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Assessing Buyer Search Behaviour for Residential House Purchasers in Adelaide

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Abstract: *This paper presents the preliminary results of a survey of house purchasers in Adelaide and regional South Australia. The paper seeks to establish the basic behaviour of house purchasers in terms of search and discovery patterns, purchaser preferences and purchaser characteristics. The basis of this research is a survey of some 2000 house purchasers who purchased detached houses in Adelaide over the period January 1995 to March 1997.*

Introduction

This paper seeks to examine aspects of the Adelaide house market. In particular to

1. Establish the behaviour of house purchasers through the consideration of the
    - number of houses inspected prior to purchase
    - time period of the search
    - area over which the purchaser searched for housing
    - method of sale and how the purchaser discovered the property was for sale
2. Establish the ranking that purchasers placed on selected attributes prior to sale
3. Examine these issues on a regional basis

Background

Professionals involved in the real estate industry use informal interviews and data collection on a day to day basis. Many of the ideas about how markets operate, the current state of the market and purchaser and vendor preferences are based on informal, unstructured, qualitative research. Sometimes this is supplemented with analysis of sales to infer market behaviour. Unfortunately there are few formal surveys of households (particularly purchasers) which can provide more robust information. The use of purchaser surveys as a

valuable source of information has been well documented (e.g. Eldred et al.,1976) and accepted for use over many years. Rowland (1995) suggests that surveys of the occupants of properties may provided much further information about the market than simple sales analysis. Typically surveys of house purchasers are the result of private market research over small geographic areas and are not published for general consumption. Few broader works are available. The Age (1980) produced a report based on a survey of 1350 houses (resulting in a sample of 407) throughout Melbourne. The survey was heavily skewed towards younger well-educated professional purchasers with a particularly low response in the western suburbs. The survey included questions about the price of housing, the search process and purchaser characteristics. A survey of households was conducted by Baen, J.S., (1992), through-out New Zealand with the aim of assessing the quality of real estate services. There does not appear to be any general studies of purchasers in Adelaide or South Australia.

Academic research in this field is generally focused on quite specific areas. These are most commonly based on purchaser preferences and purchaser migration. In a study which included results from each state in Australia, Brown, P.M., (1994) examines the movement of purchasers and links the type of property purchased to purchaser type. This study was based on data from a major real estate firm. Oluwoye, J, (1996) reported results from an empirical survey of households in Woolongong. A cluster sample was used to collect data from one hundred households through interviews. The study examined the relationship between house ownership, age and average weekly earnings. Research in the areas of housing preference in Australia has been summarised by Wulff M (1993) who summarised five major works on the topic from 1972 to 1991. The most recent works involving South Australia were based on a study in 1991 (Stevens et al, 1992) considering housing and locational preferences. This survey was conducted by the Australian Bureau of Statistics and based on a qualitative survey of approximately 3300 households in Adelaide.

The purpose of this paper is to provide some general results from a survey of house purchasers in Adelaide and in regional South Australia. The survey is multi-focused covering issues such as purchaser preference and search behaviour as well as linking property characteristics to sales details and purchaser characteristics.

Methodology

The basis of this research was a survey of recent house purchasers conducted by students during the first semesters of 1996 and 1997. Each student had a sample of 20 properties of survey. The properties were all listed as transactions of detached houses over the period from January 1995 to March 1997. Data concerning the sale was extracted from sales details of the Department of Environment and Natural Resources (DENR) using UPmarket Comparative Sales Software. A total of forty thousand nine hundred and twenty four sales were found to be probable market transactions of detached houses over the period

The properties were selected as cluster samples of detached houses in Adelaide and South Australian regional centres. The sample was slightly biased because not all areas could be chosen. As no students lived near many of the regional centres and the northern and southern suburbs of Adelaide were considered too far to travel for many students, the clusters are slightly biased particularly in Adelaide where the inner and middle distance suburbs are over represented.

Students were provided with a standard survey form for use in the interview as well as prompt cards and a letter of introduction (these are shown as Attachment 3). Tutorial sessions were used to clarify issues in the survey and coding system as well as to discuss interview and questioning techniques.

The survey form was designed to serve a variety of purposes but was short enough to ensure that a reasonable number of purchasers would respond. There were three sections. Sections one and two were completed by interview with the purchaser. Section one had four questions and related to internal characteristics of the properties which were not available from the DENR sales file. Section two contained twelve questions pertaining to purchaser characteristics, preferences and behaviour. Section three was completed by the student based on observation of the property and the neighborhood. This section was completed by students even if the purchaser would not respond to an interview.

One hundred and twelve students were allocated a sample of twenty properties. Some students failed to complete the survey and only two thousand and sixty survey from one hundred and three students were returned. Of these eight hundred and fifty included all three sections giving a response rate of 41.3%. A sample of these were then selected for a follow-up survey. This survey was carried out by phone and attempted to ascertain the validity of the original survey by checking that the respondent had in fact been interviewed. The survey forms were checked for correctness of coding and completeness. As a result of these follow-up procedures a further two hundred and forty four survey were removed.

The results of this research are based on the remaining six hundred and six completed surveys. This represents 29.4 % of the original sample set or 1.48% of the population of valid sales of detached houses over the period January 1995 to March 1997.

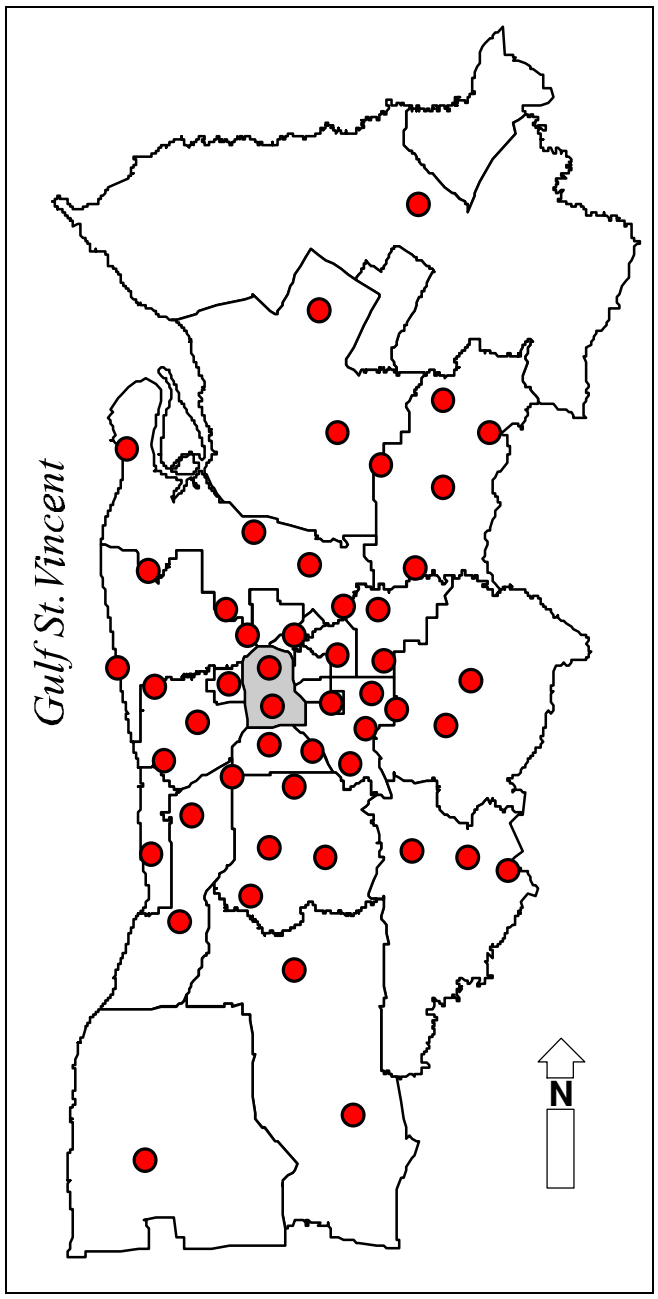
Data from the survey was merged with the corresponding sales transaction and valuation data from DENR. This gave a total of one hundred and eleven usable data fields. A list of key variables is shown in Attachment 2. All analysis was completed using SPSS 7 for Windows. Basic analysed using descriptive statistics, frequencies and cross tabulations was carried out. A methodology to discover movement of purchasers was pursued. Brown (1994)uses a methodology where the postcode of the property which is purchased is compared to the postcode of the purchaser. While this has been applied to all states of Australia, including South Australia, a casual sample of sales from South Australia revealed that some 42% of purchasers list the house that they are moving into as their residential address. This would give an unacceptable level of bias in this analysis and therefore is not included in this paper.

Results

Sample Distribution

Before any major analysis was completed it was considered necessary to test for any apparent bias in the sample. The first analysis involved simple mapping of the sample clusters. There were three clusters in regional South Australia. These were in Balaklava, a small township about 70 km north of Adelaide, Murray Bridge, a regional centre approximately 70 km east of Adelaide and Mount Gambier a regional centre some 465 km south-east of Adelaide. Within Adelaide there were a larger number of clusters. The approximate location these is shown on Figure 1.

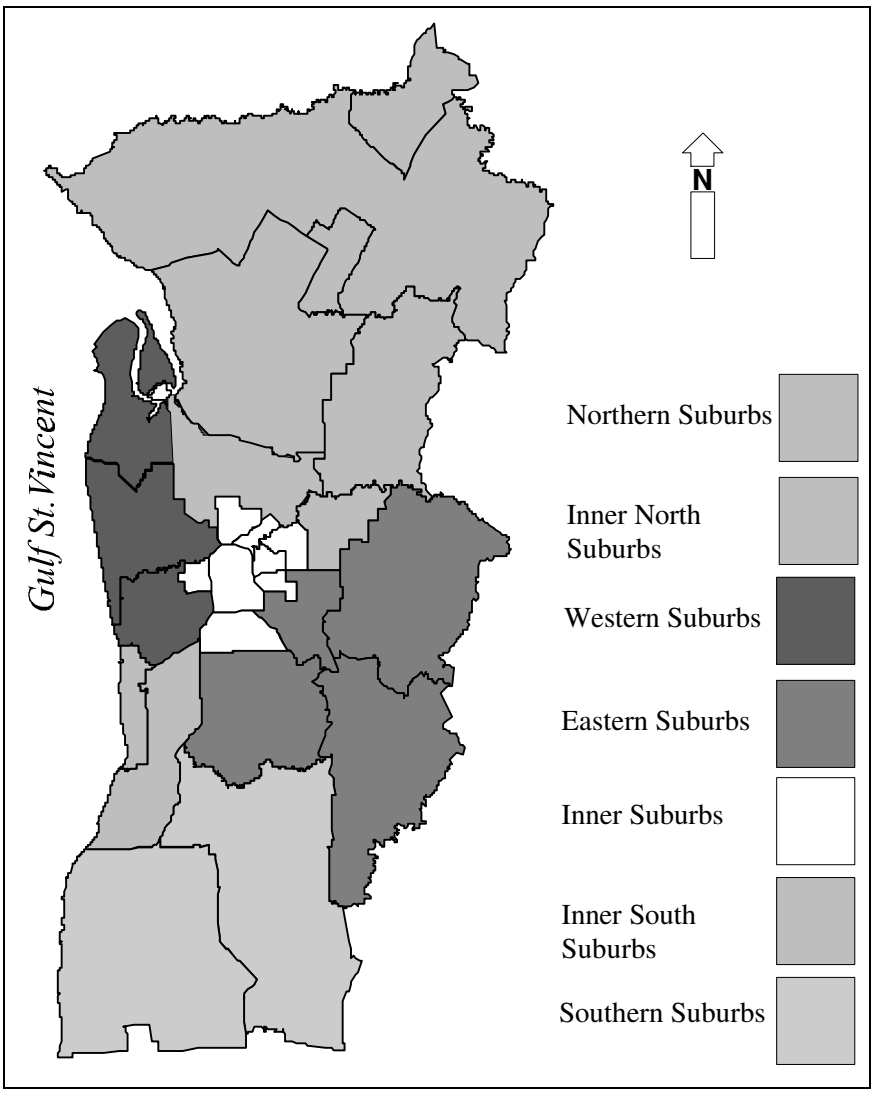
Figure 1 - Location of Sample Clusters within Adelaide



This figure clearly indicates the predominance of clusters in the centre of the metropolitan area. The local government boundaries are indicated, with the City of Adelaide highlighted. This result is consistent with other research (Steven et al, 1992, The Age, 1980) where response rates in lower socioeconomic areas are significantly lower. This equates to Adelaide's Northern and Southern suburbs. Because of this bias in the sample, and to provide spatial relationships, the metropolitan area was divided into regions. The regions were divided on local government area (LGA) boundaries with the original intention to follow the regional divisions used by Stevens et al (1992) who divided the metropolitan area into four regions. These regions however placed all of Adelaide "middle" LGA's in one cluster. This grouped Adelaide's premier eastern suburbs with the beach-side south-western suburbs and the more industrial port areas and would include nearly one third of all properties. This was considered unsatisfactory and a division involving seven regions with the cluster outside of Adelaide making up an eight regional area was used. These regions are shown on Figure 2.

The population and sample data was split by region. This enabled the calculation of the sample size in each region as well as the comparison of some key variables. The variables sales price, equivalent building area and site area (from the DENR file) were chosen for comparison. These should show if the properties involved in the sample are representative of the population. A full table of these results is shown in Attachment 2. The results indicate that the sample is biased in a number of ways. The sample percentage is high in Adelaide's inner suburbs and low in the northern, southern and regional areas. The sample percentage drops to about half of one percent in these areas. In terms of the prices paid for properties, the sample shows positive error in each region as well as for the whole state. In each region the mean price paid for properties in the sample exceeds the mean for the population. This is highlighted with the average sample price across the whole state being 27.8% above the population mean. This is however mainly due to the large sample size in those regions with the highest priced properties. The maximum sample error in any one region is about 15% in four regions. Errors in the equivalent area and site areas are significantly lower.

Figure 2 - Regional Division of Adelaide



As a result of this preliminary analysis it was concluded that

- results for the whole state would be significantly biased and that regional results were preferable.
- results on a regional basis were likely to be reliable but with a slight bias resulting from a larger proportion of higher priced properties
- For this paper results would be limited to regional analysis of the behaviour of purchasers and their preferences when purchasing.

Purchaser Characteristics

The traditional starting point of the analysis of household purchasers is to consider who is purchasing. For this research the purchaser's household structure, age and experience have been used. While household income was collected this information was missing from a significant number of surveys and it was decided not to analyse this at this stage. Charts of the relative responses in each region are shown on Figure 3, Figure 4 and Figure 5. A number of issues may be concluded from these charts

- Regional Centres and townships attract a much larger proportion of older retired purchasers.
- The vast majority (over 60% in every region) of purchasers are couples (mainly couples with children).
- First home buyers form a substantial part of the market in all regions but are particularly evident in the southern and inner northern regions where they make up some 40% of purchasers.
- The largest number of purchasers in all regions fall into the 31 to 40 year age group.
- Less traditional purchasers of detached housing, singles, singles with children and shared households make up a consistent number (about 20%)of purchasers across the regions.
- There are no clear dominant groups in any region. Each region has a reasonable spread of age groups, household structures and experience levels.

Figure 3 - Household Structure of Purchasers of Houses - By Region

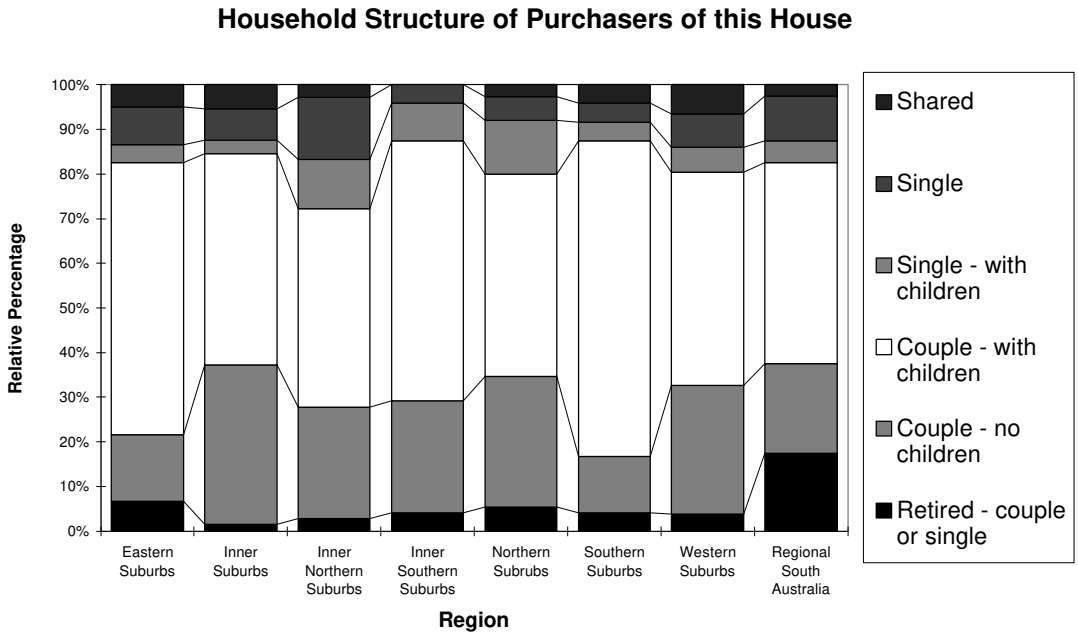


Figure 4 - Age Group of the Oldest Purchaser - By Region

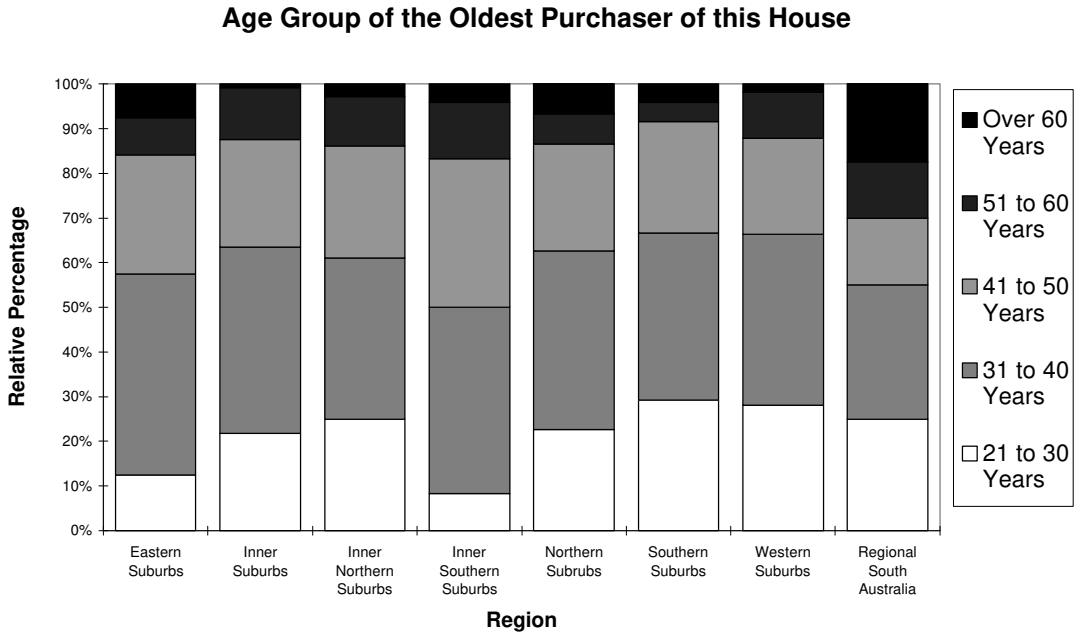
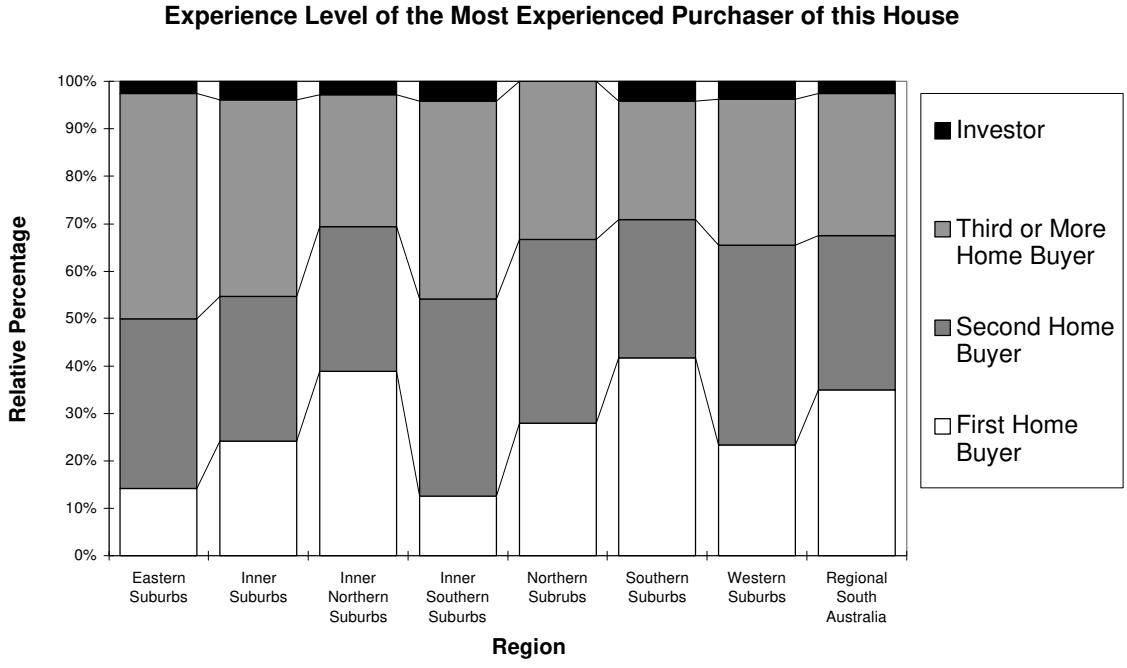


Figure 5 - Experience Level of the Most Experienced Purchaser of this House - By Region



Purchaser Behaviour

The results for this section are related to the purchasers search for houses, the number of houses inspected and over what time period and spatial area.

Search Area and Depth of Search

The number of houses searched, the time over which they search and the, space of that search gives a good indication as to their behaviour. If a large number of purchasers buy the first house they look at , then it suggests a different marketing approach to a situation where purchasers spend more time to look at a greater number of houses over a large space. Since a house is typically the purchasers most expensive purchase decision, the expectation is that buyers would look at a wide variety of houses. The survey results show that this is true of some purchasers but that there are still a large number of purchasers who buy after only a cursory examination of what is available. Figure 6 shows that in all regions at least 10% of purchasers considered only 1 to 5 properties. Purchasers in regional South Australia tend to be the least "comparative" in their decision. This is probably due to the lack of potential opportunities in these regional areas i.e. less houses for sale. This is also reflected in a small spatial search area shown in Figure 8 which indicates that most purchasers in regional South Australia look only within the township in which they purchase. By comparison, in Adelaide's inner, inner south and eastern regions the purchasers tend to examine a much larger number of properties over a longer time period and over a wider search space. Notwithstanding this it is fair to say that most purchasers look for properties over a small spatial area. Figure 8 shows that in all regions, over 70% of purchasers looked only in the suburb they purchased or in the adjoining suburbs. Purchasers in the inner, western and eastern suburbs (where housing variation is at its greatest) were more likely to search across Adelaide but again this occurred for less than 10% of purchasers in any one region. In each location some 50% of purchasers examined at least 50 properties. These regions tend to have higher prices with a wider variety of housing types.

Figure 6 - Chart showing the Number of Houses Inspected Prior to Purchase - By Region

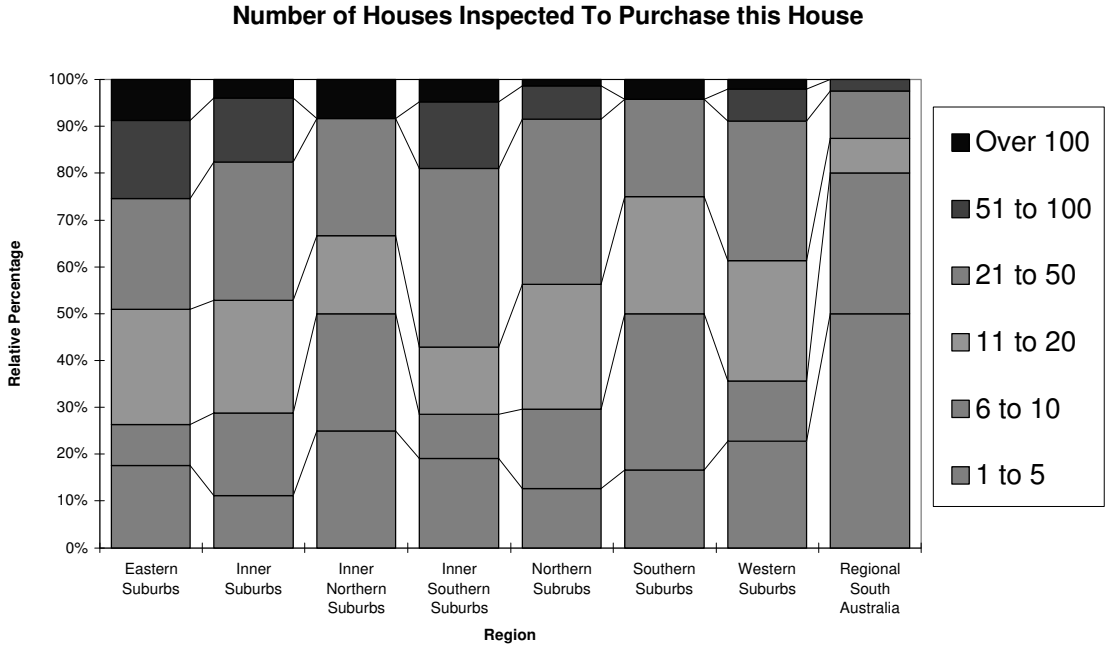


Figure 7 - Period of Time Spent Looking for this House Prior to Purchase - By Region

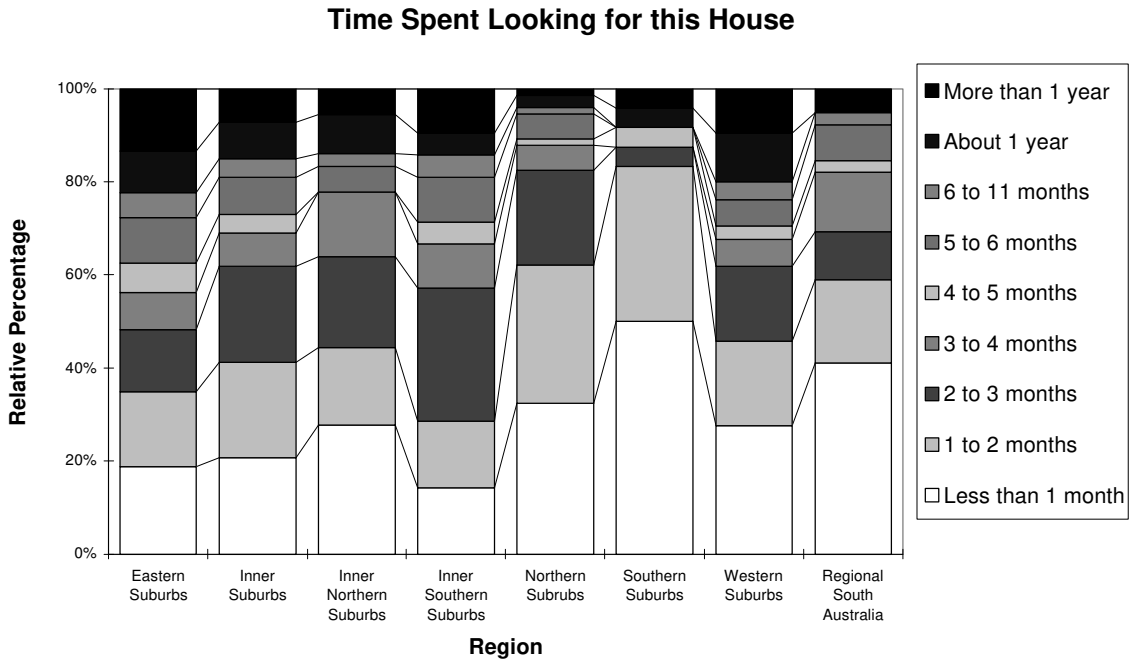
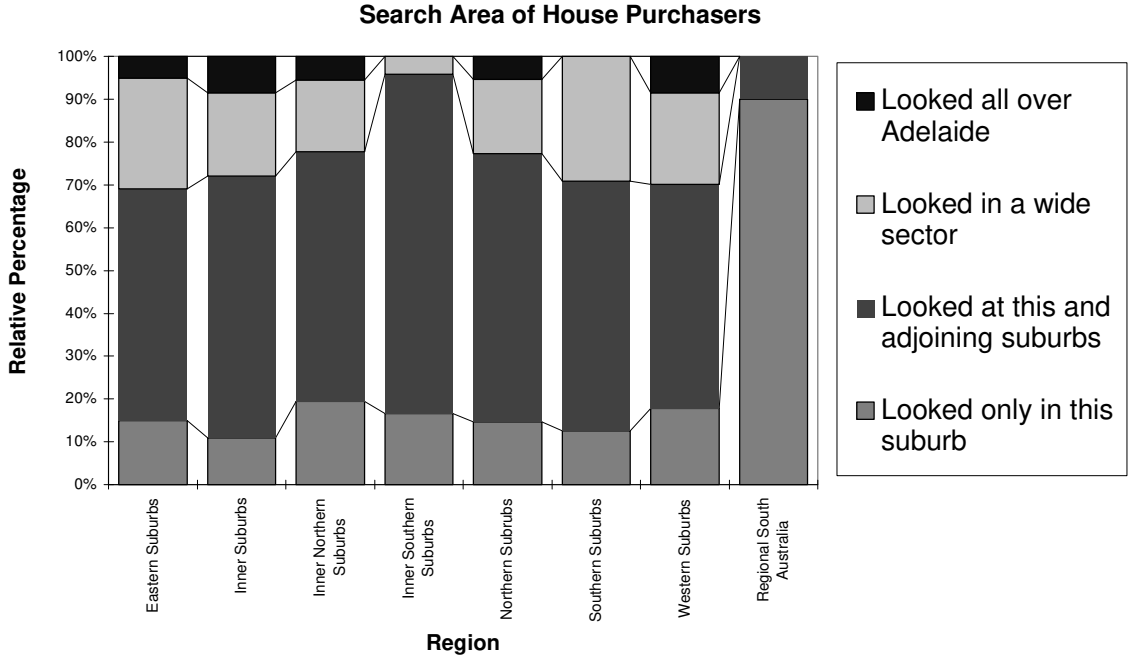


Figure 8 - Spatial Area covered while searching for this House Prior to Purchase - By Region



Method of sale and purchaser discovery

The purpose of this section of the paper is to examine the results of tradition marketing and selling methods. The Adelaide house market tend to run along very traditional lines. This normally involves basic marketing including advertising in the daily newspapers with most sales involving a real estate agent in a private treaty transaction. The results from this survey show that the role of the real estate agent is still very significant in the housing

market. Figure 10 shows that real estate agents figure in over 70% of sales in all regions. Auctions are a significant method of sale in those regions where housing variety is greatest. In particular inner Adelaide and the western and eastern regions all show that over 20% of properties sell by auction. Well established areas in the inner south and inner north as well as the regional centres have a large component of private treaty sales directly from the vendor. In these areas as many as 20% of sales occur in the absence of the real estate agent. The method of discovery that the property was for sale varies significantly across the regions. The two Adelaide newspapers, The Advertiser and the Sunday Mail are significant sources of discovery. In most regions they accounted for about 50% of the discoveries with a sign on the property accounting for about 20% in most regions. There are however some significant departures from this. Local newspapers figure strongly in some locations. This is expected in the regional centres but is also strong in the western region. Also in the regional centres and very strongly highlighted in the southern region is the discovery directly from the agent. This suggests that corporate marketing in these locations is sufficient to get purchasers to contact the agents directly. Less traditional forms of advertising such as mailed out brochures, TV advertising and computerised listing are almost non-existent as methods of discovery. This is likely to change over the next few years.

Figure 9 - How the Sale of the House was First Discovered by the Purchasers - By Region

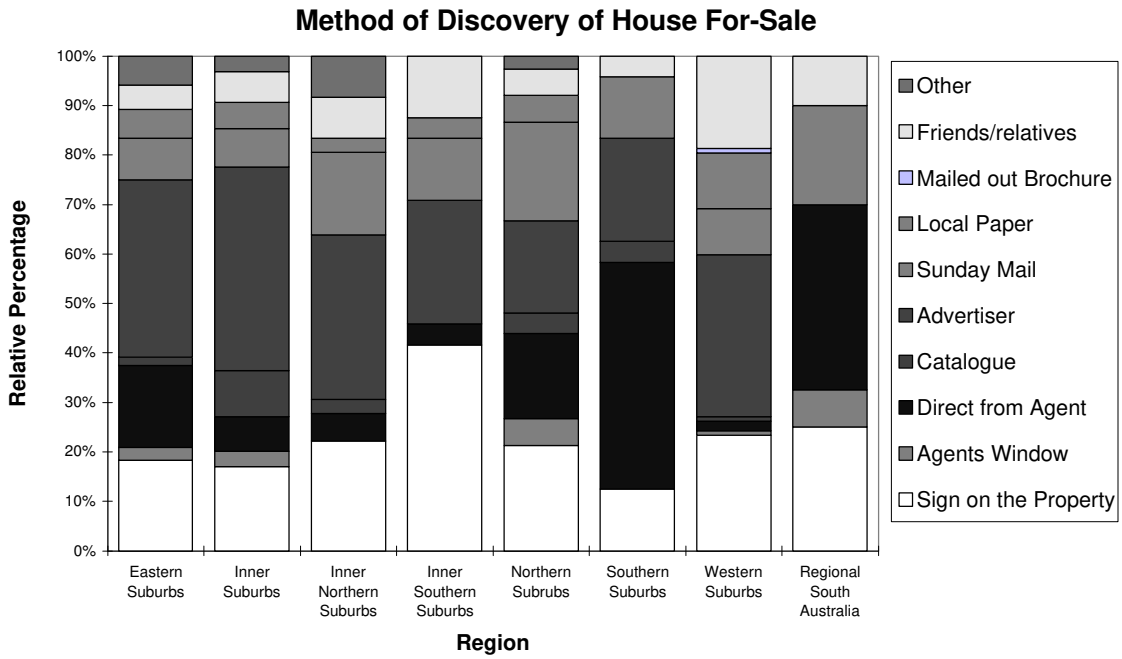
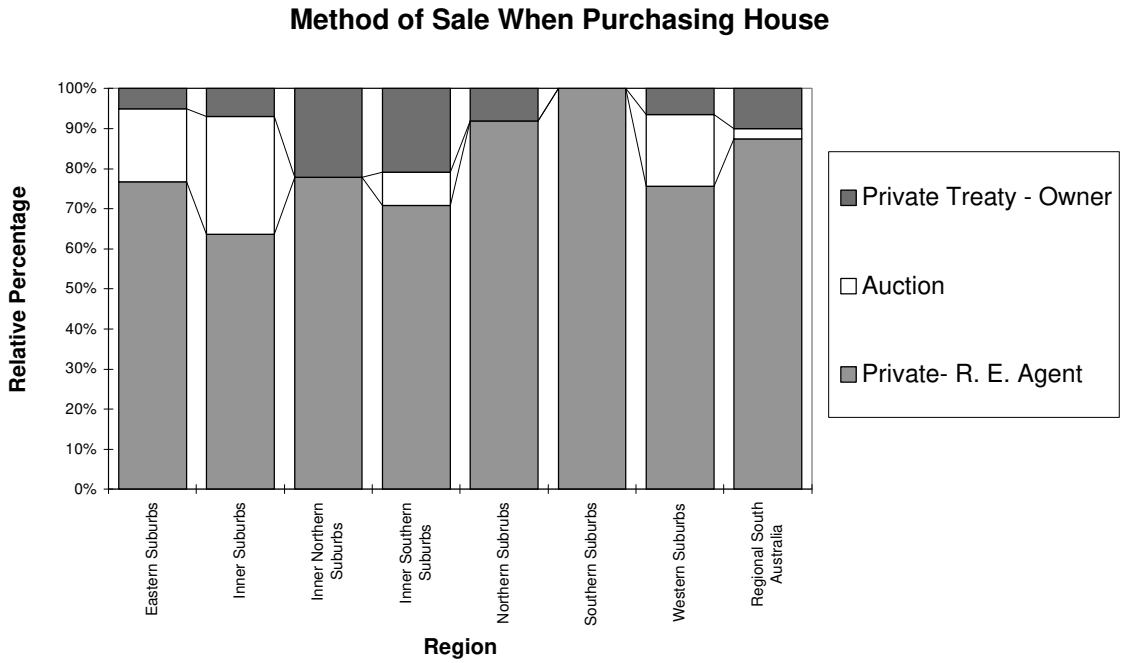


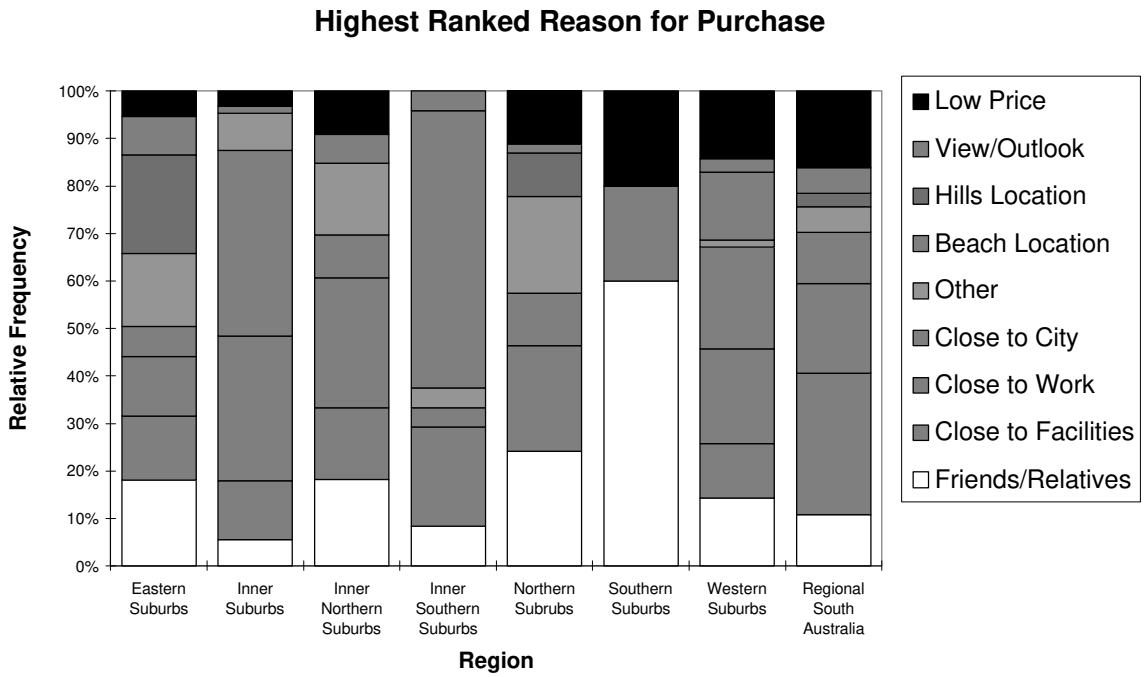
Figure 10 - Method of Sale Used When Purchasing this House - By Region



Purchasers Ranking on locational attributes

The survey included a question in which purchasers were asked to rank several items in terms of importance when purchasing the property. It is anticipated that some scales will be developed from these rankings however at this stage it was decided to examine the first ranked item and to consider these by region. The relative frequencies are shown in Figure 11. The results show that purchasers ranking are significantly different across the regions. Typically purchasers most important reason was likely to be met. Most purchasers who were looking for a beach location have purchased in the beach-side western or inner southern regions. The regions which include sections of the Adelaide hills - mainly the eastern and northern regions, include purchasers looking for a hills location. Purchasers in the inner areas prefer to be near the city. A low affordable price seems to be particularly significant in regions further from the CBD, supporting general land economic theory. The importance of being close to friends and relatives is significant in all regions but highlighted in the southern region. Similarly being close to facilities is generally important but highlighted in the regional areas where the percentage of older retired purchasers was high.

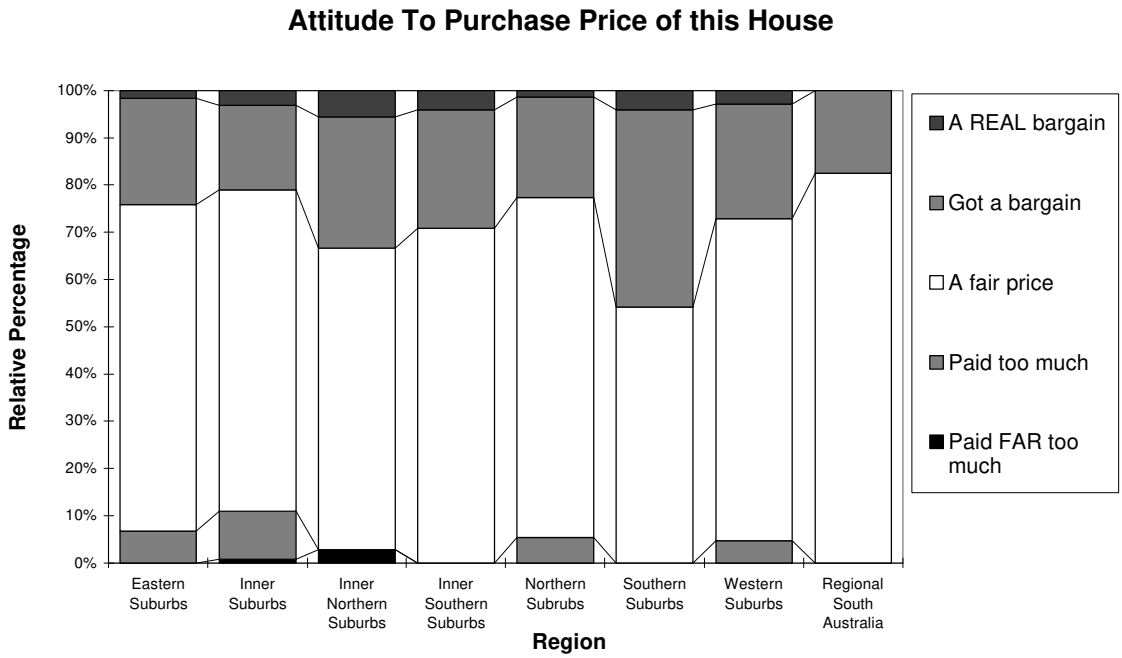
Figure 11 - Highest Ranked Reason for Purchasing this House - By Region



Attitude to Purchase Price

The survey aimed to discover how purchasers felt about the purchase price of the property after they had purchased. Rossini (1996) discovered that in several random locations in Adelaide there had been a real decrease in house values over a two year period prior to 1996. The latest anecdotal evidence from real estate agents is that prices have started to recover. The period of the survey covers the time when prices were relatively depressed. On this basis it was expected that most purchasers would feel that the price paid for their property was relatively low. This proved to be the case in all regions. Figure 12 indicates that no more that 10% of purchasers felt that they had paid "too much" or "far too much" for their property. Conversely at least 20% of people felt they had go "a bargain" or "a real bargain". In the rapidly expanding southern suburbs, no purchasers felt they paid too much while 40% felt they had some level of bargain. Developers and speculative builders have suffered in this region with poor sales and the attitude of purchasers probably reflects the large number of sales of properties at reduced prices to clear stock. The attitude of purchasers in regional South Australia probably reflects the relative stability of house prices in the regional centres.

Figure 12 - Attitude of the Purchaser Towards the Price Paid for this House - By Region



Regional Summaries

The following generalisations have been drawn to summarise the nature of purchasers and their behaviour in each region

Eastern Suburbs

- Purchasers are mainly couples with children, are in older age groups and are more experienced house buyers
- Tend to search for properties over a wide area but with a great variety of search patterns and methods
- Large number of auction sales with purchasers offering a wide variety of most important issues

Inner Suburbs

- Highest number of couples with no children
- Wide variety of search patterns but searching mainly in the inner areas
- Tend to find out about properties from the Adelaide newspapers
- High number of Auction sales
- Primarily concerned with location to facilities and work

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Inner Northern Suburbs

- Most diverse range of purchasers but with a high instance of single parents and first home buyers
- Purchasers tend to search in a small area for a short time and examine a small number of houses prior to purchase
- Very high number of private treaty sales not involving a real estate agent.
- Primarily concerned about being close to work and lower affordable prices

Inner Southern Suburbs

- Very low number of young inexperienced purchasers
- very narrow search area but purchasers tend to examine a large number of houses over a small spatial area
- High number of properties sold privately without a real estate agent with a correspondingly high number of purchasers discovering the sale through a sign on the property
- Purchasers primary motivations are a beach location and being close to facilities

Northern Suburbs

- High number of purchasers are single parents
- Very few purchasers spend a long time looking for a house
- No property in the sample was sold at auction
- Very mixed set of reasons for purchase

Southern Suburbs

- Highest percentage of couples with children as purchasers
- Highest rate of first home buyers
- Highest number who purchase after looking for less than 1 month
- Generally a narrow search area
- Highest percentage of sales discovered directly from the agent
- All sales in the sample involved a real estate agent in a private treaty sale
- Being close to friends and relatives and a low affordable price are the highest ranked reasons for purchase
- Highest percentage of purchasers who feel that they “got a bargain”

Western Suburbs

- Large number of purchasers are couples without children
- Very mixed search patterns but purchasers often look over a wide area
- High number of auction sales
- Many properties discovered for sale from friends and relatives
- Purchasers rank being close to work and facilities as most important

Regional South Australia

- Highest percentage of retired and older purchasers
- Purchasers have a narrow search area and time span
- Tend to rely on the local newspaper and information directly from agents to discover properties for sale
- Few auction sales but a reasonable percentage sold privately

Conclusion

This paper presents some preliminary results from a survey of households in Adelaide and regional South Australia. Further work will be done with the data from this survey but the preliminary results were designed to establish if further work might be worthwhile. Several key issues have arisen from this paper.

The sample of households shows bias which is typical of this type of survey. This led to the need to examine results on a regional basis. As the survey is ongoing, attempts will be made to ensure that in future periods that the sample is less biased.

Results on a regional basis show significant differences between the regions in most characteristics of the purchasers and their behaviour. The following overall conclusions may be drawn.

- The overwhelming number of purchasers of detached houses are couples with children.
- There is a wide variety of purchasers but this includes a very significant number of purchasers aged under 30 and first home buyers.
- Search patterns vary significantly but most purchasers examine houses in only the suburb in which they purchase or adjoining suburbs
- A significant number of purchasers examine only a few other properties over a very short time period prior to purchase
- Over 25% of purchasers feel that their purchase was a bargain while less than 5% feel they paid too much

Further analysis using more complex modelling and scaling methodologies may now be applied to this data and it is anticipated that the survey will continue in future years to enable some analysis over time.

References

Baen, J.S., (1992), Marketing Assessment Research of Residential Sales Persons - A Model for International Comparison of Quality of Service in New Zealand - A Nationwide Survey of All Purchasers and Vendors**,** *2nd Australasian Real Estate Educators Conference, Adelaide* January 1992

Brown, P.M., (1994), Buyers' Behaviour in the Residential Real Estate Market in Australia, *Fourth Australasian Real Estate Educators' Conference*, Auckland University, January.

Oluwoye, J, (1996) An Analysis of Household Tenure Choice And Intra-State Movements: An Empirical Study of Wollongong, *Australian Land Economics Review* Volume 2 No.1. 20-22

Rowland, P.J. (1995), Survey Methods for Establishing Market Preferences, *PRRES Conference RMIT*, January 1995.

Stevens, C.A., Baum, S., and Hassan, R. (1992), The Housing and Location Preferences of Adelaide Residents, *Urban Policy and Research*, Volume 10, Number 3, pp 7-22.

The Age, (1980) *Melbourne Home Purchase Survey No 2 1980* Marketing Research Department - The Age

Eldred, G and Zerbst, R. (1976) Consumer Research and the Real Estate Appraiser, *The Appraisal Journal Vol 44 510-522*

Wulff M (1993) An Overview of Australian Housing and Locational Preference Studies: Choices & Constraints on the Housing Market, *Urban Policy and Research*, Vol 11 No 4, 230-237

Rossini, P.A. (1996) "Using Constant Quality House Prices to Assess Property Market Performance" *The Valuer and Land Economist* , August 1996

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Attachments

Attachment 1 - Description of Key Variables from the Data Set (Not all Variables are included)

Variable	Description	Code
Sale Date	Actual Sale Date Recorded as dd/mm/yy	Continuous
Sale Price	Price in Dollars Recorded on the Transfer	Continuous
Suburb	Suburb the Property is Located in	Categorical
Improvements	String of Improvement Descriptors	Categorical
Land Area	Area in Hectares	Continuous
Zone	Government Code for Zone which determines Development Controls	Categorical
Rooms	Number of Main Rooms in the Building	Continuous
Equivalent Building Area	Calculated Equivalent Area of Buildings based on weighted average formula for main buildings and other buildings	Continuous
Condition	Scaled code from 1 - demolition to 9 - high quality new condition	Scale
Wall Type	Categorical Variable allowing for 9 wall cladding types	Categorical
Roof Type	Categorical Variable allowing for 9 roof cladding types	Categorical
Building Style	Categorical Variable allowing for 48 building styles	Categorical
Year of Construction	Date of Construction of the Main Building	Continuous
Internal Condition of House	Categorical Variable which allows for six descriptions of internal condition from new to full renovation	Categorical
Recently Renovated Kitchen	Dummy Variable which indicates the presence of when purchased	Dummy
Recently Renovated Bathroom/s	Dummy Variable which indicates the presence of when purchased	Dummy
Ducted Air Conditioning	Dummy Variable which indicates the presence of when purchased	Dummy
Walk in Wardrobe	Dummy Variable which indicates the presence of when purchased	Dummy
Built in Wardrobes	Dummy Variable which indicates the presence of when purchased	Dummy
Built in Dishwasher	Dummy Variable which indicates the presence of when purchased	Dummy
Number of Bedrooms	Number of Bedrooms in the Main Building	Continuous
Number of Bathrooms	Number of Bathrooms in the Main Building	Continuous
Number of Dining Rooms	Number of Dining Rooms in the Main Building	Continuous
Number of Lounge Rooms	Number of Lounge Rooms in the Main Building	Continuous
Number of Family Rooms	Number of Family Rooms in the Main Building	Continuous
Number of Rumpus Rooms	Number of Rumpus Rooms in the Main Building	Continuous
Number of Sunrooms / Conservatories	Number of Sunrooms / Conservatories in the Main Building	Continuous
Number of Other Rooms	Number of Other Rooms in the Main Building	Continuous
Garden Beds / Lawns	Dummy Variable which indicates the presence of when purchased	Dummy
Mature Shrubs	Dummy Variable which indicates the presence of when purchased	Dummy
Large Mature Trees	Dummy Variable which indicates the presence of when purchased	Dummy
Boundary Fencing	Dummy Variable which indicates the presence of when purchased	Dummy
Driveways and paved areas	Dummy Variable which indicates the presence of when purchased	Dummy
Pergola - Covered Entertainment Space	Dummy Variable which indicates the presence of when purchased	Dummy
Abnormal Sale Conditions	Categorical Variable which indicates whether any abnormal conditions were present within the sale (yes or no category)	Categorical
Purchase Price	Respondents attitude towards the purchase price scaled from 1 - paid far too much, to 5 - a real bargain	Categorical
Household Structure	Categorical Variable which allows for 6 household types	Categorical
Age Groups of Oldest Owner	Categorical Variable which allows for 6 age groups in ten year intervals	Categorical
Most Experienced Owner	Categorical Variable which allows for 5 types of home buyer i.e. first, second, investor etc.	Categorical
Close to Friends or Relatives	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank

Close to Facilities	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Close to Work	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Close to the City	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Other	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Beach Location	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Hills Location	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
View / Outlook	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Low (affordable) Price	Ranking Variable of Importance when Purchasing (ranked from 1 to 9)	Rank
Suburbs Looked At	Categorical Variable of broad areas looked at when purchasing - from the one suburb to all of Adelaide	Categorical
Number of Weeks	Number of Weeks spent looking for the purchased house	Continuous
Number of Houses	Number of Houses Inspected before purchasing	Continuous
Method of Marketing	Method of Marketing used to find house	Categorical
Method of Sale	The method used to sell the house	Categorical
Total Household Gross Income	Categorical Variable which allows for 8 household income levels	Categorical
Tenure of Property	Nature of tenure of respondent ie renting (yes or no category)	Categorical
Slope of Site	Categorical Variable allowing for 3 types of slope i.e. flat, gentle or steep	Categorical
Hi-Low Side of Road	Categorical Variable which indicates the location of the site i.e. high or low side of road	Categorical
Aspect of Site	Categorical Variable indicating the aspect of the site i.e. North/South, East/West	Categorical
Driveway Access to the Site	Categorical Variable of ease of access to site i.e. from easy to difficult	Categorical
Distance of View	Categorical Variable of distance of view - allows for three distances	Categorical
Angle of View	Categorical Variable of the angle of the view - allows for three degree categories	Categorical
Ocean View	Dummy Variable which indicates an ocean view	Dummy
Suburban Housing View	Dummy Variable which indicates a view of suburban housing	Dummy
Green Space View	Dummy Variable which indicates a view of greenspace	Dummy
River View	Dummy Variable which indicates a view of a river	Dummy
City View	Dummy Variable which indicates a view of the city	Dummy
Commercial View	Dummy Variable which indicates a view of commercial property	Dummy
Local Reserve View	Dummy Variable which indicates a view of the local reserve	Dummy
Rural View	Dummy Variable which indicates a rural view	Dummy
Hills View	Dummy Variable which indicates a hills view	Dummy
Major Roadway View	Dummy Variable which indicates a major roadway view	Dummy
Bushland View	Dummy Variable which indicates a bushland view	Dummy
Road Size	Categorical Variable of Road Size in the Neighbourhood	Categorical
Street Type	Categorical Variable of Street Types in the Neighbourhood	Categorical
Nearest Reserve	Categorical Variable of the Location of Reserves in the Neighbourhood	Categorical
Public Transport	Categorical Variable of the Location of Public Transport in the Neighbourhood	Categorical
Nearest School	Categorical Variable of the Location of Schools in the Neighbourhood	Categorical
Local Shops	Categorical Variable of the Location of Shops in the Neighbourhood	Categorical
Street Trees	Categorical Variable of Types of Trees in the Neighbourhood	Categorical
Transmission Lines	Categorical Variable of Types of Transmission Lines in the Neighbourhood	Categorical
Surrounding Houses	Categorical Variable of the Comparative Quality of other Housing in the Neighbourhood	Categorical
Commercial Uses	Categorical Variable of Commercial Uses in the Neighbourhood	Categorical
Neighbourhood	Rating of Neighbourhood compared to study area (1 - worst to 5 - best)	Rating Scale
Surrounding Properties	Rating of Surrounding Properties compared to study area (1 - worst to 5 - best)	Rating Scale
Streetscape	Rating of Streetscape compared to study area (1 - worst to 5 - best)	Rating Scale
House Quality	Rating of House Quality compared to study area (1 - worst to 5 - best)	Rating Scale
Site Features	Rating of Site Features compared to study area (1 - worst to 5 - best)	Rating Scale
View - Outlook	Rating of the View compares to study area (1 - worst to 5 - best)	Rating Scale
Marketability	Rating of Marketability compared to study area (1 - worst to 5 - best)	Rating Scale
Desirability	Rating of Desirability compared to study area (1 - worst and 5 - best)	Rating Scale

Attachment 2 - Comparison of Population and Sample Statistics - By Region

Sale Price								
	Population			Sample			Sample Details	
Location	Count	Mean	St Dev	Count	Mean	ST Dev	Sample %	Sample error
Regional South Australia	9729	84741	40527	43	92522	24561	0.44%	9.2%
Inner Suburbs	3285	192711	112554	143	200526	110987	4.35%	4.1%
Inner Northern Suburbs	2386	111007	42290	37	119064	29043	1.55%	7.3%
Inner Southern Suburbs	3263	131674	56962	26	155288	68115	0.80%	17.9%
Eastern Suburbs	4268	182945	90242	125	210859	119425	2.93%	15.3%
Western Suburbs	4782	128929	54797	120	149332	58361	2.51%	15.8%
Northern Suburbs	8774	98014	35202	82	112892	27661	0.93%	15.2%
Southern Suburbs	4437	100028	34593	30	101223	27069	0.68%	1.2%
Whole State	40924	127154	68067	606	162455	93651	1.48%	27.8%

Equivalent Building Area (not recorded for every property)								
	Population			Sample			Sample Details	
Location	Count	Mean	St Dev	Count	Mean	ST Dev	Sample %	Sample error
Regional South Australia	9201	127	42	30	138	39	0.33%	8.7%
Inner Suburbs	3215	151	65	143	157	58	4.45%	4.0%
Inner Northern Suburbs	2365	125	42	37	127	36	1.56%	1.6%
Inner Southern Suburbs	3231	137	43	26	159	38	0.80%	16.1%
Eastern Suburbs	4249	161	62	125	178	78	2.94%	10.6%
Western Suburbs	4732	132	42	120	146	48	2.54%	10.6%
Northern Suburbs	8724	135	39	82	143	35	0.94%	5.9%
Southern Suburbs	4354	140	40	30	138	39	0.69%	-1.4%
Whole State	40071	139	46	593	154	56	1.48%	10.8%

Site Area (not recorded for every property)								
	Population			Sample			Sample Details	
Location	Count	Mean	St Dev	Count	Mean	ST Dev	Sample %	Sample error
Regional South Australia	7224	1257	1096	21	2163	3183	0.29%	72.1%
Inner Suburbs	3271	692	363	143	705	392	4.37%	1.9%
Inner Northern Suburbs	2378	736	319	37	718	145	1.56%	-2.4%
Inner Southern Suburbs	3258	745	400	26	688	187	0.80%	-7.7%
Eastern Suburbs	4262	1162	990	124	1008	492	2.91%	-13.3%
Western Suburbs	4751	673	240	119	682	164	2.50%	1.3%
Northern Suburbs	8509	743	418	81	659	176	0.95%	-11.3%
Southern Suburbs	4430	757	405	30	650	192	0.68%	-14.1%
Whole State	38083	810	544	581	808	734	1.53%	-0.2%

Attachment 3 - Questionnaire (Introductory Letter and Prompt Sheets NOT included)