reinforce their decision not to downgrade by purchasing units in peak condition. After all, there is every possibility that they are in a financial position to insist on this. On the other hand, those moving from a home unit to a house are more likely to buy a house in poorer condition than their unit, and this may well be because these households are striving to buy their own house as soon as possible and are prepared to use the first house purchased as a stepping stone towards their ultimate housing goals. House to house movers seem to occupy the middle ground with almost equal proportions achieving no change in condition, an improvement or a decline.

Finally, the concept of housing upgrade through residential mobility by age of dwelling can be examined. Households which move from a house to a home unit are more successful in upgrading than house to house movers (see Appendix 10, Table A10.5). However, it is impossible to assert that H-HU movers have achieved housing upgrade at the expense of the H-H movers, particularly given that buyers “upgrading”

into gentrified housing will typically be buying housing older than that which they have vacated. If, however, the movement into an older house had been caused by a financial loss from owning the previous house, then the move may be interpreted as a housing downgrade. This matter will be taken up in the next chapter. For households which moved from a home unit to a house 71.9 percent moved into a house which was older than the unit they sold, although it would be unwarranted to suggest on this basis that these moves resulted in a housing downgrade.

#### **4.6.2 Households which moved twice**

Whereas there are only four possible pathways for one move households to take - house to house, house to home unit, home unit to house and home unit to home unit - for households which have made two moves there are eight ways in which they could move within and between the house and home unit sub-markets. In Figure 4.14, the numbers and proportions of households in each of these combinations is shown.

**Figure 4.14: Mobility between sub-markets for households moving twice**

Source: Derived from resid\_mo.sav file, using cases which had occupied three props, and listing lucrede1, lucrede2 and lucrede3 variables.

Figure 4.14 provides further support for the notion that most mobility is within the house sub-market, but it also reinforces the earlier assertion that the second most common type of move is from the house sub-market to the home unit sub-market. In the following discussion, the emphasis is on comparing changes in dwelling characteristics between moves to examine whether the concept of upgrading accommodation is a continuing phenomenon which households seek to achieve from one move to another. Further, these comparisons will only be made for house-house-house, house-house-home unit and home unit-house-house moves as the numbers of moves in the other types of moves are too low to make meaningful observations and conclusions.

**Table 4.16: Area characteristics for households moving twice between three houses**

Type of change	Move 1		Move 2	
	Number	Percent	Number	Percent
None	5	17.3	13	20.6
Increased by:				
1 category	1	3.5	6	9.5
2 categories	3	10.4	7	11.1
3 categories	5	17.3	7	11.1
4 categories	4	13.8	2	3.2
5 categories	3	10.4	2	3.2
> 5 categories			1	1.6
Decreased by:				
1 category	1	3.5	5	7.9
2 categories	2	6.9	6	9.5
3 categories	3	10.4	4	6.4
4 categories	2	6.9	5	7.9
5 categories			4	6.4
> 5 categories			1	1.6
<b>Total</b>	<b>29</b>	<b>100.0</b>	<b>63</b>	<b>100.0</b>

Source: Derived from resid\_mo.sav file

There are a number of points to be made from Table 4.16. Firstly, in terms of area of dwelling, the proportion of households which maintain the status quo as a result of mobility is fairly low, at about one fifth of all movers. Of the remainder, there was a tendency for the area of dwelling to generally increase as a result of the first move, but on the second move the group seemed to split evenly between those which further increased their available area and those which incurred a reduction in area through mobility. This suggests that a quite significant adjustment process has occurred after the first move, with households reconsidering their area needs in a way which seemed not to occur with the first move.

In terms of condition (see Appendix 10, Table A10.6), approximately 50 percent of households maintained dwelling condition at each move. For the remainder of households, however, about one third moved to poorer quality housing at each move.

As for age of house, there is a tendency for movers to seek more youthful accommodation with each move made by house-house-house movers.



Apart from households which made two moves, each time from a house to a house, the only other types of moves with a reasonable number of households within them were for households which moved from a house to a house to a home unit and for those which moved from a home unit to a house to a house. Among households which moved from a house to a house and finally to a home unit, it is noteworthy that as these households moved from their first house to their second house, there appeared to be a developing tendency towards downsizing, and this appears to have continued with the move from their second house to their first home unit (see Appendix 10, Table A10.7). In other words, whereas it is expected that downsizing will occur with the move from a house to a home unit, these households seemed to have also downsized with the move from their first house to their second. It is as if these households have adjusted through a two fold process involving purchase of a smaller house as the first stage, and then purchase of a smaller home unit as the second stage. This interpretation is further supported by the changes in the number of rooms owned by these households as a result of each move. In terms of condition and vintage (see Appendix 10, Table A10.8), these movers follow much the same kinds of trends identified for earlier groups of movers. In particular, with the move from their last house to the home unit, these movers have experienced high levels of improvement in condition of dwelling and movement into a more youthful dwelling.

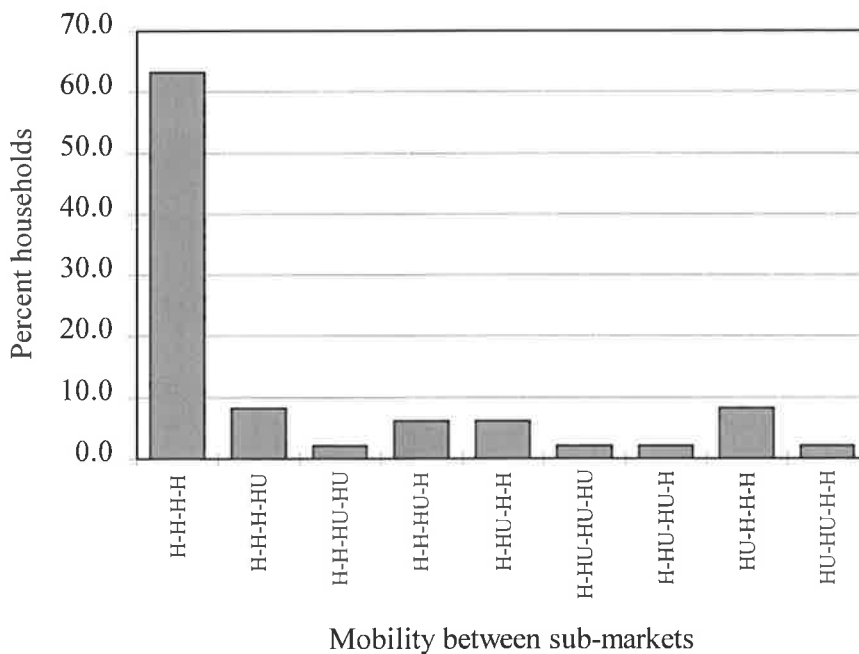
How do these characteristics compare for households which owned three properties but moved in the sequence home unit to house to house? For this group there might be an expectation that with each move there would be strong evidence of upgrade, particularly in terms of area and number of rooms. Whilst numbers are somewhat

small, the data do support the notion that these households have improved their level of housing with each move in the sequence (see Appendix 10, Table A10.9). Even with housing condition and vintage (see Appendix 10, Table A10.10), for these movers a majority of their number have either maintained the levels of their previous dwelling or improved its standing.

#### 4.6.3 Households which moved three times

The only other group for which reasonably significant numbers are involved is for households which occupied four dwellings and therefore made three residential moves. Within this group, there were nine combinations of moves between, and within, the house and home unit sub-markets which actually occurred, and these are shown in Figure 4.15.

**Figure 4.15: Mobility between sub-markets for households moving three times**



Source: Derived from resid\_mo.sav file

In the following discussion aspects of housing quality will be assessed for each of move in an attempt to examine the patterns of upgrading which occur for extremely mobile households moving within the house sub-market.

What is most clear from the data (see Appendix 10, Table A10.11) is the volatility in dwelling area changes as these households have moved from one house to another.

Relatively low proportions maintained their housing area from one move to the next, with approximately equal proportions increasing and reducing area as a result of the first and second moves. However, by the time of the third move, more than half these households actually increased the area of their dwelling, with a further 15 percent maintaining the area they had utilised at their previous house.

Households generally at least maintained the condition of their house from one move to the next, and there was a tendency for condition to improve with each move.

Further, these households tended to move increasingly towards more youthful housing. In this context, housing goals are linked with housing age and quality, and would seem to drive the filtering process. It has been argued that filtering is a consequence of trading up through mobility (Clark, 1982: 39) and there is considerable evidence of this here.

After households which moved three times, each time from a house to another house, the next most significant groups of movers, in terms of absolute numbers, are those households which moved twice from a house to a house, and a final move from a house into a home unit, and those whose movement pattern comprised a first move from a home unit into a house, with their subsequent two moves involving house to house mobility. These groups represent the other two most notable movement categories, comprising those households which adjust, or upgrade, from a unit to a

house, and those who are likely to be near the end of their housing careers and who adjust downwards from a house into a more manageable home unit. However, the actual numbers involved in each category are very low, and not big enough for their mobility to be tabulated and conclusions drawn.

#### 4.6.4 Distance moved by households

The distance a household moved from one residence to another is constrained in large part by characteristics of the housing sub-markets and a household's knowledge of their local region (Adams, 1969: 317). Therefore, residential moves are generally short. However, the data have indicated that different groups of movers behave in different ways in terms of how far they move from their previous residence, as Table 4.17 reveals.

**Table 4.17: Distance moved by selected household types**

Type of move	Move 1				Move 2				Move 3			
	Distance (km)		Number	Percentage	Distance (km)		Number	Percentage	Distance (km)		Number	Percentage
	Average	Median			Average	Median			Average	Median		
H-H-H	8.56	6.76	10	10.4	7.47	4.51	13	15.1	****	****	****	****
H-H-H-H	10.74	6.12	4	16.7	8.45	5.42	4	16.7	7.19	5.08	8	28.6
H-H-HU	10.24	10.22	1	8.3	8.62	8.16	2	16.7	****	****	****	****
H-H-H-HU	2.06	2.22	0	0.0	14.51	17.09	1	25.0	4.07	3.92	1	25.0
HU-H-H	9.88	4.52	0	0.0	10.79	8.21	0	0.0	****	****	****	****
HU-H-H-H	6.88	4.08	0	0.0	11.01	10.49	0	0.0	6.92	3.00	0	0.0

Source: Derived from resid\_mo.sav file

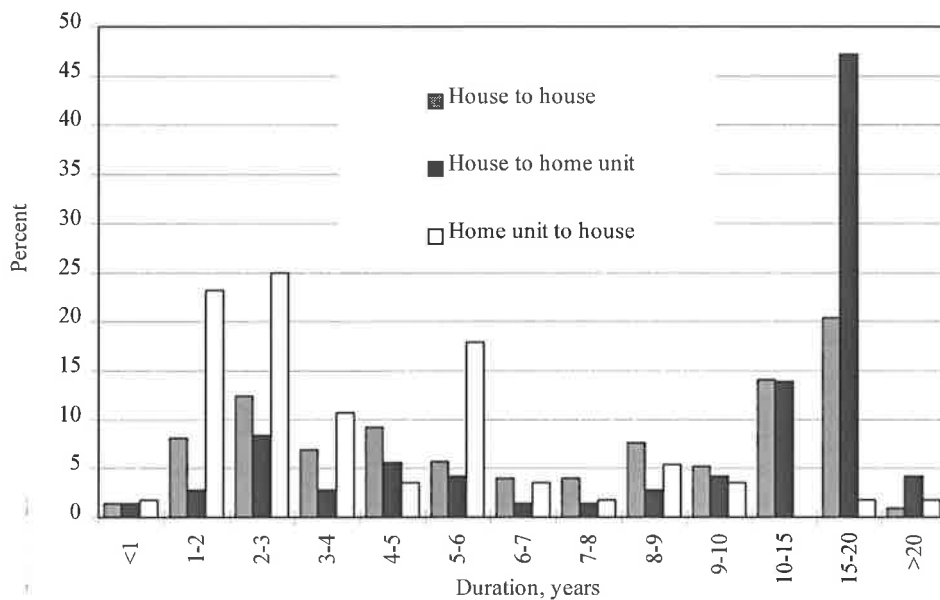
There are two interesting observations for the two groups of households which have only owned houses. Firstly, the distance moved between each ownership reduced and secondly, these owners revealed a tendency to sell and buy within the same suburb. Explanations for these characteristics range from financial constraint to a high degree of contentedness with their residential location. In all likelihood, however, as these

households move they tend to also move closer to achieving their housing goals and each successive “rung” of the ladder brings them closer to their optimum location (Michelson, 1977: 35; Coupe and Morgan, 1981: 213; Landale and Guest, 1985: 205). A form of spatial influence is also evident with the other two groups. For house to home unit movers, their last move is relatively short, shorter for those who have owned four dwellings than for those who have owned two. These households would appear to have developed an affinity for the local area and are therefore reluctant to move far from it. A proportion of these households may be in the reduction stage of the family life cycle, and Hooimeijer et al (1988: 316) have found that 80 percent of moves in this stage are short moves. Conversely, households which moved from a home unit into a house have tended to maximise the distance between their home unit and their house, over the space of one or two moves, suggesting that environmental amenity is a more significant location factor for house buyers than home unit owners.

#### **4.6.5 Length of ownership**

The time that households have owned a dwelling has implications for the residential mobility process in that it influences the number of moves any household will make during its lifetime, as well as the volume of mobility within any market at any time. Although the length of ownership has previously been considered for all mobility, in this section the emphasis is on comparison of ownership duration between different types of movers and between movement from one dwelling type to another dwelling type.

**Figure 4.16: Duration of ownership at first dwelling for households which made one move**



Source: Derived from resid\_mo.sav file

Figure 4.16 represents movers who have been essentially conservative in their mobility. They have only made one move during the entire study period. More significantly, though, the distribution of duration of ownership of the first dwelling for H-H and H-HU type movers is decidedly bi-modal. This suggests the existence of two different groups within the category. The first group made only one move and owned their previous house for a substantial period. They are, therefore, clearly conservative in their approach to mobility. Regardless of the factors which encouraged their solitary move, it would seem that the possibility of capital accumulation through residential mobility was not one of them.

The second group owned their previous house for only a relatively short period before selling and moving to their next house, or home unit. These owners would seem to be

different from the first group, and it may be that the relatively short ownership of their first house represented the beginning of a housing career characterised by regular housing shifts in response to a varying set of factors influencing the household. It may be that this group will quickly move out of the one move category and into the two and three move categories.

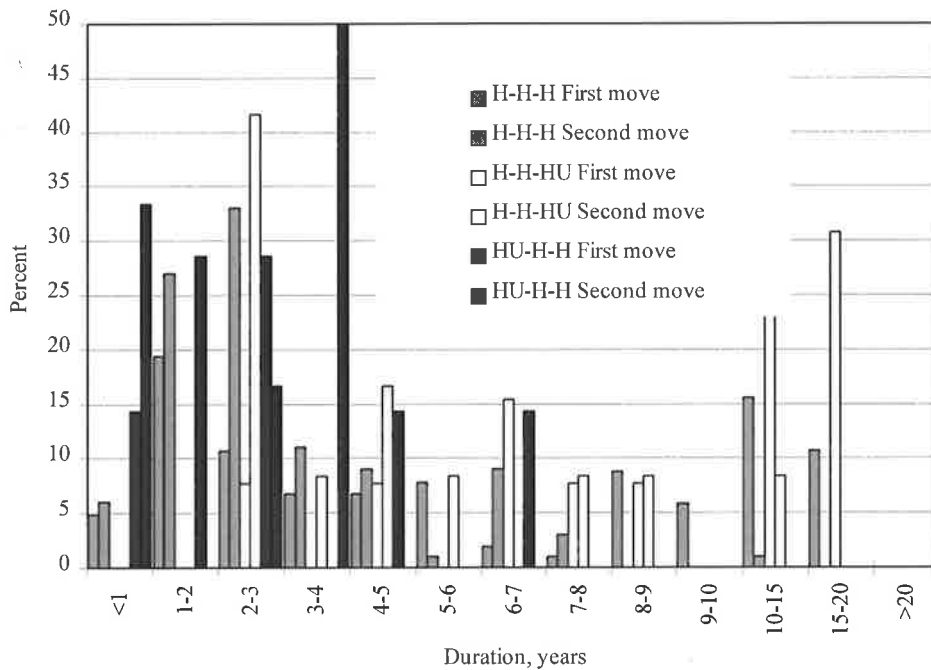
With the HU-H type of one move households, the length of ownership at their home unit is quite different from the first two types. It is probable that these households are at the beginning of their housing careers, and should not be branded as conservative movers simply on the basis of their solitary move.

Figure 4.17 provides details of households which made two moves during their housing career. The number of movers in the H-H-HU and HU-H-H types are too small to enable meaningful observations to be drawn. This is not, however, the case with the H-H-H type of mover. The distribution of ownership duration of their first house is bi-modal, which may allow the same conclusions to be drawn for this group as were drawn for the one move, H-H, group. However, when the second move is analysed, a development was noted. For more than three quarters of the group making a second residential move, their second home had been owned for four or less years, suggesting that once the mobility process is engaged, it occurs quite regularly, even for households which may have been labelled as conservative movers on the basis of the time they spent in their first dwelling prior to making their first move.

For H-H-HU movers, the first house was owned for a substantial period before making the first move. However, these households remained in the next house for only a relatively short time before deciding to move into a home unit. It is possible that towards the end of their long ownership of their first house, these owners have

debated the merits of a smaller house or possibly home unit and have ultimately opted to move to a new house. However, on making this purchase it would seem that they have quickly realised its irrelevance to their needs, and within four years half of this group has sold their second house and moved into a home unit. HU-H-H movers show the same qualities as their one move counterparts, in that the duration of home unit ownership is very brief. However, with this group, the ownership of their second dwelling is almost as equally brief, suggesting that these households have been not only anxious to quit the home unit market, but also anxious to quit the first house market and further their housing career as quickly as possible (Coupe and Morgan, 1981: 213; Landale and Guest, 1985: 205).

**Figure 4.17: Duration of ownership at first and second dwelling for households which made two moves**



Source: Derived from resid\_mo.sav file



Households which have made three moves have no pretension to conservatism, particularly within the H-H-H-H type. The only tendency towards lengthy ownership has been during the occupancy of their first house, but once the first house had been sold, ownership of their second and third house occupied relatively short periods of time (see Appendix 10, Table A10.12). The reasons for this group's frequent mobility can only be surmised. Are they accumulating, upgrading, or reacting to stimuli generated by changes within the household? It may be one of these, or some, or something else.

This discussion on ownership longevity has identified three groups of households. There is the group which is fairly conservative in that it has tended to remain geographically static throughout the study period. The next group is one which has identified early characteristics of conservatism in their ownership history, but then appeared to have adopted a more frequent mobility behaviour. Finally, there is the group which has been actively mobile throughout its housing career, and has remained at each location for only a short period of time. The question is whether any of these groups have benefited more than the others in terms of their ability to generate capital gains out of the mobility process, and the discussion will return to these groups in the next chapter.

#### **4.7 Household disintegration and mobility**

Most of the investigation in this thesis is based on analyses of housing histories generated for individual households moving within the owner-occupier housing market. However, households are subject to change and for some households the

nature of these changes meant that their housing history became impossible to trace within the LOTS database. Details of these data collection problems were presented in Chapter Two. It is due to these problems that the distribution of housing ownerships within the sample is decidedly negatively skewed (see Table 4.13) when it might be expected that the number of homes owned by households' would display a more normal distribution. In the present case, the explanation for the negatively skewed distribution of home ownership among mobile households has been adequately explained by the constraints imposed on the data collection process.

However, it begs the question as to what happened to those households which ceased to be identifiable within the LOTS database at some point in their housing histories.

In this section an attempt has been made to resolve this problem by acknowledging that not all households remain in owner-occupancy. Instead, there may be inter-tenure mobility, or within owner-occupancy mobility but in a changed household form. For example, single person households may become two person households through marriage, or couple households may disintegrate through divorce. This analysis will allow the nature of mobility for households which change their form, or move from one tenure to another, to be more fully explained.

At June 1986, each of the households in the housing history file were active in the South Australian real estate market, but between then and July 1991, the end of the study period, 38.9 percent of these households left the market. Some of these owners had died, others may have moved interstate and a proportion may have dissolved through divorce or break-up by other means. Further, some of the households may have left the ownership market and entered the rental market. To determine the

reasons why households left the ownership market, and implications from these for the residential mobility process, a multi-faceted methodology was developed.

For each household, the certificate of title for the dwelling they had owned previous to leaving the market was obtained from the housing history database, and a manual search of the Certificate of Title registers was made at the Lands Titles Office in Adelaide to provide the full names of owners<sup>1</sup>. The LOTS database had not provided this information at the data collection stage, but it was critical information to determine why households had left the real estate market. Memorials, which are part of each Certificate of Title also provided important information for some households, especially information relating to death of an owner, transfer to another owner, marriage of an owner, and where this information was provided on the title it was noted. When this task had been completed, full names of persons comprising the households which had left the market had been determined.

In Australia voting at State and Federal parliamentary elections is compulsory for all citizens over 18 years of age. The Electoral Roll records the place of residence of all electors and is maintained by the Australian Electoral Office. It is updated before each State and Federal election, and is therefore an excellent register of adult persons in Australia. Electoral Rolls were used to determine whether those persons who had left the real estate market were still in South Australia. This stage created two groups. The first comprised names of persons who were still in South Australia and the second represented those persons who might reasonably be expected to have died, or moved interstate or, in the case of women, possibly changed their name, either

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<sup>1</sup> I am grateful to Mr Michael Maddigan, Customer Services Manager, Lands Titles Office for allowing access to the Certificate of Title registers, and for much valuable advice he provided during this exercise.

through marriage or by, for example, deed poll. Two possibilities existed for those individuals in the first group. It could be assumed that they had remained in the rental market, or they could have returned to the ownership market at some point subsequent to their last ownership. To resolve which of these two possibilities could be assigned to each member of the first group enquiries were made of LOTS, which matched each person's name against current ownership records. In this way, the strategy determined a sub-group of households which had left the ownership market at some point between June 1986 and July 1991 and entered the rental market permanently, and a sub-group which had left the ownership market only temporarily. This latter sub-group was further subdivided into a group which re-entered the market after July 1991 in the same household form as it had left the market, and a group which re-entered the market in a different household form, at any time after June 1986.

For those persons in the second group, who were not on the Electoral Roll, two possibilities existed. Firstly, they may have died or, secondly, they could have left the state. To resolve the "dead or alive?" issue, each name was checked against death records held by the Registrar of Births, Deaths and Marriages in South Australia<sup>1</sup>. Those individuals who had not died comprised the second group of persons presumed to have moved out of the state. However, for single women, and those from dissolved marriages or other partnerships, in this group there was a potentially complicating factor in that if any of them had married, or re-married, then their surname may have been changed and the task of tracking them would have been made impossible without access to marriage records. Unfortunately, this option was not able to be

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<sup>1</sup> I am grateful to Mr David Ayling, Registrar of Births, Deaths and Marriages in South Australia for allowing access to these records, and to Mr Chris Cobb for his assistance in the use of those records.

pursued due to resource and time constraints, and therefore this group divided into two sub-groups - one comprising males who have left the state, and the other comprising females who have either left the state or married/re-married. Moreover, those persons identified as having moved interstate could have been located to a particular state within Australia by systematically searching the Electoral Rolls of each State. Limitations of resources and time have not allowed this option to be pursued. Nevertheless, within these constraints, it has been possible to identify a number of categories which help explain the fate of those households which left the South Australian real estate market during the period between June 1986 and July 1991. A summary of the reasons for leaving the real estate market is provided in Table 4.18, and an explanation of some of the categories employed in the table has been provided in Appendix 8.

**Table 4.18: Reasons for market departures**

Reason	Number	Percent
Husband and wife died, estate sold	38	4.9
Husband/single male died, estate sold	32	4.1
Wife/single female died, estate sold	80	10.3
Divorce of married couple	135	17.4
Separation of non-married couple	35	4.5
Interstate mobility	175	22.5
Rental	112	14.4
Temporary absence from ownership market	32	4.1
Single (lone) female: married/interstate mobility	64	8.2
New Household created from existing household	41	5.3
Partnership dissolved	21	2.7
Don't know	13	1.7
<b>Total</b>	<b>778</b>	<b>100.0</b>

Source: Derived from reasons.sav file, variable rsnrde

Table 4.18 provides a number of interesting reasons to explain households' exodus from the South Australian real estate market. Three of them are almost equally significant, with death accounting for 19.3 percent, divorce/separation for 21.9 percent and interstate mobility for 22.5 percent of all households leaving the market.

Households leaving ownership for rental are only marginally less significant, with 14.4 percent of households in this category. Out of these observations there are a number of implications for mobility theory, simply because, with the possible exception of death, housing is still a commodity which the household will require and its pursuit will generate residential mobility characteristics. Even with death, there are mobility implications, especially where a surviving member of the household moves, be it to a new owned dwelling or into rental accommodation. Moreover, these results have implications for new household formation and their residential mobility.

What are the implications of death for mobility? Clearly, there are none when both husband and wife have died, or a surviving husband/wife or single man/woman, dies. However, the research has identified 80 households (10.3 percent of departing households), in which a husband/wife died leaving a surviving wife/husband. Table 4.19 details the subsequent mobility behaviour of the surviving partner.

**Table 4.19: Mobility behaviour of widow(er) after death of partner**

Situation	Number	Percent
Husband dies, wife moves to rental accommodation	30	37.5
Husband dies, wife buys new dwelling	8	10.0
Husband dies, wife buys new dwelling in partnership with another	2	2.5
Husband dies, wife re-marries/changes name/moves interstate	22	27.5
Wife dies, husband moves to rental accommodation	8	10.0
Wife dies, husband buys new dwelling	3	3.8
Wife dies, husband remarries, buys new dwelling	1	1.3
Wife dies, husband moves interstate	6	7.5
Total	80	100.0

Source: Derived from reasons.sav file, variable reasons

When a partner died, movement into the rental market was the option adopted by 37.5 percent of households. Precisely what type of rental is unclear, but the possibility is that many in this group would opt for retirement village type accommodation. So much depends on the age and health of the surviving partner, and these factors will

influence the type and frequency of mobility in these households (Hugo, 1986; Salt, 1992: 3; Hugo and Smailes, 1992: 43-44; Hugo, 1994: 11-14; Bell, 1995:19-20; Maher and Whitelaw, 1995: 44-50; Bell, 1996: 5-6). Although rental is the dominant tenure course for these households, 13.8 percent did buy a new dwelling on their own. These are the independent survivors, young and healthy enough and prepared enough to continue alone as they had previously. The chances are that the dwelling they bought was smaller than that which they had previously owned, and most likely would be a home unit of some kind. In addition, another 2.5 percent of widows bought a dwelling in partnership with another person. Widowers moving interstate comprised 7.5 percent of the group and widowers re-marrying and buying a new dwelling represented 1.3 percent of the group. As has been explained, it was not possible to identify the proportion of widows who had remarried, and they are therefore included in a category of *...wife remarries/changes name/moves interstate*. If, however, it is assumed that the proportion of widows re-marrying and moving interstate is the same as that for widowers, then it is possible to claim that 4.1 percent of the group were widows who remarried and 23.4 percent were widows who moved interstate. In terms of mobility, interstate re-location is a significant option for surviving partners, to live either with relatives and/or to take advantage of life in warmer climates, especially those afforded by so many locations in Queensland (Murphy and Zehner, 1988: 322-324; Salt, 1992: 64; Hugo and Smailes, 1992: 34-35; Maher and Whitelaw, 1995: 15; Bell, 1995: 19-20).

What of those households which had disintegrated through divorce or separation?

There were 170 (21.9 percent) of households in this category, and the range of possible outcomes for the parties involved have been detailed in Table 4.20.

It suggests that there are several situations which have significant mobility implications. Two of these situations involved the husband moving into rental accommodation. Where this has occurred, the dominant tendency has been for the wife to remarry/move interstate. In this case, there is a strong possibility that the wife has, in fact, remarried but, as has been explained earlier, this has not been established due to the difficulty in obtaining data concerning the possible remarriage, or reversion to another name, of a female partner in any former marriage. Less likely when a husband moves into rental accommodation is for the wife to also move into rental accommodation. However, if a wife's former husband moves interstate, then the chances of the wife moving into rental accommodation are increased substantially. On the other hand, where a husband has re-married and bought another dwelling, the probability that the wife will also behave in the same way is very high. The households represented in Table 4.20 have dis-aggregated into new households, which have in turn been re-allocated to the ownership and rental sub-markets in a way suggested by Table 4.21.



**Table 4.20: Mobility behaviour after divorce or separation**

Situation	Number	Percent
Husband and wife each buy new dwelling	2	1.2
Husband buys new dwelling, wife remarries/moves interstate	8	4.7
Husband buys new dwelling, wife into rental	3	1.8
Husband & another buys new dwelling, wife remarries/moves interstate	2	1.2
Husband & another buy new dwelling, wife into rental	1	0.6
Husband remarries, buys new dwelling, wife buys new dwelling	2	1.2
Husband remarries and buys new dwelling, wife remarries/moves interstate	23	13.5
Husband remarries and buys new dwelling, wife into rental	5	2.9
Husband into rental, wife buys new dwelling	7	4.1
Husband into rental, wife & another buy new dwelling	1	0.6
Husband into rental, wife remarries/moves interstate	42	24.7
Husband into rental, wife into rental	12	7.1
Husband moves interstate, wife buys new dwelling	3	1.8
Husband moves interstate, wife & another buys new dwelling	3	1.8
Husband moves interstate, wife into rental	21	12.4
1st partner buys new dwelling, 2nd partner buys new dwelling	1	0.6
1st partner buys new dwelling, 2nd partner marries/moves interstate	7	4.1
1st partner buys new dwelling, 2nd partner into rental	1	0.6
1st partner & another buy new dwelling, 2nd partner marries/moves interstate	2	1.2
1st partner marries, buys new dwelling, 2nd partner marries/moves interstate	4	2.4
1st partner marries, buys new dwelling, 2nd partner into rental	2	1.2
1st partner moves interstate, 2nd partner buys new dwelling	3	1.8
1st partner moves interstate, 2nd partner & another buy new dwelling	1	0.6
1st partner moves interstate, 2nd partner into rental	1	0.6
1st partner marries/moves interstate, 2nd partner into rental	1	0.6
1st partner into rental, 2nd partner buys new dwelling	2	1.2
1st partner into rental, 2nd partner marries/moves interstate	7	4.1
1st partner into rental, 2nd partner into rental	3	1.8
<b>Total</b>	<b>170</b>	<b>100.0</b>

Source: Derived from reasons.sav file, variable reasons.

**Table 4.21: Distribution of divorced/separated households between owned and rented sub-markets after dis-aggregation**

Category	Number	Percent
Ownership	88	25.9
Rental	124	36.5
Males - Moved interstate	32	9.4
Females - remarried/moved interstate	96	28.2
<b>Total</b>	<b>340</b>	<b>100.0</b>

Source: Derived from Table 4.20.

It would seem that household breakup through divorce/separation tends to promote activity in the rental market, at least in the short term. However, this conclusion must be modified by two factors. Firstly, a number of those persons moving interstate

would have entered interstate housing markets and, secondly, a number of women in the *Females - remarried/moved interstate* category have indeed remarried, or resumed their former name, and re-entered the ownership market in Adelaide. Nevertheless, on the evidence in Table 4.21 it is certainly reasonable to argue that household breakdown by divorce/separation encourages significant activity in the rental market, with up to 50 percent of the members of these former owner tenure households seeking subsequent accommodation in the rental market.

Households which have dissolved through divorce or separation are not the sole source of rental market clients, and in addition to the flow already described, the research has identified three other flows which represent 14.4 percent of all households which left the home ownership market during the period June 1986 to July 1991. Moreover, these are households which made a conscious decision to sell and enter the rental market. Each of these streams were of roughly equal size, but the largest (5.9 percent) comprised married households selling their home and moving to rented housing. The next largest group comprised single males, and this group represented 4.5 percent of all households which left the market. Finally, single females moving to rented accommodation represented 4.1 percent of the total. Whilst it is not possible to identify reasons for these groups' decisions to change tenure, an analysis of capital gains generated by these households will be made in Chapter 5 and this may reveal some powerful financial incentives for these changes.

In Table 4.18 there are two categories which provide some insights as to the role of marriage in rendering void existing households and creating new households to move through the housing market. The category *Female - married/interstate mobility* comprised single female households whose disappearance from home ownership can

only be explained by the fact that they became married or moved interstate. As has been explained earlier, the strong probability is that a sizeable proportion of these households were absorbed into new households through marriage, but they have not been tracked subsequently. Similarly, the *New household created from an existing household* category was comprised of two groups. The first represented single males who married to create a new household and ownership, whilst the second comprised dwellings owned by an unmarried couple ( for example, Smith, R J & anr<sup>1</sup>) who subsequently became married, thereby creating a new household. Collectively, these two groups represent a significant proportion (13.5 percent) of households whose ownership and mobility characteristics ceased to be monitored between June 1986 and July 1991 because of changes in their household configuration. There is every possibility that these new households entered the ownership market, but the nature of the research methodology utilised here has meant that details of these new households' real estate activity have not been recorded. The major reason for this omission is principally resource and time based, but had their housing histories been pursued then the distribution of moves among households, as described in Table 4.13, would have been less negatively skewed, and more likely to have approached a normal distribution.

The analysis of households which left the ownership market between June 1986 and July 1991 has demonstrated that 22.5 percent were highly likely to have moved interstate. This is additional to those who have been positively identified as moving interstate. Within this stream there were two main groups. The first comprised

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<sup>1</sup> "Anr" is an abbreviation for "Another" used in the LOTS database. Similarly, "Ors" is used for "Others". See "Notes to selected housing history file variables" in Appendix 1 for more details.

couples, both married and unmarried, who on balance were categorised as having left the South Australian real estate market, but were not on the Electoral Roll and had not died and therefore had left the state. The second group was represented by single male households which met the same criteria. Of the two groups, the first was 3.8 times larger than the second, indicating the significance of couple households in the interstate mobility stream exiting South Australia. However, this difference would be offset by the component of interstate mobility represented in the category *Female - married/interstate mobility* in Table 4.18. Were half this category attributed to single female households moving interstate, then the size of the first group of movers in relation to the second group would only be in the vicinity of 2.3 times greater.

Regardless of these qualifications, the role of interstate mobility is a substantial reason for households leaving ownership in South Australia and which has significant consequences for the buoyancy of the housing market in the state as well as for the rate of population growth in South Australia.

Finally, for 4.1 percent of households who left the market, their departure was temporary, and they later returned, albeit after the end of the study period. The conclusion here must be that not all households move immediately from their old home into their new one. For some, there can be a gap between ownerships, during which time the households may engage in the search process for a new house, as well as the appraisal process, possibly rent, take employment interstate or overseas, as well as a host of other possibilities, or simply gather the necessary resources to buy the next home. For these households, the length of time out of the ownership market ranged from 2 month to 107 months. Only 14.3 percent remained out of the market for less than a year, 21.4 percent were absent for two to four years and 17.9 percent

returned to the market after absences of more than four years but less than six years. However, the significant statistic in this analysis is the fact that nearly half the households (46.4 percent) were absent from the housing market for more than five years. There is clearly more research needed to track these households during their absence from ownership in order to fully appreciate some of the implications for the mobility process.

This section has endeavoured to show how a housing history can be further pursued when LOTS could no longer track a household. As a result, the enquiry into the fate of households which disintegrated before the end of the study period has yielded useful insights into the causes of household breakup, and a number of pertinent implications for the mobility process. It has also illustrated the importance of basing housing history analyses at the individual owner level to avoid possible gaps in the detail of any history.

#### **4.8 Conclusions**

This chapter has sought to describe aspects of residential mobility as they have occurred in Adelaide and South Australia during a 23 year period. It has done this against a backdrop statement which detailed the nature of housing sub-markets and housing demography in the Adelaide area. Significantly, the relationship between markets, housing demography and the mobility process is substantial, because the data defining each have been derived from the same source, in this case households whose housing ownership activities have been recorded on the LOTS database.

One key finding of the chapter is an intention among movers to achieve an accommodation upgrade with each move. The notion of upgrade has been shown to

be multi-dimensional, being related to area, condition and age of dwelling, as well as being linked to evidence which has suggested that households seem to move to locations which are perceived to be their optimum location. It is therefore reasonable to expect that these housing goals would be linked to capital accumulation through housing ownership so that a better home could be bought upon its sale.

Of course, households have been identified whose mobility has not resulted in housing upgrade, and it has not been possible to determine whether or not this has been intended outcome. However, in the next chapter these qualities of mobile households will be assessed against their home's capital accumulation performance during their ownership, and this should throw more light on whether or not housing downgrade is an intentional decision for some owners.

### 5.1 Introduction

Enquiry into the relationship between capital gains and residential mobility has its origins in investigations into the impact of capital accumulation from home ownership upon traditional class relations and in particular whether accumulation could influence the development of a new middle class (Saunders, 1978). The earliest research occurred principally in the United Kingdom, but it encouraged Pratt (1986a) and Thorns (1981) to investigate the relationship between accumulation and social cleavage in Canada and New Zealand respectively. Thorns, in particular, proposed that there were significant links between ownership, labour markets and household mobility (Thorns, 1981a: 211-212) based on evidence from both New Zealand and the United Kingdom. His conclusions were noted, criticised and refined by Hamnett (1984) and a number of other researchers (Champion et al, 1988; Barlow, 1990; Allan and Hamnett, 1991; Coombes et al, 1991; Forrest and Murie, 1991; Hamnett, 1991; Randolph, 1991).

The essential nature of the relationship between labour markets, housing markets and mobility is that the two markets share reasonably common spatial boundaries, influenced by the significance of the journey to work for most individuals and households (Coombes et al, 1991: 169). Hence, when the labour market position of a household changes it might be expected that their housing market position would also change. For example, if a household's labour market position shifted spatially, there might be compelling reasons for the household to follow the employment opportunity and move from one housing market to another. Similarly, were a household's labour

market position to change *in situ*, through job promotion, demotion or job loss, these events may cause the household to consider, and then possibly change, their housing market position. Each type of consideration has clear implications for residential mobility (Allen and Hamnett, 1991: 6; Hamnett, 1992: 56; Owen and Green, 1992: 22-23). For owner-occupiers, mobility is largely related to their ability to pay for varying quantities and qualities of housing at various locations (Thrall, 1983: 224-225; Owen and Green, 1989: 122; Randolph, 1991: 18; Forrest and Murie, 1991: 63). There have, however, been many qualifications to this generalisation, mainly through the recognition that the home owning group in any community is not homogenous (Doling and Stafford, 1987: 103; Forrest et al, 1990: 217). Propensity to move is most directly linked to a household's occupational status, and the higher the occupational status the greater the propensity to move (Forrest and Murie, 1991: 87; Owen and Green, 1992: 30; Munro, 1992: 6).

With respect to this theoretical context, this Chapter is unable to contribute to our understanding of the relationship between household labour market position and property market position because data relating to labour market position were not available in the dataset used here. However, a major strength of the database is the quality of its information over a 23 year period. These data will enable theoretical contributions concerning the relationship between capital accumulation and mobility to be made. Moreover, these relationships will be examined as they occur at the intra-urban level, in contrast to many previous studies which have examined data obtained at a national level.

Whereas the previous chapter sought mainly to describe patterns of mobility exhibited by households, this chapter will endeavour to explain how capital accumulation



considerations might explain and predict these patterns. The strategy will be to assess, in the first instance, capital gains performance for houses, home units and vacant land. In this assessment there will also be a consideration of the impact which time of entry into any sub-market has had on the accumulation potential of an investment, together with a discussion of the spatial dimensions of capital accumulation in the Adelaide urban area. The purpose of this approach is to provide a backdrop against which to examine, subsequently, the specific accumulation performance of households which move within and between these sub-markets. The next level of investigation will restrict the enquiry to the accumulation performance of owner-occupied dwellings and the level of capital gain they accrue to their owners. Here the objectives will be to assess issues relating to dwelling value and mobility, levels of re-investment at successive stages of the mobility process, the extent of a household's accumulation at the end of its housing history, as well as attempting to provide an explanation for capital losses generated by mobile households.

## **5.2 Capital gains and sub-markets**

Nearly all the properties (97.2 percent) owned by the sample fell into one of three dominant sub-markets - houses, home units and vacant land. The largest of these was the house sub-market, which represented 70.9 percent of all properties in the survey. Less significant were the home unit and vacant land sub-markets, which were represented by 14.2 percent and 12.2 percent respectively of all properties. The earliest analyses of capital gains from property ownership based their findings on simple absolute and pro rata measures of accumulation (Hamilton, 1976: cited in

Pratt, 1986a: 368; Thorns, 1981a: 208; Pratt, 1986a: 368), which involved either a calculation of the difference between selling price and purchase price, or computation of the selling price as a percentage of the purchase price. Since then refinements have been made to the equations employed to compute the capital gain generated by a property during any ownership period, and these have been detailed in Section 3.6. Although it is the case, for many owners, that the measure of capital gains remains a simple equation, based around the difference between selling price and purchase price (Maher, 1994: 8), a more precise formula is required. In this chapter capital accumulation will be defined as the difference between selling price and purchase price, discounted for inflation and adjusted to 1989/90 values. Further, to allow for valid comparisons between households, accumulation will be measured as a rate based, wherever possible, on the number of years the property has been owned, and/or square metres of housing.

### **5.2.1 The house sub-market**

One key problem associated with any discussion of the accumulation potential of the house sub-market is that the level of any gain generated by a dwelling is dependent upon the size, or price of the dwelling, (Thorns, 1981a: 206,210; Badcock, 1989: 81-85) and the length of time that the dwelling has been owned (Thorns, 1981a: 207; 1984: 297). When, as has been the case with most earlier studies, the data used are in aggregate form, it has not been possible to control for dwelling size and length of ownership. However, in the present study these constraints do not apply and data related to length of ownership and size of dwelling have been collected for each dwelling. This has enabled the computation of a capital gain value pro-rated for

dwelling area (m<sup>2</sup>) and time owned (years). Further, because the impact of inflation should be considered once a dwelling has been owned for any length of time two measures of capital gains have been computed. The first represents nominal capital gain, with no adjustment made to purchase price and sale price, and the second is an adjusted capital gain measure, with purchase price and sale price adjusted to 1989/90 values. All purchase prices and sales prices have been adjusted using the formula in Equation 5.1.

**Equation 5.1**       $AV_{1989/90} = (P/CPI)*100$

where

$AV_{1989/90}$	=	Adjusted value at 1989/90 prices
$P$	=	Actual price paid in any transaction
$CPI$	=	Consumer Price Index value at time of transaction

Table 5.1 details the accumulation performance of houses between 1968 and 1991. Although some 2150 houses were eligible for consideration in this analysis, over 1000 were not included because of incomplete data relating to area, or because the current ownership had not been concluded at the end of the study period. Further, those dwellings which had been bought before 1968 were excluded because purchase price details were not available.

**Table 5.1: Capital accumulation by houses in the Adelaide metropolitan area, 1968 to 1991.**

Gain or loss/m <sup>2</sup> /year	Nominal		Adjusted	
	Number	Percent	Number	Percent
>\$200 loss	8	0.8	9	0.9
\$101-\$200 loss	2	0.2	26	2.5
\$1-\$100 loss	56	5.3	317	30.4
\$0-\$50 gain	442	42.2	397	38.0
\$51-\$100 gain	354	33.8	178	17.0
\$101-\$150 gain	108	10.3	52	5.0
\$151-\$200 gain	30	2.9	20	1.9
\$201-\$300 gain	28	2.7	20	1.9
>\$300 gain	20	1.9	25	2.4
Total	1048	100.0	1044	100.0

Source: Frequencies of vars cg1rcdv2 and cg2rcdv2 in cap\_gain.sav file

It would seem that, based on nominal capital gains, most home owners have benefited through home ownership. For more than 90 percent of owners, home ownership has guaranteed wealth generation along the lines suggested by Pahl (1975: 291) and Saunders (1978: 243-245). It also supports the point made by Maher (1994: 8), that home owners often base the decision to sell solely on their computation of nominal capital gain, and it contributes to the explanation of how a certain amount of mythology has attached itself to the capital generation virtues of housing. For the average sized house of 130 m<sup>2</sup>, these results suggest a capital gain ranging from around \$6,500 up to \$26,000 per year, a return with which most owners would be rather satisfied, notwithstanding that this level of return would be offset by a number of costs incurred by the owner of the dwelling. Within this evidence, there is clear support for the prevailing view that most home owners expect to derive substantial capital gains from home ownership. However, if house prices are adjusted to account for inflation which has occurred during the period of ownership, the capital gains

generation capacity of houses is diminished, as shown in the last two columns of Table 5.1.

The most striking revelation in this part of the table is that for fully one third of houses, their occupancy by owners has resulted in a capital loss after adjustment for inflation. For most of these dwellings, the loss has been up to \$100/m<sup>2</sup>/year. These results mean that in any housing market a substantial proportion of owners are more marginal through home ownership than they might believe. Similar findings have been reported for Canberra by Beer (1993: 161), who found that between 1962 and 1981 only 60 percent of households received a capital gain from ownership. Elsewhere, Doling and Stafford (1987: 103) and Forrest et al (1990: 217) have arrived at similar conclusions. In terms of further research, it would be interesting to determine how these capital loss making households might modify the conclusions of a group of early researchers who argued that home ownership and the perceived benefits which flowed from it could lead to changes in traditional class allegiances and behaviours (see Saunders, 1978: 233-234, 246; Kemeny, 1980: 373; Thorns, 1981a: 206; Saunders, 1984: 203-205; Pratt, 1986a: 367). It might also explain the motivation behind a developing view that some significant advantages attach to renting which are not achieved through home ownership (Clifton, 1995: 46), this notwithstanding any considerations of imputed rent savings which should ideally be incorporated into any capital gains equation (see Lerman and Lerman, 1986: 324; Badcock, 1989: 80; Saunders, 1990: 124).

### 5.2.2 The home unit sub-market

Table 5.2 presents the results of a similar analysis for home units. It is clear that home units have behaved in similar ways to houses during the study period in terms of their generation of capital gains, and that when prices have been adjusted for inflation this dwelling type also returned significant losses to a substantial proportion of their owners.

**Table 5.2: Capital accumulation by home units in the Adelaide metropolitan area, 1968 to 1991.**

Gain or loss/m2/year	Nominal		Adjusted	
	Number	Percent	Number	Percent
>\$200 loss	3	1.1	6	2.3
\$101-\$200 loss	3	1.1	6	2.3
\$1-\$100 loss	19	7.2	94	35.7
\$0-\$50 gain	83	31.6	85	32.3
\$51-\$100 gain	107	40.7	45	17.1
\$101-\$150 gain	31	11.8	16	6.1
\$151-\$200 gain	11	4.2	6	2.3
\$201-\$300 gain	5	1.9	4	1.5
>\$300 gain	1	0.4	1	
Total	263	100.0	263	100.0

Source: Frequencies of vars cg1rde and cg2rde in cap\_gain.sav file

**Table 5.3: Capital accumulation by vacant land in the Adelaide metropolitan area, 1968 to 1991.**

Gain or loss per year	Nominal		Adjusted	
	Number	Percent	Number	Percent
Loss	5	8.5	17	28.8
\$0-\$5000	34	57.6	27	45.8
\$5001-\$10000	12	20.3	7	11.9
\$10001-\$20000	4	6.8	4	6.8
>\$20000	4	6.8	4	6.8
Total	59	100.0	59	100.0

Source: Frequencies of vars cg1rde and cg2rde in cap\_gain.sav file

The only other sub-market with a reasonable number of ownerships was vacant residential allotments. For this sub-market no data were available for area, and therefore a per year calculation of nominal and adjusted accumulation has been made, and the results of this analysis presented in Table 5.3. Perhaps the most pertinent observations from this table is the fact that the proportion of vacant residential allotments which generate a capital loss for their owners is less than the level for houses and home units, and that the range of gains for vacant land is greater than that obtained for the other two sub-markets. Despite these observations, the fact remains that land and real estate does not represent a certain way of accumulating wealth. Further, the analyses in this section have highlighted the critical importance of discounting capital gains for the impact of inflation to show the real potential of housing to generate wealth for its owners.

### **5.3 Capital gains and time of entry to sub-markets**

The significance of accumulation through home ownership has been reported in depth only since the onset of rapid inflation in western economies in the 1970's. It has been inflation which has made possible huge windfall profits to owners (Hamnett and Randolph, 1988: 381-382; Hamley, 1992: 21-22; Maher, 1994:11-14; King, 1989a: 455-456), and which has caused investigation of the many implications stemming from this phenomenon. One key factor which has emerged from the analyses has been the relationship between the property cycle time at the time of purchase and level of capital gain (Thorns, 1981a: 207-210), and in this section the per m<sup>2</sup>, per year return to house owners has been related to the period in which the house was purchased. The expectation is that nominal levels of accumulation should have

become more widespread throughout the study period as inflation became more pronounced, but simultaneously there should have developed a tendency for adjusted accumulation to show a lower earning capacity from home ownership. Table 5.4 shows the development of the relationship between nominal accumulation and period of house purchase. The clearest pattern which emerges from the table is that until the onset of rapid inflation in the early seventies, home owners could expect their investment to accrue relatively modest and predictable nominal capital gains, and that there was little possibility of a capital loss being produced. However, this environment changed in the second half of the 1970's, and rapidly increasing inflation rates increased the opportunity for nominal capital gains to accrue to owners who bought during this period.

With the eighties, new factors were introduced to the home ownership equation, especially interest rate volatility, so that nominal losses from ownership became an increasing possibility. So, too, did the opportunity for increasingly larger windfall profits. In Table 5.5, the tendencies described above have been qualified to take into account the impact of inflation by adjusting selling and purchase prices to 1989/90 values. This adjustment has established some developing tendencies which have modified the capacity of housing to generate capital gains, especially for home buyers who purchased from 1970 onwards.



**Table 5.4: Nominal gain or loss based on period of house purchase.**

Gain or loss	1968-1970		1971-1975		1976-1980		1981-1985		1986-1991	
	No	%	No	%	No	%	No	%	No	%
>\$200 loss									8	2.3
\$101-\$200 loss							1	0.2	1	0.3
\$1-\$100 loss							28	6.7	28	7.9
\$0-\$50 gain	6	85.7	58	95.1	126	60.9	116	27.7	136	38.4
\$51-\$100 gain	1	14.3	3	4.9	70	33.8	185	44.2	95	26.8
\$101-\$150 gain					10	4.8	50	11.9	48	13.6
\$151-\$200 gain							12	2.9	18	5.1
\$201-\$300 gain					1	0.5	18	4.3	9	2.5
>\$300 gain							9	2.1	11	3.1
Total	7	100.0	61	100.0	207	100.0	419	100.0	354	100.0

Source: Extracted from cap\_gain.sav file

**Table 5.5: Adjusted gain or loss based on period of house purchase**

Gain or loss	1968-1970		1971-1975		1976-1980		1981-1985		1986-1991	
	No	%	No	%	No	%	No	%	No	%
>\$200 loss							1	0.2	8	2.3
\$101-\$200 loss			1	1.7			10	2.4	15	4.2
\$1-\$100 loss			16	27.1	46	22.3	94	22.5	161	45.5
\$0-\$50 gain	6	85.7	40	67.8	124	60.2	135	32.3	92	26.0
\$51-\$100 gain	1	14.3	2	3.4	31	15.0	102	24.4	42	11.9
\$101-\$150 gain					4	1.9	30	7.2	18	5.1
\$151-\$200 gain							14	3.3	6	1.7
\$201-\$300 gain							17	4.1	3	0.8
>\$300 gain					1	0.5	15	3.6	9	2.5
Total	7	100.0	59	100.0	206	100.0	418	100.0	354	100.0

Source: Extracted from cap\_gain.sav file

As processes associated with global restructuring and internationalisation of capital have progressed the capital accumulation options for home owners have changed in largely negative ways. Firstly, the proportion of home owners which might have expected to make a reasonable gain of up to \$100/m<sup>2</sup>/year has reduced progressively from 100 percent during the 1968-1970 period to 37.9 percent in the 1986-1991 period. Secondly, the proportion of owners who could expect to lose from ownership fluctuated between a low 22.3 percent and a high 28.8 percent between 1971 and

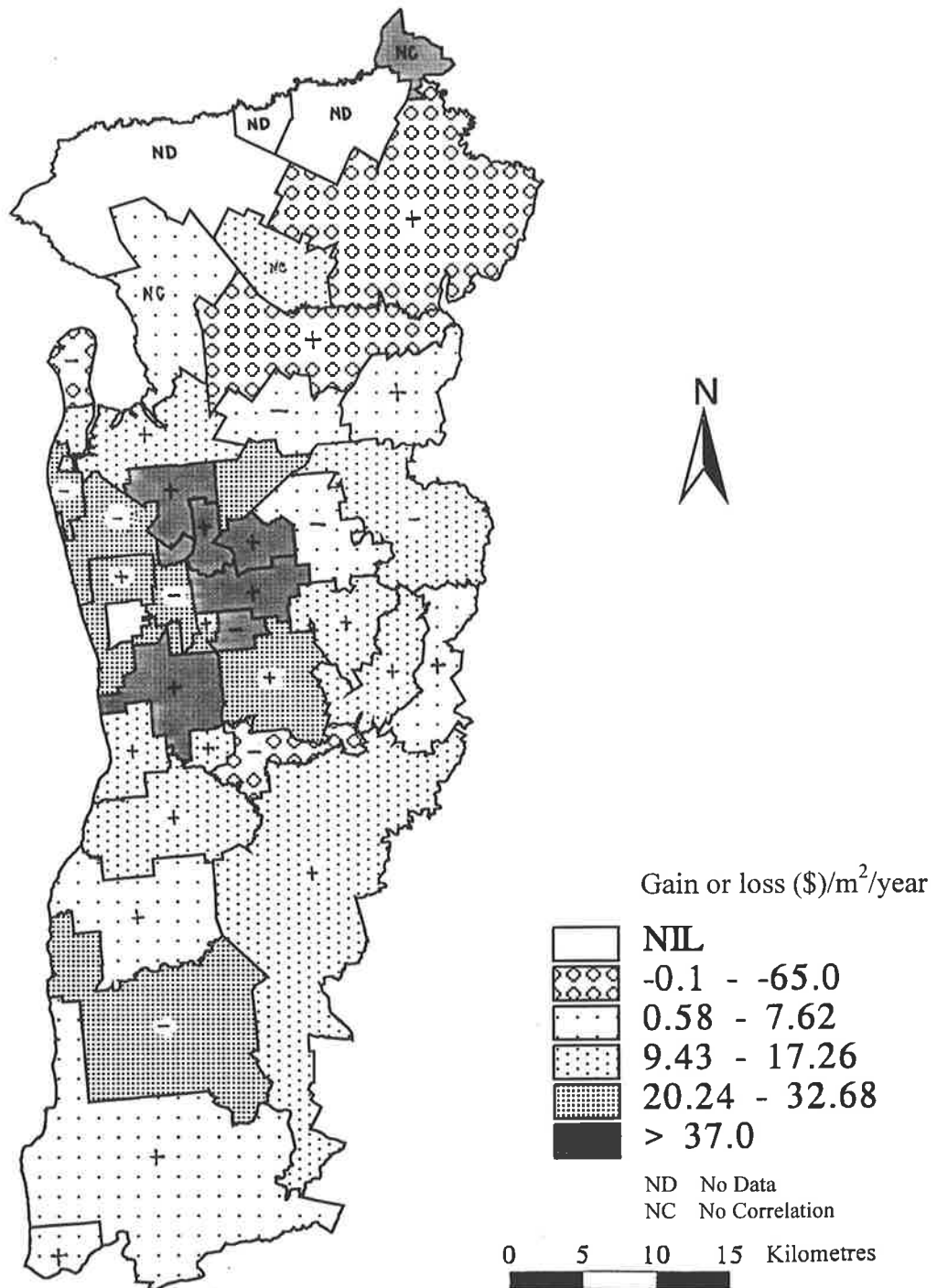
1985, but from 1986 the possibility of a financial loss from ownership increased to 52 percent of all buyers. The possibility of deriving real gains from ownership of more than \$100/m<sup>2</sup>/year during the period peaked at 18.2 percent in the 1981-1985 period, and tumbled to 10.1 percent in the succeeding period.

#### **5.4 Spatial distribution of capital gains in the house sub-market**

Saunders (1990: 131) has suggested that the spatial assessment of capital gains is problematical because of an array of factors which have to be considered in order to fully appreciate any measure of capital gain. However, as has been indicated above, the use of individual house data, together with data for house area and length of ownership, has meant that some of these difficulties have been overcome. Therefore, nominal and adjusted capital gain per m<sup>2</sup> per year data for houses has been allocated to each of the mosaic areas generated by the intersection of the zones and sectors employed in Chapter Four. For each mosaic area, the median adjusted capital gain per m<sup>2</sup> per year was determined, and these data used to produce Figure 5.1.

The first point to note is that for most mosaic areas within the metropolitan area, the median level of real, or adjusted, capital gain is relatively low, and therefore this map is an important qualification of the trends depicted in Table 5.1, in that it emphasises the degree of variation associated with capital returns from housing. As well, it is a confirmation of the view that the capital gains generation capacity of housing is not as great as it was once supposed. The second point is that this representation of capital accumulation potential reflects the typical patterns of land values found in urban areas, with highest values near the centre and lowest values at the periphery, therefore suggesting a link between land value and capital gain.

**Figure 5.1: Distribution of adjusted median values of gain or loss/m<sup>2</sup>/year in Adelaide metropolitan area, 1968 to 1991**



Source: Extracted from cap\_gain.sav file.

There is, however, a third and more interesting point related to the actual location of highest accumulation potential areas. The data have suggested that the inner zones of sectors 1, 2, 3 and 4 have produced a better accumulation record throughout the study period than the corresponding zones of sectors 5 and 6 especially, and to a lesser extent sectors 7 and 8<sup>1</sup>. Traditionally, the south-eastern sectors of Adelaide have been regarded as the high land value areas of the city, and there is evidence that these areas retain that reputation (see Chapter Four, Table 4.6). However, the evidence of Figure 5.1 indicates that capital gain, pro-rated for area and time owned, is not firmly linked to the prevailing land, or house, value surface. A correlation analysis was performed on the level of real gain or loss/m<sup>2</sup>/year and the adjusted sale price of houses in each mosaic area. The purpose of this exercise was to measure not the magnitude of any correlation but whether the association was positive or negative. These results are superimposed on the shading patterns of Figure 5.1. Those mosaic areas with a positive relationship between real gain and adjusted selling price represents areas where the level of gain reflects the land value surface. However, those mosaic areas with a negative relationship are areas where levels of capital gain are inversely related to the prevailing land value levels. This tendency is dominant in the northwest-west sector, and has occurred in half the zones of the southwest-west, southeast-south and northeast-east sectors. In the first sector land values are middle range, and therefore this sector has generated capital gains well above expectations, and it may well be that this sector is experiencing the early stages of gentrification. The other sectors are located in generally high to very high land value areas, and it may be that processes

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<sup>1</sup> See Appendices 4 and 5 for a description of zones and sectors as used in this study together with maps showing their areal extent.

associated with gentrification and supply and demand are nearing the end of their cycle in these regions, that capital is shifting (Daly, 1988: 140; King, 1989a: 445-453; King, 1989c: 859; Beauregard, 1991: 93) from these areas to the northwest-west sector which is potentially more likely to generate higher returns on invested capital. The principal aim of the discussion to this point has been to provide a context, against which to examine the more specific accumulation record of movers *per se*. It has established an environment of uncertainty surrounding the capital gains potential of housing, which has developed since the 1970's. Consequently, capital gains from home ownership are by no means guaranteed and, moreover, the relationship between space and capital gains would also seem to be evolving new characteristics which are likely to modify previous perceptions of the relationship.

### 5.5 Capital gains and mobility

The aim of this section is to focus on the accumulation record of movers. In Table 5.6 details regarding the accumulation potential of households which moved from a house to another house are shown.

**Table 5.6: Accumulation performance of households which moved within the house sub-market**

Gain or loss/m <sup>2</sup> /year	Nominal		Adjusted	
	Number	Percent	Number	Percent
>\$200 loss	2	0.6	2	0.6
\$101-\$200 loss			4	1.2
\$1-\$100 loss	13	4.0	87	27.0
\$0-\$50 gain	135	41.8	128	39.8
\$51-\$100 gain	111	34.4	64	19.9
\$101-\$150 gain	38	11.8	21	6.5
\$151-\$200 gain	14	4.3	6	1.9
\$201-\$300 gain	2	2.2	7	2.2
>\$300 gain	3	0.9	3	0.9
Total	323	100.0	322	100.0

Source: Extracted from mobility.sav file, based on frequencies for variables *cg1rcdv2* and *cg2rcdv2*

The importance of using adjusted values in computing accumulation is again reinforced in the table. Based simply on nominal values, very few households incurred a loss through ownership and mobility. However, when prices are adjusted for inflation, the pattern is modified to the extent that nearly 30 percent of owner households, moving from a house to another house, incurred losses. Of those households which made a capital gain, based on adjusted values, just on 60 percent made only a modest gain of up to \$100 per m<sup>2</sup> per year.

Because the number of households moving within the home unit sub-market (16), and between the house and home unit sub-markets (54) and home unit and house sub-markets (71) are small in comparison to those moving within the house sub-market, full details of their accumulation performance have not been presented. However, several salient points need to be mentioned. Firstly, for movers from a house to a home unit, the likelihood of an adjusted loss was slightly less than that for house to house movers, whereas their chances of making a modest profit of up to \$100 per m<sup>2</sup> per year was slightly greater. Secondly, households which moved from a home unit, either to a house or to another home unit, could be expected to incur considerable accumulation disadvantage. For the home unit to house movers, 36.6 percent made an adjusted loss through home unit ownership, while 56.6 percent of home unit to home unit movers made a loss. There has been a train of thought in housing studies which has suggested that home unit ownership acts as a stepping stone to home ownership (Kendig, 1984: 280; Rudel and Neaigus, 1984: 137; Rudel, 1987: 259-260), especially for younger households embarking upon their housing career. The evidence from these results would suggest that home unit ownership, for many owners, should be seen as a millstone, rather than a stepping stone. How much these results confirm the

views of Rudel and Neaigus (1984: 129-137; and Harris (1986: 303), who argued that the prevailing economic climate of the seventies caused some owners to rush into home ownership earlier than perhaps they should have is interesting to contemplate. Were these owners relatively short term owners? Had they “bought high and sold low” in order to get into house ownership quickly to take advantage of the huge capital gains windfalls houses were reported to achieve?

**Table 5.7: Period of purchase for origin dwelling of mobile households**

Market to market	Period											
	1968-1970		1971-1975		1976-1980		1981-1985		1986-1991		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
House to house	1	0.3	38	9.4	123	30.3	161	39.7	83	20.5	406	100.0
House to home unit	2	2.9	10	14.3	26	37.3	16	22.9	16	22.9	70	100.0
Home unit to house			2	2.3	17	19.8	47	54.7	20	23.3	86	100.0
Home unit to home unit			2	9.5	3	14.3	9	42.9	7	33.3	21	100.0

Source: Extracted from mobility.sav file using variable cgrt2rcd

Table 5.7 provides some insights into these questions. By the end of the seventies, 42 percent of house owners had bought their dwelling, and at best this enabled their investment to accumulate for up to a decade before it was sold. On the other hand, however, only 22.4 percent of the home unit stock had been purchased by this time, with a further 52.3 percent of home units purchased during the first half of the eighties. This was the very time that so many of the capital gains virtues of home ownership were being extolled (Hamnett, 1983: 98; King, 1990: 361; Linneman and Megbolugbe, 1992: 369), and there may be in these observations some evidence to support the claims that home unit owners were pressured to sell their unit, despite the costs they would incur, in order to capitalise on the advantages that would be theirs in

house ownership. Whether this promise eventuated for these movers is explored in

Table 5.8.

**Table 5.8: Annualised gain per move for households which moved from a home unit into houses for the remainder of their housing career**

Gain or loss/year/move	Number	Percent
>\$10000 loss	2	2.3
\$8-\$10000 loss	2	2.3
\$6-\$8000 loss	1	1.2
\$4-\$6000 loss	2	2.3
\$2-\$4000 loss	4	4.7
\$0-\$2000 loss	13	15.1
\$0-\$2000 gain	15	17.4
\$2-\$4000 gain	16	18.6
\$4-\$6000 gain	15	17.4
\$6-\$8000 gain	2	2.3
\$8-\$10000 gain	6	7.0
\$10-\$20000 gain	5	5.8
\$200-\$5000 gain	2	2.3
>\$50000 gain	1	1.2
Total	86	100.0

Source: Derived from resid\_mo.sav file, using *gnymvrc* variable for those mobile households whose housing history follows the general format HU-H....H

Clearly, nearly one third of households who commenced their housing careers with a home unit have realised an annualised capital loss from ownership of their subsequent houses. On the other hand, for more than half (53.4 percent) these households, mobility from a home unit into one or more houses has generated gains of up to \$6000 per year per move.

The findings reported to this point can be complemented by computations of rates of capital gain. The earliest explorations of rates of return based the calculation on the purchase price (Saunders, 1990: 124), but subsequent analysts preferred to base the rate on the household's equity in the dwelling (Dupuis, 1992: 30). In Table 5.9, the rate of return has been computed using the purchase price of the dwelling, as well as



allowing for the time that the dwelling had been owned, using the formula in Equation 5.2.

**Equation 5.2** 
$$(((SP_{adj} - PPadj) * 100)/PPadj)/T$$

where  $SP_{adj}$  = selling price (based on 1989/90 prices)  
 $PP_{adj}$  = purchase price (based on 1989/90 prices)  
 $T$  = time (years) dwelling owned

The table shows how movers within and between the sub-markets have fared in terms of real, or adjusted, accumulation rates based on the purchase price of their origin dwelling.

**Table 5.9: Rate of accumulation, based on purchase price, for movers within and between sub-markets**

Loss or gain	House - house		House - home unit		Home unit to house		Home unit to home unit	
	No	%	No	%	No	%	No	%
>10%/year loss	88	21.7	14	20.0	20	23.3	10	47.6
5-10%/year loss	29	7.1	6	8.6	8	9.3		
0-5%/year loss	12	3.0	3	4.3	4	4.7		
0-5%/year gain	113	27.8	24	34.3	21	24.4	4	19.0
5-10%/year gain	71	17.5	11	15.7	19	22.1	1	4.8
10-15%/year gain	39	9.6	6	8.6	6	7.0	2	9.5
15-20%/year gain	27	6.7	4	5.7	2	2.3	2	9.5
20-50%/year gain	20	4.9			4	4.7	1	4.8
50-100%/year gain	6	1.5	1	1.4	1	1.2	1	4.8
>100%/year gain	1	0.2	1	1.4	1	1.2		
Total	406	100.0	70	100.0	86	100.0	21	100.0

Source: Extracted from mobility.sav file, based on frequencies for variable CGRT2RCD

In addition to confirming a number of points which have already been made, Table 5.9 suggests that all forms of housing are capable of returning a loss to a sizeable proportion of their owners, and that the size of the proportion is lower for movers who shift from a house than for those who shift from a home unit. Further, about half of all owners can expect to make a return on their housing investment of up to 10 percent per year, based on purchase price, with the exception of those home unit owners who

move to another home unit. For this group, only about one quarter can expect to achieve this reasonable rate of appreciation. However, this group does have the best chances of making substantial rates of appreciation compared with the other groups, although it needs to be noted that this assertion is based on very low numbers.

Capital accumulation can also be measured as a per year return based on the owners' equity invested in the dwelling, where equity is defined as the difference between purchase price and mortgage. This computation is possible for selected dwellings as mortgage data were collected for all homes and home units bought during June, 1986 (Harris, 1989), and Table 5.10 shows, for all houses and home units purchased with a mortgage, the rates of capital gain per \$100 of household equity in the dwelling, per year based on Equation 5.3.

**Equation 5.3** 
$$\frac{((SP_{adj}-PP_{adj})*100)/(PP_{adj}-M_{adj})}{T}$$

where

- $SP_{adj}$  = Selling Price (adjusted to 1989/90 prices)
- $PP_{adj}$  = Purchase Price (adjusted to 1989/90 prices)
- $M_{adj}$  = Mortgage (adjusted to 1989/90 prices)
- $T$  = Time dwelling owned.

**Table 5.10: Annualised rate of accumulation based on owner equity**

Gain or loss per \$100 equity per year	Houses		Home units	
	Number	Percent	Number	Percent
>20% loss/year	46	21.2	9	17.6
10-20% loss/year	22	10.1	8	15.7
0-10% loss/year	46	21.2	18	35.3
0-10% gain/year	50	23.0	10	19.6
10-20% gain/year	18	8.3	3	5.9
20-30% gain/year	5	2.3	2	3.9
30-40% gain/year	8	3.7	1	2.0
40-50% gain/year	8	3.7		
50-75% gain/year	4	1.8		
75-100% gain/year	5	2.3		
>100% gain/year	5	2.3		
Total	217	100.0	51	100.0

Source: Extracted from cap\_gain.sav file, using variable *rt\_eqrcd*.

Again, these data reinforce the consistent findings of earlier analyses, in that for more than half the houses bought with a mortgage, and more than two thirds of home units, the accumulation performance has been dismal, and has resulted in an annualised loss on owner equity invested in the dwelling. Of those owners who were able to profit from ownership, most profited by no more than \$40 per year for each \$100 equity invested in their accommodation. For house owners, some 37 percent fell into this category, whilst all home unit owners were exclusively in this category. However, as Table 5.10 makes clear, the majority of owners accrued profits within the lower bands of the range, indicating that owners have been more likely to make a loss from ownership, or at best a small profit, rather than a substantial financial “killing”. With these kinds of returns from owner equity in housing, it is curious that so many owners, especially first time owners, seem to be anxious to invest as much as possible of their own resources into housing purchases (Dupuis, 1992: 29). Among non-first home buyers, there is an even greater tendency to buy with a small mortgage and correspondingly large equity (Saunders, 1990: 124), but for all owners the conclusion seems to be the same - that there are, in all probability, better forms of investment outside the real estate market (Badcock, 1989: 77; Edel, 1984; Thorns, 1989b: 297). It has been suggested (Saunders, 1990: 131; Dupuis, 1992: 29) that return on equity is indirectly proportional to the size of the equity and this proposition can be examined in the Adelaide context. However, as a sizeable proportion of dwellings had recorded negative capital gain per \$100 of equity invested per year it was not possible to run a correlation analysis between return and size of equity, which included all dwellings, as the negative returns on equity would distort the size of any correlation and, more

importantly, its sign. Therefore, those dwellings which recorded a loss were isolated from those which recorded a gain and separate correlation analyses were run for houses and home units in each category. In employing these refinements, an indirect relationship between return and size of equity will be indicated by a negative correlation for dwellings which made a profit, and by a positive correlation for dwellings which returned a loss on equity. The logic of this lies in the following: as the size of the loss increases it produces an increasingly smaller absolute number. For example, minus 20 percent is smaller than minus 10 percent. If a 20 percent loss is linked to a small equity amount, then it will return a positive correlation, indicating that a small equity is related to a small absolute number, but which should be interpreted in the context of the present discussion as a small equity generating a large loss; that is, a negative relationship between equity and return. The results of the analysis are presented in Table 5.11.

**Table 5.11: Relationship between capital gain on equity and size of equity**

Capital gain/\$100 equity/year (Gain/loss)	Correlation analysis	
	Houses bought with mortgage	Home units bought with mortgage
Gain	-0.1805 N=103 P= .068	-0.1942 N=16 P= .471
Loss	+0.2295 N=114 P= .014	+0.1951 N=35 P= .261

Source: Derived from cap\_gain.sav file, using variables *rate\_eq* and *siz\_eq*.

The conclusions to be drawn from the above table are twofold. Firstly, there is support for the expected relationship between level of return on owner investment and size of that investment but, secondly, the relationship is far from conclusive. As to why the results are so inconclusive, it would seem that in the environment of deregulation which existed in 1986, the period for which mortgage data are available,

home buyers were behaving in a very irregular fashion, not seeming to be influenced by any dominant behaviour as to equity levels, borrowing levels and accumulation results. At this time, the norms of the past were being revised, and replaced with new sets of parameters which, in association with levels of inflation not previously encountered, resulted in a very mixed set of investment performances. For example, of those house owners who registered a loss of more than 20 percent per year, 47.8 percent had an equity level of less than \$10,000, and a further 19.6 percent had an equity level between \$10,000 and \$20,000, and similar results were recorded for home unit buyers. For house owners who recorded a loss of up to 10 percent per year on equity, 28.3 percent had equity levels between \$50,000 and \$100,000, and a further 13 percent had equity levels greater than \$100,000. Among owners who made gains on their equity, those who made huge gains were, in the main, owners who had low levels of personal equity in their house. Fifty percent of owners who made more than 75 percent on their equity investment had equity levels of \$20,000 or less. A further 20 percent of these households had equity levels between \$20,000 and \$40,000. The results for these owners seemed to be in accordance with prevailing wisdom concerning the relationship between return, or accumulation, and size of equity. However, as Table 5.12 reveals, around these trends there is huge variation caused by households whose accumulation performance has not matched expectations, and it is this variation which is responsible for the small size of the correlations reported in Table 5.11.

**Table 5.12: Relationship between return to equity and size of equity - houses purchased with a mortgage**

Gain/ loss	Equity							Total
	Up to \$10000	\$10001 - \$20000	\$20001 - \$30000	\$30001 - \$40000	\$40001 - \$50000	\$50001 - \$100000	More than \$100000	
>20% loss	22 47.8 62.9	9 19.6 24.3	6 13.0 17.6	4 8.7 17.4	3 6.5 16.7	2 4.3 3.8		46 21.2
10 - 20% loss	1 4.5 2.9	6 27.3 16.2	6 27.3 17.6	3 13.6 13.0	1 4.5 5.6	4 18.2 7.5	1 4.5 5.9	22 10.1
0 - 10% loss	5 10.9 14.3	6 13.0 16.2	6 13.0 17.6	4 8.7 17.4	6 13.0 33.3	13 28.3 24.5	6 13.0 35.3	46 21.2
0 - 10% gain	3 6.0 8.6	8 16.0 21.6	3 6.0 8.8	5 10.0 21.7	5 10.0 27.8	19 38.0 35.8	7 14.0 41.2	50 23.0
10 - 20% gain		2 11.1 5.4	5 27.8 14.7	1 5.6 4.3		7 38.9 13.2	3 16.7 17.6	18 8.3
20 - 30% gain		2 40.0 5.4			1 20.0 5.6	2 40.0 3.8		5 2.3
30 - 40% gain	1 12.5 2.9		1 12.5 2.9	1 12.5 4.3	1 12.5 5.6	4 50.0 7.5		8 3.7
40 - 50% gain		1 12.5 2.7	4 50.0 11.8	2 25.0 8.7	1 12.5 5.6			8 3.7
50 - 75% gain	1 25.0 2.9		1 25.0 2.9	1 25.0 4.3		1 25.0 1.9		4 1.8
75 - 100% gain	1 20.0 2.9	2 40.0 5.4	1 20.0 2.9			1 20.0 1.9		5 2.3
>100% gain	1 20.0 2.9	1 20.0 2.7	1 20.0 2.9	2 40.0 8.7				5 2.3
<b>Total</b>	35 16.1	37 17.1	34 15.7	23 10.6	18 8.3	53 24.4	17 7.8	217 100.0

Source: Extracted from cap\_gain.sav file, using variables *rt\_eqrcd* and *sz\_eqrcd*.

Finally in this section, there is the question as to what kind of investment performance, in terms of return per \$100 of equity, households which left the market have made. The reasons why these households left the South Australian real estate market were detailed in Section 4.8 of Chapter Four and it is possible to relate these reasons to levels of return on invested equity. Households which had left the market

had owned 153 properties which had been bought with a mortgage, and within this group the most significant reasons for leaving the market were:

- Interstate mobility (23.5 percent)
- Divorce of married couple (20.9 percent)
- Mobility into the rental market (14.4 percent).

The returns achieved by these categories of households which left the market are provided in Table 5.13. What is significant for each of these groups is that the majority have incurred losses on their investment in housing.

**Table 5.13: Annualised returns to equity for households which left the South Australian real estate market**

Gain/loss per \$100 equity per year	Reason for leaving real estate market							
	Interstate mobility		Divorce		Mobility into rental market		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
>20% loss	9	25.0	15	46.9	7	31.8	31	34.4
10-20% loss	3	8.3	3	9.4	1	4.5	7	7.8
0-10% loss	7	19.4	6	18.8	5	22.7	18	20.0
0-10% gain	10	27.8	3	9.4	4	18.2	17	18.9
10-20% gain	4	11.1	1	3.1	1	4.5	6	6.7
20-30% gain					2	9.1	2	2.2
30-40% gain	1	2.8	1	3.1	1	4.5	3	3.3
40-50% gain	1	2.8			1	4.5	2	2.2
50-75% gain			2	6.3			2	2.2
75-100% gain			1	3.1			1	1.1
>100% gain	1	2.8					1	1.1
Total	36	100.0	32	100.0	22	100.0	90	100.0

Source: Extracted from crosstabulation of *rsnrnde* and *rt\_eqrcd* in *cap\_gain.sav* file selected for households which had left market and which had owned properties purchased with a mortgage.

For households moving interstate, and for those who moved due to divorce, their large scale losses are in all probability due to the forced nature of their housing sale which occurred soon after its purchase in 1986, when the property market was somewhat subdued. Therefore, their investment had little time to mature, and this factor was exacerbated by the sale occurring during a low in the property cycle. More

significantly, for as long as high divorce rates (ABS, 1992b: 50-51; Maher, 1994: 19; ABS, 1995a: 33-37; ABS, 1995b: 19) and high levels of interstate mobility (Flood, 1992: 44-46; ABS, 1994a: 18-20; ABS, 1994b: 41-44; ABS, 1995b: 12) remain as important characteristics within the community, there is a strong possibility that real capital gains from housing ownership will be difficult to achieve for a sizeable group of owners.

For those owners who sold and moved into the rental market there are a number of observations. They, too, left the real estate market as clear financial losers and although this analysis cannot determine why they sold out, it can provide some characteristics of their ownership which may provide some pointers at to why they quit the market. The majority were relatively new to ownership as nearly three quarters (72.7 percent) of these households had owned only one property during their housing history. They were, in most cases, first time owners, particularly given that the median value of their housing was \$63,500 for house owners and \$57,000 for home unit owners. Therefore, these observations suggest that they may well have become owner-occupiers in pursuit of the capital gains the tenure offered, or as households at the margin of ownership, they had been encouraged into the market by government subsidies or housing grants (ABS, 1992b: 330-336). Whatever the reasons, most had bought a house, and this may suggest that they were guided by the prevailing view that a house offered more accumulation potential than a home unit. The median mortgage for the house owners within the group was \$44,500 and for home unit owners \$33,400, and as a proportion of the purchase price 40.9 percent of households had borrowed 80 percent or more to purchase their dwelling. As well, there was a clear negative relationship between the purchase price of the dwelling and



the level of gearing, defined as the ratio of mortgage to purchase price. For house owners, the correlation coefficient was  $-.6805$  ( $P = .004$ ) and for home unit owners it was  $-.6160$ , but less significant with  $P = .193$ . The results suggest that these owners may have over-committed themselves in buying their home. They also predict that, should they sell, the probability of sizeable levels of accumulation would be low (Harris, 1993: 223-226). Indeed, this prediction has been borne out by the data, which have revealed that of all the dwellings incurring a loss per \$100 of equity per year, 72.7 percent of these dwellings had a purchase price below the median. These results do tend to support suggestions (Rudel and Neaigus, 1984: 137; Rudel, 1987: 260-262) that many buyers were encouraged into the housing market during the eighties through experimentation with the potential of housing to accumulate huge profits. Alternatively, it may have been that increasing financial deregulation during the eighties in most western countries encouraged a new group of marginal owners into the housing market only to find that they could not maintain payments, due to increased interest rates and increasing levels of unemployment (Thorns, 1989a: 88-94; Harris, 1993:223-226; Maher, 1994: 20-23). Regardless of the processes at work, it would seem that many of these buyers did rush into ownership, and having bought in haste they were left to repent at their leisure, contemplating their decision, before deciding to quit the tenure before their situation worsened. However, more detailed enquiry is needed to assess any role played by deregulation of the Australian housing finance market in 1986 in encouraging these households' movement into the rental market. Nevertheless, the present results indicate that 60.9 percent of these households made a capital loss, based on adjusted prices, on the sale of their last property. For half of these households the loss was greater than \$10 000. Moreover,

for 64.3 percent of loss making households, their last dwelling had been purchased during 1986 or 1987. Further, 57.2 percent of these households had commenced their housing history after 1975, and regardless of the number of moves they had made, their housing plans and expectations had been formulated in the developing environment of inflation and expectation of accumulation through home ownership.

### **5.6 Proportion of equity in purchase price.**

To determine the proportion of equity in any housing purchase requires data on the size of mortgage used to purchase a specific dwelling. Most housing studies have encountered difficulty in obtaining mortgage information relating to individual house purchases (Peiser and Smith, 1985: 348; King, 1989c: 868; Badcock, 1989: 80; Bourassa and Hendershott, 1993: 36), so that the concept of owner equity has been based around estimates of its magnitude. However, in this study, specific mortgage data related to particular purchases have been obtained, and it is therefore possible to relate this study's results to some of the estimates provided by earlier investigations. More than 800 houses and home units were bought with a mortgage, and the proportion of owner equity in these purchases was computed using Equation 5.4.

**Equation 5.4**             $((PP - M) * 100)/PP$

where                    PP = purchase price  
                               M = mortgage

Given that all houses for which mortgage data were available had been purchased during June, 1986 there was no need to convert the actual values to 1989/90 values for this exercise.

**Table 5.14: Equity to purchase price for home owners**

Equity: purchase price	House owners		Home unit owners	
	Number	Percent	Number	Percent
0 - 10%	71	9.9	3	3.2
10 - 20%	99	13.8	15	15.8
20 - 30%	121	16.8	26	27.4
30 - 40%	93	12.9	13	13.7
40 - 50%	107	14.9	14	14.7
50 - 60%	98	13.6	8	8.4
60 - 70%	55	7.6	8	8.4
70 - 80%	47	6.5	3	3.2
80 - 90%	25	3.5	5	5.3
90 - 100%	4	0.6		
Total	720	100.0	95	100.0

Source: Extracted from cap\_gain.sav file using variable *eq\_pprcd*.

The most salient point from Table 5.14 is that 46.4 percent of home unit owners have equity levels of 30 percent or less in their investment, compared with 40.5 percent for house owners. As well, the median proportion of owner equity in house purchases was 37.9 percent, and 33.8 percent for home unit owners. Together, these observations would seem to suggest that home unit buyers are marginally more reliant on mortgage borrowing to own their dwelling than are house buyers. It may also lend support to the Rudel and Neaigus (1984: 137) hypothesis that these owners were desperate to enter the market during the eighties in order to capitalise on perceived profits from home ownership, and therefore borrowed rather heavily. The data in Table 5.15 would seem to reinforce these inferences. Indeed, for home unit owners who were also defined as movers, the median proportion of equity in the purchase fell to 29 percent, compared with a median percentage of 35.8 percent for house owning movers. For home unit owners who were also movers, half had bought the unit with an equity of 30 percent or less, compared with 41.6 percent of house owners. Similarly, the respective median values were 29 percent and 35.9 percent. Therefore, it would seem that not only were home unit owners borrowing rather more heavily

than house owners in order to become owners, and therefore be eligible for the gains reputed to be available from ownership, but this tendency was more pronounced among those who actually sought to realise their accumulation by selling their unit and moving to a new location.

**Table 5.15: Equity to purchase price for residentially mobile home owners**

Equity: purchase price	House owners		Home unit owners	
	Number	Percent	Number	Percent
0 - 10%	6	7.8		
10 - 20%	10	13.0	4	22.2
20 - 30%	16	20.8	5	27.8
30 - 40%	7	9.1	2	11.1
40 - 50%	15	19.5	2	11.1
50 - 60%	8	10.4	1	5.6
60 - 70%	7	9.1	2	11.1
70 - 80%	6	7.8	1	5.6
80 - 90%	2	2.6	1	5.6
90 - 100%				
Total	77	100.0	18	100.0

Source: Extracted from mobility.sav file using variable *eq\_pprcd*.

Finally, estimates of owner equity, as reported in the literature, have varied from 20 percent (Peiser and Smith, 1985: 348; King, 1989c: 868) to 30 percent ( Bourassa and Hendershott, 1993: 36). In light of the present results, it would seem that they should be revised upwards, as these results suggest a developing tendency among home buyers for deposits on housing to become larger in proportion to the cost of the dwelling (Saunders, 1990: 124; Dupuis, 1992: 29). This conclusion provides an explanation for the earlier relationship identified between size of equity and return on capital, based around several behavioural characteristics of home buyers. Firstly, a household's goal of genuinely owning its home is striven for with seemingly little recognition on the part of some owners of the cost which this implies. Secondly, if people are aware of these costs *vis-a-vis* reducing return with increasing equity, then it

may be the case that households do not expect to sell when they buy a house. It follows, then, that for a significant proportion of households mobility is not planned as part of any housing career. Rather, it would seem that the need to move arises unexpectedly for these households, at which time they do what needs to be done to change residence. Seen in this light, it may be that a substantial proportion of households see any single purchase as being for the long term, possibly in the same way as investors regard their purchase of a share portfolio. For these households it may be that their mobility is similar to that of households who move through interstate transfer or divorce. For each group, mobility is a household event that is largely unanticipated, and when its need arises it may have costly ramifications for the households. Such an hypothesis would suggest modifications to mobility models influenced by the stage of a household's life cycle. It is an interesting possibility deserving of further consideration and enquiry.

### **5.7 Residential mobility and accumulation**

This section is perhaps the chapter's most important in terms of advancing mobility theory and its relationship with the process of accumulation. This section establishes the return households actually derive from ownership as they move from one location to another. As well, it is established whether, and how, accumulation is a factor which drives the residential mobility process as well as examining the spatial dimension of mobility and accumulation.

The level of accumulation a household derives from ownership is the net balance of a whole range of housing, and other, costs offset against the difference between the selling price of a dwelling and its purchase price. The nature of these costs has been

detailed in Chapter Three, Section 3.6. However, there is an inherent dilemma in the application of many of these models to real households and their dwellings. Often, the various percentages and proportions envisaged by a capital accumulation model may not represent the actual dwellings and households to which they are applied. For example, it is the case that in the Adelaide housing market in 1986 some 27 percent of dwellings, comprising houses and home units, were bought without a mortgage (Harris, 1989: 40; Harris, 1993: 216). Therefore, to apply a model which contains factors for size of mortgage and period of mortgage repayments to every dwelling must produce some patently wrong results and conclusions. Further, as Badcock (1994: 613) has reported,

The few attempts to measure capital accumulation and rates of return from owner occupation vary considerably with respect to the working assumptions.

It does seem that measures of accumulation which take account of the vast array of factors which, strictly, must be considered are only possible if based on data drawn from a comprehensive survey directed at the level of the individual household. When secondary data are employed, as in the current project, the opportunity to use complex equations to measure capital gains is limited. Even Badcock, who has championed the issue of accumulation through empirical enquiry rather than theoretical speculation, has employed only gross and net returns from ownership, based on the difference between selling price and purchase price, notwithstanding that the value of home improvements were incorporated into the computation of net returns (Badcock, 1994a: 613). Saunders (1990: 127) opted to ignore the array of housing costs which might ideally be taken into account in computing the level of real capital gain, while

recognising that it would have an inflating effect on the magnitude of any capital gains computation.

Therefore, in this section the emphasis must be on working with the data that are available, and assuming that any generalisations or patterns which might result from such an analysis would also be obtained, albeit at a lower level of occurrence, if a more precise model of accumulation were employed. In other words, the shape of any statistical surface produced by the anticipated analysis is unlikely to be radically different from that produced by a model which used estimates for a range of factors reported as contributing to the calculation of capital gain from home ownership.

#### **5.7.1 Do households buy more expensive housing each time they move?**

This is perhaps the first question which is asked of households in terms of the accumulation qualities attributed to home ownership. It might be expected that if accumulation results from the ownership of a dwelling, then when the household moves from that dwelling, the accumulated capital will be ploughed back into a more expensive next residential location. Of course, this need not be the case, as there exists a range of alternative options towards which any accumulated capital from home ownership might be directed. Kendig (1984: 276) found that only 60 percent of owners moved to a dwelling which was more expensive than that which had been vacated, and in the 1950's Grigsby (1963: 79) found that mobile households could move to equally expensive housing, or cheaper housing. In the high inflation environment of the 1970's Rudel and Neaigus (1984: 129) argued that young couples with moderate incomes moved to older, run-down, inner city locations in order to adjust their housing to increasing real costs of housing. The gentrification process

also involves inner areas dwellings, except that their buyers are typically from higher socio-economic groups who buy older dwellings to refurbish and possibly sell for a considerable capital gain (LeGates and Murphy, 1981: 266-267; Gober, 1992: 183). Older people quite typically downgrade to smaller, more easily managed, accommodation (Seek, 1983: 457; Landale and Guest, 1985: 203; Hooimeijer et al, 1988: 316). Nevertheless, there is a view that residential mobility occurs in order to optimise housing needs (Clark, 1982: 39; Moore, 1986: 498; McHugh et al, 1990: 81), conceptualised in the notion of filtering. Filtering is a consequence of trading up (Jones, 1978: 551; Gober, 1992: 180-181), which involved wealthier households moving out of housing they considered to be obsolete, and moving into newer, more modern and more expensive housing. Their move creates an opportunity for another household to trade up by purchasing the vacated dwelling.

In addressing the question of whether households buy more expensive housing with each move, the prices compared have been adjusted to 1989/90 prices, to eliminate any influences of prevailing inflation. It is also necessary to control for mobility between different dwelling types, for example house to house and house to home unit, to avoid any spurious conclusions which might be obtained from a single analysis which aggregated the two dwelling types.

In Table 5.16, the purchase price relationship, based on the price difference between origin and destination houses, is shown for households which made up to three moves. It should also be noted that any observations which stem from this table have been generated by the mobility characteristics of a single set of households. In other words, there is household continuity between those households which created the "First move" data and those which made the "Second move" and "Third move" data. This



continuity quality is characteristic of any group which moves between housing stock of the same type, such as house to house or home unit to home unit.

**Table 5.16: Comparison of purchase price of origin and destination houses.**

Difference	First move		Second move		Third move	
	Number	Percent	Number	Percent	Number	Percent
>\$30000 cheaper	29	9.3	13	12.1	5	15.6
\$20000 - \$30000 cheaper	19	6.1	4	3.7	2	6.3
\$10000 - \$20000 cheaper	12	3.8	6	5.6	3	9.4
\$1 - \$10000 cheaper	19	6.1	11	10.3	3	9.4
\$0 - \$10000 dearer	28	9.0	17	15.9	3	9.4
\$10000 - \$20000 dearer	39	12.5	12	11.2	4	12.5
\$20000 - \$30000 dearer	22	7.1	13	12.1	2	6.3
\$30000 - \$40000 dearer	30	9.6	8	7.5		
\$40000 - \$50000 dearer	24	7.7	4	3.7	2	6.3
\$50000 - \$75000 dearer	42	13.5	6	5.6	6	18.8
\$75000 - \$100000 dearer	19	6.1	5	4.7	1	3.1
>\$100000 dearer	29	9.3	8	7.5	1	3.1
Total	416	100.0	107	100.0	32	100.

Source: Extracted from resid\_mo.sav file.

The most noticeable observation from Table 5.16 is that in making their first move, households which move from a house to another house would seem to be predominantly endeavouring to purchase a more expensive house. For just on three quarters of these households, their second house was more expensive than their first. Moreover, for 46.2 percent of these households, the second house cost \$30,000 or more than the first. A second significant point is that as these households made their second and third moves from a house to another house, the proportion of households which bought more expensive houses reduced and those that bought cheaper houses increased. This suggests that among mobile households there is a tendency to buy a cheaper house than that which had been vacated. Indeed, although the numbers were very low (5), among households which made a fourth move from a house to another house, the proportion which bought a cheaper house rose to 60 percent of the total. It would seem, therefore, that there is a desire to buy more expensive houses in the early

part of a household's housing history, but after that an adjustment process operates, and the essential characteristic of this adjustment process might be that the household's available financial resources, together with any accumulation from home ownership, are spent in ways other than on more expensive housing. For households which moved from a home unit to another home unit, the same general tendencies were identified.

Analyses of households which moved between a house and a home unit or a home unit and a house are subject to an important caveat. With this kind of mobility household continuity between "First move", "Second move" and "Third move" findings does not occur, and therefore the same households are not involved in each of the move categories. Nevertheless, there are some worthwhile comparisons to be made, as Table 5.17 shows.

**Table 5.17: Households which moved from house to home unit**

Difference	First move		Second move		Third move	
	Number	Percent	Number	Percent	Number	Percent
>\$30000 cheaper	10	17.9	7	38.9	1	25.0
\$20000 - \$30000 cheaper	5	8.9	1	5.6		
\$10000 - \$20000 cheaper	10	17.9	1	5.6	1	25.0
\$1 - \$10000 cheaper	7	12.5	4	22.2		
\$0 - \$10000 dearer	6	10.7	1	5.6		
\$10000 - \$20000 dearer	7	12.5	2	11.1		
\$20000 - \$30000 dearer	3	5.4	1	5.6	1	25.0
\$30000 - \$40000 dearer	3	5.4			1	25.0
\$40000 - \$50000 dearer						
\$50000 - \$75000 dearer	3	5.4				
\$75000 - \$100000 dearer						
>\$100000 dearer	2	3.6	1	5.6		
Total	56	100.0	18	100.0	4	100.0

Source: Extracted from resid\_mo.sav file.

The main tendency revealed by the table is that when households move from a house to a home unit they purchase a unit which is cheaper than the house they vacated.

Therefore, data for these households can be aggregated to describe the relationship

between price paid for a home unit and price received for a house. Utilising this approach, some 23.1 percent buy a home unit which is more than \$30,000 cheaper than the house they had earlier occupied. However, fairly large proportions, at 14.1 and 15.4 percent respectively, bought home units which were up to \$10,000 cheaper and between \$10,000 and \$20,000 cheaper. As was indicated in Section 4.7.1, this might reinforce the view that in making a move from one type of dwelling to another, many households are not prepared to overly compromise on size nor, it would appear, on price. Almost matching this group is another, representing 20.6 percent of all households, which actually bought a home unit up to \$20,000 dearer than their previous house, together with the remainder which bought units priced considerably more than their previous house.

**Table 5.18: Households which moved from a home unit to a house**

Difference	First move		Second move		Third move	
	Number	Percent	Number	Percent	Number	Percent
>\$30000 cheaper	1	1.7	2	8.0		
\$20000 - \$30000 cheaper	2	3.4				
\$10000 - \$20000 cheaper	4	6.9	1	4.0		
\$1 - \$10000 cheaper	6	10.3	2	8.0		
\$0 - \$10000 dearer	4	6.9	2	8.0		
\$10000 - \$20000 dearer	4	6.9	1	4.0	1	20.0
\$20000 - \$30000 dearer	9	15.5	3	12.0	2	40.0
\$30000 - \$40000 dearer	5	8.6	6	24.0		
\$40000 - \$50000 dearer	4	6.9	2	8.0		
\$50000 - \$75000 dearer	10	17.2			1	20.0
\$75000 - \$100000 dearer	5	8.6	3	12.0		
>\$100000 dearer	4	6.9	3	12.0	1	20.0
Total	58	100.0	25	100.0	5	100.0

Source: Extracted from resid\_mo.sav file.

The same caveat defined for Table 5.17 needs to be employed for Table 5.18.

Therefore, it is most realistic to talk about the purchase price comparisons between home unit and house for all households which engaged in this type of mobility.

Although the expectation is that households might normally move into a house which

was more expensive than the home unit they left, the data suggest that for about one fifth of households this is not the case, even though about half of these households move into a house which is cheaper than their previous unit by no more than \$10,000. However, 79.5 percent of households do behave according to expectation, with about a third (32.5 percent) purchasing a house which was more than \$40,000 dearer than their home unit. Of the remainder, 28.4 percent bought a house between \$20,000 and \$40,000 dearer than their unit, and 13.6 percent bought a house which was up to \$20,000 more expensive than the price they had paid for their home unit. For those households whose house was more expensive than their unit, the expectation is that they have used the time during home unit ownership to save the deposit for their house, and added to this any capital accumulation which may have accrued at the same time.

In respect of whether people buy more expensive housing each time they move, the discussion has identified two groups, and their main characteristics can be summarised.

- One group has moved from a house to a house, or a home unit to a home unit, each time they have moved. For this group there is evidence that they do buy a more expensive house the first time they move, but the degree to which this occurs on successive moves reduces at each move.

- The second group comprises households which have, at one time or another, moved from a house to a home unit or a home unit to a house.

Within this group, there is an expectation that those moving from a house to a home unit would buy a cheaper unit than the house they left, and those moving from a home unit to a house would buy a dearer house than

the unit they owned previously. Whilst these expectations have been supported by the data, there is a sizeable group in each category which has behaved contrary to expectations. Reasons for this aberrant behaviour can only be assumed in the absence of more specific personal data relating to each of the households.

### **5.7.2 Levels of re-investment by mobile households - the relationship between price received for old dwelling and price paid for new residence**

It is possible to compare the selling price of a household's former residence with the purchase price of their current dwelling to derive some indication of the extent to which sale proceeds have been ploughed back into housing or released for other purposes. In this section, the discussion is concerned with movers who have consistently purchased houses in their mobility throughout the urban area. For any move completed by these households, the proportion of the selling price of their former residence has been computed as a percentage of the value of their new residence, using prices adjusted to 1989/90 values. In Table 5.19, low SP:PP ratios indicate that the subsequent dwelling had been bought at a price considerably higher than the price received for the former dwelling, and therefore these ratios might be interpreted to show households which ploughed back sale proceeds into their new residence. On the other hand, high SP:PP ratios are produced when the purchase price is less than the selling price, and in these circumstances it may well be the case that the mobile household has sought to release some of its housing equity and redirect it toward other uses. Details have been provided for households which made one, or two or three residential moves during the study period. Those households which

made more than three moves, all from one house to another house, have not been considered because of their low numbers.

**Table 5.19: Selling price to purchase price ratio for households moving from a house to a house, based on number of moves in household's housing history**

Ratio SP:PP	Household mobility											
	One move		Two moves				Three moves					
	House1 to house2		House1 to house2		House 2 to house 3		House1 to house2		House 2 to house 3		House 3 to house 4	
	No	%	No	%	No	%	No	%	No	%	No	%
0-50%	23	5.5	3	2.9	5	5.0					1	3.2
50.1-80%	119	28.5	21	20.4	16	16.1	3	10.0	7	22.7	5	16.2
80.1-100%	85	20.3	23	22.3	20	20.2	9	30.0	4	13.0	8	25.8
100.1-120%	51	12.2	21	20.4	17	17.2	3	10.0	4	13.0	5	16.2
120.1-200%	77	18.4	23	22.3	30	30.3	7	23.3	10	32.4	7	22.6
>200%	64	15.3	12	11.7	11	11.1	8	26.7	6	19.4	5	16.1
Total	419	100.0	103	100.0	99	100.0	30	100.0	31	100.0	31	100.0

Source: Extracted from resid\_mo.sav file, using syntax file frid.lst.

The first point to notice in Table 5.19 is that households which made only one move were more inclined to buy a new house which was considerably more expensive than their previous house, compared with movers who made two or three moves. Indeed, households which moved three times only indulged in this form of buying behaviour to a minor degree. This tendency among single move households may be the cause of their single move status, in that the substantially larger purchase price for their new home compared with the selling price of their former home may have caused such an over-commitment to housing that they have either been forced to quit the market, or that they have been forced to remain in their present home until they are able to recover financially from the strains imposed by such apparent over-commitment.

The evidence would suggest that the latter option best fits this group, as nearly 90 percent of those households whose SP:PP ratio was less than, or equal to, 50 percent were still in the market at the end of the study period. It would seem, therefore, that the level of financial commitment in their housing may be keeping them fixed at their

present location. A similar point has been noted in the UK where, after the housing appreciation boom of the eighties, households experienced rapidly rising interest rates and house price stagnation, causing many households to become locked into their location because they could not “afford” to sell (Gentle et al, 1994: 182; Hamnett, 1997: 142).

Much the same result is obtained for those households with an SP:PP ratio of 50.1 to 80 percent. For this group, 85.7 percent remained in the market at the end of the study period, and for those who had left the South Australian real estate market, interstate mobility (4.8 percent), divorce (3.4 percent) and death (2 percent) were the principal reasons for causing the sale of their second property. However, there is another explanation which is equally plausible. These households are essentially one move households because they have tended to occupy their original dwelling for some considerable time. Of the households with an SP:PP ratio of 50 percent or less, 45.6 percent had owned their original house for more than 10 years, and for those households with a ratio greater than 50 percent, but less than 80 percent, 29.3 percent had owned their previous residence for 10 or more years. Therefore, the one move status for these households is associated with an apparent contentment with location which has not fostered a will to move regularly. However, when they have moved, there would seem to have been a tendency to upgrade significantly and this may well have been facilitated using cash reserves which had been accumulated throughout the period of lengthy ownership of the previous residence.

A second point from Table 5.19 is that for most households there is a general tendency to upgrade on the first move, and a reduction in this tendency after the first move. This is based on the trends shown for households whose SP:PP ratio fell

between 80.1 percent and 100 percent, and is a confirmation of a tendency noted when comparing purchase price of any subsequent dwelling with a household's former dwelling in the previous section. Thirdly, the evidence suggests that within the group of households moving from a house to a house, there is a substantial proportion, typically more than 30 percent of all movers, who buy new housing which is considerably cheaper than their previous housing. The explanation of this most likely centres around issues of equity release, ageing, restructuring and reducing financial commitment to housing.

The specific details presented in Table 5.19 can be generalised into a table which groups all first moves, second moves and third moves, regardless of the mobility characteristics of the household which produced them. Hence Table 5.20 shows that the tendency to purchase substantially more expensive homes, shown by SP:PP ratios of 80 percent or less, reduces with increasing moves made by a household. This observation notwithstanding, it is also the case that around one fifth of movers achieve a modest increase in the value of their housing through each move.

**Table 5.20: Selling price to purchase price ratio by move for households moving from a house to a house**

Ratio SP:PP	Mobility					
	First move		Second move		Third move	
	Number	Percent	Number	Percent	Number	Percent
0-50%	26	4.7	5	3.7	1	2.8
50.1-80%	143	25.7	23	17.0	6	16.7
80.1-100%	117	21.0	26	19.3	8	22.2
100.1-120%	75	13.4	23	17.0	7	19.4
120.1-200%	111	20.0	40	29.7	8	22.3
>200%	85	15.3	18	13.3	6	16.7
Total	557	100.0	135	100.0	36	100.0

Source: Derived from resid\_mo.sav file using variable *slp1mlrc* (Selling price:purchase price ratio based on move number)



Another tendency identified in Table 5.20 is that the proportion of movers who reduce the value of their new dwelling compared with that of their previous dwelling shows a steady increase with number of moves. Finally, regardless of the type of move a household is making, there is a consistently significant proportion who trade down in terms of the value of their new home compared with that of their previous house.

### 5.7.3 Levels of accumulation by mobile households

In this section, the aim is to show how much households actually accumulated from their housing ownership, either at the end of their housing history, for households which had left the South Australian housing market, or to 1991 for owner-occupiers still in the market at the end of the study period. To determine this, Equation 5.5 enabled a calculation of real gain from each ownership to be made.

**Equation 5.5**       $SP_{adj} - PP_{adj}$

where

$SP_{adj}$  is the selling price of the property being vacated, adjusted to 1989/90 values  
 $PP_{adj}$  is the purchase price of the property being vacated, adjusted to 1989/90 values.

For each household there could be up to seven computations of real gain, one for each ownership. These values of gain for each property owned were then summed to produce a value for total gain from residential mobility, which was then divided by the number of moves the household had made during its housing history to give a level of real gain per residential move.

Table 5.21 examines the hypothesis that mobile households are increasingly likely to accumulate capital from ownership the longer they remain in the process, or the more moves they make. In this respect, housing may be likened to participation in the share market which, while not guaranteeing profits in the short term, is generally assured of providing investors with profit over the longer term of, say, ten years or more.

**Table 5.21: Capital accumulation per move by residentially mobile households**

Gain/loss per move	Number of moves by households									
	One		Two		Three		Four		Five	
	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent
>\$30000 loss	8	1.8	2	1.3	1	2.1				
\$20000-\$30000 loss	9	2.1	2	1.3						
\$10000-\$20000 loss	30	6.8	9	5.9	1	2.1				
\$1-\$10000 loss	64	14.6	13	8.6	7	14.6	1	12.5		
\$0-\$10000 gain	63	14.4	33	21.7	12	25.0	3	37.5		
\$10000-\$20000 gain	70	16.0	35	23.0	5	10.4	1	12.5	1	50.0
\$20000-\$30000 gain	47	10.7	21	13.8	7	14.6				
\$30000-\$40000 gain	32	7.3	11	7.2	6	12.5	1	12.5		
\$40000-\$50000 gain	15	3.4	10	6.6	2	4.2	2	25.0	1	50.0
\$50000-\$75000 gain	39	8.9	8	5.3	5	10.4				
\$75000-\$100000 gain	24	5.5	6	3.9	2	4.2				
>\$100000 gain	37	8.4	2	1.3						
<b>Total</b>	<b>438</b>	<b>100.0</b>	<b>152</b>	<b>100.0</b>	<b>48</b>	<b>100.0</b>	<b>8</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>

Source: Extracted from resid\_mo.sav file

These results would seem to hold out some hope for households which persist in the real estate market, as several significant trends can be identified. Firstly, the likelihood of a household making substantial losses from housing ownership reduces with the number of moves a household makes, so that a quarter of households which made one move could expect to make a loss from ownership, that expectation was reduced by nearly half for households which had made four moves. Secondly, as a household's number of moves increases, so too does the possibility of making a gain of up to \$20,000 per move, although a cautionary note on the number of observations on which this conclusion is based needs to be made. The same kind of tendency is

noted for households making \$20,000 to \$50,000 per move: the possibility of achieving these levels of accumulation increases with the number of moves the household achieves. Thirdly, the possibility of a household sustaining large capital gains each time it moves reduces with the number of moves, slumping from 22.8 percent of households which made one move to 10.5 and 14.6 percent for households making two and three moves.

The difficulty with an analysis based on real gain per move is that it ignores the role of time in generating gain, particularly given that households which had owned a property for a long period of time are likely to generate a high rate of gain per move compared with a household which had only owned a property for a short period of time. Therefore, omission of the time factor may distort any comparisons made on the basis of gains, or losses, per move. To counter this potentiality, the data have been re-assessed so that the level of gain per year per move can be obtained, using the following formula in Equation 5.6.

**Equation 5.6**      gain/loss per year per move =  $GA_{adj} / (TT_{yrs} * N)$

where       $GA_{adj}$  = sum of gain/loss from each property owned  
               $TT_{yrs}$  = sum of time owned for each property owned  
               $N$      = number of residential moves made by the household.

**Table 5.22: Annualised capital accumulation per move by residentially mobile households**

Gain/loss per year per move	Number of moves by households									
	One		Two		Three		Four		Five	
	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent	Num ber	Per cent
>\$10000 loss	7	1.6	1	0.7						
\$8000-\$10000 loss	3	0.7								
\$6000-\$8000 loss	3	0.7								
\$4000 - \$6000 loss	8	1.8								
\$2000 - \$4000 loss	25	5.7	4	2.6	1	2.1				
\$1-\$2000 loss	65	14.8	21	13.8	8	16.7	1	12.5		
\$0 - \$2000 gain	82	18.7	68	44.7	20	41.7	4	50.0	1	50.0
\$2000 - \$4000 gain	60	13.7	24	15.8	10	20.8	1	12.5	1	50.0
\$4000 - \$6000 gain	47	10.7	19	12.5	5	10.4	1	12.5		
\$6000 - \$8000 gain	25	5.7	4	2.6	3	6.3	1	12.5		
\$8000 - \$10000 gain	32	7.3	3	2.0	1	2.1				
\$10000 - \$20000 gain	50	11.4	8	5.3						
\$20000 - \$50000 gain	27	6.2								
>\$50000 gain	4	0.9								
<b>Total</b>	<b>438</b>	<b>100.0</b>	<b>152</b>	<b>100.0</b>	<b>48</b>	<b>100.0</b>	<b>8</b>	<b>100.0</b>	<b>2</b>	<b>100.0</b>

Source: Derived from resid\_mo.sav file, using frequencies of variable *gnyrmvrc* selected for a households number of moves.

Although Table 5.22 is derived from Table 5.21 the class intervals used have been modified to reflect both the reduced levels of values obtained by dividing any per move figure by the time owned factor for each household, and to define more precisely the high degree of concentration which occurred in both losses and gains up to \$10000. One notable observation is the huge range of potential gains and losses per year per move for households which had owned only one property. This variation is partly caused by market vagaries and their volatility, but it could also be the case that some of these extreme rates have been generated by owners making significant gains or losses over a short period of time, but which have become exaggerated when converted to a per year rate.

It is clear that the distribution of gains and losses in Table 5.21 and Table 5.22, and the conclusions which can be made from them, are very similar indeed. Therefore, if similar conclusions can be drawn from the two datasets, one of which annualises capital gains and the other does not, the significance of length of ownership in generating capital gains might be questioned. For each of the moves identified in Table 5.22, a correlation analysis was undertaken between the capital gain a household made from ownership and the time it had owned that dwelling. The relationship was shown to be only weakly positive and not consistent between moves, as Table 5.23 reveals.

**Table 5.23: Correlation coefficients for time owned and capital accumulation for each dwelling owned by residentially mobile households**

Time owned, years	Number of moves by household					
	One		Two		Three	
	Capital gain (\$'000) generated by:					
	Dwelling 1	Dwelling 1	Dwelling 2	Dwelling 1	Dwelling 2	Dwelling 3
Dwelling 1	$r = +.1321$ N = 420 P = .007	$r = +.2334$ N = 120 P = .010		$r = +.1122$ N = 38 P = .503		
Dwelling 2			$r = +.0894$ N = 148 P = .280		$r = +.2751$ N = 48 P = .058	
Dwelling 3						$r = +.1857$ N = 48 P = .206

Source: Correlation analysis of variables *time* and *real\_gn* in *resid\_mo.sav* file

These are mixed results in that although they indicate a positive relationship between the time a household owned its dwelling and the level of accumulation it generated for the household, the size of any correlation is very small, and the clear conclusion is that there is wide variation in the financial performance of any property a household may own as it moves about the urban area. It is, though, a confirmation, albeit it fragile, of the investment proviso that real gains are achieved only with time.

The matter of the level of gains which households had made, either at the end of their housing history, or at the end of the study period, can be summarised with the following conclusions:

- The extent of real losses reduce with the level of mobility.
- The more moves a household makes, the better its chances of generating a capital gain from ownership.
- Modest gains are more probable than larger gains.
- Substantial gains are likely to be difficult to sustain over several moves.
- The duration of any dwelling ownership is positively related to the size of any capital gain, but only weakly.
- Capital gains from home ownership are not guaranteed.

#### **5.7.4 Explaining capital losses by mobile households**

The extent and size of the losses reported in the previous section demand some explanation. To this end, those households experiencing a capital loss from ownership at each stage of their housing history were identified, and certain characteristics of their dwelling and buying behaviour were then examined. Only households which had moved once, twice or three times were examined, simply because to examine the behaviour of households which had moved more than three times would have meant considering patterns based on very low numbers.

Households which had moved once could have owned and sold two properties. If they had in fact sold their second property then, clearly, that household had left the South Australian real estate market. Similarly, households which made two moves could have sold three properties and those which had moved three times could have

sold a maximum of four properties. The distribution of these loss making properties between the various mobility types and the moves within each type is shown in Table 5.24.

**Table 5.24: Distribution of capital loss making ownerships between mobility type and moves within each type**

Household mobility type								
One move		Two moves			Three moves			
1st dwelling	2nd dwelling	1st dwelling	2nd dwelling	3rd dwelling	1st dwelling	2nd dwelling	3rd dwelling	4th dwelling
105	43	45	40	20	18	10	16	5

Source: Extracted from resid\_mo.sav file

For each of these households data were extracted relating to type of dwelling, the location of the dwelling, the year in which it was bought and sold, the time the dwelling was owned by the household, and the year the dwelling was built.

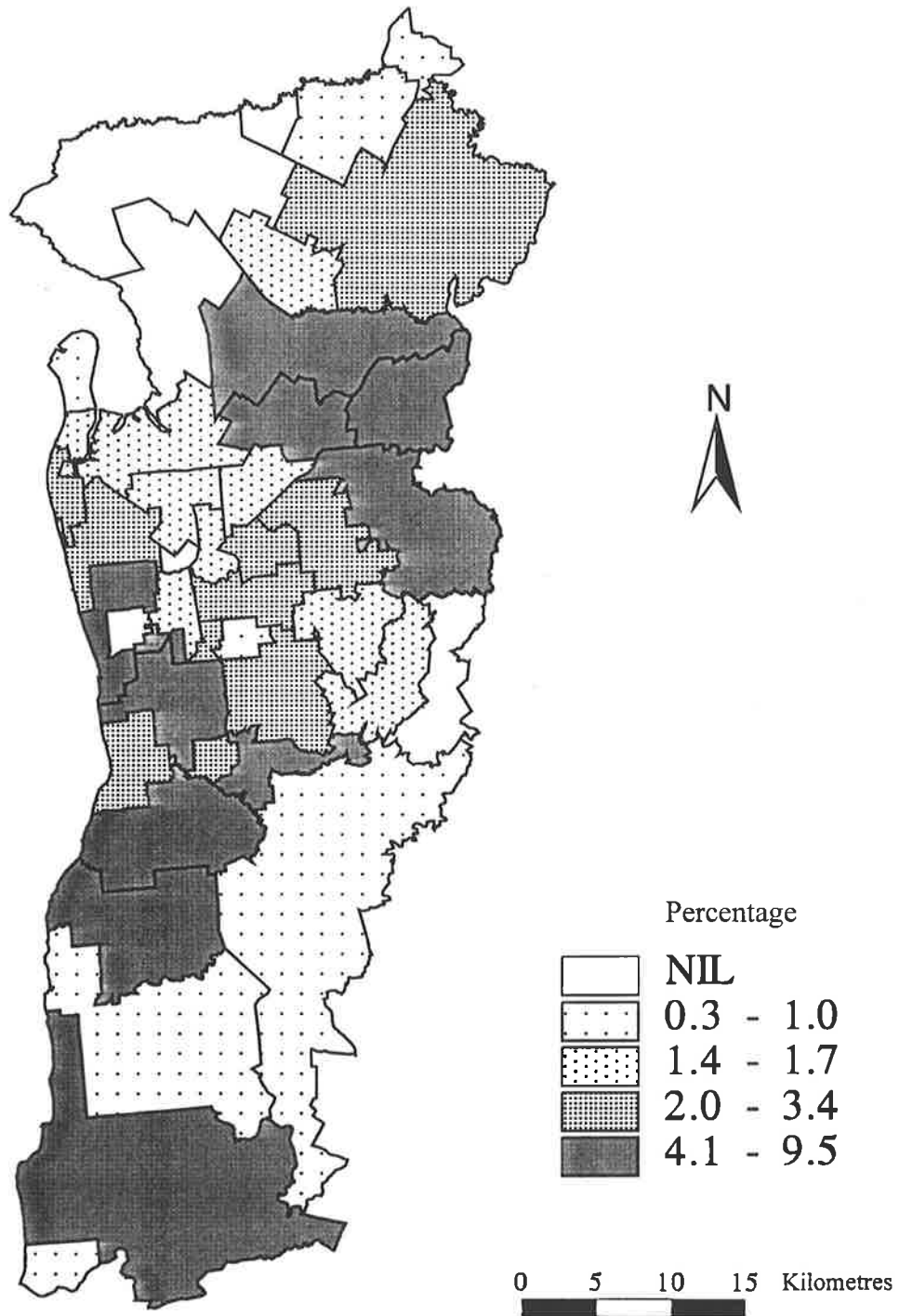
Regardless of how a loss making property was related to a household mobility type or an ownership within any mobility type, a fairly consistent relationship was observed between capital loss and the selected variables, with the possible exception of dwelling type.

Overall, 83.1 percent of capital losses were incurred by owners of houses rather than home units. It might be argued that this is because the house sub-market is substantially larger than the home unit sub-market, but size of sub-markets should not in itself be a factor linked to the prospect of a certain dwelling making a loss compared with another dwelling type. This evidence would seem to suggest that there are factors associated with houses, which are not associated with home units, that have caused the probability of capital loss for houses. Moreover, these factors are most likely to be associated with intra-urban variations in supply and demand levels for housing.

There is a spatial dimension to capital losses from housing, with 37.3 percent of losses located in the two northeast sectors of the metropolitan area, and 31.2 percent in the southwest-south sector. Therefore, three sectors contain more than two thirds of the loss making properties, compared with 58.3 percent of all dwellings in the sample. In Figure 5.2, the spatial limitation to capital loss can be further defined by considering the zonation of losses in each sector. The areas within each sector which contain the largest proportions of loss making households tend to lie beyond 10 kilometres from the CBD, and are areas characterised by a substantially larger stock of houses than home units. Compared with the three critical sectors, each of the other five sectors of the metropolitan area have relatively low occurrences of loss making ownerships. Dwellings which made a capital loss on sale tended also to have been built within a certain period. Dwellings built during the seventies accounted for 46.8 percent of capital losses, compared with 20.8 percent of losses associated with dwellings built during the sixties and 13 percent constructed during the eighties. The proportion of the sample dwellings built during each of these periods is 21.8, 19.7 and 7.1 percent, respectively. The bulk of building activity during these times has occurred in the newer and more peripheral suburbs of the Adelaide metropolitan area, and it is likely that this building activity has, at times, created localised areas of oversupply, which may be a factor in the link between capital loss and age of dwelling.



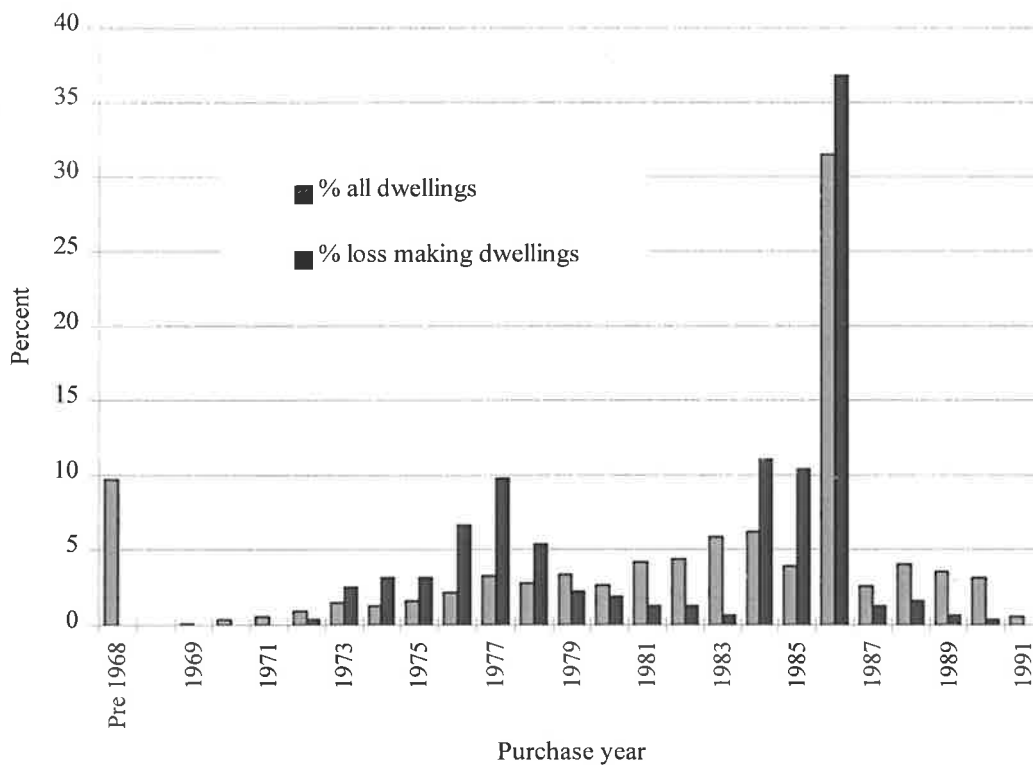
**Figure 5.2: Distribution of capital losses within the metropolitan area**



Source: Derived from distribution of variable *mosaic* amongst loss making households in *resid\_mo.sav* file

There is also a relationship between the year of purchase and loss making properties. In particular, properties bought during 1986 are heavily associated with losses, but this relationship needs to be discounted because half the sampled households bought a property in June, 1986. Leaving aside 1986, there are two time periods which stand out in terms of their association with loss making dwellings. Of all the properties which made a loss, 21.2 percent were bought in either 1984 or 1985, and 16.5 percent were bought in either 1976 or 1977, as shown in Figure 5.3. In addition, it is clear from the graph that properties purchased between 1973 and 1978 showed a propensity to make losses for their owners.

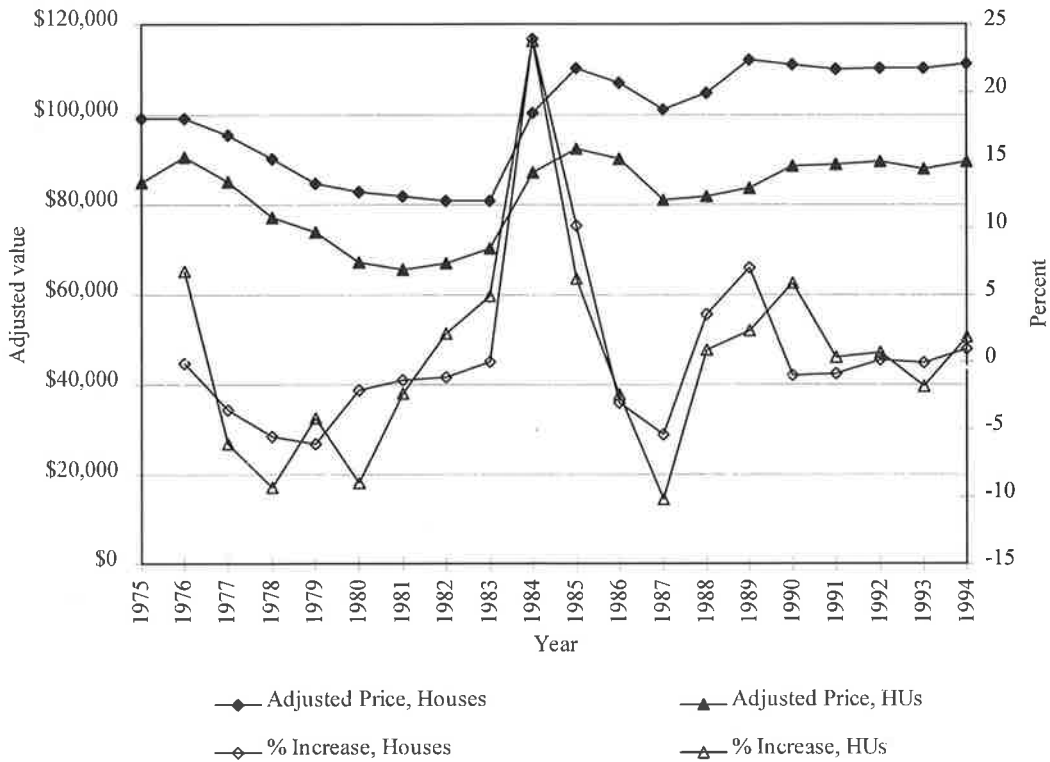
**Figure 5.3: Purchase year for all dwellings and dwellings recording capital loss on sale**



Source: Extracted from resid\_mo.sav file, using variables *puryr* and *rlgnrcl*

Are these periods related to “bearish” sectors of the real estate cycle? Certainly, in 1976 house sales increased by 49.8 percent on the sales from the previous year, but the increase in 1977 over the previous year fell to 24.1 percent, which signalled the beginning of a housing slump in South Australia (see Table 1.7). Similarly, in 1984 sales were considerably higher than in the previous year, but in 1985 they slumped minus 12.3 percent on the level recorded in 1984. Therefore, both periods represent a watershed between the end of a boom and the beginning of a subdued period for house sales in the Adelaide region. Figure 5.4 depicts trends in house and home unit prices, adjusted to 1989/90 values, for the period 1975 to 1994, and these trends bear out the fact that buyers who purchased housing in 1976 and 1977, and 1984 and 1985, were doing so at the watershed between the end of a boom period and the beginning of a bust period.

**Figure 5.4: House and home unit prices, 1975 to 1994: Adelaide metropolitan area**



Source: Department of Environment and Natural Resources, Valuation Division.

Is it the case, though, that these loss making households bought when the market was buoyant and, presumably, sold when the market was low? It would seem that they bought on a high, but did they sell on a low? To examine this proposition, a crosstabulation analysis was carried out on the relationship between loss making properties' year of purchase and their year of sale, and the results are shown in Figure 5.5.

**Figure 5.5: Relationship between purchase and sale years of capital loss making dwellings**

Year bought	Year sold																				
	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	
72												1									
73								1		1	1	1			3		1				
74					1			1	1			2	1		3				1		
75									1	1		1	1		5						
76									3	2		3	1	1	3	7					
77									3	3	2	4	3		13				1	1	
78									1	1	2	2	3	2		4					
79											2				1	1	2				
80												2	2			1			1		
81													2	1		1					
82													3			1					
83																1			1		
84																29	2	1		1	
85															1	27		1		2	
86																2	29	35	26	18	2
87																	1	2	1		
88																			1	4	
89																				1	
90																					
91																					

Source: Derived from crosstab analysis of variables *puryr* and *salbyer* for loss making households in *resid\_mo.sav* file.

In Figure 5.5, shaded years represent sellers' markets within the housing cycle, and are related to trends shown in Figure 5.4. Therefore, the intersection of shaded bands define dwellings which were bought and sold during a buoyant housing market. Unshaded areas represent periods when the housing market was depressed at both the time of purchase and the time of sale. Between these two extremes are sections identifying dwellings purchased on a high market and sold on a low market (horizontal shaded band intersecting an unshaded vertical band) and dwellings whose purchase occurred on a low market and whose sale occurred on a high market (Unshaded horizontal band intersecting a shaded vertical band). The distribution of loss making dwellings between these four possible scenarios is shown in Table 5.25.

**Table 5.25: Distribution of loss making dwellings between various market conditions at time of purchase and sale**

Market conditions at time of purchase and sale	Number	Percent
Bought high & sold low	59	19.5
Bought low & sold low	116	38.4
Bought high & sold high	25	8.3
Bought low & sold high	102	33.8
Total	302	100.0

Source: Derived from Figure 5.5

It might be expected that most losers would be located in the group which bought high and sold low, and that the least number of losers would be found in the group that bought low and sold high. Clearly, this hypothesis is not supported by the data in Table 5.25, and it is therefore necessary to explore the nature of the losses incurred by movers. To this end, each move made by mobile households which incurred a loss was assigned to one of four categories, based on whether the household's residence had been bought and sold in a boom or bust period, and the distribution of annualised losses within each category determined. In Table 5.26, all capital losing movers have been combined to show not only the most frequent relationship between purchase market and sale market but also how the losses incurred by these households are distributed.

**Table 5.26: Annualised losses of movers related to market conditions at time of purchase and time of sale.**

Loss	Relationship between purchase market and sale market							
	Boom/boom		Boom/bust		Bust/bust		Bust/boom	
	Number	Percent age	Number	Percent age	Number	Percent age	Number	Percent age
>\$30000/year					4	3.2	1	0.8
\$20000-\$30000/year			1	1.6	6	4.8		
\$10000-\$20000/year	2	7.7	5	7.9	19	15.2	8	6.4
\$5000-\$10000/year	4	15.4	9	14.3	25	20.0	21	16.8
\$4000-\$5000/year	5	19.2	4	6.1	8	6.4	12	9.6
\$3000-\$4000/year	1	3.9	7	11.1	7	5.6	9	7.2
\$2000-\$3000/year	3	11.5	6	9.5	9	7.2	16	12.8
\$1000-\$2000/year	6	23.1	16	25.4	18	14.4	18	14.4
\$1-\$1000/year	5	19.2	15	23.8	29	23.2	20	16.0
<b>Total</b>	<b>26</b>	<b>100.0</b>	<b>63</b>	<b>100.0</b>	<b>125</b>	<b>100.0</b>	<b>105</b>	<b>100.0</b>

Source: Derived from resid\_mo.sav file, using variable *gn\_yrcl*

The largest proportion of losing movers is located in the bust/bust category, which defines a group which bought their dwelling during a period of market decline, and sold during a similar period. Regardless of whether a household's first move is considered, or any subsequent moves, this category always contained the largest proportion of losing movers. The second largest category of losers, again regardless of move number, were those households which bought during a bust and sold during a boom. Households which bought during a boom and sold during a bust and those which bought in a boom and sold in a boom were ranked third and fourth respectively. These observations point to two significant conclusions. Firstly, it would seem that for any dwelling bought during a bust period there is a heightened probability that its owners will generate a capital loss on sale of the property, and this is the more likely if the sale is made during a bust period. Secondly, the corollary would seem to be that a household buying during a boom period is less likely to incur a financial loss on sale of that property, particularly if the dwelling was sold during a boom period.

Whatever the relationship between market conditions at time of purchase and time of sale, most losers have not suffered substantial losses, but those who bought during a bust market period have borne more substantial losses than those who bought a dwelling during boom market conditions. Table 5.26 illustrates these observations, as well as the full range of losses incurred by owners who had bought and sold under various market environments. The question raised by these findings is that if losers are more strongly linked to purchases made during bust times are gainers more likely to be associated with dwelling purchases made during boom times? Table 5.27 suggests that this is the case, and yet there is a certain illogicality attached to this simply because it might reasonably be expected that to make a substantial gain from home ownership it is necessary to buy on a low market and sell on a high market.

**Table 5.27: Annualised gains of movers related to market conditions at time of purchase and time of sale.**

Gain	Relationship between purchase market and sale market							
	Boom/boom		Boom/bust		Bust/bust		Bust/boom	
	Number	Percent age	Number	Percent age	Number	Percent age	Number	Percent age
\$0-\$10000/year	54	56.9	205	64.1	139	43.4	71	62.8
\$10000-\$20000/year	20	21.1	45	14.1	29	9.1	27	23.9
\$20000-\$30000/year	11	11.6	30	9.4	7	2.2	6	5.3
\$30000-\$40000/year	3	3.2	22	6.9	1	0.3	6	5.3
\$40000-\$50000/year	4	4.2	10	3.1			2	1.8
\$50000-\$75000/year	3	3.2	6	1.9	5	1.6	1	0.9
\$75000-\$100000/year			1	0.3	1	0.3		
>\$100000/year			1	0.3	2	0.6		
Total	95	100.0	320	100.0	184	100.0	113	100.0

Source: Derived from resid\_mo.sav file, using variable *gn\_yrcl*

That the largest group of gainers comprise households which bought high and sold low is at odds with conventional wisdom is interesting, just as interesting is the fact that the group which conventionally ought to be experiencing the largest gains, those households which bought low and sold high, is ranked at only the third largest category. Furthermore, there is clear evidence that the owners in the boom/bust



category of gainers have achieved accumulation performances at higher levels than those returned by the group which bought in a bust market and sold during boom market conditions.

The reason these findings seem to overturn conventional wisdom may be due solely to the fact that they reflect particular long term swings in the housing market which are embraced by the particular sample employed in this research. However, this possibility has been rejected on the grounds that the sample was obtained in such a way that makes it representative of the Adelaide housing market. Therefore, what alternative conclusions might these findings suggest?

Principally, it may be that owners do not behave logically, as economic rationalists, when they decide to sell their home. Indeed, it may well be the case that the majority of sellers are unaware of when a housing market is bullish or bearish. It may also be the case that even if they were aware of these prevailing conditions, more pressing factors, such as those related to change of workplace, family needs, and retirement, are at work and these operate to effect the sale regardless of market conditions and any associated costs these might impose on a household. The data used in this section indicate that 58.9% of losers, and 70.8 percent of gainers, have sold their dwelling during depressed market conditions. It may well be the case, therefore, that substantial numbers of households have no real choice as to when to sell, and this therefore contributes to the likelihood that a sale will occur during a depressed housing market. The possibility of such an eventuality is further heightened by the fact that the periodicity between successive housing price highs and lows has tended to reduce since the beginning of the eighties (see Figure 5.4).

Another possible interpretation of these findings revolves around investor characteristics which have been noted for share market players. There is a tendency, especially among “amateur” investors (Dunstan, 1996), for entry to the market to occur when the market is high, or bullish, encouraged by the positive media commentary which reports and encourages this environment, and for departure from the market to accompany, and further encourage, any slide in share market indicators. Although it is not possible to assess this interpretation, it might be hypothesised that the size of the group of gainers which bought high and sold low could be the result of home ownership motivated by the prospect of high returns and terminated at the first sign that the investment was at risk. In this environment, this group has cut and run.

## **5.8 Summary**

This chapter has examined capital gain essentially from the individual household viewpoint. Levels of capital which have accumulated for households have been prescribed and analysed and the impact of this on some aspects of household mobility explained. Although some of the explanations and the implications drawn from them have been tentative, stemming from the nature of the dataset which has been used, a number of refinements have been made to both the theory of accumulation and residential mobility theory and its relationship to capital accumulation through home ownership. In terms of accumulation theory, the investigation has revealed the following significant conclusions.

- There is support for the theory that households expect to make a capital gain from ownership on the basis of nominal prices, and this applies to ownership of both

houses and home units. However, this theory is strongly modified when house values are adjusted for inflation.

- In any market, around one third of owners are likely to experience real capital losses from home ownership, and home unit owners are more susceptible to these losses than house owners.
- There is a higher probability of generating real capital gains from vacant land than from an investment in “bricks and mortar”.
- These conclusions are arrived at regardless of whether capital gains measures are based real differences between selling price and purchase price, return on purchase price or return on level of owner equity in the dwelling.
- Prospects of real capital losses for owners have occurred only since the early 1970s, and therefore capital losses are significantly related to the onset of inflationary conditions. This relationship between capital losses and inflation also explains why home unit owners are more susceptible to real losses, as home unit development in Adelaide occurred at much the same time as the onset of rapid inflation.
- The use of individual house data related to location, dwelling area and length of ownership have enabled some theoretical advances concerning the spatial distribution of capital gains in an urban context.
  - Generally, the spatial pattern of accumulation tends to have a negative relationship with distance from the city centre.
  - More specifically, however, there is a varying relationship between a locality’s prevailing land value and its level of accumulation. The nature of

this relationship is influenced by various process (including gentrification and capital shifting) which may or may not be occurring within the locality.

The significant conclusions in terms of the relationship between accumulation and mobility can be listed.

- Households which commenced their housing careers with a home unit run a strong risk of generating a capital loss from their first housing ownership.
- There is support for existing theory that the level of return is indirectly proportional to the size of equity in the dwelling, but the relationship is not as tight as might be expected.
- Based on owner equity, capital returns are especially poor, although this conclusion may be caused the fact that all mortgage data related to 1986 which was a period in which the Australian financial environment changed rapidly.
- In the light of these findings, it would seem that much mobility occurs which would seem to be unaware of the capital loss potential of ownership. It therefore follows that this mobility must have occurred without a consideration of future mobility.
- Where mobility is forced, particularly through interstate transfer and divorce, the likelihood of a capital loss from ownership is significant.
- Likewise, those who have left the ownership market to return to the rental have shown a high propensity to incur a capital loss.
- As households move, they seek more expensive housing in the early part of their housing career, but as the number of moves increases cheaper housing is purchased. This tendency has been noted for both H-H movers and H-HU movers.

This finding is evidence that mobility is used to free up capital for expenditure on needs other than housing.

- Mobility is influenced by the level of financial commitment households have in their housing, in that this level may cause households to become fixed at a particular location.
- The prospect of a household making a capital loss from their housing career reduces with the number of moves made. Similarly, the possibility of a household making substantial capital gains at each stage of their housing career also reduces with the number of moves.
- Loss making dwellings have particular qualities. Most are houses, they are located in particular areas within the metropolitan area and they were built during a specific period, most typically the 1970s. If mobility involves dwellings and locations with these qualities, the level of accumulation associated with that mobility may be compromised.
- For any dwelling bought during a trough in the housing market cycle, there is an increased probability that it will generate a capital loss on sale. The converse also appears, on the evidence to be true, despite a certain illogicality in the observation.

In the next chapter, the emphasis on households will be replaced with an emphasis on properties. Rather than being concerned with the accumulation performance of individual households as they moved from ownership to ownership, or through their housing history, Chapter Six will investigate the accumulation performance of individual properties as they progress through their life cycle.

### 6.1 Introduction

The principal aim of this study is to examine the relationship between residential mobility of households, and the level of capital accumulation which has accrued to them through their owner-occupier housing tenure. Hence, in Chapters four and five, the emphasis has been on households and the levels of gain or loss they have made from owning housing at various locations in the urban area. In this chapter, the emphasis on the household is replaced with a focus on the units in the housing stock, to address the second aim of the thesis. In other words, in this chapter the emphasis is directed away from the housing history of individual households and towards the ownership history of each dwelling in the sample. The relevance of such an approach has been noted by Gober (1992: 180), who suggested that:

“Just as an individual experiences a housing career moving from one dwelling to another so also does a given housing unit pass from one set of occupants to another”.

Filtering research, which analyses the socio-economic and demographic characteristics of persons who have occupied a dwelling at various stages throughout the dwelling's history, has been used to explain the social structure of an area at any time, as well as predict processes which can cause changes to existing social structure in an area. The application of a filtering approach (see Chapter Three, Section 3.2) to the accumulation history of a dwelling is unique. That little or no research has been completed on this question is due, mainly, to the difficulty in obtaining appropriate data.

Chapters four and five have shown that households' net accumulation performances produced from ownership of dwellings have generated losses as well as profits. The question raised by instances where a household has owned a loss making dwelling is whether that particular dwelling has made a loss for all the owners which have filtered through it as a result of the residential mobility process. Indeed, the converse question of whether every house which has made a profit for one particular owner has made a profit for each of its other owners can also be asked. Just as Chapters four and five have investigated the accumulation performance of owners, so the task of this chapter is to assess the accumulation performance of the housing stock. An analysis using this approach will determine whether there are temporal patterns of accumulation associated with particular dwellings and their location within the urban area. In making the investigations, there are a number of key questions which are considered, including:

- Do dwellings exhibit any generalised patterns in their accumulation careers? For example, do houses make a profit for their owners at each sale? How does the magnitude of profit change from one sale to the next? Are there spatial patterns created by the accumulation behaviour of houses?
- How are dwellings' careers related to the rhythms of the real estate cycle?
- Can other factors impact on the accumulation potential of houses, especially "demographic" characteristics such as a dwelling's age, style and size?
- If these other factors exist as possible determinants of accumulation performance for individual members of the housing stock, does spatial location play a role in their operation?

The resolution of these questions hinges on deriving a capital accumulation performance rating for each dwellings and determining whether these ratings are

differentiated within the urban area. It is expected that the patterns identified should represent signposts to guide households towards locations which would not only satisfy their housing needs but also their expectations for capital accumulation from ownership. Of course, the significance of such signposts insists that the accumulations performance of dwellings in any area is consistent through time, and whether this is the case will be determined through data analyses in this chapter. It is also intended to relate any patterns of accumulation generated by dwellings during their lifetime to the patterns of spatial variation for a number of housing demographic characteristics, which were identified in Chapter Four.

## **6.2 The data**

The data for this chapter are derived from the ownership records of 1079 properties which, between 1968 and July 1991, underwent some 3062 sales. However, for several reasons, which have been noted in Table 6.1, not all these properties could be included in the analyses described in this Chapter. In fact, the findings of this Chapter are based on the accumulation performance of 437 houses, and Table 6.1 summarises the process by which the temporal data series was obtained.



**Table 6.1: Derivation of temporal series database from original database**

Data base decisions	Number of records	Dwelling type	
		Houses	Home units
Original database	1079	936	143
<i>less</i> properties sold once, but with no purchase price details <sup>(1)</sup>	196	184	12
Sub total	883	752	131
<i>less</i> properties sold once only <sup>(2)</sup>	97	96	1
Subtotal	786	656	130
<i>less</i> properties sold twice, but no first purchase price details <sup>(3)</sup>	258	219	39
Sub total	528	437	91
<i>less</i> Home units <sup>(4)</sup>	91		91
Time series database	437	437	Nil

Notes:

(1) These properties were purchased before 1968, and therefore no purchase price details for them were available.

(2) The housing career of these properties involved only one completed sale. They were excluded on the grounds that their data could not be categorised as time series data.

(3) Although these properties had been sold twice, details of their first purchase were not available. Therefore, they were excluded because their data could not be categorised as time series data.

(4) Home units were omitted from the analysis on the grounds that their numbers were low and that they were likely to perform similarly to houses.

### 6.3 The profitability of houses - nominal and real accumulation

There are two approaches which can be used to determine a dwelling's accumulation capability. Nominal capital gain uses actual values and is based upon the difference between the price received at sale and the price paid at the time of purchase, whereas real capital gain is measured by adjusting the selling and buying prices to take into account changes in the value of money caused by inflation. The procedure by which all house values were adjusted to 1989/90 prices has been presented in Section 5.2 of Chapter Five.

Of the 1198 completed ownerships<sup>1</sup> in this analysis, only 6.4 percent made a loss from ownership. Moreover, of the dwellings analysed, 82.5 percent made a profit each

<sup>1</sup> For any property a completed ownership occurs when the purchase price and sale price of that ownership have been recorded on the database.

time they were sold during their housing history. These are compelling statistics in terms of generating, and then perpetuating, a myth around the accumulation potential of housing ownership. They are the kind of statistics which early studies generated and which precipitated substantial investigation of home ownership and wealth generation and its impact on social class (Saunders, 1978: 233, Pratt, 1986a: 367). But, of course, these findings must be subjected to closer scrutiny which takes into account the impact of inflation so as to make any comparison of a dwelling's selling price with its purchase price more realistic. Further, given that the size of any difference between adjusted sale price and purchase price may be influenced by the time that a property has been owned, the time that a property had been owned was factored into the equation to provide an annualised statement of profit or loss generated by a dwelling during any ownership in its history using the formula in Equation 6.1.

**Equation 6.1**       $P = (SP - PP)/T$

Where       $P =$  Annualised, adjusted profit or loss  
                $SP =$  Selling price (1989/90 values)  
                $PP =$  Purchase price (1989/90 values)  
                $T =$  Duration of ownership (years)

When this analytical approach to accumulation is adopted, the proportion of houses which reported a profit each time that they were sold fell to 30 percent and the proportion of house sales which resulted in a real loss for the vendor increased to 40.3 percent. The consistency of the positive accumulation results obtained with the nominal approach is replaced with a set of accumulation consequences exhibiting enormous variety, as shown in Table 6.2. The table suggests that provided there are

more properties than the expected number of relationships between profit and loss, there is a strong possibility that all combinations of profit and loss will be observed. Therefore, although the ratio of observed to expected outcomes for dwellings which have had five or six owners is less than the levels recorded for properties with four or less owners, this may be due to the fact that the number of properties in these categories was simply less than the number of profit/loss relationships that could be expected. The compelling finding which emerges from Table 6.2 is that a mobile household must expect to incur losses at some stage during the mobility process, based particularly on the observation that dwellings which have had 2, 3 and 4 owners have generated either the full range, or very close to the full range, of possible profit/loss relationships.

**Table 6.2: Accumulation performance of houses**

Number completed consecutive sales	Number houses	Expected profit/loss relationships	Observed profit/loss relationships	Ratio observed:expected (%)
2	244	4	4	100.0
3	109	9	8	88.9
4	54	16	15	93.8
5	19	25	13	52.0
6	9	36	9	25.0

Source: Derived from stk\_dwg.sav file

#### 6.4 Investigative strategy

The values of annualised profit or loss for each ownership in any dwelling's history could be used to allocate each dwelling to a category based on the relationship between profits and losses which it had generated. Three categories of dwellings were established:

- dwellings which had generated more losses than profits

- dwellings which had produced a balance between losses and profits for their owners
- dwellings which had returned more profits than losses during their ownership history.

These three categories can be regarded as depicting dwellings which have been bad performers, those that have been balanced performers, and those which have been good performers in terms of their ability to generate capital gains. In most of the analyses which follow these three categories of accumulation performance are utilised.

### 6.5 Defining dwelling profitability

Although the findings of Table 6.2 might suggest that mobile households should expect to incur losses at some point in the mobility process, the overall potential of houses to deliver a profit to their owners is demonstrated in Table 6.3, which shows that, historically, houses have returned more profits than losses to their owners. This can be taken one step further by determining a cash value of a dwelling's accumulation career for its various owners.

**Table 6.3: Profit and loss performance of houses**

Number completed consecutive sales	Observed profit/loss relationships					
	Losses outnumber profits		Losses equal profits		Profits outnumber losses	
	Number	Percentage	Number	Percentage	Number	Percentage
2	17	7.0	127	52.0	100	41.0
3	37	33.9			72	66.1
4	8	14.8	26	48.2	20	37.0
5	4	21.1			15	78.9
6	1	11.1	1	11.1	7	77.8

Source: Derived from stk\_dwg.sav file

Regardless of how many times a property had been owned, the level of profit or loss accumulated by a dwelling during its lifetime was computed by subtracting its first purchase price from its final selling price, using values which had been adjusted to 1989/90 prices, so as to account for inflation. Furthermore, so that the duration of any dwelling's accumulation history could not influence the level of profit or loss recorded, the computed profit or loss was divided by the time elapsed, in years, between the date of first purchase and date of last sale, to give a value which represented the per year profit or loss generated by any specific dwelling. These specific values were then allocated to particular intervals, and the results are presented in Table 6.4.

**Table 6.4: Annualised profit/loss at end of dwelling accumulation career, based on 1989/90 values**

Profit/loss per year	Profitability category					
	Losses greater than profits		Losses equal profits		Losses less than profits	
	Number	Percent	Number	Percent	Number	Percent
>\$8000 loss						
\$6000-\$8000 loss	2	3.0	1	0.7		
\$4000-\$6000 loss	3	4.5	1	0.7		
\$2000-\$4000 loss	12	17.9	2	1.3	1	0.5
\$0-\$2000 loss	30	44.8	36	23.1	2	0.9
\$1-\$2000 profit	19	28.4	52	33.3	40	18.8
\$2000-\$4000 profit			24	15.4	41	19.3
\$4000-\$6000 profit	1	1.5	11	7.1	43	20.2
\$6000-\$8000 profit			5	3.2	19	8.9
\$8000-\$10000 profit			8	5.1	20	9.4
\$10000-\$20000 profit			13	8.3	36	16.9
\$20000-\$50000 profit			3	1.9	11	5.2
>\$50000 profit						
Total	67	100.0	156	100.0	213	100.0

Source: Derived from stk\_dwg.sav file

The overall accumulation performance of dwellings varies according to the profitability category. For dwellings which recorded more losses than profits, 70.2

percent returned an overall annualised loss during their accumulation career, compared with 25.8 percent for those dwellings which recorded a balance between profits and losses and 1.4 percent for dwellings whose profits exceeded losses. At the other end of the scale, the overall level of accumulation for dwellings which had more profits than losses in their ownership careers was very impressive, with more than a fifth recording average profits per year of more than \$10,000, compared with just over 10 percent for balanced performance properties. There were no properties which had more losses than profits which generated more than \$10,000 per year. Indeed, none of these dwellings generated more than \$6,000 per year.

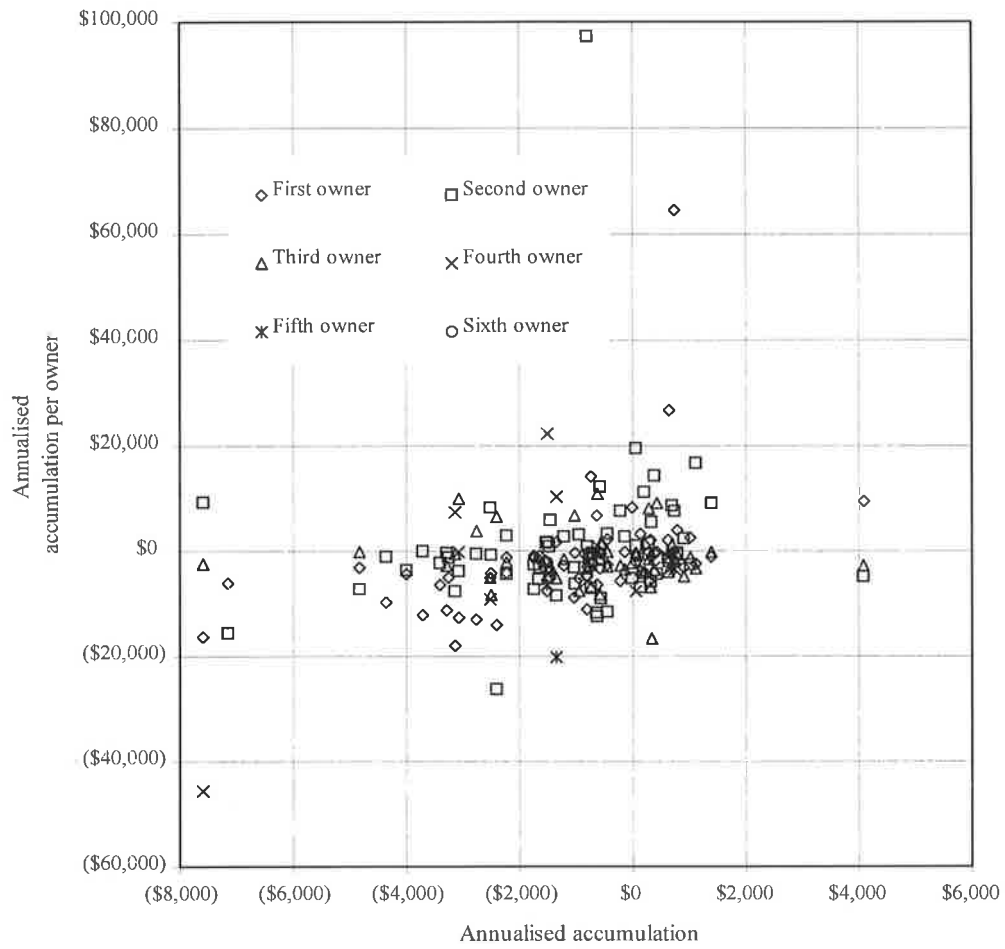
The mean accumulation per year for any property's accumulation career is, of course, the result of a series of accumulation performances for each time the property has been owned during its history. Does, therefore, the accumulation rate during each ownership match that recorded for the dwelling over its lifetime? Or is there variation in performance? If variability in accumulation performance can be identified, what are its characteristics? To illustrate how the per ownership accumulation rate for any property compared with its lifetime accumulation rate, the annualised rate of capital gain or loss for each property during each ownership was computed. These were then plotted as series on the Y-axis to produce a scattergram, with annualised accumulation per dwelling as the X-axis. Three of these graphs were produced, one for each profitability category, and they are presented as Figure 6.1, Figure 6.2 and Figure 6.3. For any horizontal axis value there may be as many as six symbols directly above it, each symbol representing the level of accumulation derived by the owners during their occupancy of the dwelling. The spread of these individual values above any given X-

value, and specifically around the \$0 Y-value, is an indicator of the accumulation variability that has characterised a particular dwelling's accumulation performance.

### **6.5.1 Accumulation variability of dwellings with losses greater than profits**

The dwellings represented in Figure 6.1 are those classed as bad performers in terms of their ability to provide capital gains to their owners. The X-axis segregates the dwellings into those that have made an overall loss during their lifetime and those that have made a profit. The Y-axis segregates properties according to individual ownerships which made a loss and those that made a profit. In this graph there will always be more symbols below the \$0 Y-value than above. And yet, a cursory glance at the scatter of values in Figure 6.1 reveals that there are a substantial number of symbols above the \$0 Y-value, leading to the inescapable observation that there is associated with any dwelling significant variability in capital gains performance between the various numbers of owners who have occupied it, even allowing for the extreme performances located at the margins of the graph.

**Figure 6.1: Annualised accumulation per owner and annualised accumulation per dwelling, for dwellings which have generated more losses than profits**



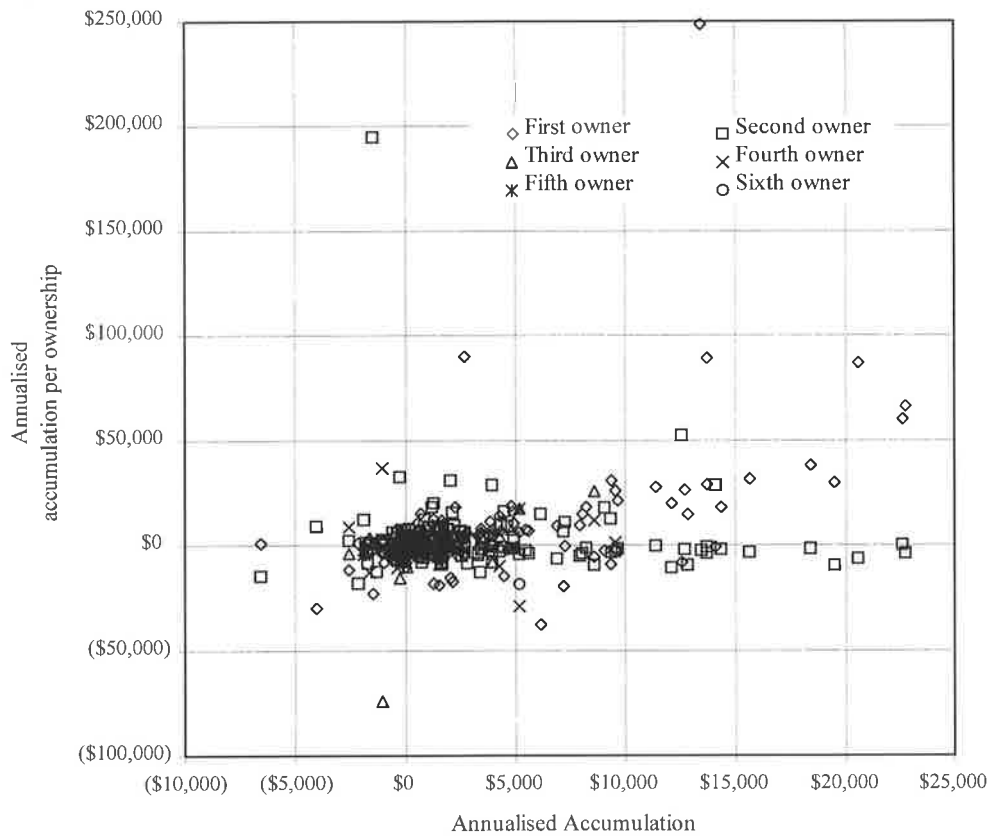
Source: Derived from hse\_stk.sav file.



### 6.5.2 Accumulation variability of dwellings with losses equal to profits

Figure 6.2 also displays significant variability in its distribution of returns achieved at each ownership of a property, especially at the extremes of overall annualised returns. But even for dwellings whose annualised accumulation rate fell between minus \$5,000 and plus \$5,000, the individual returns to owners consistently fluctuated within a band of minus \$15,000 and plus \$20,000.

**Figure 6.2: Annualised accumulation per owner and annualised accumulation per dwelling, for dwellings which have generated losses equal to profits**



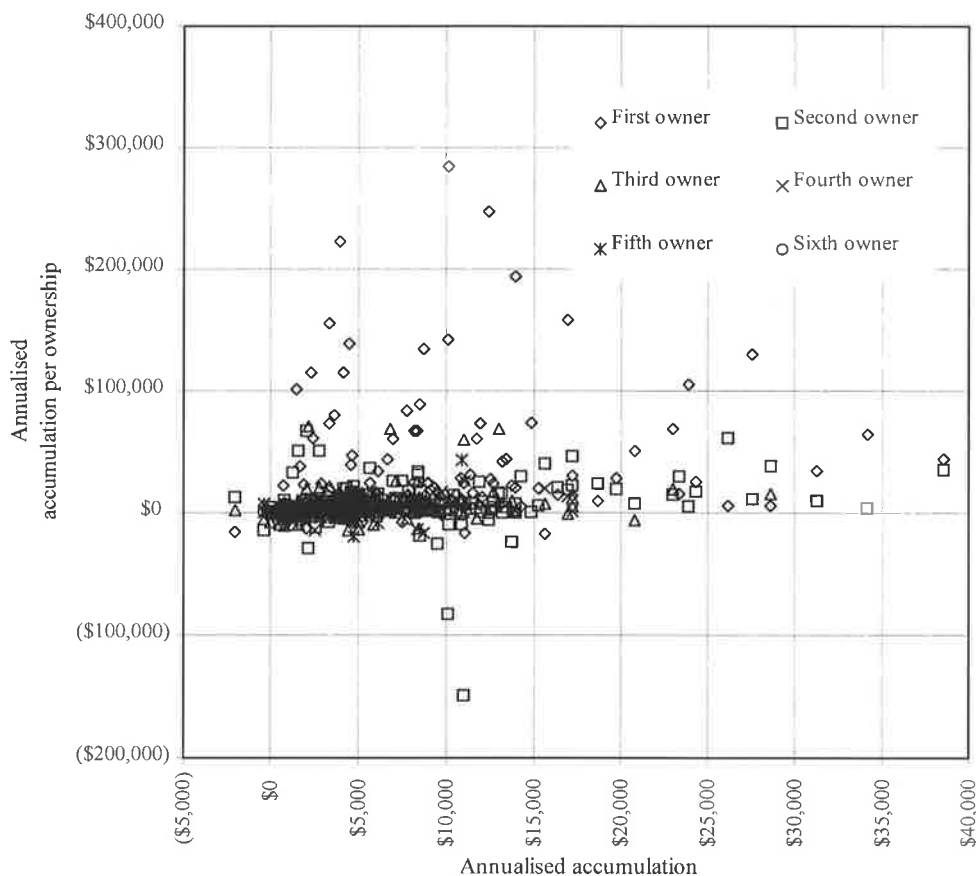
Source: Derived from hse\_stk.sav file.

### 6.5.3 Accumulation variability of dwellings with losses less than profits

With dwellings which have been classed as good accumulation performers for their owners, there is nevertheless enormous variability associated with the individual ownerships. Figure 6.3 shows, firstly, that properties in this category have been capable of generating losses for individual owners of up to \$20,000 per year.

Secondly, where properties have generated capital gains for their owners, there has been enormous variation in the size of these gains. Whereas many properties may have created gains of \$25,000 per annum for some of their owners, for other owners of the same properties the level of gain has been much higher.

**Figure 6.3: Annualised accumulation per owner and annualised accumulation per dwelling, for dwellings which have generated profits greater than losses**



Source: Derived from hse\_stk.sav file.

## **6.6 Spatial variation of dwelling performance**

In the preceding sections the approach has been to show, firstly, that dwellings in different profitability categories have produced different patterns of accumulation per year over time and, secondly, that these overall rates of accumulation have been the product of considerable variation in annualised accumulation rates for the various owners who have occupied the dwelling. In this section, the annualised accumulation rates associated with each dwelling have been allocated to mosaic regions, which were defined in Table A.6.1 of Appendix 6, and a median annualised rate of return for each mosaic region has been determined. These median values were then mapped to show the spatial variation in accumulation rates for dwellings in each of the three profitability categories.

### **6.6.1 Dwellings with more losses than profits - the poor performers**

The geography of poor performing dwellings, presented in Figure 6.4, has several noteworthy characteristics. Firstly, there are areas which have no representation of dwellings with more losses than profits - in particular, the inner areas of the city, and the north-western sector, as well as the northern area of the metropolitan area and the south-east margins located in the Mount Lofty Ranges. Secondly, the main concentrations of houses with poor accumulation performances are located in the city's north-eastern sector and its south-western sector, two sectors where substantial housing development has occurred, especially since the mid 1960's. Thirdly, within these areas, there is a weak positive relationship ( $r = +0.285$ ) between the distribution

of poor performing dwellings and distance from the CBD, largely caused by the absence of these dwellings from the inner areas.

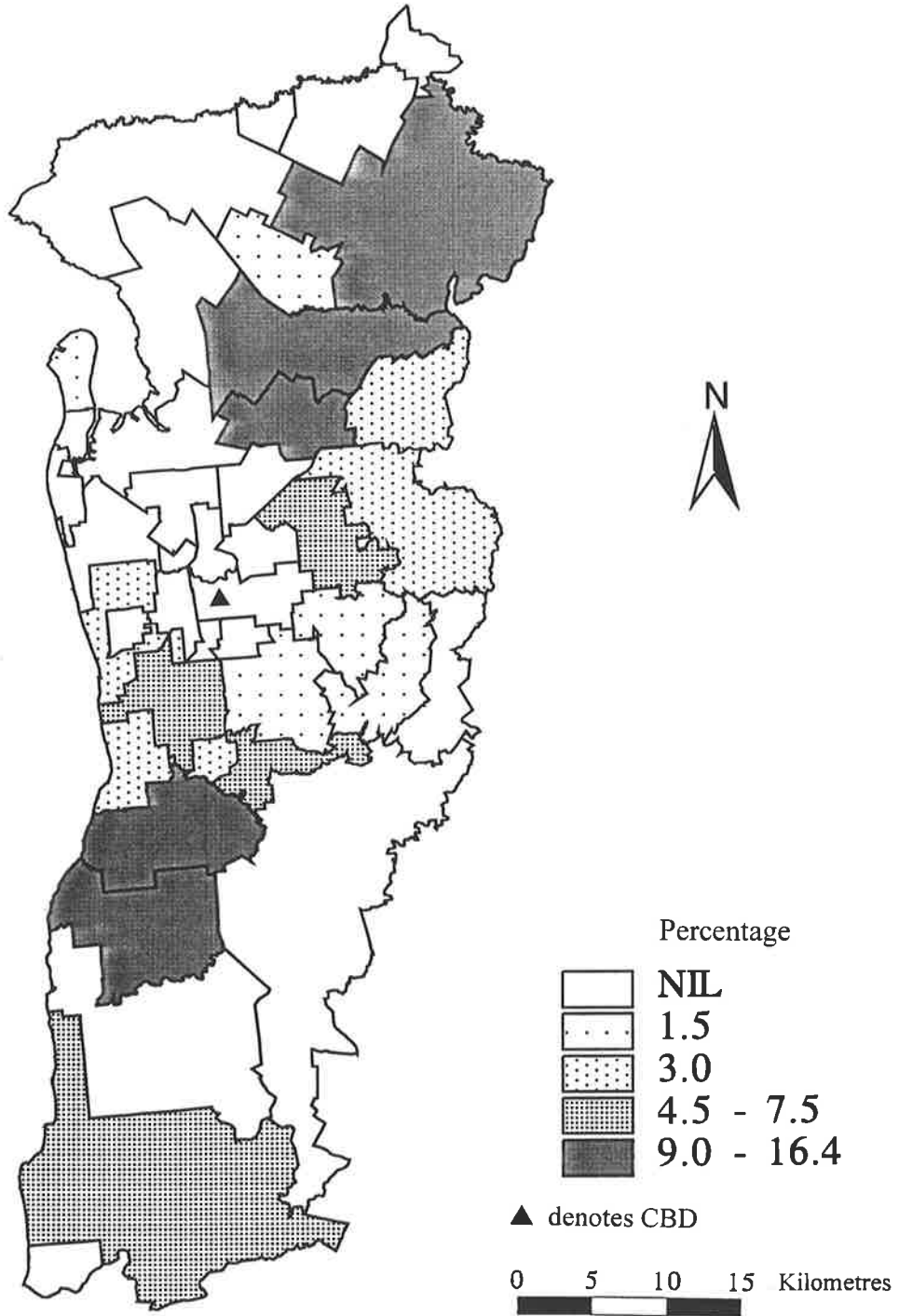
### **6.6.2 Dwellings with losses equal to profits - the balanced performers**

In contrast to the poor performers, the distribution of balanced performing houses, depicted in Figure 6.5, is more dispersed, with only a handful of mosaic regions not represented. There is only a weak positive relationship ( $r=+0.144$ ) between the distribution of these dwellings and distance from the CBD. Although there are discrete regions of varying concentrations of this dwelling type throughout the urban area, these discrete regions are offset by isolated occurrences of the same concentration elsewhere in the urban area and at varying distances from the CBD.

### **6.6.3 Dwellings with losses less than profits - the good performers**

In contrast to the geography of the other two profitability categories, this group displays the most clear cut distribution. As Figure 6.6 shows, its relationship with distance from the CBD is significant, producing a correlation coefficient of  $-0.353$  and providing the clearest indication that these types of dwellings are most likely to be concentrated nearest the CBD and experience reducing levels of concentration towards the suburbs and peripheral locations.

Figure 6.4: Distribution of dwellings with losses greater than profits



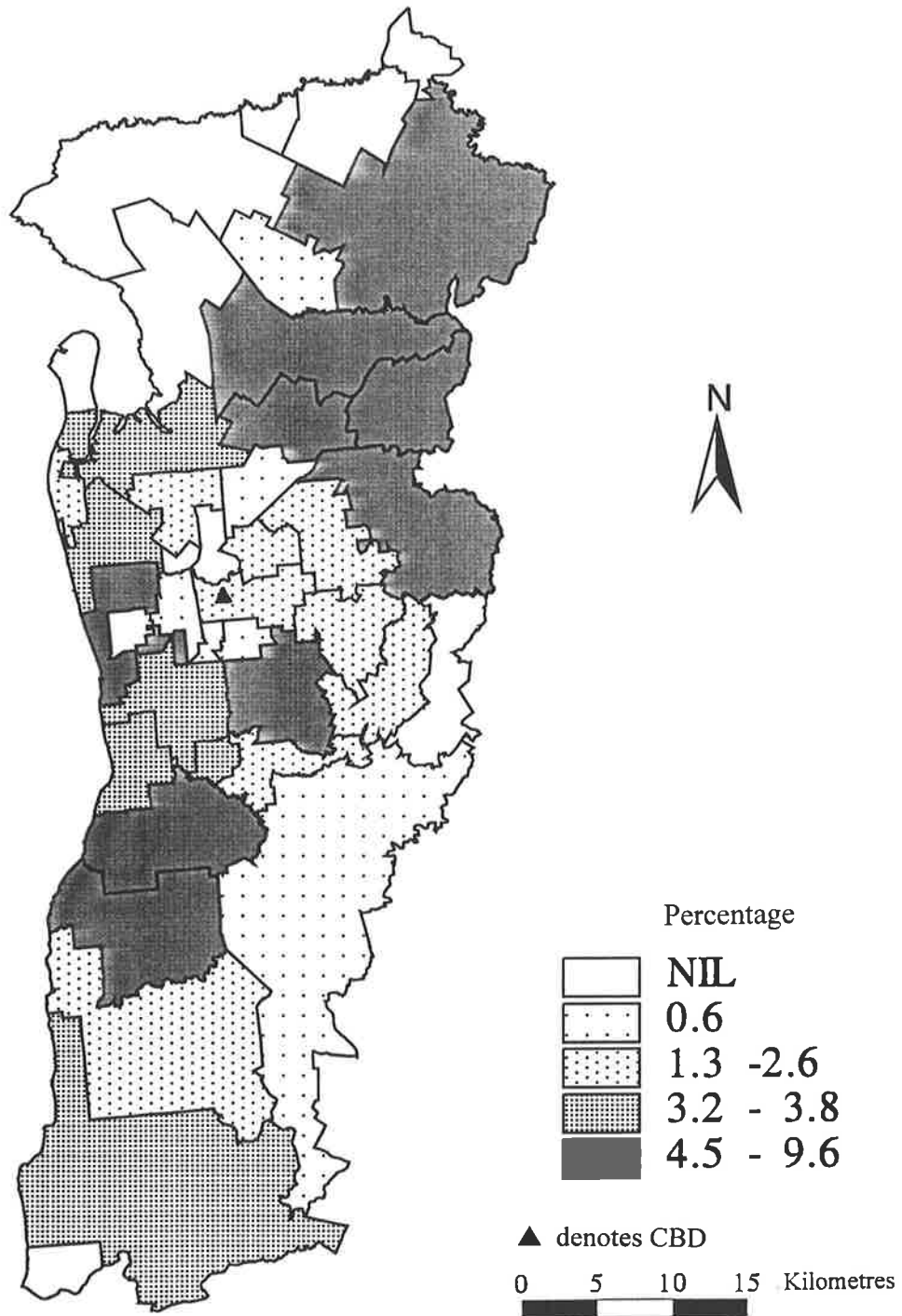
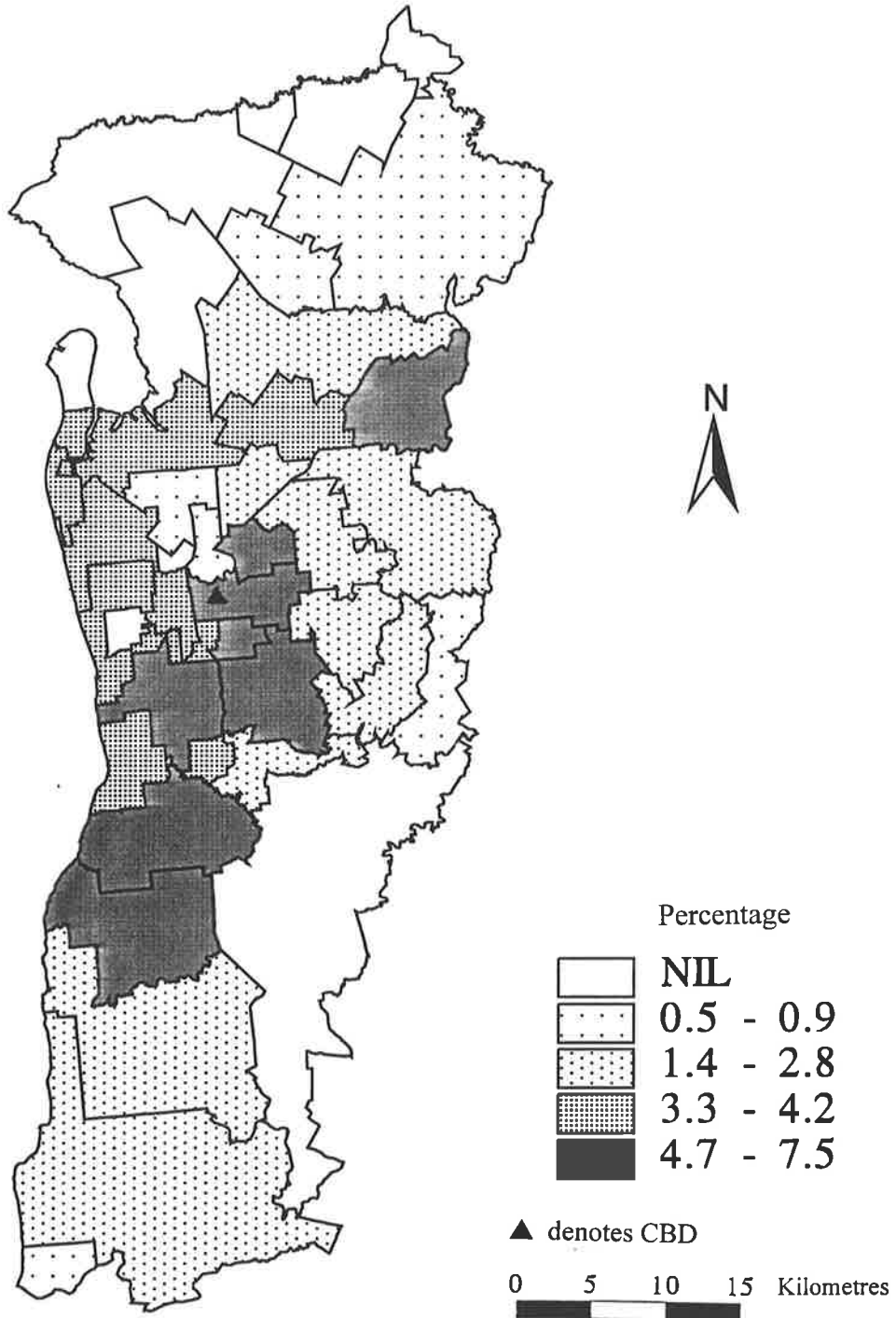
**Figure 6.5: Distribution of dwellings with losses equal to profits**

Figure 6.6: Distribution of dwellings with losses less than profits



## 6.7 Accumulation variability and residential mobility

For residentially mobile households, anxious that their investment in owner-occupancy returns an appreciation on their capital, the information in Figure 6.4, Figure 6.5 and Figure 6.6 might seem to direct them to suburbs containing the highest concentrations of good performing dwellings and steer them away from suburbs with the highest concentrations of poor performing dwellings, particularly if there were a relationship between level of good performing dwellings at any location and the investment return generated by those dwellings. Such a relationship would undoubtedly have significant consequences for the mobility process. To test the existence of this relationship, a correlation analysis was conducted between the median annualised accumulation performance for dwellings in each profitability category and the percentage distribution of dwellings in each profitability category by mosaic region. The analysis has been conducted at two levels - for dwellings which generated a positive annualised accumulation outcome during their accumulation lifetime, and for those whose accumulation outcome was negative. It might be expected that the distribution of good performing dwellings would be accompanied by a strong positive correlation with positive accumulation records and a strong negative correlation with negative accumulation outcomes. In a similar fashion, the opposite relationships might be expected for distribution of poor performing dwellings. However, this has not occurred and the results presented in Table 6.5 would seem to indicate that were a mobile household to base their location decisions on the spatial patterns displayed in Figure 6.4, Figure 6.5 and Figure 6.6, such a strategy would not necessarily lead to expected accumulation outcomes. Essentially there is no relationship between the distribution of dwellings in any particular profitability



category and the levels of accumulation that those dwellings have produced for their owners.

**Table 6.5: Relation between occurrence and annualised accumulation level for dwellings in specific profitability categories**

Profitability category	Annualised dwelling accumulation rate:	
	Positive	Negative
Losses less than profits - good performers	+0.1674	-0.9954 (1)
Losses equal to profits - balanced performers	+0.0858	+0.1676
Losses greater than profits - poor performers	+0.1293	+0.1302

(1) Based on three observations

Source: Derived from hse\_stk.sav file

The reason for this is that the variation in accumulation performance which has been identified earlier in this chapter is characteristic of all dwellings, regardless of the profitability category in which they are located. How, then, can a household know what level of return will occur during its occupancy of the dwelling? Clearly, it cannot and this adds a dimension of uncertainty, or “randomness”, to household profitability in that mobile households are moving through a pool of dwellings in a city’s housing stock, each one of which consistently generates variable returns to its owners and therefore for each owner there is a substantial probability that a real loss or a real gain will be generated. The degree of variability which accompanies the return on investment for each owner introduces a large element of chance into the possibility that mobile households will make real capital gains each time they move. It has been demonstrated in this chapter that mobile households normally will make nominal capital gains with each move, but this cannot be said when price paid and price received are adjusted for inflation and length of ownership, not to mention the cost of any borrowings made to effect a housing purchase.

This said, are there any patterns associated with the variability in accumulation rates generated for each owner by a specific dwelling? A correlation analysis was conducted between successive accumulation rates produced by a given dwelling, and the results are displayed in Table 6.6. Firstly, it has to be stressed that none of the correlations are large, and therefore the emphasis is directed at either the sign of the coefficient, or the lack of correlation which the coefficient suggests. For dwellings in the latter two profitability categories, the balanced performers and the good performers, the results would seem to suggest that any profit made by one owner may well be less than that made by the previous owner.

**Table 6.6: Correlation analysis between annualised accumulation rates at successive property ownerships**

Profitability category	Correlation between rates generated by ownerships:				
	1 and 2	2 and 3	3 and 4	4 and 5	5 and 6
Losses greater than profits - the bad performers	+0.0070	-0.2010	+0.0177	-0.4152	(1)
Losses equal to profits - the balanced performers	-0.1996	-0.2918	-0.6837	(1)	(1)
Losses less than profits - the good performers	-0.0813	-0.0611	-0.0080	-0.0988	+0.1790

(1) Insufficient pairs available to compute correlation coefficients

Source: Based on data in vari\_llp.xls, vari\_lep.xls and vari\_lgp.xls, which was derived from data extracted from stk\_dwgs.sav

For owners of properties in the first profitability category, the picture is more representative of a roller coaster, in that the second owner might expect to achieve the same level of returns as the first owner, but the third owner could expect the property's accumulation rate to reverse that generated for the previous owner. The fourth owner could expect returns to be the same as those obtained by the third, but the fifth might find that returns were the reverse of those obtained by the fourth owner. Certainly, these results do suggest that the best returns are most likely to be

had by a dwelling's first owner, and after that how can any owner, on the evidence of Table 6.6 be certain of the kind of returns which may be generated by any property at which they are the owner-occupier? It is a further illustration of the uncertainty facing households when they purchase a dwelling with the expectation of accumulating capital gains. The problem is that despite the accepted wisdom, reinforced by a prevailing mythology, there would appear to be no evidence which resembles a guarantee that any household will, as a matter of course, derive a capital gain from ownership of its housing.

### **6.8 Explaining capital gains behaviour of dwellings**

The erratic, and essentially pattern-less, behaviour of houses in generating profits or losses for their owners, demands an explanation. The literature has suggested that there are features of a house which are likely to positively influence its capital gains performance. For example, Thorns (1981: 207) and Badcock (1994: 281) have both recognised the role of location and time of purchase on levels of house price appreciation. Munro and Maclellan (1987: 78) concur on the role of location and add that the price of a dwelling is also an indicator of its ability to generate capital gains. Badcock (1989: 71) also agrees on the role of price, and its relation to the size of a dwelling, in influencing a property's capital accumulation potential.

In these studies, the concept of location has usually referred to large areas within countries, be they capital city areas or major centres, or planning regions (Thorns, 1981b, 711, Thorns, 1989b: 301-306; Hamnett, 1989: 345-348; Badcock, 1989: 81-84), and the relationship between location and house price has been attributed to strong linkages between property markets and labour markets (Champion et al, 1988:

256-260). Thorns (1989: 301) has argued that location and price relationships can also exist at the suburb level within cities. However, this is a proposal which has been queried by Badcock (1994: 285) mainly because the theoretical work on linkages between property markets and labour markets at the suburban, or “within city”, level has been “scanty”, and in a number of investigations at the local level “...the labour market factor has been under-developed or ignored” (Coombes et al, 1991: 170).

Housing attributes which have been reported to cause patterns of accumulation can be used by house buyers to gauge the probability of a particular dwelling representing good or bad value in respect of its ability to generate future capital gains. However, because the investigations in this chapter have not produced any solid patterns of accumulation during a dwelling’s ownership history, it may be that the task of this section is to show that the traditional factors reported to influence the production of capital gain in a dwelling do not, in fact, operate through the course of a dwelling’s lifetime.

### **6.8.1 Market cycles**

The influence of the market in generating capital gains from any investment is well documented (Thorns, 1981a: 207; Badcock, 1994b: 281). Therefore, could a case be made to illustrate the influence of the property market on a property’s accumulation record throughout its lifetime? For each property in each profitability category, details of each purchase date and sale date in their career were extracted from the database. These dates were then related to the seven “boom” and “bust” real estate periods between 1968 and 1991 and which were identified in Section 5.7.4, so that it was possible to identify whether each purchase and sale in a house’s ownership career

had occurred during a buoyant market or a relatively depressed housing market. This information is presented in Appendix 11, Table A11.1.

It is hypothesised that if a property's profitability were linked to the state of the South Australian real estate market, then properties with poor profitability would, in all probability, have a strong relationship with sales and/or purchases made during depressed, or bust, market conditions, and vice-versa. However, no such relationship can be demonstrated (see Appendix 11, Table A11.1), and instead it is clear that properties which have provided good capital returns for their owners over time seem to have been bought and sold in much the same economic circumstances as properties which have returned even capital gains performances and properties whose performance has been poor. This observation is especially pronounced with properties which have experienced two, three and four consecutive ownerships in their history. The even distribution of properties in each profitability category located in the various market condition permutations would seem to indicate that market factors have not influenced the temporal accumulation performance of individual properties. If the evidence seems to discount a relationship between performance and cyclical activity in the real estate market, can other factors be identified which have an influence on the performance of dwellings for their owners?

### **6.8.2 Profitability and location**

The spatial units used to explore this question are the sector, the zone, the mosaic region and the suburb. Each dwelling was allocated to its specific sector, zone, mosaic region and suburb location within the Adelaide Statistical Division and this information was cross-tabulated with the dwelling's profitability category. The

sectoral distribution of dwellings by their profitability category is displayed in Table 6.7.

**Table 6.7: Profitability of properties by sector**

Sector	Profitability category					
	Losses greater than profits		Losses equal profits		Losses less than profits	
	Number	Percent	Number	Percent	Number	Percent
<b>1</b>	1	1.5	9	5.8	11	5.2
<b>2</b>	0		10	6.4	14	6.6
<b>3</b>	2	3.0	13	8.3	14	6.6
<b>4</b>	26	38.8	47	30.1	70	32.9
<b>5</b>	6	9.0	13	8.3	34	16.0
<b>6</b>	2	3.0	7	4.5	21	9.9
<b>7</b>	7	10.4	25	16.0	30	14.1
<b>8</b>	23	34.3	32	20.5	19	8.9
<b>Total</b>	<b>67</b>	<b>100.0</b>	<b>156</b>	<b>100.0</b>	<b>213</b>	<b>100.0</b>

Source: Extracted from stk\_dwgs.sav file

At this level of investigation, there seemed to be little evidence of any spatial influence on the profitability of properties, as relatively similar concentrations of each profitability category were located in a number of sectors. In particular, heavy concentrations of properties in each category were found in sector 4 and uniform concentrations in sectors 5 and 7. Only sector 8 showed any real gradation from one profitability category to another. An index of dissimilarity ( $I_D$ ) analysis further confirmed the similarity of the three distributions (see Appendix 11, Table A11.2), suggesting that only small proportions of the balanced and good performing dwellings would need to relocate in order to have the same percentage distribution as the total number of dwellings in the survey. The poor performing dwellings were more spatially concentrated, indicated by their  $I_D$  of 23.4. The similarity of the sectoral distributions of each profitability category is also confirmed by correlation analysis (see Appendix 11, Table A11.3).

The inability of a sectoral analysis to provide any explanation for the occurrence of properties with different capital gains performances may lie in the fact that each sector represents a huge slice through parts of the Adelaide urban area with varying land value characteristics which tends to mask any role which might be played by locality or distance from the urban centre. Furthermore, the sectors embrace areas with an enormous diversity in housing stock, demographic and socio-economic qualities, and therefore the degree of similarity between them in terms of the number of dwellings with specific capital gains performances is easily explained. At the sectoral level, then, the spatial location of a property seems not to provide an explanation for the nature of its temporal capital gains performance.

The problem of diversity at the sectoral level can be controlled to a certain extent by using zones as the basis for an analysis of the role played by space on a dwelling's profitability for its owners. By using zonal data, the analysis will emphasise more the role of distance from the Central Business District (CBD), a factor which was masked in the sectoral analysis. Table 6.8 shows the distribution of dwellings in each of the profitability categories, by the zone in which they are located.

**Table 6.8: Profitability of properties by zone**

Zone	Profitability category					
	Losses greater than profits		Losses equal profits		Losses less than profits	
	Number	Percent	Number	Percent	Number	Percent
1			9	5.8	55	25.8
2	10	14.9	42	26.9	60	28.2
3	16	23.9	35	22.4	41	19.2
4	18	26.9	33	21.2	32	15.0
5	12	17.9	16	10.3	11	5.2
6	8	11.9	16	10.3	6	2.8
7	3	4.5	5	3.2	6	2.8
8			0		2	0.9
<b>Total</b>	<b>67</b>	<b>100.0</b>	<b>156</b>	<b>100.0</b>	<b>213</b>	<b>100.0</b>

Source: Extracted from stk\_dwgs.sav file

There is a little more variation in capital gains performance of dwellings when analysed zonally than was noticed with the sectoral analysis. In particular, poorly performed dwellings had no representation in the inner zone of the urban area, while average performers had a low representation compared with the well performed dwellings. Further, 50 percent of poor performing dwellings were located in zones 3 and 4, nearly 50 percent of average performing dwellings were located in zones 2 and 3, and more than 50 percent of good performing dwellings were located in zones 1 and 2. The highest concentrations of dwellings which had lost money for their owners more times than they had gained were located in zones 3, 4 and 5, compared with highest concentrations in zones 2, 3 and 4 for properties which have balanced losses and profits. These two observations are in further contrast with those properties which have afforded their owners more profits than losses. The highest concentrations of these properties are located in zones 1, 2 and 3. The evidence suggests, therefore, that the geography of each profitability group is essentially the same, but with some developing tendency to noticeable differences in particular locations. Hence, slight increases in indices of dissimilarity are also noticed (see Appendix 11, Table A11.4). In particular, the distribution of well performed dwellings becomes more pronounced when considered at the zonal level, especially due to their concentrations in the inner zones.

This evidence that zonation, as both a measure of space and distance from the CBD, might explain the capital gains performance of a dwelling is further reinforced by Table 6.9.



The low correlation between well performed and badly performed dwellings would seem to suggest that these two types of properties are spatially segregated. However, properties which have produced a balanced performance are just as likely to be located in zones with good performing dwellings as in zones with poor performing dwellings.

**Table 6.9: Correlation analysis of profitability categories distributed zonally**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.808	0.216
Losses equal profits		****	0.655
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

This notwithstanding, the real dimension which has been linked to dwelling capital gain performance in this analysis is distance from the CBD. The concept of space varies from zone to zone, simply because the area of each zone increases with distance from the CBD. To examine more precisely the role of space, or more particularly, the role of locality, or community, or environment, on the level of performance of dwellings, it is necessary to use the concept of mosaic region.

Table 6.10 shows the distribution of properties with specific capital gains characteristics related to the mosaic regions of the Adelaide urban area within which they are located. The table shows that 38.8 percent of dwellings which had performed badly, with losses greater than profits, were located in sector 4, and that the majority of these dwellings were situated in mosaic regions 44 and 45. A further 34.3 percent of the poorly performed dwellings were located in sector 8, with the majority of these located in mosaic regions 83, 84 and 86. It is also clear that these types of dwellings

were relatively absent from mosaic areas, or localities, located in sectors 1, 2 and 3, as well as being unrepresented in inner urban areas up to 5 kilometres from the CBD.

**Table 6.10: Profitability of properties by mosaic region**

Mosaic <sup>(1)</sup>	Profitability category					
	Losses greater than profits		Losses equal profits		Losses less than profits	
	Number	Percent	Number	Percent	Number	Percent
11					1	0.5
12			4	2.6	2	0.9
13			5	3.2	8	3.8
14	1	1.5				
15						
22			6	3.8	7	3.3
23			4	2.6	7	3.3
31			1	0.6	7	3.3
32	2	3.0	12	7.7	7	3.3
41			1	0.6	8	3.8
42	3	4.5	6	3.8	16	7.5
43	2	3.0	5	3.2	9	4.2
44	7	10.4	13	8.3	15	7.0
45	11	16.4	15	9.6	10	4.7
46			2	1.3	4	1.9
47	3	4.5	5	3.2	6	2.8
48					2	0.9
51			1	0.6	15	7.0
52	1	1.5	7	4.5	15	7.0
53	5	7.5	4	2.6	4	1.9
54			1	0.6		
61			3	1.9	13	6.1
62	1	1.5	2	1.3	3	1.4
63	1	1.5	2	1.3	3	1.4
64					2	0.9
71			3	1.9	11	5.2
72	3	4.5	4	2.6	5	2.3
73	2	3.0	8	5.1	3	1.4
74	2	3.0	10	6.4	11	5.2
81						
82			1	0.6	5	2.3
83	6	9.0	7	4.5	7	3.3
84	8	11.9	9	5.8	4	1.9
85	1	1.5	1	0.6	1	0.5
86	8	11.9	14	9.0	2	0.9
<b>Total</b>	<b>67</b>	<b>100.0</b>	<b>156</b>	<b>100.0</b>	<b>213</b>	<b>100.0</b>

(1) The first digit in any mosaic code refers to the sector in which the mosaic region is located and the second digit refers to its zone.

Source: Extracted from stk\_dwgs.sav file

With dwellings which have returned a balanced performance in terms of generating capital gains and capital losses for their owners, there remains the dominance of sectors 4 and 8. Sector 4 contained 30 percent of these dwellings, with 20.5 percent located in sector 8. In sector 4 mosaic regions 44 and 45 were as dominant for this group as they were for the poorly performed group of dwellings. In sector 8 it is a similar story, with mosaic regions 83, 84 and 86 containing the largest proportions of balanced performance, and poorly performed, dwellings in the sector.

Although these two profitability groups share selected mosaic regions in some parts of the urban area, there are other locations where this does not occur. For example, dwellings which have returned a balanced accumulation record have quite significant occurrences in the inner mosaic regions of sectors 1, 2 and 3, which is in contrast to the geography of poorly performed dwellings.

The locational preference for dwellings which have generated more profits than losses for their owners is indisputably in mosaic regions closest to the city. Over a quarter of these dwellings are located in mosaic regions within 5 kilometres of the CBD, and half of these are located within mosaic regions 51 and 61, immediately south-east and east of the city area. Mosaic areas located between 5 and 10 kilometres from the CBD contain an even greater 28.2 percent of these dwellings. Again, just over half of these dwellings are restricted to mosaic regions 42 and 52. These patterns are unique to the dwelling profitability type, and its contrast with the geographies described for the other two profitability types may reinforce the possibility that the difference has been influenced by space, or locality, or even community.

Based on this evidence, the relationship between dwelling accumulation performance and space appears to be more clear cut at the mosaic region level, and this observation

is reinforced by the levels of correlation obtained between the three groups and shown in Table 6.11. There is a very strong locational correlation between properties which performed very badly and those which recorded a balanced performance. The best performed properties have a minimal association with the poor performers, and only a marginally better association with those that generated a balanced performance through time.

**Table 6.11: Correlation analysis of profitability categories distributed by mosaic region**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.697	0.077
Losses equal profits		****	0.168
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

These conclusions are supported by an index of dissimilarity analysis (see Appendix 11, Table A11.5) which indicates that, at the mosaic region level of analysis, the spatial patterns of the three profitability groups are at their most refined level, with the poor performing dwellings exhibiting the most constrained geography. The geography of the well performed dwellings is less clear cut than poorly performed dwellings, and the balanced performers are the most uniformly distributed group. As the definition of space in this discussion has become more refined, progressing from a sectoral to zonal to mosaic region definition, the possibility of interpreting a relationship between dwelling accumulation performance and location has increased, apparently due to definitional changes which has reduced the level of heterogeneity as the area has reduced. The relationship between space and accumulation has been reported by Thorns (1981: 215, 1989: 305), Hamnett (1989: 349) and Badcock (1989:

82-84), with each concerned to show that accumulation was related to the characteristics of an urban space which had been influenced by labour market, or socio-economic influences. Were the definition of space to be further refined in the current analysis, it might be that the relationship could be described with more precision. The concept of suburb is more spatially restricted than the mosaic region, and therefore the correlation between a dwelling's capital gains record and its suburb was examined (Table 6.12).

**Table 6.12: Correlation analysis of profitability categories distributed by suburb**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.797	0.647
Losses equal profits		****	0.594
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

On their own, these results are inconclusive. However, an index of dissimilarity analysis appears to support the notion that dwelling profitability characteristics are linked to location. These results, presented in Table 6.13, indicate that the spatial concentration of all three profitability categories, relative to the distribution of all dwellings, increases at the suburb level. The degree of concentration is most significant for the poor performance dwellings, but is also high for the other two categories. At the suburb level indices of dissimilarity have identified a relationship between space and levels of accumulation.

**Table 6.13: Index of dissimilarity of profitability categories distributed by suburb**

Profitability category	Index of dissimilarity
Losses greater than profits	60.4
Losses equal profits	35.3
Losses less than profits	30.2

Whilst it has been shown that levels of accumulation are related to spatial location, is it the case that certain factors might be at work to cause this relationship? In particular, does distance from the CBD influence the patterns which have been discerned? Data were obtained to compute the distance that each property was located from the CBD and this value was cross-tabulated with each dwelling's profitability category. The distribution of each dwelling type based on distance was then correlated, and the coefficients obtained are presented in Table 6.14. These results indicate a role for distance in influencing a dwelling's ability to return good accumulation results to its owners. Indeed, there is a negative relationship, albeit small, between good performers and bad performers on the basis of a dwelling's distance from the CBD.

**Table 6.14: Correlation analysis of profitability categories distributed by distance from the Central Business District**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.786	-0.045
Losses equal profits		****	0.516
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

Further, if distance were incorporated into the definition of suburb, by categorising suburbs by their distance from the CBD, there is every possibility that the correlation analysis would show similar patterns to those which have been obtained for the zonal, mosaic region and distance analyses. The results in Table 6.15 confirm the prediction.

**Table 6.15: Correlation analysis of profitability categories distributed by suburb arranged by distance from the Central Business District**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.793	0.093
Losses equal profits		****	0.502
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

Essentially, the conclusion from Table 6.15 and Table 6.14 is that the spatial distribution of each profitability category show some differences when compared on the basis of distance from the CBD. However, this is not to say that distance from the CBD, *per se*, influences the distribution of any profitability category. Indeed, when a correlation analysis was performed on a dwelling's level of profitability and the dwelling's distance from the city centre, inconclusive results were obtained, as shown in Table 6.16.

**Table 6.16: Correlation analysis of dwelling profitability and distance from the CBD**

Profitability category	Correlation coefficient
Losses greater than profits	0.1308
Losses equal profits	0.1848
Losses less than profits	0.0466

There are three conclusions stemming from the series of analyses presented in this section. Firstly, it would seem that location does influence the distribution of each profitability category, and this has been well illustrated by the index of dissimilarity analysis. Secondly, despite the influence of location on each profitability category it is nevertheless the case that each category will have a significant occurrence in each location. This phenomenon has been illustrated by correlation analyses performed on

the relationship between the spatial patterns, at different levels of aggregation, for each of the profitability categories. Thirdly, correlation analyses on dwelling profitability and their distance from the CBD would suggest that the best performing dwellings are likely to be located closer to the CBD than the other two categories. This conclusion is despite the low levels of correlation which have been presented in Table 6.16. This finding confirms, of course, well established theory (Alonso, 1964; Marsden, 1970: 80-82; Badcock, 1989: 86) that the demand for locations close to the CBD normally exceeds supply mainly for reasons relating to accessibility and dwelling style. At these locations it is the land component of the property which is contributing most to the property's capital performance. Therefore, it is to be expected that these dwellings will consistently accumulate positive returns for their owners. The implications in these findings for mobile households is that if they concentrate their mobility within a radius of 15-20 kilometres from the CBD they increase the probability that their ownership will result in a capital gain.

### **6.8.3 Profitability and housing demography**

In the context of mixed results for the influence of location on profitability, what other dwelling characteristics might impact on a dwelling's accumulation performance? In particular, can the demographic characteristics of houses, which were detailed in Section 4.3.1. be shown to influence the way in which a house performs during its accumulation career? To assess this question, each dwelling accumulation performance was crosstabulated with its style, age, condition, size and roof and wall material characteristics.



**Table 6.17: Relationship between dwelling style and accumulation performance**

Dwelling style	Profitability category					
	Losses greater than profits		Losses equal to profits		Losses less than profits	
	Number	Percent	Number	Percent	Number	Percent
Symmetrical cottage	1	1.5	3	1.9	15	7.2
Bay window villa					2	1.0
Villa			3	1.9	14	6.7
Return verandah villa					3	1.4
Louvre roof			1	0.6	2	1.0
Queen Anne					1	0.5
Single fronted cottage			1	0.6	5	2.4
Bungalow			10	6.4	33	15.9
Tudor			2	1.3	1	0.5
Spanish mission					2	1.0
Art deco			1	0.6		
Austerity			5	3.2	3	1.4
Conventional	34	50.0	74	47.4	74	35.6
Contemporary	6	8.8	11	7.1	13	6.3
Ranch	5	7.4	10	6.4	11	5.3
Spanish style			4	2.6	2	1.0
Boomerang	1	1.5	1	0.6		
Georgian	1	1.5				
Colonial	2	2.9	4	2.6	7	3.4
Poor conventional	1	1.5	3	1.9	3	1.4
High quality conventional			5	3.2	3	1.4
State bank bungalow					1	0.5
SAHT conventional	15	22.1	15	9.6	10	4.8
A frame			1	0.6		
High quality ranch			1	0.6		
High quality contemporary	1	1.5				
Mediterranean	1	1.5			1	0.5
Shack					2	1.0
Backender			1	0.6		
<b>Total</b>	<b>68</b>	<b>100.0</b>	<b>156</b>	<b>100.0</b>	<b>208</b>	<b>100.0</b>

Source: Extracted from stk\_dwgs.sav file

When style<sup>2</sup> is related to accumulation performance (Table 6.17) a number of points emerge. Firstly, the first dozen styles represent 39 percent of dwellings which were good performers during their accumulation careers, compared with 16.4 percent of balanced performers and a low 1.5 percent amongst poor performers. Furthermore, these styles represent dwellings whose popularity as a current building style waned

<sup>2</sup> Appendix 9 contains a description of the main house styles in the Adelaide area.

between 40 and 80 years ago (Department of Lands, 1987). For dwellings in these styles, 91.5 percent were built before 1950 and 86.4 percent before 1940. Moreover, among those dwellings built before 1940, 46 percent were located within 5 kilometres of the city centre, and 28.5 percent were located between 5 and 10 kilometres from the city. It is therefore highly likely that these dwellings have subjected to gentrification processes (Badcock and Urlich Cloher, 1981: 47-49; Hamnett and Randolph, 1984 263-264; King, 1989c: 867-868). Therefore, it may be the case that the factors accounting for the distribution of accumulation performances within the first 12 styles is similar to the forces which were identified in the previous section, and which acted on the accumulation performance of dwellings in the inner areas. Secondly, each performance category has high numbers represented in the conventional style, with the poor performing dwellings having 50 percent of their number in this housing style. As accumulation performance improves, the proportion of conventional dwellings contributing to the performance declines. Thirdly, similar patterns can be detected for SAHT conventional, Contemporary and Ranch housing styles. However, despite these observations, the correlation coefficients between the three performance categories is strongly positive, as shown Table 6.18.

**Table 6.18: Correlation analysis of profitability categories distributed by housing style**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.969	0.919
Losses equal profits		****	0.924
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

These correlation results suggest that the relationship of each performance category within each of the styles is, overall, very similar. In other words, there is an expectation that any particular style would generate similar levels of poor performing dwellings to balanced performers to good performers, and on this evidence it is not possible to accord to housing style some kind of role in influencing the accumulation performance of any dwelling.

In Table 6.19 the results for similar correlation analyses between other dwelling characteristics and level of accumulation performance is presented to show that with each of these, too, it is difficult to assign any level of contribution to these factors in causing the type of performance any dwelling is likely to generate.

**Table 6.19: Correlation analysis between profitability categories distributed by selected dwelling characteristics**

Dwelling demographic	Correlation between dwellings with:		
	Losses greater than profits <b>and</b> Losses equal to profits	Losses greater than profits <b>and</b> Losses less than profits	Losses equal to profits <b>and</b> Losses less than profits
Condition	0.986	0.940	0.969
Number of rooms	0.979	0.963	0.972
Roof material	0.975	0.789	0.922
Wall material	0.998	0.982	0.991
Age	0.829	0.716	0.508

Source: Computed from data extracted from stk\_dwgs.sav file

These correlations are extremely high, and would seem to demonstrate beyond any doubt that the capital accumulation performance of a dwelling is influenced not at all by any of the characteristics which have been assessed. Some of these are surprising, especially the non effect of condition and number of rooms on a dwelling's accumulation potential. Real estate agents emphasise, almost as their first recommendation to prospective sellers that a concerted effort be made to present the

dwelling in its best light, presumably because it will add to the price the dwelling will fetch at sale. However, the evidence has suggested that this factor contributes little towards the accumulation performance of the dwelling. There is a suggestion in the literature that size of dwelling (Badcock, 1989: 71) is a factor in generating capital gains, and therefore it should follow that larger dwellings should return more good performances than balanced performances than poor performance. If number of rooms is considered as a surrogate for size of dwellings, the results of the correlation analysis would suggest that this perceived relationship is not substantiated by the present research. The size of a dwelling can also be quantified by its area, measured in square metres. When correlation analyses are performed on the relationship between a dwelling's area and its level of accumulation the results are marginally different from those obtained in earlier analyses, as is shown in Table 6.20. In particular, there was less association between dwellings whose losses were greater than profits - poor performers - and good performing dwellings whose losses were less than profits. Relative to the other two relationships it suggests that on the basis of area, measured in square metres, there is less of an association between good performing dwellings and badly performed dwellings, compared with the level of association which could be expected between poor and balanced performers, and good and balanced performers.

**Table 6.20: Correlation analysis of profitability categories distributed by area (m<sup>2</sup>)**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.837	0.665
Losses equal profits		****	0.757
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

In all the sets of correlations, except that based on dwelling age, there is a consistent pattern in which the level of correlation between the two extreme dwelling accumulation performance - good and bad - is lower than the coefficients obtained for the good and the balanced and the bad and the balanced. However, they are not low enough to illustrate a spatial segregation between the two performance types. Therefore, it is not possible to argue a causal relationship between selected housing demography variables and a dwelling's accumulation performance.

## **6.9 Conclusions and implications**

The emphasis in this chapter has been upon investigation of the careers of houses, rather than the housing careers of households. The investigation has pursued four main lines of enquiry:

- The annualised accumulation performance of single dwellings over their lifetime and the annualised accumulation performance of the various ownerships which have occurred during a dwelling's career.

The analysis showed substantial variability in both the lifetime accumulation performance of dwellings and the level of accumulation generated for individual owners.

- The spatial characteristics of the three accumulation categories identified in the Investigative Strategy.

Although there were identifiable differences between the distribution of each accumulation category, further analysis revealed that no real relationship existed

between the proportion of dwellings in a given accumulation category located in any locality and the level of capital accumulation at that locality.

- The variability in accumulation rates generated for each owner by a specific dwelling.

Notwithstanding that near Central Business District locations produced the best capital gains performances within the housing stock, this analysis indicated that the best opportunities for real capital gain from ownership are obtained from owning a dwelling in the early part of its career, and after that point the likelihood increases that the next owner's gain will be less than that of the previous owner.

- The explanation of capital gains by dwellings

The data have suggested that market cycles have had no significant influence on the accumulation performance of dwellings. Moreover, the role of space has been examined with the conclusion that space, or location, as such is less influential than its underlying component - distance from the CBD. Similar conclusions were reached around an analysis of accumulation performance and house demography characteristics. Those styles most positively related to dwelling accumulation were generally located in areas situated close to the CBD.

Overall, the conclusion from this chapter's investigation is a lack of patterns and regularity in the accumulation characteristics of dwellings, which ultimately is influenced by the variation in accumulation performances which has been identified. There are several reasons which explain accumulation variation. Principally, sellers base their decision to sell and buy almost solely on the basis of nominal prices. Most sellers are unaware of the concept of adjusted prices. This, therefore, makes the house

market a poorly informed market. As an investment, house buyers are given remarkably little information. It is possible to get more information on the existence of salt damp or white ants in a building, and the state of its electrical system, than it is to obtain advice on its investment potential. In contrast, for example, share investors have an enormous amount of past history available for each stock, which is used to predict its investment future, and on which a decision to buy might be based. In a similar fashion, punters attending any horse racing meeting in Australia can purchase form guides which detail the performance history of each starter in each race, which can be used to inform any investment decisions which might be made. However, for buyers anticipating an investment in housing, no assessment, or statement, of a property's past performance is available.

Several implications follow from these observations:

- Owner-occupiers really are unable to predict the kind of accumulation outcome which will result from any given ownership.
- Mobile households move through a house-scape in which dwellings with different profitability histories are juxtaposed in any region, including suburbs, and within each profitability category there is huge variation in prices which have been paid in the past and which, presumably, will be paid in the future.
- These features of dwellings make predicting profit potential well nigh impossible, particularly as buyers have no way of knowing the past accumulation features which have characterised the house they contemplate purchasing
- Therefore, probability, or luck, is a factor which works to influence accumulation outcomes of ownership along with other recognised processes.

The significant and fundamental finding of this chapter is that, regardless of a dwelling's profitability category, the returns to owners have been subject to substantial variability, based on real prices. As households move through the city's housing stock there is a strong possibility that they will purchase a house which will return them a capital loss, simply because high price variability attaches to every dwelling. This explains the high proportion of mobile households which experience capital losses from ownership.

Owners cannot foresee how price variability will affect their accumulation outcomes from ownership and mobility. Therefore, how can dwellings likely to return a capital loss be avoided by mobile households? On the present evidence it would seem that they cannot be avoided. They have to be taken as they occur, and the household must hope that the loss at one location will be absorbed by a profit at the next. Such a conclusion implies that mobility models which are driven by economic rationalist approaches, particularly those centred around the significance of capital gains realisation, need to be questioned or be more precisely defined. That households nevertheless continue to maintain high levels of home-ownership must be due to an inability to understand the real equation for computing capital gain, or that there are other qualities associated with owning a house which take a higher priority for households than the need to make a capital gain from ownership.



## CHAPTER 7 CONCLUSION

### 7.1 Introduction

The intention in this chapter is to summarise the way in which the aims and objectives established in Chapter One have been addressed and to briefly recapitulate the major outcomes of the investigation. Subsequently, a number of theoretical implications deriving from the outcomes will be discussed, followed by a statement relating to several policy implications which have emerged and which have relevance to government bodies and other organisations. Finally, the research outcomes have produced a substantial number of questions which might be taken up by future research activity. However, at the outset it is important to make some comments on the nature of the data which were employed in the thesis.

### 7.2 The data

The findings of the thesis have been derived from analysis of a database which is quite unique. Its data are based at the individual household level and their reliability and accuracy have been guaranteed throughout the 23 year time frame of the research. In this sense they are superior to any temporal data which might have been collected by survey approaches, since respondents in such studies are unable to recall all past events with clarity and accuracy (Saunders, 1990; Badcock, 1994a).

The reliability of the data is especially pertinent on three counts:

- In the calculation of capital gains the house price data and the sales transaction dates have been unambiguously useful. They have enabled annualised capital gains to be computed, thereby enabling realistic comparisons of accumulation

performance between dwellings which had been owned for differing periods of time.

- For many dwellings, the database provided reliable details for area, in square metres, which has allowed capital gains comparisons between dwellings without fear that any observed differences might be unduly influenced by size variations between the dwellings.

These two unique characteristics of the database reflect the fact that housing is not an homogenous product (Fleming and Nellis, 1981: 1109) and that housing comparisons should be made only if allowances for house differences have been incorporated into the analyses (Jones and Bullen, 1993: 1411).

- A third characteristic of the database is its adjustment of house price data for inflation to enable meaningful comparisons of accumulation performance between particular dwellings.

For the exercise of linking mobility and house price information the data are superior to those which could have been assembled from any other source. Other sources exist to examine mobility, particularly electoral rolls and electricity authority records. Data enabling insights into capital gains generation from housing could be obtained from the Real Estate Institute or from Local Government Authority valuation records.

However, the over-riding quality of the data obtained for this thesis, which is not available for data from other sources, is that it simultaneously provides mobility and house price information for the same household.

### **7.3 Outcomes and theoretical implications**

In Section 1.5 of Chapter One eight major aims were established for investigation in this thesis. The main outcomes and implications for each of these have been detailed in Chapters Four, Five and Six. In this section, each aim is revisited briefly and the main findings are summarised before commenting on any implications which are suggested by the findings. A number of the findings have implications for policy and further research, and these have been assembled in sections 7.4 and 7.5.

#### **7.3.1 Mobility patterns**

The first aim sought to examine owner-occupier mobility patterns, with an emphasis on:

- mobility at both the intra-urban and urban-rural levels
- mobility patterns within and between the house and home unit sub-markets.

Several conclusions either reinforce or extend the understanding of mobility theory and the mobility process in Australian cities.

- Nearly half of all movers relocated five kilometres or less from their original dwelling.
- Of all moves, 11 percent were very short, involving distances of one kilometre or less.
- For households whose mobility occurred exclusively between houses, the distance moved between each ownership reduced and they demonstrated a tendency to buy and sell within the same suburb.

- Households which had owned houses before finally moving to a home unit generally moved only a short distance from their last house to their home unit.
- In contrast, for households which moved from a home unit to a house, the distance moved has tended to be maximised.
- More than 50 percent of moves occurred within the same sector, suggesting that residential moves are more likely to be radial than circumferential.
- Particular sectors within the urban area act both as dominant origin sectors and destination sectors.
- Most of the households in the survey had moved one, two or three times during the 23 years of the study period.
- Households demonstrating the lowest propensity to move were located in two opposite sectors of the urban area.
- As the propensity to move increases so too does the probability that mobility will occur in the house sub-market.

There are several implications stemming from these results.

- Households move within that part of the urban area with which they are most familiar.
- As households progress through their housing career, they quickly determine their preferred urban location and refinements to their housing goals are made through relatively short moves within that location.
- Household mobility is constrained by its socio-economic position.
- Mobility, in general, is unlikely to cause any change to existing social differentiation.

- Opportunity for wealth accumulation is not equally available to all households but is influenced by the characteristics of the urban location to which they are constrained.

There is an element of constraint imposed on participants in the mobility process which is undoubtedly influenced by factors related to a household's labour market position and the spatial variation of the housing market. These results are a re-assertion of the U-shaped relationship between mobility and labour market position argued by Quigley and Weinberg (1977: 54). In terms of wealth accumulation, these conclusions mean that most households' wealth accumulation will be generated from the urban location to which they are limited by their financial circumstances. Section 5.4 of Chapter 5 showed that there is a geography of accumulation in the Adelaide metropolitan area and therefore the degree of wealth generation for any household will depend on the accumulation characteristics of the area in which it is located.

An unexpected finding was that house to home unit mobility is the second most dominant type of mobility in the Adelaide housing market. This tendency is probably influenced by age selectivity in mobility, as older owners move from houses to home units. However, it does have planning policy implications for any ageing community and should influence the type of housing built in areas likely to be sought by older home buyers.

Not all mobility occurs within the metropolitan area, and the sample displayed tendencies to move from urban to rural locations and vice-versa. In fact 12 percent of movers were in these categories. Greater mobility occurred from urban to rural

locations than from rural to urban locations (Birtles, 1990: 71; Sant and Simons, 1993: 115-117; Bell, 1995: 91-92). More significantly, this tendency continued when the phenomenon of metropolitan overflow into adjacent non-metropolitan areas was taken into account. Further, the results seem to indicate that substantial proportions of these movers located to towns and regions whose recent population growth has been substantially due to in-migration by retired persons and those who, for other reasons, are not in the workforce. These findings lend support to many aspects of current population turnaround and counterurbanisation theoretical development. For mobility from rural areas to the metropolitan area, the nature of the origin locations would also suggest that factors associated with structural change in rural areas have contributed to the household's decision to relocate to the city.

### **7.3.2 Accumulation patterns and household net accumulation**

A second task was to detail the nature of any patterns of accumulation which had been generated by movers. In particular, households moving between similar and different dwellings types were compared to determine if levels of accumulation from ownership varied between groups. Such an approach has been advocated by Fleming and Nellis (1981: 1121), and is a considerable refinement on the approach employed by Badcock (1994: 618, 621), who has also analysed the housing history of households to determine the level of their capital gains or losses. However, he does not distinguish between the different types of dwelling that could be owned during any housing history. The findings indicate that housing type and housing characteristics do influence the magnitude of any accumulation that may accrue to

households. Based on nominal values, more than 90 percent of owners made a profit from owner-occupancy. Two significant implications derive from this finding.

- Home ownership is a virtual guarantee of wealth creation.
- The accumulation potential of ownership may drive the residential mobility process, especially as any dwelling must be sold to realise the accumulated wealth.

However, this representation of wealth accumulation from ownership is changed dramatically when the influence of inflation is taken into account. Using prices adjusted to 1989/90 levels, the data indicate that 33.8 percent of house owners and 40.3 percent of home unit owners made a loss from ownership. These levels of loss are obtained regardless of the method used to calculate loss, be it based on the simple difference between purchase price and selling price, or sale price expressed as a percentage of purchase price, or return on invested equity. This finding represents one of the key results from the investigation, and it has two critical implications:

- The prevailing view that home ownership is a guarantee for wealth creation must be qualified.
- The relationship between capital accumulation and residential mobility needs to be carefully examined to determine whether accumulation is a powerful factor in driving the mobility process.

The level of real losses incurred by households has tended to increase with the onset of rapidly increasing inflation from the early seventies (see Table 5.5). It is likely, therefore, that the relationship between accumulation and mobility has changed since that time. In the post World War Two period, up to the end of the sixties, inflation

levels were relatively low and caused house prices to increase at rather low rates. House prices tended to keep up with inflation, and if demand factors were also at work, then a “profit” could be made from ownership. However, from the middle of the 1970’s, galloping wages and prices inflation characterised most western countries and in this environment house prices rose at rates not hitherto experienced. Housing came to be regarded as an investment (Harris and Hamnett, 1987: 175; Smith, 1987: 165-179; Clark et al, 1994: 139; Maher, 1994: 7) rather than a consumption commodity, and in this investment context there existed a probability of financial loss from ownership as well as a probability of profit.

It could be argued that before the 1970s the residential mobility process may have been driven by the accumulation potential of housing created in a relatively low inflation, and steady demand, environment. Since the seventies, however, it is likely that the relationship between accumulation and mobility has changed under the influence of a different inflation regime.

The evidence that up to one third of owners accrue an accumulation debt through ownership is balanced to a degree by other results which indicate that positive accumulation outcomes will result for households which move a number of times. Tables 5.22 and 5.23 have shown that the likelihood of a household making a substantial loss from ownership reduces with the number of moves made by a household during its career. This could well be explained by the fact that the home owning households are gaining in economic capacity over time and are at the same time on a path to upgrading dwelling size and amenity. Part of that upgrading is achieved by moving dwellings but part may be occurring through renovation.



Because the study's sample has been confined to households which have been owning all stages of the mobility process, it is likely that upgrading will be a major feature.

The research has also shown that as the number of moves made by a household increases so too does the occasional chance of making substantial profits. However, for any household, the possibility of sustaining large capital gains from one ownership to the next reduces with the number of moves it makes. Therefore, the mobility process can give some assurances to households in terms of wealth accumulation "at the end of the day", but those assurances are tempered with a number of provisos, each of which point to the variability which surrounds house prices and therefore the probability of accumulating wealth from any single ownership.

### **7.3.3 Housing upgrade and equity release**

The third aim involved two strategies:

- an examination of the relationship between residential mobility and housing upgrade
- investigation of the levels, and incidence, of equity release to households on the sale of their dwelling at each stage of their housing history.

House size and price data were used to determine whether a household upgraded its accommodation through mobility. House size is typically measured by number of rooms, number of bedrooms or area (m<sup>2</sup>) of dwelling. The database developed for the thesis had recorded information for number of rooms and actual area. However, rather than use two sets of data which might produce somewhat similar conclusions,

preference was given to the area (m<sup>2</sup>) variable, as it was considered to give a more precise statement on dwelling size change with mobility.

The first point to make is that the concept of upgrade might normally be defined as household mobility from a home unit to a house. In this context, the results are conclusive with 80.5 percent of home unit owners moving to a house. However, the concept of upgrading can also be applied to movers who move between the same type of dwelling.

House to house and home unit to home unit movers exhibited a number of similar characteristics in terms of upgrading their dwelling through mobility. Most of these movers increased the area of their dwelling in incremental steps, rather than through giant increases. Whereas there was a tendency to increase the size of dwelling with mobility, there was a lesser tendency to increase the condition of the dwelling.

Finally, the majority of movers shifted to a dwelling which was more youthful than their previous house. These observations have implications for the direction of mobility in urban areas, suggesting a tendency to radial movement outwards along the lines suggested by filtering theory (Kendig, 1984: 273; Clark, 1982: 39; Cadwallader, 1982: 460; Hamnett, 1991: 206-207).

The behavioural similarity of H-H and HU-HU movers would indicate that the two groups are stepping up at each move. For the former, these steps would seem to represent a process of achieving the household's ultimate housing goals (Michelson, 1977: 35; Strassmann, 1991: 760) whilst for the other group it may be that their steps are designed to acquire a suitable capital base before moving into house ownership. Of course, such an implication is subject to confirmation through further research.

In comparison, HU-H households upgrade boldly, in terms of the area of their new dwelling and H-HU movers divided into three distinct groups:

- The first group maintained the size of their former house at the new unit.
- The second group actually increased their dwelling size by the move into a home unit.
- The third group represented the reductionists, whose unit was smaller than their previous house.

Finally, HU-H movers have bought a house of generally low condition and reasonable age, while the H-HU group have acted in the opposite way.

The concept of housing upgrade through residential mobility can also be measured using price paid comparisons for the origin and destination dwellings. The fundamental conclusion is that, in making a move from a house to a house, a substantial majority of households seek to buy a house more expensive than the one they previously owned. Moreover, this observation is regardless of the number of moves that the household has made during its housing career. One important qualification must be made to this observation. The proportion of households upgrading in this way reduces with the number of moves, so that with the second and subsequent moves made by a household the tendency to upgrade reduces, with a corresponding increase in the tendency to buy a cheaper house by these households. When households move from a home unit to a house they buy a house which is more expensive than their home unit, whereas for house to home unit movers the priority would seem to be more significantly related to equity release considerations.

Considerations of equity release have been confined to house to house mobility.

Equity release has been identified by computing ratios of the selling price of the origin dwelling and the purchase price of the destination dwelling. High SP:PP ratios represent equity release. The principal finding in this regard is that for households which made two or more moves, there is a tendency to upgrade on the first move, and then to have increasing SP:PP ratios for any subsequent moves. These results indicate that equity release is a phenomenon associated with the residential mobility process.

It follows, then, that considerations of equity release should have considerable implications for the mobility process. Several factors underlie these implications.

Firstly, equity release is a separate concept from capital accumulation. The latter is the difference between the purchase price and the sale price of any dwelling, whereas equity release is represented by the difference between the sale price of the former dwelling and the purchase price of the next dwelling. More significantly, it is possible to have a situation where equity release could occur regardless of whether a household had incurred a capital gain or a capital loss from ownership. Secondly, equity release is realised at the household's discretion, unlike capital accumulation. It can be accessed provided the household is prepared to reduce their housing requirements. In this sense, it is a consequence of downgrading. Thirdly, the household is able to easily calculate the size of any equity it might want to release by simply relating the proceeds they have collected from the sale of their previous dwelling and the price they are prepared to pay for their next accommodation. Given these characteristics of equity release, it may very well be the case that it has a more significant relationship to the residential mobility process than has capital

accumulation. Its relationship to mobility may be as strong as the nominal level of accumulation, or the price received for the last dwelling.

#### **7.3.4 Wealth gains and their impact on traditional class barriers**

Through its fourth aim the research endeavoured to resolve whether huge wealth gains are possible from ownership, with the express purpose of:

- providing further evidence to assess the theorised relationship between wealth accumulation and the erosion of traditional class barriers (Saunders, 1978: 246; Pratt, 1986a: 367; Ball, 1985: 27)
- contributing to the debate between those who argue a powerful role for accumulation (Pahl, 1975: 291) and those who believe it is over-rated (Edel, 1982: 215).

The clearest finding has been that huge wealth gains may be possible from home ownership, but they are far from universal. Not only has one third of owners made a real loss from ownership, but among those who have made a real gain, more than half fall into the two lowest categories of real gain. It is, therefore, difficult to envisage how these kinds of results could work to erode traditional perceptions of class (Saunders, 1978: 246; Kemeny, 1980: 373; Saunders, 1984: 203; Pratt, 1986a: 367; Doling et al, 1986: 51; Hamnett and Randolph, 1988: 382). For many households there is no truth to the claim that a family could earn more in a couple of years than in a lifetime (Pahl, 1975: 291). However, it has not been possible to extend the research results to a consideration of the relationship between levels of gain and loss and a household's labour market position so as to provide some commentary on recent

conclusions by Badcock (1994: 626) and Forrest and Murie (1991: 64) that levels of wealth accumulation from ownership are occurring in such a way that they are favouring high socio-economic groups and therefore working to create a more intensely differentiated society. However, given that this investigation has demonstrated that household mobility and capital accumulation potentials are spatially differentiated (see Section 7.3.1) this relationship may be confirmed.

### **7.3.5 Capital gains and dwellings age, length of ownership and location**

The literature centred around capital gains generation has theorised a relationship between a dwelling's age, the length of its ownership and its location, and the size of any capital gain it creates. The intention of the fifth aim was to analyse these relationships using actual house price data which were adjusted to discount for inflation, and using variables which controlled the level of gain for size of dwelling and length of ownership.

There is no clear cut relationship between the age of a dwelling and the level of gain it generates. It is clear that the relationship between age and capital gain is variable, and this revelation represents further uncertainty for households which endeavour to tailor their residential mobility to increased prospects of capital accumulation. Analyses conducted (see Table 5.23) have shown that although there is a positive relationship between levels of accumulation and time owned, the size of the correlation is very small. The reason for this lies in the wide variation observed in house prices, and the implication for mobile households is that although real gains are directly linked to the time that any dwelling is owned, the size of any gains is extremely variable.

Findings related to the spatial variation of capital gains are significant because individual dwelling data, rather than aggregated data, have been employed. It has therefore been possible to create, for each dwelling, a per year per m<sup>2</sup> measure of accumulation which has ensured that the accumulation performance of every dwelling is comparable, and any variations have not occurred due to differences in size or the time that a dwelling has been owned (Saunders, 1990: 131). The capital accumulation statistical surface in the Adelaide metropolitan area reflects the prevailing distribution of land value, in that highest levels of capital gain are located nearer the CBD, and there is a tendency for capital gain to diminish with increasing distance from the city centre. These results reinforce earlier findings for Adelaide (Badcock, 1994a: 625), in which owners in the inner areas obtained better levels of capital gain from ownership than those owners located in the outer suburbs (Hamley, 1992: 21). However, within this generalised distribution there are areas which have generated capital gains well above any expectations based on the area's generalised land value and areas which have produced levels of gain which are less than those that might be predicted by the area's prevailing land values. This finding lends support to existing theory related to circulation of capital, capital switching and property cycles related to supply and demand factors at work in particular areas (Daly, 1988: 140; King, 1989a: 445-453; King, 1989c: 859; Beauregard, 1991: 93), but it also begs further research to examine, more precisely, the nature of the processes at work to cause these patterns.

In terms of implications for residential mobility, it is clear that there are accumulation signposts (see Section 5.4 and Figure 5.1) that can direct households to areas where real gains are possible, but these signposts must be interpreted carefully in the light of the variation which has been demonstrated.

### 7.3.6 Accumulation and property cycles

The sixth aim required that actual house price data and the accumulation levels generated by them be matched with real estate market conditions which have prevailed throughout the study period so that the impact of cyclical “boom” and “bust” periods on both mobility and accumulation could be gauged.

Normally, it might be expected that home buyers would buy in a depressed market and sell in a buoyant market to ensure maximum profit from ownership. The results here indicate that significant proportions of owners buy and sell in each of the four possible market conditions based around boom and bust conditions. For example:

- Of those owners who made a profit from ownership, only 15.9 percent bought low and sold high.
- In comparison, among those owners who made a capital loss from ownership only 19.7 percent bought high and sold low.
- The largest group of households generating a capital gain from ownership bought their dwelling during boom market conditions and sold during depressed market conditions.
- For households which made a capital loss from owning their home, the largest group bought their dwelling during a bust period and sold during similar market conditions.

These findings are at odds with those of Badcock (1994a: 618) who identified a general relationship between gains and losses and the state of the market at the time of



purchase and sale. However, his findings were based on a three year property cycle between boom and bust markets and is therefore a more generalised approach than that which has been used here. It is argued, then, that the present results are more likely to reflect reality than those presented in the earlier investigation. It raises a number of interesting observations concerning the relationship between capital gains and losses and market conditions (see Section 5.7.4) and these have significant implications for the residential mobility process and its relationship to capital accumulation. In particular, it is clear that owners seem not to be aware of whether the market is bullish or bearish at the time they buy or sell. Indeed, trying to anticipate the market, and using this to implement a 'gains realisation strategy' into the decision to sell and move, is almost impossible to do as one can never be sure when the market has peaked or bottomed. These considerations notwithstanding, if owners were aware of market conditions at the time they moved, the results which have been obtained would suggest that households place more importance on other factors, possibly related to workplace changes, family needs or retirement, in arriving at the decision to move. In other words, the great majority of households are guided by factors other than the amount of capital gain they are likely to realise, perhaps with the exception of those seeking to withdraw equity from their housing investment. It may well be that a large proportion of households have, effectively, little choice in when they sell, as other factors take the question of timing out of their hands. Therefore, market conditions and their implications for wealth generation may play only a minor role, or perhaps no role, in the household's decision to move.

### **7.3.7 Households which left the real estate market**

With the seventh aim, its goal was to identify households which left the ownership market between 1986 and 1991 and determined reasons for their departure. Further, the subsequent location and housing tenure of these households would be investigated, with the expectation that their destination details might provide useful, and possibly new, insights into the internal migration process. Finally, it was hoped to relate the circumstances of their departure to capital accumulation levels realised during their time as owner-occupiers

The major reasons for leaving the market were movement interstate, divorce, death and return to the rental sub-market. Moreover, the majority of each category incurred a loss on their investment in housing. For households in the first two categories, their loss from ownership is most likely to be caused by the forced nature of their sale, particularly so soon after its purchase. For owners who sold to move into the rental market, there are some additional conclusions. The majority of these were new to ownership, had bought relatively cheap accommodation, had high levels of gearing and were very probably overcommitted in terms of their ability to afford their housing. In these results there is the suggestion that deregulation of the housing finance market from 1984 made it possible for economically marginal households to become owner-occupiers, often for the first time. In this financial environment it may be that these households have moved into ownership, encouraged by its potential, only to quit the market upon realising that they could not afford the costs of owner-occupancy.

Overall, the principal conclusion is that in any community where there is a high incidence of mobility caused by divorce/separation, interstate mobility or marginal ownership, capital losses are likely to be substantial. In these circumstances, a relationship between mobility and accumulation in which one drives the other has no substance, and the capital loss incurred by the move has to be absorbed as one of the costs associated with the move.

### **7.3.8 The capital gains performance of the housing stock.**

The last aim envisaged an investigation to explore the capital gains generation capability of the actual housing stock, rather than the households which had moved through the stock, to resolve a number of pertinent questions:

- Has each dwelling provided enduring rates of return for each of its owners or have returns been cyclical, or even spasmodic?
- Have all dwellings generated the same rate of return at the same time, representing a form of temporal harmony in terms of the creation of capital returns?
- Is there variation between housing classes, or housing types, in the generation of benefits, in that the style, or the size, of a dwelling may influence the financial performance of the dwelling?
- What is the role played by location in the ability of a property to generate capital gains?

As was the case for individual households, the significance of using adjusted values to discount for inflationary effects on accumulation levels cannot be overstated. There is a strong similarity between the results for dwelling histories and those obtained from

an analysis of household histories reported in Chapter Five. Significantly, these two sets of similar results have been obtained from two very different samples. There is, in these results, a strong cautionary message to households which believe that wealth accumulation is guaranteed from home ownership. If other costs, which any household can incorporate into the equation, are taken into account, then the level of losses would be considerably higher. It raises again the question of the level of information which households employ in the arriving at the decision to move, particularly if the decision to move is influenced by considerations of the “profit” which has been made from the household’s current ownership.

Dwellings whose lifetime accumulation performance was categorised as “poor” displayed a geography with distinctive sectoral dimensions, with highest concentrations located in suburbs which were typically developed from the mid sixties onwards. Dwellings which had produced a balanced accumulation performance showed a zonal distributional pattern with highest concentrations nearest the CBD, while the best performed dwellings were characterised with a “potted” distribution which seems to pick out the metropolitan area’s highest socio-economic locations. In addition to these patterns, it was shown that dwellings, *per se*, are capable of returning gains or losses to their owners which fluctuate widely around their performance annualised over an entire career, and these findings have echoed those of Forrest and Murie (1989: 30) who concluded that “...substantial variations in housing equity will result from the specific house price inflation histories of particular dwellings, in particular streets, in particular towns, in particular localities in particular regions”. Dupuis (1992: 43) has referred to stratified capital gains rather than use the concept of variation. The implications of variable accumulation for residential

mobility are substantial. Essentially, mobile households should be wary of basing mobility decisions on the assumption that the move will generate capital gains, and they should be alert to the fact that capital gains or losses from ownership are subject to huge variability.

Substantial variability has been observed with both the spatial variation of profitability categories and the level of capital gain or loss which a dwelling could produce. As the variability in each of these had implications for residentially mobile households, some explanation of the variability was sought. The role of location within the metropolitan area was examined for evidence of its influence on the observed variability. A variety of measures for location were employed, including sectors, zones, urban mosaic regions, suburbs and distance from the CBD. The conclusion reached from this analysis was that location did not overly influence the distribution of dwellings with specific profitability characteristics. Therefore, it seems that no real implications for residential mobility derive from considerations of the influence of location on dwelling profitability, except that areas closest to the CBD provided an increased possibility for profit than did locations more distant from the central business district. The influence of factors relating to house style, and other housing demographic variables, have been shown to have no significant influence on the profitability of dwellings, with the proviso that those styles whose age tends to locate them close to the CBD have a heightened potential to produce capital gains for their owners. Therefore, these findings cannot provide direction for mobile households by guiding them towards housing choices in areas where their chances of accumulation from ownership might be increased.

#### 7.4 Policy implications

The finding that substantial proportions of owners realise a capital loss on moving suggest some policy implication, be they for government, or their agencies, or real estate industry organisations, related to:

- consumer education of the significance of inflation
- government and media promotion of the housing market
- incentives to lower the qualifications for home ownership.

In South Australia the Department for the Environment and Planning (DENR) does publish aggregate data for houses and home units, at the local government area, which are adjusted to show the influence of inflation over the previous year. But it may be that the meaning and interpretation of these data need to be more rigorously explained to consumers so that its relevance at the household level can be more fully appreciated, particularly in determining the level of real gain that a dwelling might afford to its owners upon sale. The significance of consumer education on the relationship between inflation and house prices becomes more critical as the western world moves into a low inflation economic environment. When inflation is high, cyclical falls in real prices for housing are masked by nominal gains in prices (Scamps, 1997: 7), as has been emphatically demonstrated in this research. However, in a low inflation environment, stagnant or declining house prices have an immediate effect on a household's economic investment position in the housing market.

Opportunities for this type of education campaign lie with the Australian Bureau of Statistics, the Housing Industry Association and especially the media.

The importance of any strategies designed to raise the consciousness of home buyers is heightened by a number of developing tendencies. In particular, whenever the real

estate cycle begins to recover from a trough, various media outlets begin to encourage the virtues of ownership, which tends to reinforce a number of well established myths. Governments not only welcome such “talking up” of the market, they encourage it further, whenever possible, through strategies to bring interest rates down so as to encourage home purchase and new house construction. Moreover, governments regularly devise schemes to make it easier for home ownership to be contemplated, thereby tempting into ownership groups for whom previous regulations had not enabled ownership. In other words, there seems to be a developing tendency to bring down barriers which had previously existed and in the process increase the range of home owners. While these developments are good for industries which revolve around the fortunes of the housing market, as well as for government which taxes most transactions of the housing market, it may be that these developments work to further marginalise sections of the home ownership community.

These groups need to be aware that the incentives to home ownership are being made at the same time as labour markets are becoming increasingly deregulated and wage increases more spasmodic. In a rapidly evolving economic environment such as this, there are groups in the community who need to be more informed in making their decision to buy into the market on the basis of rule changes principally designed to stimulate the market. For without such an education campaign, some of these owners risk marginalisation through changing interest rate levels, mortgage repayment difficulties (Hamnett, 1997: 142), forced sale in a stagnant or declining market and the possibility of real capital losses of the kind which have been identified in this thesis. The clear finding that the majority of owners realise a capital gain on moving may

indicate policy implications related to:

- taxation of capital gains from owner-occupied housing
- taxation of imputed rent from ownership
- death duties imposed on inherited dwellings

At no time in Australia's history has capital gain from owner-occupied housing been taxed, and the key characteristics of this concession, together with comparisons from other countries, were detailed in Section 3.3.1. Significantly, therefore, homeownership can provide owner-occupiers with an untaxed source of income which is not available to other housing tenures. Further, the evidence (Badcock, 1984: 184 and 217; ABS, 1992b: 323) is that owner-occupied weekly housing costs are lower than tenants' rental repayments. The difference between the two costs can be regarded as a cash advantage, or imputed income, which accrues to the home owner and which is untaxed. As well, the notion of inherited housing wealth means that financial and taxation advantages enjoyed by owner-occupiers at the expense of other tenures can be carried across generations and perpetuate inequalities engendered by the housing system.

The non taxation of capital gains and imputed rent and housing wealth inheritance are not tenure neutral and contribute to significant and enlarging equity differences between tenures. If these matters were to be confronted to achieve change then number of policy initiatives would need to be implemented. In particular, capital gains derived from owner-occupancy may need to be taxed, perhaps in the same way that profits from share equities are taxed, and the politically difficult notion of taxing imputed rent from ownership would need to be considered. Furthermore, policies related to estate duties, or death duties, could be considered so that the renting sector



is not financially disadvantaged through concessions specifically directed at homeowners.

## **7.5 Future research directions**

In any research both the limitations of its data and the outcomes point towards further investigation which could be undertaken to extend the level of understanding around a particular issue. This section comments on a number of such directions.

### **7.5.1 Labour markets and housing markets**

The importance of relationships between a household's labour market position and its housing market position has been emphasised by a number of researchers, in particular Thorns (1982), Hamnett (1984; 1991), Hamnett and Randolph (1988), Forrest and Murie (1991), Coombes, Champion and Munro (1991) and Badcock (1994). Ideally, the next stage of research suggested by this thesis is to survey the sample households so that not only might social and economic data relating to them be obtained, but also data relating to attitudes, motivation and knowledge of the housing market. These additional data would be enormously important in validating many of the results which have been presented. However, mounting this type of exercise would be a huge task, involving either a mail based survey or a personal interview approach. The former is subject to difficulties associated with locating these households and the certainty of poor response rates, while the latter is extremely time consuming.

### 7.5.2 The capital gains equation

In the computation of capital gain there is a temptation to use apparently more sophisticated formulae to compute capital gain, so that the effect of housing costs such as mortgage interest and buying and selling charges, insurances, rates and taxes, repairs and maintenance, and opportunity costs might be taken into account (Peiser and Smith, 1985: 348; Duncan, 1990: 200-201; Dupuis, 1992: 29-30; Bourassa and Hendershott, 1993: 36). As well, there is the phenomenon of rent imputation, and its implications for capital gains outcomes for owner-occupiers, and the influence of renovation and extension costs in the real, or full, calculation of accumulation created by a dwelling during any ownership. The overwhelming problem with all of these factors is their measurement with an acceptable degree of accuracy. Typically, models which have sought to take these costs into account employ estimates of them, simply because it is too difficult, if not impossible, to obtain them for each and every household. Even where local authorities might have data at the household level relating to the cost of extensions and renovations, there are difficulties associated with their use, because they are usually estimates made at the approval stage of the work, and there is no follow-up by the local authority to determine whether the work was completed at, above, or below, budget. The dilemma, then, for the researcher using these kinds of estimates is how representative are any answers obtained? The challenge is to develop a research methodology whereby these factors can be incorporated more readily into the capital gains equation than is presently the case.

### **7.5.3 Home owners' attitudes to capital gains and inflation and their impact on mobility**

In terms of the relationship between mobility and capital accumulation, there is scope for substantial further research, particularly in terms of exactly what owners understand about the concept of capital gains and its relationship to prevailing inflation levels and its significance in the decision to move and to relocate to a particular dwelling and location. If future research showed that the concept of real gain or loss was not appreciated by movers, and that their concept of capital gain was represented only by the difference between purchase price and sale price, then it would be possible to accord to accumulation a significant role in driving mobility. However, if it were shown that movers are aware of real gains made from ownership then, even on the basis of results from the present research, it might be that for a significant proportion of movers the influence of accumulation on mobility is low and is influenced by other more significant factors. On the other hand if, on becoming aware of the implications represented by the difference between nominal and real capital gain, potential movers reconsidered their decision to move, then the implications for mobility may be significant.

Another significant consideration is whether the relationship between selling price of the previous residence and purchase price of the new residence is a more important influence on mobility than capital gain considerations from ownership of a household's previous residence. The important point here is that if these two prices do influence the mobility process, then they are not subject to any inflation considerations, as sale and purchase normally occur within a fairly short time of each

other. Such an “inflation free” consideration to mobility may be more easily accommodated by households than any decision based around adjustment of purchase price to take account of inflation during the period of any ownership.

#### **7.5.4 Investment and holiday properties in housing histories**

The research has shown (see Table 4.3) that a significant number of households have owned properties within their housing history in which they have not lived. These properties are clearly a part of the household’s accumulation equation but whether they are consciously considered in the household’s accumulation equation is moot. It may be the case for non-residential properties such as units and rural properties which might be seen as an investment, but it may not be the case for properties which have been bought more for leisure activities, such as a holiday house or rural retreat. As these properties are a feature of many housing histories it is tempting to know what contributions they have made to wealth generation for the households which have owned them. Further, it would be useful to know whether these aspects of housing histories are confined to particular types of households or whether they have a widespread occurrence throughout the socio-economic spectrum.

#### **7.5.5 Explaining housing downgrades**

It might be expected that all moves would result in an upgrade (Maher and Whitelaw, 1995: 3). Why would a household shift if it meant a downgrade? Despite this expectation, the results indicate that there is a substantial proportion of moves which do, in fact, result in a housing downgrade. Additional data are required to test the hypotheses that downgrading may be associated with the age of mobile owners, their

labour force status or changes in it, the death of a partner or the breakdown of a relationship, or factors related to housing affordability. It may also be the case that some households deliberately downgrade their accommodation with the express intention of remodelling the building. The gentrification process has undoubtedly created many movers of this type. In this context, downgrading may not be an appropriate description. Answers to these questions therefore represents several areas for further investigation.

#### **7.5.6 Capital loss and equity release**

The present research has shown that mobility has implications for equity release and has identified two pertinent questions. Firstly, is there a relationship between capital loss and equity release, in that if a household is aware of a capital loss is there a tendency to compensate for this by acting to achieve equity release? Secondly, how do households which have made a capital gain behave in terms of both upgrading and equity release? Do they upgrade exclusively, or do they balance in some way their levels of upgrade and equity release?

#### **7.5.7 Financial markets deregulation, ownership and mobility**

The current results offer some support for the view that financial markets deregulation in Australia during the eighties affected the cost relativities between owning and renting and therefore encouraged a new group of owners into the market. Similar financial environments in the UK created a new diversity and social complexity in the owner-occupancy market to the point where previous generalisations around the desirability and financial advantages of ownership were no longer sustainable (Forrest

and Murie, 1986: 62; Munro, 1992: 8; Gentle et al, 1994: 189). Accordingly, there remains considerable scope for further investigation of the significance of this era on capital accumulation and residential mobility.

## **7.6 A closing comment**

If there are few signposts directing movers towards dwellings at locations which can reliably be expected to generate capital gains, what are the implications for accumulation from mobility? Firstly, when households move, they move within a market environment whose component dwellings consistently produce variable profits or losses for their owners. Secondly, factors influencing the capital gains potential of their dwelling at the time of purchase may not operate throughout the period of their ownership, so that predicting the accumulation performance of the dwelling may well be impossible. There is therefore an element of chance associated with any accumulation success from ownership. It is not the first time that chance, or luck, has been assigned a role in the variable generation of capital gains (see Munro and Maclellan, 1987: 74). Can the outcomes from these implications be over-turned? It would seem unlikely for as long as movers retain a number of their present behavioural characteristics. In particular, financial caution seems to be relegated to a low priority by other factors affecting the decision to move. This possibility has been discerned in a Cardiff study, which concluded that movers did not seem to have capital accumulation actively in mind when they shifted. Instead, the move seemed to be convenient for other reasons (Davies and Pickles, 1991: 647). Elsewhere, it has been observed that there is little evidence that residential mobility is related to household goals concerned with maximising financial gain (Murie, 1986: 354; Forrest

and Murie, 1989: 30; Forrest and Murie, 1991: 87; Clark et al, 1994: 139). Also, nominal values are used almost exclusively in arriving at any economic justification for a decision to move and, it would seem, very little recognition is paid to whether ownership has produced a positive return on invested equity. Furthermore, it would seem that most home owners attach more significance to the belief that once into ownership, they will always be able to buy another dwelling for at least the same price as that which they received for their previous dwelling, and that this is a more fundamental reality to home ownership than the level of real capital gain or loss (Dunstan, 1996: 14). It is also likely that owners attach more significance to the possibility of equity release through housing downgrade than whether their ownership has generated a real capital gain.

For as long as these implied behavioural characteristics exist in household decision making, assessments of accumulation levels based on adjusted values might very well be purely academic and of little relevance to the decision to move. Moreover, it may not be productive to seek a strong, possibly causal, relationship between accumulation and mobility. If, however, there were opportunities for households to determine the accumulation performance of their dwelling during their ownership, or the past accumulation performance of the dwelling to which they expected to move, then the relationship between mobility and accumulation might become more significant.

Informing owners of the real level of accumulation for any dwelling could be achieved in a number of ways, and it could be that such an information service could become a part of the housing industry. Were changed attitudes on this matter to be instilled into movers, so that the real possibility of large losses, as well as large gains, were an inherent part of the mobility process, then perhaps the propensity to move

might reduce, and new parameters would be included in any housing adjustment model employed by households to decide whether or not to move.



## APPENDICES

### Appendix 1: The housing history file

Table A.1.1 presents the coding schema used to code each household's real estate ownership details into the housing history file.

**Table A.1.1: Housing history file coding system**

Variable Number	Description	Code
1	Reference Number	Enter Reference Number
2	Surname	Enter Surname
3	Initials	Enter initials
4	Owner characteristics	1=One set of initials (eg, KR) 2=Two sets of initials (eg, KR & CJ) 3=One set of initials, plus Anr 4=One set of initials, plus Ors 5=None of the above
5	Notes on this record?	1=No 2=Yes
6	Number of properties owned by this household	Enter number of properties owned
7	Reasons for leaving market on sale of last property	1=Death  2=Divorce 3=Interstate or overseas move 4=Don't know
8	Tenure at this property	1=Owner-occupier who owns no other property 2=Owner-occupier who owns other property 3=Landlord who is owner-occupier at another property 4=Landlord who owns other property but who is not owner-occupier at any of them 5=Landlord who owns no other properties 6=This property is vacant land and owner is owner-occupier elsewhere 7=This property is vacant land and owner has other property(ies) but is not owner-occupier at any of these properties 8=This property is vacant land and owner owns no other properties 9=This property is second family home or holiday house 10=Cannot state 11=Business property
<b>If tenure code is 3 or greater, code the following details</b>		
9	Owner's residential suburb	Enter suburb
10	X co-ordinate	Enter X co-ordinate
11	Y co-ordinate	Enter Y co-ordinate
12	Postcode	Enter postcode
13	Tenure change during ownership?	1=No 2=Owner-occupier to Landlord 3=Landlord to Owner-occupier 4=Built house on vacant land and became owner-occupier 5=Built house on vacant land and became Landlord whilst Owner-occupier at another property 6=Built house on vacant land and became Landlord whilst owning other property 7=Built house on vacant land and became Landlord with no other property 8=Other 9=Cannot state 10=Became second family home or holiday house

## For all properties, code the following

14	Street number	Enter Street number
15	Street name	Enter Street name
16	Suburb	Enter suburb
17	X co-ordinate	Enter X co-ordinate
18	Y co-ordinate	Enter Y co-ordinate
19	Postcode	Enter postcode
20	Allotment number	Enter allotment number
21	Purchase price	Enter purchase price
22	Purchase date	Enter purchase date
		<b>Note: Enter 1/1/67 if property purchased before 1968</b>
23	Mortgage	Enter mortgage amount
24	Purchase price notes	1=OK 2=Obtained through will 3=Obtained through gift 4=Influenced by divorce 5=Obtained through an agreement 6=Sub-divided from an previous property
25	Number of rooms	Enter number of rooms
26	Condition of property	Enter condition of property
27	Area of dwelling, m <sup>2</sup>	Enter area of dwelling
28	Year dwelling built	Enter year
29	Roof material of dwelling	1=Tile 2=Galvanised iron 3=Corrugated asbestos 4=Steel decking 5=Imitation tile 6=Slate 7=Shingles 8=Other
30	Wall material of dwelling	1=Brick 2=Iron 3=Rendered 4=Asbestos, weatherboard, log 5=Stone, freestone 6=Bluestone 7=Basket Range stone 8=Block (including Mount Gambier stone) 9=Other
31	Style	1=Settlers Cottage 2=Colonial Cottage 3=Symmetrical Cottage 4=Kingston's architecture 5=Bay window villa 6=Villa 7=Return verandah villa 8=Louvre roof 9=Queen Anne/Art nouveau 10=Single fronted cottage/villa 11=Two storey cottage/townhouse 13=Row cottage 14=Terrace house 15=Mansion 16=Bungalow 17=Tudor 18=Gentleman's residence 19=Spanish mission 20=Art deco 21=Austerity 22=Waterfall austerity 23=Conventional 24=Contemporary 25=Cape Cod 26=Ranch 27=Spanish styles 28=Boomerang 29=Georgian 30=Colonial 31=Architectural

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		32=Poor conventional
		33=High quality conventional
		34=State Bank bungalow
		35=Homestead
		36=SAHT conventional
		37=A frame
		38=Polygon
		39=High quality ranch
		40=High quality contemporary
		45=Mediterranean
		48=Shack
		49=Backender
32	LUC, Land use classification	Enter LUC
33	Zone, legal land use	Enter zone
34	Sale price	Enter sale price
		1=property unsold to end of study period
		2=Unable to locate sale price
35	Sale date	Enter sale date
36	Sale price notes	1=OK
		2=Sold due to death of sole proprietor
		3=Sold due to death of one or more proprietors
		4=Influenced by divorce
		5=Transferred as gift to new owner, either gratis or for small consideration
		6=Property created by sub-division of existing property
37	Number of rooms unchanged?	1=Yes
		2=No, one room added
		3=No, more than one room added
		4=Cannot state
		5=Unfinished house became completed
38	Unchanged description?	1=Yes
		2=Cannot state
		3=No, shed or carport added
		4=No, swimming pool added
		5=No, room(s) added
		6=No, "other" changes noted
		7=No, built house on land since purchase
		8=No, built units on land since purchase
		9=Shop converted to house
		10=House converted to a shop
		11=Zone changed
		12=LUC changed
39	Has subdivision occurred?	1=No
		2=Yes

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**Repeat Variables 8 to 39 for each additional property owned**

## Notes to selected housing history file variables

Some aspects of the housing history coding system require explanation and these are detailed below in relevant variable order.

### Variable 4 Owner characteristics

The Valuation Services Division of the South Australian Department of Environment and Natural Resources, which produces the annual Sales Reports, does not report the full name of vendors and purchasers, even though these are recorded on LOTS, from which the Sales Reports are derived. This is unfortunate because it deprives the analysis of a sex breakdown of the real estate players, and of a reasonably positive identification of buying and selling couples who are either married or in some other relationship. The coding approach adopted represents an attempt to identify those

owners who might be single (1), married (2), or in some other form of partnership with one other person (3) or several other persons (4).

#### **Variable 5 Notes on this record?**

Some of the written records in the database had notes associated with them which could not be coded, and this variable alerts the analysis to the existence of a note.

#### **Variable 6 Number of properties owned by this household**

The coded value for this variable was determined by actually counting the number of properties a household had owned, based upon data contained on the handwritten housing history for each households.

#### **Variable 7 Reason for leaving market on sale of last property**

For most records, there was no reason available to account for a household leaving the South Australian real estate market. However, sometimes the various data sources provided some insights which allowed for a coding option other than "Don't Know" to be employed.

#### **Variable 8 Tenure of this property**

Whether an owner could be characterised as an owner-occupier or a landlord was based on an interpretation of owner address and property address details in the Ownership Lists. The decision to code a property as a second family home or holiday house was usually a result of the property's location within South Australia.

#### **Variables 10, 11, 17 and 18 X and Y co-ordinates**

These variables were created to provide a straightline distance measure between any two properties. The co-ordinates are not standard easting and northing values, based on the Australian Map Grid, but were created especially for the investigation. Copies of the Adelaide, Barossa, Echunga, Gawler, Noarlunga, Onkaparinga, Vincent, Willunga and Yankalilla 1:50 000 topographic series map sheets, produced by the (former) South Australian Department of Lands, were photo reduced to a scale of 1:100,000 (one centimetre represents one kilometre) and spliced together. Over the resulting map a 1 centimetre (or one kilometre) square grid was drawn, referenced to a zero point one kilometre west of Myponga Beach. Each of these lines were labelled consecutively east and north of the reference point. The map was then used to assign an X and Y co-ordinate, to the nearest tenth of a kilometre, to each suburb in the Adelaide Statistical Division. A small booklet was prepared containing this data, together with suburb postcodes, which was used to facilitate the coding process.

#### **Variable 13 Tenure change during ownership**

The correct code to employ could usually be determined by scrutinising any changed relationships between owner's address and property address

**Variable 23 Mortgage**

For some 900 purchasers of dwellings during June 1986, mortgage data existed (Harris, 1989). Whenever a property purchased during June 1986 was encountered in the data entry process, its reference number was used to determine whether the purchase had been effected with a mortgage and, if so, the value of the mortgage was entered.

**Variables 24 and 36 Purchase price notes and Sale price notes**

Sometimes, the data contained information by which it was possible to assert that an ownership had been a result of inheritance, death, a gift, divorce or some other factor. Generally, however, there were no notes attached to the purchase price or sale price details of an ownership.

## Appendix 2: The housing stock file

Table A.2.1 presents the coding schema used to code each dwelling's ownership details into the housing stock file.

**Table A.2.1: Housing stock file coding system**

Variable Number	Description	Code
1	Reference number	Enter reference number
2	Street number	Enter street number of property
3	Street name	Enter street name
4	Suburb	Enter suburb name
5	Postcode	Enter postcode
6	X co-ordinate	Enter X co-ordinate
7	Y co-ordinate	Enter Y co-ordinate
8	Number of sales for this property	Enter number of sales
9	Vacant land	1=No sale of property in form of vacant land 2=At least one sale of property as vacant land
10	Rooms	Enter number of rooms
11	Condition of property	Enter condition
12	Roof material	1=Tile 2=Galvanised iron 3=Corrugated asbestos 4=Steel decking 5=Imitation tile 6=Slate 7=Shingles 8=Other
13	Wall material	1=Brick 2=Iron 3=Rendered 4=Asbestos, weatherboard, log 5=Stone, freestone 6=Bluestone 7=Basket Range stone 8=Block (including Mount Gambier stone) 9=Other
14	Area, m <sup>2</sup>	Enter area of dwelling
15	Year built	Enter year built
16	Style	1=Settlers Cottage 2=Colonial Cottage 3=Symmetrical Cottage 4=Kingston's architecture 5=Bay window villa 6=Villa 7=Return verandah villa 8=Louvre roof 9=Queen Anne/Art nouveau 10=Single fronted cottage/villa 11=Two storey cottage/townhouse 13=Row cottage 14=Terrace house 15=Mansion 16=Bungalow 17=Tudor 18=Gentleman's residence 19=Spanish mission 20=Art deco 21=Austerity 22=Waterfall austerity 23=Conventional 24=Contemporary 25=Cape Cod 26=Ranch 27=Spanish styles 28=Boomerang

Variable Number	Description	Code
		29=Georgian 30=Colonial 31=Architectural 32=Poor conventional 33=High quality conventional 34=State Bank bungalow 35=Homestead 36=SAHT conventional 37=A frame 38=Polygon 39=High quality ranch 40=High quality contemporary 45=Mediterranean 48=Shack 49=Backender
17	Improvements at 1986	Enter number of improvements at 1986
18	Improvement 1	Enter code for improvement 1
19	Improvement 2	Enter code for improvement 2
20	Improvement 3	Enter code for improvement 3
21	More than 3 improvements?	1=No 2=Yes
22	LUC, Land Use Classification	Enter LUC
23	Area of allotment	Enter area, hectares
24	Zone, legal land use	Enter zone
25	Frontage	Enter allotment frontage, metres
26	Owner reference number	Enter owner reference number (eg, 117402)
27	Owner characteristics	1=One set of initials (eg, KR) 2=Two sets of initials (eg, KR & CJ) 3=One set of initials, plus Anr 4=One set of initials, plus Ors 5=Company, not category 6 or 7 6=Company which built dwelling 7=Company which developed the land 8=Individual who built dwelling 9=Don't Know 10=Housing association 11=Individual who developed the land
28	Tenure	1=Owner-occupier 2=Landlord 3=Owner of vacant land 4=Don't Know 5=Other 6=Company 7=Group acting as a company 8=Housing association 9=Holiday house 11=Individual acting as a land developer
<b>For tenure types other than 1, enter variables 24 to 27</b>		
29	Owner suburb	Enter owner's suburb
30	Owner postcode	Enter owner's postcode
31	Owner X co-ordinate	Enter owner's X co-ordinate
32	Owner Y co-ordinate	Enter owner's Y co-ordinate
<b>For all records, enter variables 28 to 33</b>		
33	Purchase price	Enter purchase price Nil=Purchased before 1968 1=Built by company after 1968
34	Purchase date	Enter purchase date
35	Sale price	Enter sale price
36	Sale date	Enter sale date
37	1986 description unchanged between sales?	1=Yes 2=No 3=Don't Know 4=Property remained vacant land between sales

38	Type of change between sales	Blank=Don't Know 1=One less improvement than 1986 2=Two less improvements than 1986 3=House built on vacant land 4=Property sold as vacant land 5=One room added to 1986 number 6=Two rooms added to 1986 number 7=More than two rooms added to 1986 number 8=One room less than 1986 number 9=Two rooms less than 1986 number 10=More than two rooms less than 1986 number 11=One more improvement than 1986 12=Two more improvements than 1986
----	------------------------------	--

Repeat for each ownership of the housing stock

### Notes to selected housing stock file variables

Some aspects of Table 3 require explanation and these are detailed in the following sections.

#### Variable 8 Number of sales of this property?

The number of times the property had been sold was determined by tallying the number of sales of the property which appeared on both sides of the handwritten A4 sheet.

#### Variable 9 Vacant land?

Not all properties commenced their history as vacant land, and this variable was included to identify any properties whose history included some time in this category.

#### Variable 17 Improvements at 1986

The June 1986 Sales Report, from which the sample of households was drawn, provided a statement of the improvements which LOTS had recorded for each property. For example, the improvements field of the Sales Report may display **I/G S/P CP**, indicating that the property had improvements noted as Iron Garage, Swimming Pool and Carport. For each property, the number of these improvements was noted, and entered into the housing stock file.

#### Variables 18, 19 and 20 Improvement 1, 2 and 3

The alpha code for any improvements noted for variable 17 were entered as IG for Iron Garage, SP for Swimming Pool and CP for Carport.

#### Variable 26 Owner reference number

This six figure value comprised two parts, the first four numbers representing the reference number of the property (Variable 1) and the last two numbers described the historical position of the owner in relation to all ownerships of the property. For



example, an owner reference number of 117402 would indicate the second owner of property number 1174.

### **Variable 27 Owner**

Codes 1 to 4 have been described for Appendix 1. These four codes, together with codes 8 and 11 were not mutually exclusive, and where sales occurred involving individuals or groups which could be allocated to more than one of these categories, the data were assessed to provide the most appropriate code. If the assessment determined that the owner was a straightforward household engaged in buying accommodation, then codes 1 to 4 would be employed. However, if it appeared that the owner engaged in developing land or dwellings, rather than simply buying accommodation, then codes 8 and 11 would be used. With codes 5,6,7 and 8, which were mutually exclusive, it was only necessary to determine from the data which code to allocate to an owner.

### **Variable 28 Tenure**

A number of codes - 1,4,5 and 8 - are mutually exclusive, and allocation of the owner to one of these was generally straightforward. However, the data needed to be interpreted for additional cues before a reasonable distinction could be made between codes 2,6,7 and 9 and to distinguish between codes 3 and 11.

### **Variables 29, 30, 31 and 32 Non owner-occupier's suburb, postcode and X and Y co-ordinates**

These variables have been included to examine any spatial relationships which might exist between the location of non owner-occupiers and the properties they own.

### **Variable 33 Purchase price**

The Sales Reports did not allow the transfer price of properties purchased before 1968 to be determined. These properties are therefore identified with a blank entry in the field. Code 1 was employed for dwellings built by a company, after 1986, on land for which no purchase price was available

### **Variable 37 1986 description unchanged between sales?**

Variables 10 (Rooms) and 18 to 20 (Improvements) established a description of the property based on the June 1986 Sales Reports. This variable identifies, for each ownership, whether the property differed from its 1986 description, mainly on a "Yes" or "No" basis, although differences caused by the property being owned as vacant land are identified. Information relating to the nature of any differences is captured in Variable 38.

**Variable 38 Type of change**

Code 3, which indicated that a house had been built on previously vacant land, could be extended to a four digit number, depending on availability of data. For example, 3 indicated that a house had been built, and that no other information was available, whereas 36 indicated that a 6 roomed house had been built and 3908 indicated the construction of a two storeyed, 8 roomed dwelling with 9 representing a two storey building and 08 representing the number of rooms.

### Appendix 3: Ownership characteristics of the sampled households

The analysis of residential mobility was based on 2002 households which had owned property between 1968 and July 1991. Many of these households owned more than one property in this time, and therefore there are 3692 individual properties included in the analysis, as shown in Table A.3.1

**Table A.3.1: Number of properties owned by sample households, 1968-1991**

Number of properties owned during period	Number households in each category	Percent	Number of properties in sample	Percent of total properties
1	993	49.6	993	26.9
2	601	30.0	1202	32.6
3	245	12.2	735	19.9
4	101	5.0	404	10.9
5	31	1.5	155	4.2
6	25	1.2	150	4.1
7	1	0.0	7	0.2
8	2	0.1	16	0.4
9	1	0.0	9	0.2
10	1	0.0	10	0.3
11	1	0.0	11	0.3
<b>Total</b>	<b>2002</b>	<b>100.0</b>	<b>3692</b>	<b>100.0</b>

Source: Frequency statistics from variable nopropso.

Not all of these properties were dwellings occupied by their owners. Therefore, in Table A.3.2 the number of owner-occupiers in the sample is detailed, along with the other categories of ownership identified for this study.

**Table A.3.2: Household tenure at properties owned, 1968-1991**

Tenure category	Tenure description	Number of properties	Percent
1	Owner-occupier	2730	73.9
3	Landlord who is owner-occupier at another property	305	8.3
4	Landlord who owns other property but is not an owner-occupier at any of them	51	1.4
5	Landlord who owns no other property	111	3.0
6	Vacant land and owner is owner-occupier elsewhere	172	4.6
7	Vacant land, owner has other property, but owner-occupier at none.	6	0.2
8	Vacant land and owner owns no other property	268	7.3
9	Second family home or holiday house	48	1.3
10	Cannot determine tenure	4	0.1
11	Business property	1	0.0
<b>Total</b>		<b>3692</b>	<b>100.0</b>

Source: Summation of frequency of each *tenure* variable.

For a number of households represented in Table A.3.2, tenure change occurred during any given ownership, and those whose tenure changed to owner-occupier were added to the group identified as being potentially residentially mobile and those whose tenure changed from owner-occupier were deleted. In Table A.3.3, details of any tenure change during a property's ownership have been provided.

**Table A.3.3: Tenure change during ownership, 1968 to 1991**

Description of change	Category of change	Number	Percent
None	1	3300	89.4
Owner-occupier to landlord	2	49	1.3
Landlord to owner-occupier	3	29	0.8
Built house on vacant land and became owner-occupier	4	268	7.3
Built house on vacant land and became landlord whilst owner-occupier at another property	5	6	0.2
Built house on vacant land and became landlord whilst owning other property	6	2	0.05
Built house on vacant land and became landlord with no other property	7	3	0.08
Other	8	26	0.6
Cannot state	9	5	0.1
Became second family home or holiday house	10	4	0.1
Total		3692	100.0

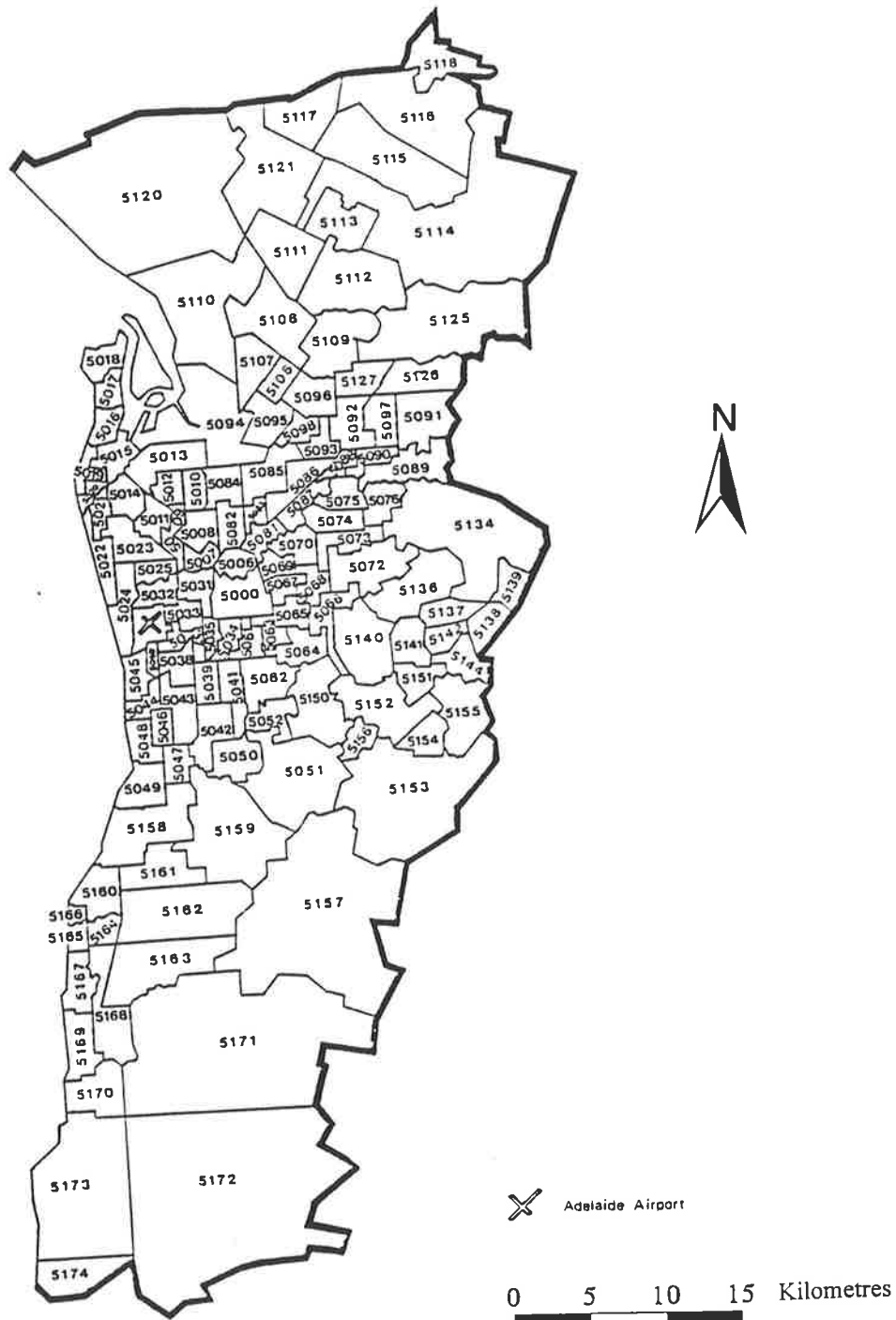
Source: Frequencies for variable *tenchn*

Those owners in categories 3 and 4 became owner-occupiers by the end of one or more of their ownerships and therefore became part of the group of owner-occupiers who were potential residential movers. On the other hand, those owners in category 2 reverted from owner-occupancy, and therefore left the group who were potentially mobile.

#### Appendix 4: Postcodes and zones, Adelaide metropolitan area

All properties in the housing history file and the housing stock file contain postcode information. The distribution of postcodes in the Adelaide metropolitan area are shown in Figure A.4.1. Postcode areas have been used to define zones located at 5 kilometre intervals from the Central Business District. The allocation of postcodes to each of the eight zones defined for the study is shown in Table A.4.1 and Figure A.4.2.

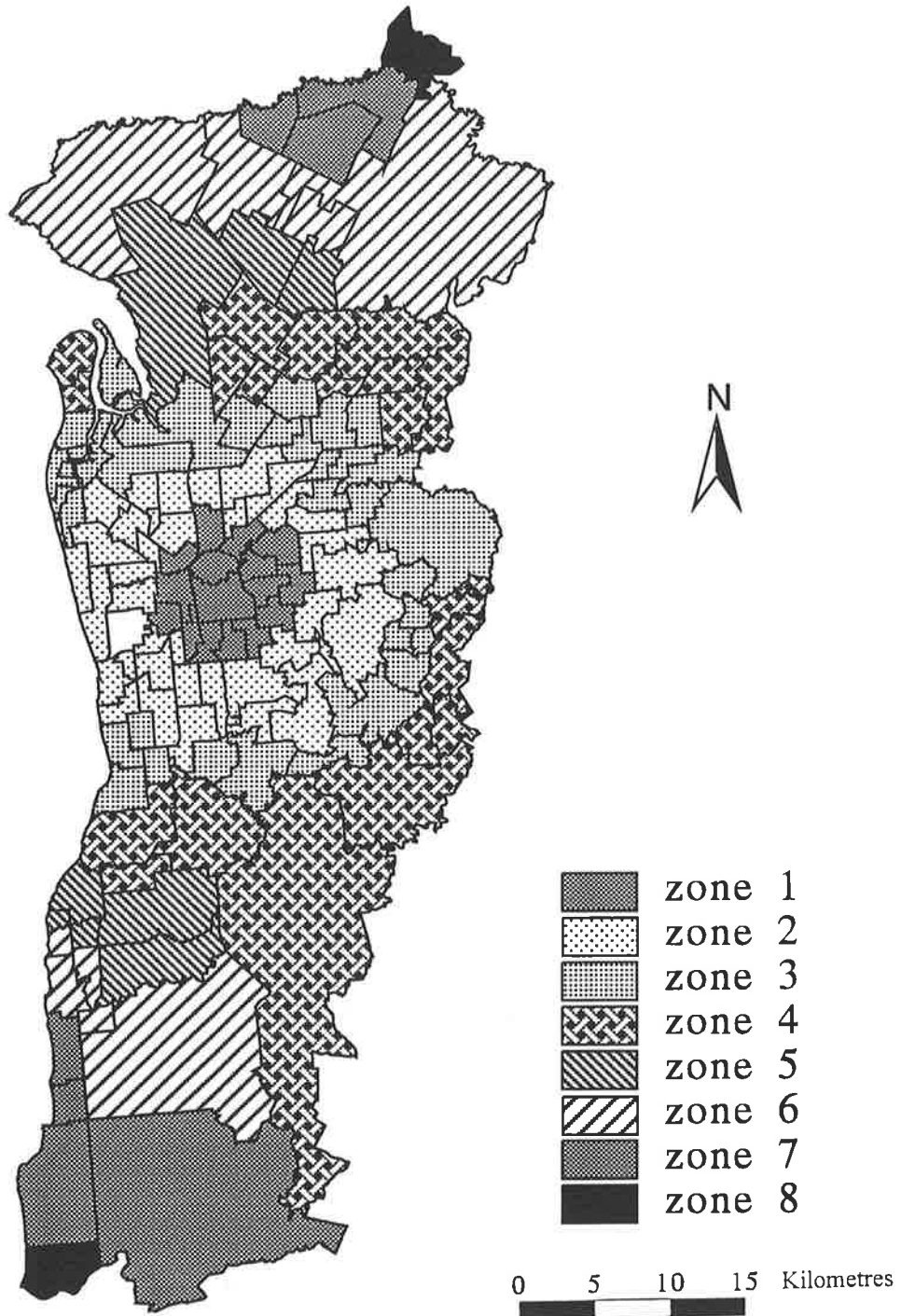
Figure A.4.1: Postcodes, Adelaide metropolitan area



**Table A.4.1: Postcodes and zones, Adelaide metropolitan area**

<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>	<b>Zone 4</b>	<b>Zone 5</b>	<b>Zone 6</b>	<b>Zone 7</b>	<b>Zone 8</b>
0-5 km	5-10 km	10-15 km	15-20 km	20-25 km	25-30 km	30-35 km	35-40 km
5006	5008	5013	5017	5112	5120	5169	5118
5082	5084	5015	5018	5160	5121	5170	5174
5007	5010	5016	5159	5162	5165	5172	
5031	5012	5021	5158	5163	5167	5173	
5035	5011	5020	5161	5164	5168	5115	
5033	5014	5019	5153	5166	5171	5116	
5034	5023	5050	5157	5110	5113	5117	
5061	5022	5046	5138	5111	5114		
5063	5037	5048	5144				
5000	5040	5047	5155				
5065	5045	5049	5154				
5081	5025	5156	5139				
5070	5032	5051	5091				
5068	5024	5137	5131				
5069	5039	5141	5126				
5067	5038	5142	5106				
5065	5041	5151	5107				
	5042	5152	5109				
	5043	5088	5108				
	5044	5136	5125				
	5064	5134	5127				
	5062	5076					
	5052	5089					
	5150	5090					
	5066	5097					
	5140	5098					
	5087	5093					
	5074	5092					
	5073	5095					
	5072	5096					
	5083						
	5085						
	5086						

Figure A.4.2: Postcodes and zones, Adelaide metropolitan area



### Appendix 5: Postcodes and sectors, Adelaide metropolitan area

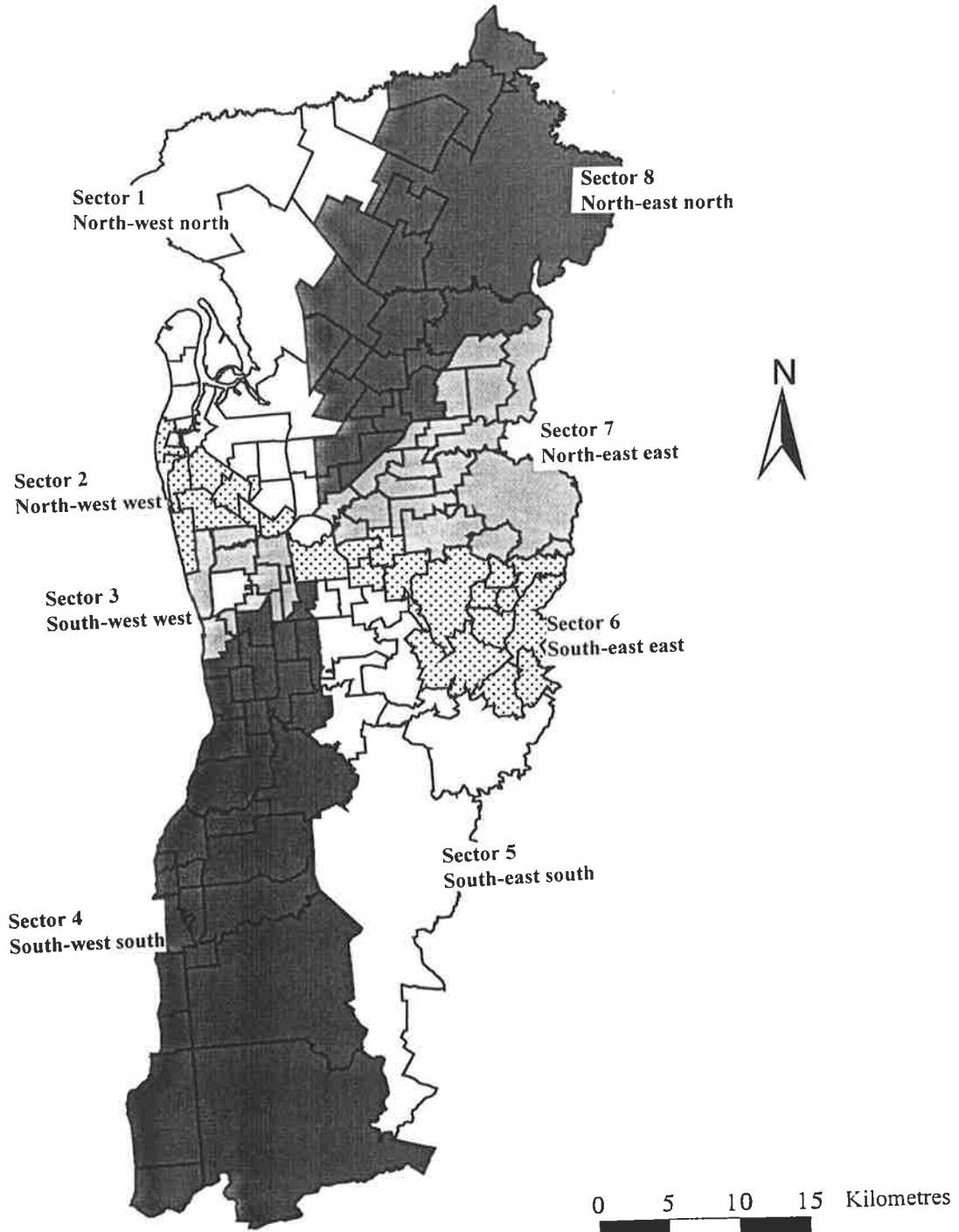
In a similar fashion to Table A.4.1, postcodes have also been used to define sectors, based on the main arterial roads which radiate from the city centre. Eight sectors, generally defined by these arterials, but coinciding with postcode boundaries were defined for the study. The allocation of postcodes to each of the eight sectors is shown in Table A.5.1 and Figure A.5.1.

**Table A.5.1: Postcodes and sectors, Adelaide metropolitan area**

Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7	Sector 8
Northwest-north	Northwest-west	Southwest-west	Southwest-south	Southeast-south	Southeast-east	Northeast-east	Northeast-north
5006	5007	5031	5034	5061	5065	5081	5083
5008	5009	5035	5039	5063	5066	5087	5085
5082	5011	5033	5038	5064	5067	5088	5086
5084	5014	5037	5041	5062	5068	5069	5098
5010	5023	5040	5042	5052	5140	5070	5093
5012	5022	5045	5050	5150	5137	5074	5092
5013	5021	5025	5043	5156	5141	5073	5095
5015	5020	5032	5044	5153	5142	5072	5096
5016	5019	5024	5046	5051	5138	5136	5106
5017			5048	5157	5144	5134	5107
5018			5047		5151	5139	5109
5094			5049		5155	5075	5108
5110			5159		5152	5076	5125
5117			5158		5154	5089	5112
5120			5161		5000	5090	5111
5121			5160			5091	5113
			5162			5131	5114
			5163			5126	5115
			5164			5097	5116
			5165				5118
			5166				5127
			5169				
			5168				
			5167				
			5170				
			5171				
			5172				
			5173				
			5174				



Figure A.5.1: Postcodes and sectors, Adelaide metropolitan area



## Appendix 6: Postcode and mosaic regions, Adelaide metropolitan area

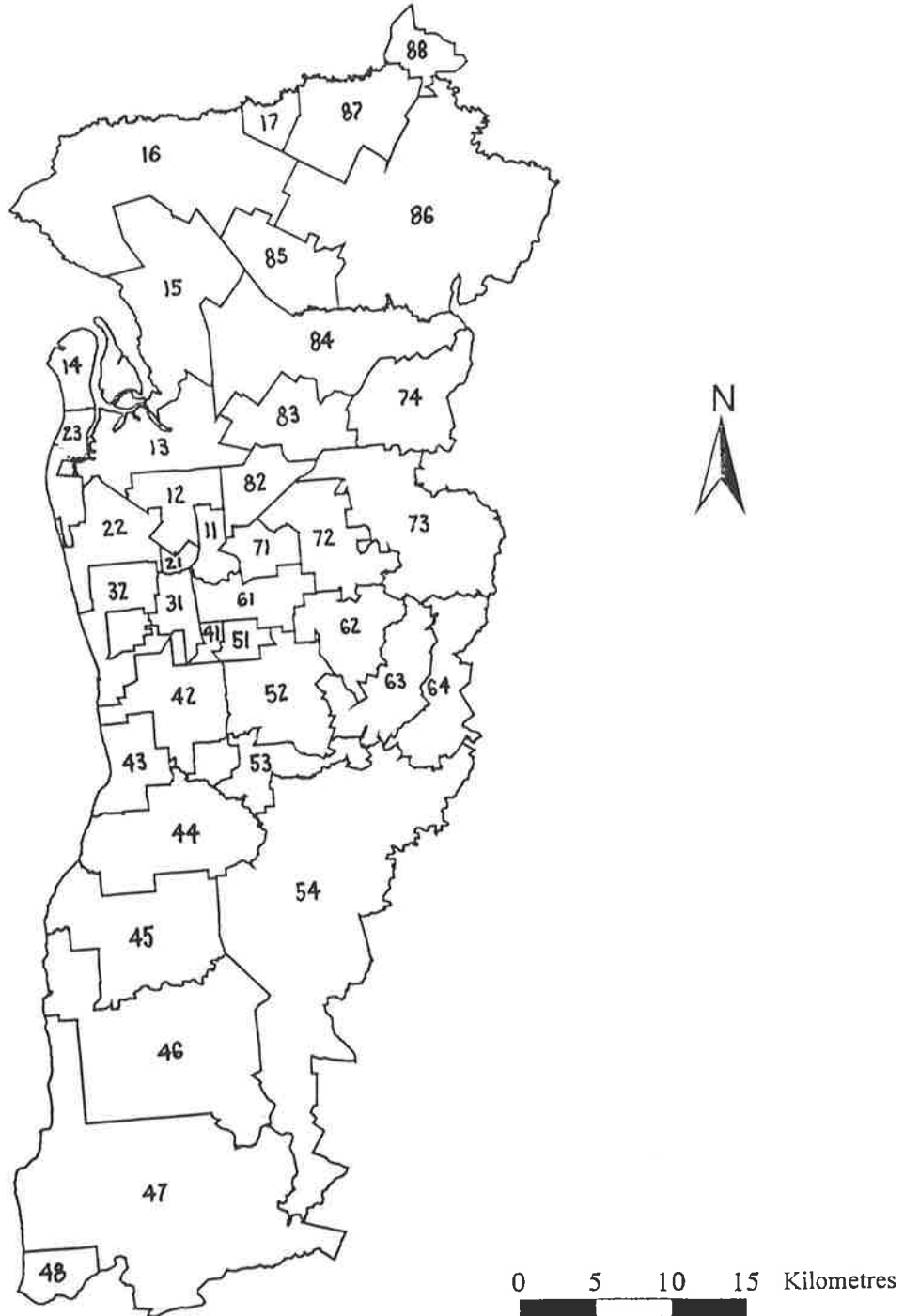
As described in Table A.4.1 and Table A.5.1 each postcode area was allocated to a zone and a sector. The intersection of the sectors and zones created a matrix of areas which have been called mosaic regions. The mosaic region is the third spatial unit used throughout the thesis. Each mosaic region is comprised of one or more postcode areas, and the allocation of postcodes to mosaic regions is shown in Table A.6.1 and Figure A.6.1.

**Table A.6.1: Postcodes and mosaic regions, Adelaide metropolitan area**

Mosaic Region	Postcodes
11	5006, 5082
12	5008, 5084, 5010, 5012
13	5013, 5094, 5015, 5016
14	5017, 5018
15	5110
16	5120, 5121
17	5117
21	5007
22	5009, 5011, 5014, 5022, 5023
23	5019, 5020, 5021
31	5031, 5033, 5035
32	5037, 5040, 5045, 5025, 5032, 5024
41	5034
42	5038, 5039, 4041, 5042, 5043, 5044
43	4046, 5047, 5048, 5049, 5050
44	5161, 5158, 5159
45	5160, 5166, 5162, 5163, 5164
46	5165, 5171, 5167, 6168
47	5169, 5170, 5172, 5173
48	5174
51	5061, 5063
52	5064, 5062, 5052, 5150
53	5156, 5051
54	5153, 5157
61	5000, 5065, 5067, 5068
62	5066, 5140
63	5137, 5141, 5142, 5151, 5152
64	5138, 5144, 5155, 5154
71	5081, 5069, 5070
72	5087, 5072, 5073, 5074, 5075
73	5136, 5134, 5139, 5076, 5088, 5089, 5090
74	5091, 5097, 5131, 5126
82	5083, 5085, 5086
83	5098, 5092, 5093, 5095, 5096
84	5125, 5127, 5106, 5107, 5108, 5109
85	5111, 5112
86	5113, 5114
87	5115, 5116
88	5118

Note: The first digit refers to the sector and the second digit refers to the zone in which the postcode is located.

Figure A.6.1: Postcodes and mosaic regions, Adelaide metropolitan area



## Appendix 7: Mobility within and between mosaic regions

Data in Table A.7.1 have been used to prepare Figures 4.10, 4.11 and 4.12.

**Table A.7.1: Mobility within and between mosaic regions**

Mosaic reference	Number of departures	Per cent	Number of arrivals	Per cent	Within mosaic moves	Net departures	Net Arrivals	Net mobility gain/loss
11	15	1.6	14	1.5	3	12	11	-1
12	19	2.0	10	1.0		19	10	-9
13	13	1.4	14	1.5	2	11	12	+1
14	4	0.4	7	0.7	1	3	6	+3
15	1	0.1	2	0.2		1	2	-1
16	3	0.3	3	0.3		3	3	0
17	1	0.1	1	0.1		1	1	0
21	3	0.3	2	0.2		3	2	-1
22	35	3.6	27	2.8	7	28	20	-8
23	33	3.4	36	3.7	15	18	21	+3
31	15	1.6	10	1.0	3	12	7	-5
32	54	5.6	49	5.1	13	41	36	-5
41	17	1.8	12	1.2	2	15	10	-5
42	69	7.2	65	6.8	26	43	39	-4
43	46	4.8	44	4.6	19	27	25	-2
44	66	6.9	89	9.3	36	30	53	+23
45	59	6.1	58	6.0	29	30	29	-1
46	10	1.0	19	2.0	1	9	18	+9
47	25	2.6	31	3.2	9	16	22	+6
48	3	0.3	4	0.4		3	4	+1
51	36	3.7	34	3.5	11	25	23	-2
52	38	4.0	53	5.5	9	29	44	+15
53	18	1.9	20	2.1	6	12	14	+2
54	3	0.3	7	0.7		3	7	+4
61	39	4.1	44	4.6	16	23	28	+5
62	17	1.8	16	1.7	4	13	12	-1
63	12	1.2	14	1.5	3	9	11	+2
64	10	1.0	8	0.8	1	9	7	-2
71	31	3.2	29	3.0	6	25	23	-2
72	26	2.7	30	3.1	9	17	21	+4
73	24	2.5	30	3.1	11	13	19	+6
74	42	4.4	29	3.0	16	26	13	-13
82	24	2.5	20	2.1	7	17	13	-14
83	57	5.9	34	3.5	15	42	19	-23
84	66	6.9	65	6.8	30	36	35	-1
85	3	0.3	4	0.4		3	4	+1
86	22	2.3	22	2.3	11	11	11	0
87	1	0.1	2	0.2		1	2	+1
88	2	0.2	4	0.4		2	4	+2
<b>Totals</b>	<b>962</b>	<b>100</b>	<b>962</b>	<b>100</b>	<b>321</b>	<b>641</b>	<b>641</b>	

Note: The first number in the mosaic reference indicates the sector and the second number refers to the zone within any sectors. Therefore, 46 refers to the mosaic area created by the intersection of sector 4 and zone 6.

Source: Extracted from crosstabulation of mosv1\_or and mosv1\_de in mobility.sav file.

## Appendix 8: Notes accompanying Table 4.18: Reasons for market departures

This appendix contains detailed notes to four categories employed in Table 4.18.

1. *Husband and wife died, estate sold* does not imply that the husband and wife died together, but rather that the research process identified that the estate had been sold subsequent to the death of the surviving partner.

2. *Husband/single male died* and *Wife/single female died* categories were derived from the research process which identified options for a wife on the death of her husband, and vice versa, and instances where the estate of single males and females, who might also have been surviving widowers/widows, was sold upon their death.

3. Although the thesis has collected no data on the marital status of its households, as explained in the methodology chapter, it has generally been assumed that households which contained two sets of initials (for example, Smith, R J & P M) represented a household in which the two owners were married, and households represented as, for example, Smith & anr were households where the owners were not married.

Where households of these two types have broken up, the first group is represented as *Divorce of married couples* and the second group is presented as *Separation of non married couples*.

4. *New household created from an existing household* - There were a number of instances where existing owners, or households, left the market so that they could re-enter it in partnership with a new set of owners. For example, Smith, R J and P M may have sold, but bought another dwelling with J Jones. In this case, LOTS would record the new ownership as Smith, R J & ors, and although Smith, R J and P M have continued in the market as a new household, their status as a survey household has been lost.

## **Appendix 9: Selected house styles in the Adelaide area.**

Throughout the text, and especially in Chapter 4, reference is made to a number of house styles. So that the reader may be informed on the essential qualities of the main house styles in the Adelaide housing market, a brief description of each is provided, together with an accompanying drawing. Most of the material in this Appendix has been taken from Persse and Rose (1981).

### **Conventional            Era: Mid 1950s to early 1960s**

This style was less austere than the **Austerity** style of the 1940s and immediately post World War Two period. It took advantage of the increasing availability and variety of building materials. The style involved three bedrooms, lounge and dining rooms, kitchen and bathroom under the main roof, together with the use of wider eaves. Triple fronted and double fronted step back design was also typical of the style. The style evolved throughout the sixties and continued to be built over the next two decades.

### **Conventional - with hipped roof    Era: 1960s and 1970s**

Regularly of double or triple fronted stepped back style. The front of the house was usually built with Basket Range stone, a sawn stone quarried from the Basket Range region in the Adelaide Hills, with the mortar tuck pointed. However, this style was also constructed using bricks for all its walls.



**Conventional - with gable roof      Era: 1970s and 1980s**

This style of dwelling was representative of medium priced housing and typically consisted of three bedrooms with a carport under the main roof. Construction was most usually in brick.

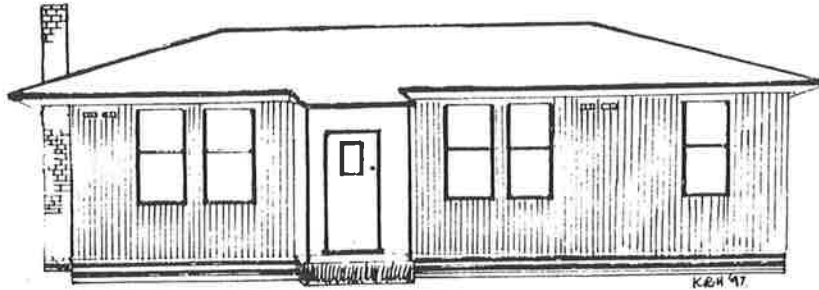
**Bungalow      Era: 1916 - 1920**

Also known as the “homestead” style, it incorporated the front verandah under the main roof. Usually, a double gable treatment was incorporated into the front of the house. Freestone was a popular wall material at the front of the house, with brick used on the other walls, and the roof was usually tiled. A variation of the style was the **State Bank Bungalow (1918 - 1930)**, built to cheaper specifications to house Returned Soldiers from World War One. Many examples of this style were built in several suburbs within the Adelaide metropolitan area.



### SAHT (South Australian Housing Trust) conventional

This type of dwelling represented budget priced housing constructed by the South Australian Government housing authority during the period of rapid urban development in South Australia. These dwellings were constructed for middle socio-economic groups, especially migrant groups brought to Australia to work in the developing manufacturing industries. Typically they were timber framed, with either timber or asbestos (fibre cement) cladding.



### Contemporary Era: 1950s and 1960s

This term described houses with an angular appearance and a low pitched clad with galvanised iron or asbestos. Timber framed construction was used regularly and the style was essentially based around low cost construction techniques. However, some expensive designs in the style were built throughout the city.





**Symmetrical cottage**      **Era: 1860 - 1915**

This style evolved from the more simple colonial cottage. It generally comprised four main rooms, with a central passageway, and was symmetrical in design and appearance. It was always built with a verandah extending across the front of the house. The roof style used evolved with the current fashion. Laundry, bathroom and kitchen facilities were usually contained in a lean to constructed onto the back of the main dwelling.

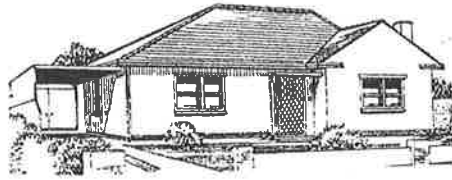
**Colonial**      **Era: 1960s and 1970s**

This style is similar to the Ranch style, rectangular in shape and with a carport under the main roof. It was usually single fronted or near single fronted, and regularly emphasised bay windows with the characteristic treatment shown in the illustration below.



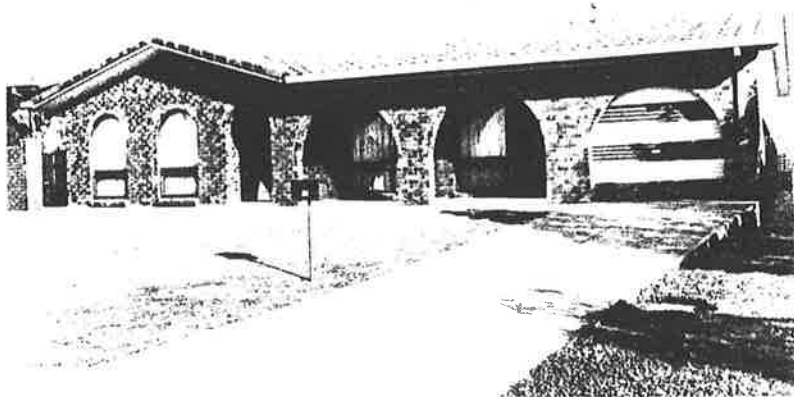
**Austerity Era: 1941 - 1950**

The style owed its characteristics to building restrictions imposed during, and immediately afterwards, World War Two. Its area was generally limited to approximately 110 m<sup>2</sup>, and examples of the style continued through to the mid fifties. It was generally constructed from brick, block or asbestos fibres cement board. Where low quality bricks were used, the finish was often cement rendered. Other features of this style was a small front porch and narrow eaves. Typically it contained two bedrooms, sitting and dining rooms and a kitchen. A lean to at the rear was also characteristic.



**Spanish Era: 1970s and 1980s**

This style was particularly popular in the early 1970s. Basically, the style was an embellishment of the contemporary style house which had been given distinguishing external treatment involving the incorporation of arches into the design. Walls were typically dark red/brown clinker bricks, or cement rendered and painted white.



## Appendix 10: Tables related to Chapter 4

This Appendix provides a number of tables which have been referred to in Chapter Four.

**Table A10.1: House to house mobility and dwelling condition**

Type of change	Number	Percent
No change	155	43.4
Improved by 1 grade	68	19.1
Improved by 2 grades	28	7.8
Improved by 3 grades	14	3.9
Improved by >3 grades	2	0.6
Declined by 1 grade	57	16.0
Declined by 2 grades	19	5.3
Declined by 3 grades	10	2.7
Declined by >3 grades	4	1.2
Total	357	100.0

Source: Extracted from crosstabulation analysis of cond\_ori by cond\_des variables for house-house movers in mobility.sav file.

**Table A10.2: House to house mobility and age of dwelling**

Type of change	Number	Percent
Same vintage	74	19.6
More youthful by:		
1 category	48	12.8
2 categories	49	13.0
3 categories	29	7.7
4 categories	25	6.7
5 categories	15	3.9
>5 categories	28	7.5
More aged by:		
1 category	39	10.4
2 categories	16	4.3
3 categories	15	3.9
4 categories	11	2.9
5 categories	11	2.9
> 5 categories	16	4.4
Total	376	100.0

Source: Extracted from crosstabulation analysis of yrblt\_ori by yrblt\_des variables for house-house movers in mobility.sav file.

**Table A10.3: Household mobility between sub-markets by number of moves**

Number of moves by households	Sub-market to sub-market	Move						
		First	Second	Third	Fourth	Fifth	Sixth	Seventh
1	House-house	428						
	House-Home unit	74						
	Home unit to house	56						
	Home unit to Home unit	7						
2	House-house	117	111					
	House-Home unit	26	14					
	Home unit to house	8	21					
	Home unit to Home unit	2	7					
3	House-house	39	39	39				
	House-Home unit	5	4	4				
	Home unit to house	4	4	4				
	Home unit to Home unit	1	2	2				
4	House-house	5	5	4	5			
	House-Home unit	1	1	3				
	Home unit to house	1	2	1	3			
	Home unit to Home unit	1						
5	House-house	2	1	1	2	2		
	House-Home unit		1					
	Home unit to house			1				
	Home unit to Home unit							
7	House-house	1	1	1	1	1	1	1
	House-Home unit							
	Home unit to house							
	Home unit to Home unit							

Source: Derived from crosstabs from resid\_mo.sav file

**Table A10.4: Dwelling condition changes for single move households**

Type of change	Movement between sub-markets					
	House to house		House to home unit		Home unit to house	
	Number	Percent	Number	Percent	Number	Percent
None	86	37.6	11	24.5	13	33.3
Increased by:						
1 category	54	23.6	16	35.6	5	12.8
2 categories	23	10.1	7	15.6	1	2.6
3 categories	10	4.4	5	11.1	2	5.1
4 categories	1	0.4	1	2.2		
5 categories						
More than 5 categories	1	0.4				
Decreased by:						
1 category	37	16.2	2	4.5	5	12.8
2 categories	10	4.4	3	6.7	6	15.4
3 categories	5	2.2			7	18.0
4 categories						
5 categories	1	0.4				
More than 5 categories	1	0.4				
<b>Total</b>	<b>229</b>	<b>100.0</b>	<b>45</b>	<b>100.0</b>	<b>39</b>	<b>100.0</b>

Source: Crosstabs analysis of Con1 by Con2 variables for households which had owned 2 properties in resid\_mo.sav file

**Table A10.5: Dwelling vintage changes for single move households**

Type of change	Movement between sub-markets					
	House to house		House to home unit		Home unit to house	
	Number	Percent	Number	Percent	Number	Percent
None	35	14.4	4	8.2	2	5.1
Increased by:						
1 category	31	12.8	4	8.2	4	10.3
2 categories	34	14.0	2	4.1	1	2.6
3 categories	18	7.4	4	8.2	1	2.6
4 categories	20	8.2	8	16.3	1	2.6
5 categories	13	5.4	7	14.3	1	2.6
More than 5 categories	23	9.5	14	28.6	1	2.6
Decreased by:						
1 category	21	8.7	1	2.0	4	10.3
2 categories	8	3.3			4	10.3
3 categories	12	4.9	4	8.2	3	7.1
4 categories	8	3.3	1	2.0	2	5.1
5 categories	7	2.9			1	2.6
More than 5 categories	13	5.4			14	35.9
<b>Total</b>	<b>243</b>	<b>100.0</b>	<b>49</b>	<b>100.0</b>	<b>39</b>	<b>100.0</b>

Source: Crosstabs analysis of yrblt1 by yrblt2 variables for households which had owned 2 properties in resid\_mo.sav file

**Table A10.6: Condition and vintage characteristics for households moving twice between three houses**

Type of change	Condition				Vintage			
	Move 1		Move 2		Move 1		Move 2	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
None	14	56.0	29	46.0	9	30.0	14	21.9
Increased by:								
1 category	1	4.0	11	17.5	5	16.7	8	12.5
2 categories	1	4.0	3	4.8	2	6.7	7	10.9
3 categories	1	4.0	1	1.6	3	10.0	4	6.3
4 categories					1	3.3	2	3.1
5 categories							3	4.7
> 5 categories					3	10.0	5	7.8
Decreased by:								
1 category	5	20.0	10	15.9	1	3.3	10	15.6
2 categories	2	8.0	6	9.5	1	3.3	2	3.1
3 categories	1	4.0	2	3.2	1	3.3	4	6.3
4 categories			1	1.6	2	6.7	1	1.6
5 categories					1	3.3	2	3.1
> 5 categories					1	3.3	2	3.1
Total	25	100.0	63	100.0	30	100.0	64	100.0

Source: Derived from resid\_mo.sav file

**Table A10.7: Area characteristics for households moving twice between two houses and a home unit**

Type of change	Move 1		Move 2	
	Number	Percent	Number	Percent
None			1	11.1
Increased by:				
1 category			2	22.2
2 categories				
3 categories				
4 categories				
5 categories				
> 5 categories				
Decreased by:				
1 category			1	11.1
2 categories	2	66.6	1	11.1
3 categories			2	22.2
4 categories			1	11.1
5 categories	1	33.3		
> 5 categories			1	11.1
Total	3	100.0	9	100.0

Source: Derived from resid\_mo.sav file

**Table A10.8: Condition and Age characteristics for households moving twice between two houses and a home unit**

Type of change	Condition				Vintage			
	Move 1		Move 2		Move 1		Move 2	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
None	2	66.6	3	42.9	1	33.3		
Increased by:								
1 category	1	33.3	2	28.6			2	22.2
2 categories			1	14.3			2	22.2
3 categories							1	11.1
4 categories								
5 categories					1	33.3		
> 5 categories							3	33.3
Decreased by:								
1 category					1	33.3	1	11.1
2 categories			1	14.3				
3 categories								
4 categories								
5 categories								
> 5 categories								
<b>Total</b>	<b>3</b>	<b>100.0</b>	<b>7</b>	<b>100.0</b>	<b>3</b>	<b>100.0</b>	<b>9</b>	<b>100.0</b>

Source: Derived from resid\_mo.sav file

**Table A10.9: Area characteristics for households moving twice between a home unit and two houses**

Type of change	Move 1		Move 2	
	Number	Percent	Number	Percent
None				
Increased by:				
1 category			1	25.0
2 categories			1	25.0
3 categories				
4 categories			1	25.0
5 categories				
> 5 categories	3	50.0		
Decreased by:				
1 category	3	50.0		
2 categories				
3 categories			1	25.0
4 categories				
5 categories				
> 5 categories				
<b>Total</b>	<b>6</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>

Source: Derived from resid\_mo.sav file

**Table A10.10: Condition and age characteristics for households moving twice between a home unit and two houses**

Type of change	Condition				Vintage			
	Move 1		Move 2		Move 1		Move 2	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
None	3	50.0	2	40.0	1	16.6	2	40.0
Increased by:								
1 category			1	20.0	2	33.3		
2 categories	1	16.6					1	20.0
3 categories								
4 categories								
5 categories								
> 5 categories								
Decreased by:								
1 category	1	16.6	1	20.0				
2 categories							1	20.0
3 categories	1	16.6	1	20.0	1	16.6		
4 categories					1	16.6	1	20.0
5 categories								
> 5 categories					1	16.6		
Total	6	100.0	5		6	100.0	5	100.0

Source: Derived from resid\_mo.sav file

**Table A10.11: Area characteristics of households moving three times between four houses**

Type of change	Move 1		Move 2		Move 3	
	Number	Percent	Number	Percent	Number	Percent
None	2	28.6	1	7.2	3	15.0
Increased by:						
1 category			1	7.2	2	10.0
2 categories			2	14.4	2	10.0
3 categories	1	14.3			1	5.0
4 categories			2	14.4	4	20.0
5 categories						
>5 categories	1	14.3	2	14.4	2	10.0
Decreased by:						
1 category	1	14.3				
2 categories			2	14.4	3	15.0
3 categories	1	14.3	2	14.4		
4 categories			2	14.4	1	5.0
5 categories						
>5 categories	1	14.3			2	10.0
Total	7	100.0	14	100.0	20	100.0

Source: Derived from Resid\_mo.sav file.



**Table A10.12: Duration of ownership at first, second and third dwelling for those households which made three moves**

Duration, years	First move					
	H-H-H-H		H-H-H-HU		HU-H-H-H	
	Number	Percent	Number	Percent	Number	Percent
< 1 year						
1-2 years	2	6.7			1	25.0
2-3 years	5	16.7			1	25.0
3-4 years	6	20.0	1	25.0	1	25.0
4-5 years	1	3.3				
5-6 years	1	3.3	1	25.0	1	25.0
6-7 years	3	10.0				
7-8 years	3	10.0	1	25.0		
8-9 years	2	6.7				
9-10 years	1	3.3				
10-15 years	3	10.0				
15-20 years	3	10.0	1	25.0		
>20 years						
<b>Totals</b>	<b>30</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>

Duration, years	Second move					
	H-H-H-H		H-H-H-HU		HU-H-H-H	
	Number	Percent	Number	Percent	Number	Percent
< 1 year	1	3.2				
1-2 years	12	38.7				
2-3 years	6	19.4	3	75.0	2	50.0
3-4 years	6	19.4				
4-5 years	3	9.7				
5-6 years	1	3.2	1	25.0	1	25.0
6-7 years	2	6.5			1	25.0
7-8 years						
8-9 years						
9-10 years						
10-15 years						
15-20 years						
>20 years						
<b>Totals</b>	<b>31</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>

Duration, years	Third move					
	H-H-H-H		H-H-H-HU		HU-H-H-H	
	Number	Percent	Number	Percent	Number	Percent
< 1 year	4	12.9				
1-2 years	4	12.9	2	50.0	2	50.0
2-3 years	11	35.5			1	25.0
3-4 years	8	25.8	1	25.0	1	25.0
4-5 years	3	9.7	1	25.0		
5-6 years						
6-7 years	1	3.2				
7-8 years						
8-9 years						
9-10 years						
10-15 years						
15-20 years						
>20 years						
<b>Totals</b>	<b>31</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>

Source: Derived from resid\_mo.sav file

## Appendix 11: Tables related to Chapter Five

This Appendix provides a number of tables which have been referred to in Chapter Five.

**Table A11.1: Profitability of houses and market conditions**

Market conditions at time of transactions <sup>(1)</sup>	Profitability category					
	Losses greater than profits		Losses equal profits		Losses less than profits	
	Number	Percent	Number	Percent	Number	Percent
<b>Properties with two consecutive sales</b>						
1111	8	47.1	26	20.5	22	22.2
1112	3	17.7	10	7.9	8	8.1
1211					1	1.0
1221	2	11.8	25	19.7	31	31.3
1222			1	0.8		
2111	2	11.8	24	18.9	10	10.1
2112	2	11.8	16	12.6	11	11.1
2221			25	19.7	16	16.2
<b>Sub Total</b>	<b>17</b>	<b>100.0</b>	<b>127</b>	<b>100.0</b>	<b>99</b>	<b>100.0</b>
<b>Properties with three consecutive sales</b>						
11111	4	10.8			8	11.3
11112	2	5.4			4	5.6
111221	3	8.1			10	14.1
122111	9	24.3			9	12.7
122112	4	10.8			5	7.1
122221	2	5.4			8	11.3
211111	2	5.4			4	5.6
211112	1	2.7			2	2.8
211221	4	10.8			2	2.8
211222	1	2.7				
222111	1	2.7			8	11.3
222112	3	8.1			4	5.6
222221	1	2.7			7	9.9
<b>Sub Total</b>	<b>37</b>	<b>100.0</b>			<b>71</b>	<b>100.0</b>

Properties with four consecutive sales						
11111111					2	10.0
11111221					2	10.0
11122111			3	10.7		
11122112			1	3.6	2	10.0
11122221			4	14.3	1	5.0
12211111					1	5.0
12211112	2	25.0	3	10.7		
12211112					1	5.0
12211221			1	3.6	1	5.0
12222111	1	12.5	5	17.9	2	10.0
12222112			1	3.6		
12222221			1	3.6		
21111221			2	7.2		
21122111					1	5.0
21222112	1	12.5				
22211111			1	3.6	1	5.0
22211112	1	12.5	2	7.2	2	10.0
22211221					1	5.0
22222111	2	25.0	2	7.2	2	10.0
22222112			2	7.2		
22222221	1	12.5			1	5.0
Sub Total	8	100.0	28	100.0	20	100.0
Properties with five consecutive sales						
1111111221					5	33.3
1111122111					2	13.3
1111122112	1	25.0				
1111122221					1	6.7
1112211221					2	13.3
1112222111	1	25.0				
1121122221					1	6.7
1211111221					1	6.7
1211122221					1	6.7
1221122221					1	6.7
1222222111	1	25.0				
2112222111	1	25.0			1	6.7
Sub Total	4	100.0			15	100.0
Properties with six consecutive sales						
111221122112					1	16.7
111222211112					2	33.3
111222211221			1	100.0		
112221122112					1	16.7
122222211211					1	16.7
222222211112	1	100.0				
222222211211					1	16.7
Sub Total	1	100.0	1	100.0	6	100.0
TOTAL	67		156		211	

<sup>(1)</sup> The codes indicate whether a property's purchase or sale year occurred during a boom or bust period in the South Australian real estate market. 1 = bust conditions and 2 = boom conditions. Therefore, 1121 represents a property which experienced two sales in its history, and the first purchase occurred during a bust, the first sale occurred during a bust, the second purchase occurred during a boom and its second sale occurred during a bust.

Source: Extracted from stk\_dwg.sav file

**Table A11.2: Index of dissimilarity of profitability categories distributed sectorally**

Profitability category	Index of dissimilarity
Losses greater than profits	23.4
Losses equal profits	8.9
Loss less than profits	8.3

Source: Computed from data extracted from stk\_dwgs.sav file

**Table A11.3: Correlation analysis of profitability categories distributed sectorally**

	Losses greater than profits	Losses equal profits	Losses less than profits
Losses greater than profits	****	0.940	0.672
Losses equal profits		****	0.793
Losses less than profits			****

Source: Computed from data extracted from stk\_dwgs.sav file

**Table A11.4: Index of dissimilarity of profitability categories distributed zonally**

Profitability category	Index of dissimilarity
Losses greater than profits	25.9
Losses equal profits	9.4
Losses less than profits	14.1

**Table A11.5: Index of dissimilarity of profitability categories distributed by mosaic regions**

Profitability category	Index of dissimilarity
Losses greater than profits	38.3
Losses equal profits	15.0
Losses less than profits	19.6

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