



**Population Change in Adelaide's Peri-urban Region:  
Patterns, Causes and Implications**

by  
**Tania Ford**

**A thesis submitted in fulfilment of the requirements of the Degree of Master of  
Arts, Department of Geography**

**University of Adelaide**

**April 1998**

## ERRATA

p.66, line 6 should read 'the last'

p.67, line 7 from bottom delete 'a'

p.73, Table 4.1, last column, second from bottom should read '-0.45'

p.95, line 10 from bottom delete '9824' and replace with '5037'

p.99, line 6 from bottom replace '70 and over' with '75 and over'

line 4 from bottom replace '10-24 years' with '15-24 years'

p.101, line 5 replace '0-10' with '5-14'

p.105 L = locality (200-999 population)

Beneath title of table should read...(see Figure 4.23 for locations)

p.111, line 6 from bottom replace '10-24 years' with '15-24 years'

p.116, line 11 footnote to sentence: This figure, based on census count data differs from

the estimates quoted earlier (Tables 4.2 and 4.3) which were based on vital statistics

line 9 from bottom, replace second 'region' with 'SLA'

p.123, line 1 should read...Many peri-urbanSLAs are growing not only as a result...

p.124, bottom right corner of table replace '19.0' with '1.9'

p.183, line 1 'travelled'

p.202, line 3, second paragraph should read...approximately one quarter of the established population was born in the ASD, overseas and other rural locations respectively.

## TABLE OF CONTENTS

	<b>Page</b>
<b>TITLE PAGE</b>	I
<b>TABLE OF CONTENTS</b>	ii
<b>LIST OF TABLES</b>	v
<b>LIST OF FIGURES</b>	vii
<b>LIST OF PLATES</b>	x
<b>ABSTRACT</b>	xi
<b>DECLARATION</b>	xii
<b>ACKNOWLEDGMENTS</b>	xiii
<b>ABBREVIATIONS</b>	iv
<b>CHAPTER 1 INTRODUCTION</b>	1
1.1 Introduction	1
1.2 Themes in the Literature	1
1.3 Aims and Objectives of the Study	3
1.4 Defining the Peri-urban Region	4
1.5 Adelaide's Peri-urban Region	7
1.6 Adelaide's Peri-urban Region in Context	12
1.6.1 The Fleurieu Peninsula	14
1.6.2 The Mount Lofty Ranges	16
1.6.3 The Barossa Valley	17
1.6.4 The Murray Lands	18
1.6.5 The Lower Mid North	19
1.6.6 The Adelaide Plains	20
1.7 Outline of Study	22
<b>CHAPTER 2 THE LITERATURE AND APPROACHES TO EXPLANATION</b>	24
2.1 Introduction	24
2.2 The Population Turnaround	24
2.3 The International Experience	26
2.4 The Australian Experience	30
2.5 Peri-urban Population Growth	32
2.6 Approaches to an Explanation of the Population Turnaround	34
2.7 Gaps in the Literature	37
2.8 Conclusion	40
<b>CHAPTER 3 DEMOGRAPHIC GROWTH PROCESSES IN THE PERI-URBAN REGION</b>	42
3.1 Introduction	42
3.2 Demographic Growth Processes	42
3.2.1 Suburbanisation	42
3.2.2 Counterurbanisation	45
3.2.3 Population Retention	48
3.2.4 Centripetal Migration	49
3.3 Conceptual Framework of Peri-urban Growth	50
3.4 The Data and Methodology	56
3.4.1 Secondary Data Sources	56

3.4.1.1 The Australian Census of Population and Housing	56
3.4.1.2 Other Secondary Sources	57
3.4.2 Primary Data Collection	58
3.4.2.1 Selection of Case Study Areas	58
3.4.2.2 Survey Methodology	65
3.4.3 Spatial Units of Analysis	68
3.5 Conclusion	69
<b>CHAPTER 4 POPULATION CHANGE IN THE PERI-URBAN REGION</b>	<b>71</b>
4.1 Introduction	71
4.2 Population Growth in South Australia	71
4.3 Macro-Scale Factors Influencing Peri-urban Growth	74
4.4 Population Change in South Australia and Adelaide's Peri-urban Region, 1961 to 1996	79
4.4.1 Population Change, 1961-71	79
4.4.2 Population Change, 1971-81	81
4.4.3 Population Change, 1981-91	87
4.4.4 Population Change, 1991-96	91
4.5 Components of Population Change	94
4.5.1 Peri-urban Growth, 1966-1996	94
4.5.2 Migration at the SLA Level	95
4.5.3 The Age Profile of Migration	98
4.6 The Settlement Pattern	101
4.7 Projected Population Change	106
4.8 Conclusion	111
<b>CHAPTER 5 GROWTH PROCESSES IN THE PERI-URBAN REGION</b>	<b>113</b>
5.1 Introduction	113
5.2 Definition of Growth Processes	113
5.3 Differentiation of Growth Processes at the SLA Level	115
5.3.1 Origin of Migrants	115
5.3.2 The Journey to Work	128
5.3.3 Nature of Residential Development	136
5.3.4 Amenity Value of Destination Areas	141
5.3.5 Accessibility	146
5.4 Summary of Spatial Pattern of Growth Processes at the SLA Level	151
5.5 Differentiation of Growth Processes at the Local Level	155
5.5.1 Wakefield Plains	158
5.5.2 Mallala	168
5.5.3 Strathalbyn	177
5.6 Conclusion	186
<b>CHAPTER 6 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE MIGRATION FLOW</b>	<b>190</b>
6.1 Introduction	190
6.2 The Migrant Population	191
6.3 Composition of the Migrant Flow: The Literature	192
6.4 Hypothesised Differences in the Migration Flow	195

6.5 The Socio-Demographic Characteristics of the Migrant Households According to the Survey Data	198
6.5.1 Age-Sex Structure	199
6.5.2 Family Type	201
6.5.3 Birthplace	202
6.5.4 Labour Force Status	204
6.5.5 Occupation	206
6.5.6 Income	207
6.5.7 Residential Location	209
6.5.8 Nature of Housing	210
6.6 Recent Migrants and Established Residents	212
6.7 The Recent Migrant Population by Household Type	214
6.8 Conclusion	219
<b>CHAPTER 7 THE IMPACT OF POPULATION GROWTH IN THE PERI-URBAN REGION</b>	220
7.1 Introduction	220
7.2 Impacts of Growth in the Peri-urban Region as a Whole	221
7.3 Impacts of Population Growth on the Local Host Community: The Literature	224
7.3.1 Social Integration	224
7.3.2 In-migrant Satisfaction and Identification with their New Locality	228
7.3.3 Shopping Linkages	230
7.3.4 Summary of Hypothesised Differences Between Recent Migrants and Established Residents	230
7.4 The Impact of Population Growth at the Local Level	234
7.4.1 The Impact of Population Growth in Mallala	234
7.4.2 The Impact of Population Growth in Strathalbyn	239
7.4.3 The Impact of Population Growth in Wakefield Plains	244
7.5 Conclusion	247
<b>CHAPTER 8 CONCLUSION</b>	252
8.1 Introduction	252
8.2 Key Findings of the Study	252
8.3 Research Issues	258
<b>APPENDICES</b>	
A Deficiencies and Advantages of the Australian Census of Population and Housing	261
B The Questionnaire	263
C The Fieldwork	271
D Spatial Location of Survey Respondents	273
E Classification of Case Study Areas by Location Type	276
F Cadastral Land Division, Wakefield Plains SLA	279
G Cadastral Land Division, Lewiston (Mallala SLA)	280
H Cadastral Land Division, Strathalbyn SLA	281
<b>BIBLIOGRAPHY</b>	282

## LIST OF TABLES

3.1	Definition and Measurement of Demographic Growth Processes	55
3.2	Variables Used to Classify Peri-urban SLAs	59
3.3	Distribution of Sample in Case Study Areas	67
4.1	Average Annual Population Growth, the State and Selected Regions of S.A., 1961 to 1996	73
4.2	South Australia: Components of Population Growth in the State and Peri-urban Region, 1966-71 to 1991-96	94
4.3	Components of Population Growth, Peri-urban SLAs, 1986-91	96
4.4	Population Change by Settlement Category, South Australia, 1971 to 1991	102
4.5	Growth of Peri-urban Population by Settlement Size, 1976-1996	103
4.6	Urban Centres/ Rural Localities Ranked by Settlement Size, 1996	105
4.7	Projected Population Growth of Adelaide, the Peri-urban Region, Non-metropolitan S.A. and the Total State, 1991-2011	107
5.1	Net Migration by Peri-urban SLA, 1986-91	117
5.2	Population Retaining Same Place of Residence, 1981-86 and 1986-91	121
5.3	Population Retaining Peri-urban Residence, 1981-86 and 1986-91	122
5.4	Rate of Out-Migration of Total Population from Adelaide's Peri-urban Region, 1981-86 to 1986-91	124
5.5	Rate of Centripetal In-Migration, 1986-91	125
5.6	Relative Contribution of the Four Growth Processes in Adelaide's Peri-urban Region Based on Migrant Origin	128
5.7	Population Employed Within Peri-urban Region, 1986 and 1991	133
5.8	Relative Contribution of the Four Growth Processes in Adelaide's Peri-urban Region Based on the Journey to Work	135
5.9	Relative Contribution of the Four Growth Processes in Adelaide's Peri-urban Region Based on Five Key Indicators	154
5.10	Classification of Migrant Households by Growth Process	157
5.11	Previous Place of Residence of Migrant Households, Wakefield Plains	159
5.12	Distribution of Recent Migrants by Previous Place of Residence in Urban and Rural Sectors, Wakefield Plains	161
5.13	Place of Previous Residence and Frequency of Travel to Adelaide of Recent Migrants, Wakefield Plains	163
5.14	Main Reason for Moving to Current Residence by Previous Place of Residence of Recent Migrants, Wakefield Plains	164
5.15	Previous Place of Residence of Migrant Households, Mallala	170
5.16	Main Reason for Moving to Current Residence of Recent Migrant Households, Mallala	174
5.17	Previous Place of Residence of Migrant Households, Strathalbyn	179
5.18	Distribution of Recent Migrants by Previous Place of Residence in Urban and Rural Sectors, Strathalbyn	180
5.19	Main Reason for Moving to Current Residence of Recent Migrant Households, Strathalbyn	183
6.1	Recent Migrant Households Classified by Type	192

6.2	Summary of Hypothesised Characteristics of Migrant Households	198
6.3	Recent Migrants and Established Households by Family Type	201
6.4	Migrant Households by Family Type	202
6.5	Recent Migrants and Established Residents by Birthplace	202
6.6	Migrant Households by Birthplace	203
6.7	Labour Force Status by Household Type	204
6.8	Migrant Households by Labour Force Status	206
6.9	Migrant Households by Occupation	206
6.10	Main Source of Income by Recent Migrant and Established Resident Households	208
6.11	Migrant Households by Residential Location	210
6.12	Migrant Households by Nature of Housing	211
6.13	Statistically Significant Differences Between Recent Migrant and Established Resident Households Based Upon Survey Findings	213
6.14	Statistically Significant Differences Between Recent Migrant Household Types Based Upon Survey Findings	218
7.1	Hypothesised Differences Between Recent Migrants and Established Residents	231
7.2	Hypothesised Differences Within the Migration Flow According to the Four Growth Processes	232
7.3	Questions Asked of the Survey Respondents in Relation to Social Integration, Local Identification/Satisfaction and Shopping Linkages	234
7.4	Perceived Integration of Recent Arrivals into Local Community by Recent Migrants and Established Residents, Mallala	235
7.5	Lifestyle Adjustment Involved with Peri-urban Move by Migrant Type, Mallala	237
7.6	Location of Area Most Used for Shopping by Recent Migrants and Established Residents, Mallala	239
7.7	Perceived Acceptance by Local Community by Recent Migrants and Established Residents, Strathalbyn	240
7.8	Perceived Acceptance by Local Community by Migrant Type, Strathalbyn	240
7.9	Participation in Local Organisations by Recent Migrants and Established Residents, Strathalbyn	242
7.10	Location of Area Most Used for Shopping by Recent Migrants and Established Residents, Strathalbyn	243
7.11	Perceived Integration of Recent Arrivals into Local Community by Recent Migrants and Established Residents, Wakefield Plains	245
7.12	Degree of Lifestyle Adjustment by Migrant Type, Wakefield Plains	246
7.13	Location of Area Most Used for Shopping by Recent Migrants and Established Residents, Wakefield Plains	247
7.14	Differentiation Between Recent Migrants and Established Residents in the Three Case Study Areas Based Upon Survey Results	248

## LIST OF FIGURES

1.1	The Form of the Peri-urban Region	6
1.2	Adelaide's Peri-urban Region	8
1.3	South Australia: Net Population Increase, 1986-1991	9
1.4	Extent of Urban Development in the Adelaide Metropolitan Area and Surrounding Peri-urban SLAs	11
1.5	South Australia: The Direction and Spread of Settlement up to 1868	12
1.6	South Australia: Density of Vacant Agricultural Land and Rural Living Properties	13
1.7	Broad Physiographical Regions within Adelaide's Peri-urban Area	15
3.1	Conceptual Model of Demographic Growth Processes at Work in the Peri-urban Region	51
3.2	Dendrogram Used to Classify Groups of Peri-urban SLAs	60
3.2	Location of Case Study Areas	62
4.1	South Australia: Population Distribution Between Metropolitan, Other Urban and Rural Areas, 1844-1991	72
4.2	Growth of Population Aged 65+ Years in South Australia and the Peri-urban Region, 1971-96	75
4.3	Increase in Motor Vehicles (S.A.) and Total Peri-urban Population, 1971-1996	76
4.4	Growth in the Number of Telephones (S.A.) and Total Peri-urban Population, 1971-1996	77
4.5	Increase in Average Weekly Earnings (S.A.) and Total Peri-urban Population, 1971-1996	77
4.6	Average House Prices (S.A. and Adelaide) and Total Peri-urban Population, 1975-1996	78
4.7	Population Growth by SLA, Non-Metropolitan S.A., 1961-66 and 1966-71	80
4.8	Population Growth by SLA, Adelaide's Peri-urban Region, 1961-66 and 1966-71	81
4.9	Population Growth by SLA, Non-Metropolitan S.A., 1971-76 and 1976-81	82
4.10	Population Growth by SLA, Adelaide's Peri-urban Region, 1971-76 and 1976-81	83
4.11	Population Growth by Collection District, Adelaide's Peri-urban Region, 1971-81	85
4.12	Location of Peri-urban Centres and Localities and Major Transport Routes	86
4.13	Population Growth by SLA, Non-Metropolitan S.A., 1981-86 and 1986-91	87
4.14	Population Growth by SLA, Adelaide's Peri-urban Region, 1981-86 and 1986-91	88
4.15	Population Growth by Collection District, Adelaide's Peri-urban Region, 1981-91	90
4.16	Population Growth by SLA, Non-Metropolitan S.A., 1991-96	91
4.17	Population Growth by SLA, Adelaide's Peri-urban Region, 1991-96	92



4.18 Population Growth by Collection District, Adelaide's Peri-urban Region, 1991-96	93
4.19 Net Migration and Distance From Metropolitan Adelaide, Adelaide's Peri-urban Region, 1986-91	97
4.20 Age-Sex Profile of Adelaide's Peri-urban Population, 1961 and 1996	98
4.21 Age-Specific Net Migration Profile, Adelaide's Peri-urban Region, 1966-71 to 1986-91	100
4.22 Age-Specific Net Migration Profiles, Mount Barker, Meningie, Port Elliot/Goolwa and Victor Harbor, 1986-91	101
4.23 Peri-Urban Centres, 1996	104
4.24 Projected Population Growth, SLA in Non-Metropolitan S.A., 1991-2011	108
4.25 Projected Population Growth, SLAs in Adelaide's Peri-urban Region, 1991-2001	109
4.26 Projected Population Growth, SLAs in Adelaide's Peri-urban Region, 1991-2011	110
5.1 Place of Previous Residence of Adelaide's Peri-urban Population by SLA, 1986-1991	117
5.2 Source of In-Migrants to Adelaide's Peri-urban SLAs, 1986-1991	119
5.3 In-migration From Within the Peri-urban Region as a Proportion of Total In-flow, 1986-91	123
5.4 Broad Pattern of Demographic Growth Processes in Adelaide's Peri-urban Region Based on the Origin of Migrants	126
5.5 Journey to Work Destination From Adelaide's Peri-urban SLAs, 1991	130
5.6 Journey to Work Destination From Adelaide's Peri-urban SLAs: Self-Containment, 1991	132
5.7 Broad Pattern of Demographic Growth Processes in Adelaide's Peri-urban Region Based on the Commuting Patterns of the Workforce	134
5.8 Extent of Urban Settlement in Metropolitan Adelaide and Surrounding Peri-urban Region, 1991	136
5.9 Total 'Suburban-like' Development in Peri-urban SLAs Surrounding Metropolitan Adelaide, 1950-1996	138
5.10 Extent of Urban Development Surrounding Metropolitan Adelaide to 1996	139
5.11 Factors Associated with Amenity Value in Adelaide's Peri-urban Region	143
5.12 Amenity Value in Adelaide's Peri-urban Region	144
5.13 Accessibility in Adelaide's Peri-urban Region.	147
5.14 Amenity and Accessibility in Adelaide's Peri-urban Region	149
5.15 Broad Pattern of Demographic Growth Processes in Adelaide's Peri-urban Region Based on Nature of Residential Development, Amenity and Accessibility of the Peri-urban Destination	150
5.16 Broad Pattern of Demographic Growth Processes in Adelaide's Peri-urban Region Based on the Five Key Indicators	153
5.17 Location of Towns and Rural Settlements in Wakefield Plains SLA	158
5.18 Distribution of Recent Migrants by Previous Place of Residence, Wakefield Plains	160

5.19 Distribution of Recent Migrants by Journey to Work Destination, Wakefield Plains	162
5.20 Spatial Distribution of Recent Migrant Household Types, Wakefield Plains	166
5.21 Broad Pattern of Demographic Growth Processes at the Local Level, Wakefield Plains	167
5.22 Location of Towns and Rural Settlements in Mallala SLA	169
5.23 Distribution of Recent Migrants by Previous Place of Residence, Mallala	171
5.24 Distribution of Recent Migrants by Journey to Work Destination, Mallala	172
5.25 Spatial Distribution of Recent Migrant Household Types, Mallala	175
5.26 Broad Pattern of Demographic Growth Processes at the Local Level, Mallala	176
5.27 Location of Towns and Rural Settlements in Strathalbyn SLA	178
5.28 Distribution of Recent Migrants by Previous Place of Residence, Strathalbyn	180
5.29 Distribution of Recent Migrants by Journey to Work Destination, Strathalbyn	181
5.30 Journey to Work Destination of Migrants by Origin, Strathalbyn	182
5.31 Spatial Distribution of Recent Migrant Household Types, Strathalbyn	184
5.32 Broad Pattern of Demographic Growth Processes at the Local Level, Strathalbyn	185
6.1 Age-Sex Structure of Recent Migrant and Established Resident Populations	199
6.2 Age-Sex Structure of Migrant Flow According to Household Type	200
7.1 Age-Sex Structure of the Peri-urban and South Australian Population, 1996	222
7.2 Model of the Impact of Population Growth in the Peri-urban Region	225

**LIST OF PLATES**

7.1	Typical Landscape of Mallala SLA	63
7.2	Typical Landscape of Wakefield Plains SLA	64
7.3	Typical Landscape of Strathalbyn SLA	65
E1	Well-Established Country Town: Balaklava (Wakefield Plains SLA)	276
E2	Suburban-like Development: Lewiston (Mallala SLA)	277
E3	Small Rural Settlement: Langhorne Creek (Strathalbyn SLA)	278
E4	Hobby Farm: Dublin (Mallala SLA)	278

## ABSTRACT

Non-metropolitan growth has become spatially concentrated in the peri-urban regions of cities throughout the western world and the significance of this growth zone is reflected in the large body of literature which has been generated. Despite this, significant gaps exist which impede a complete understanding of the patterns, causes and implications of peri-urban growth. This study endeavours to bridge these gaps in the existing literature, with the aim of contributing toward a clearer understanding of the nature of current patterns of population change in the peri-urban region. The peri-urban region is conceptualised as a set of overlapping zones of net growth representing the product of four demographic processes (suburbanisation, counterurbanisation, population retention, centripetal migration). Previous work has failed to identify these processes which, although quite different, are interlinked, producing differences between and within peri-urban Statistical Local Areas (SLAs). This study combines aggregate census data with survey data collected in three selected case studies. Three key aspects of peri-urban growth dynamics are addressed in the context of Adelaide's peri-urban region. Firstly, spatial differentiation of the four processes across the peri-urban region is undertaken at the macro-scale and linked with local level case studies in order to provide a finer level of spatial disaggregation against which to examine the interaction between migrant characteristics, behaviour, motivation and space. Secondly, survey data are utilised to establish the distinctive differences in the composition of the migration flow according to the four processes. Thirdly, the impacts of population growth on the social structure of the peri-urban host community are examined at the local level.

## 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, 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.

**Tania Ford**  
**University of Adelaide**  
**April 1998**

## ACKNOWLEDGEMENTS

There are a number of people without whom, the completion of this study would not have been possible. Firstly my supervisors, Mr Peter Smailes and Dr Martin Bell have provided countless hours of expert advice, insight and attention to detail, without which this research could not have progressed to its current state. I am extremely grateful for their constant encouragement and guidance throughout the duration of this study. The unwavering support and wisdom of Professor Graeme Hugo over the past 10 years must also be acknowledged, who has provided me with a solid background and working environment within which to undertake such a research task. I am also extremely grateful to Ms Di Rudd for her friendship and encouragement over the years and to Mrs Margaret Young for her support and vast computing skill and expertise, upon which much of the analysis of this thesis has relied. I also owe a debt of gratitude to Mrs Sue Murray for her patience, friendship and expert cartographic skills in undertaking the enormous task of drawing many of the maps and figures included in this study. I must also thank Mr Neil Coffee for his computer generated maps. The fieldwork undertaken for this study has relied on the co-operation of many people scattered throughout the peri-urban region, but particularly Mr Steve Jonas of Wakefield Plains District Council, Mr Colin Dunlop of Mallala District Council and Mr Gordon Stidson of Strathalbyn Council, who were important sources of local information and insight. I would also like to acknowledge all of the survey respondents, without whom much of the analysis in this study would not have been possible. Finally to my family, Julie and Tim who supported, encouraged and helped me through the duration of this research.

**ABBREVIATIONS**

ABS	Australian Bureau of Statistics
ASD	Adelaide Statistical Division
CBD	Central Business District
CD	Collection District
DC	District Council
ERP	Estimated Resident Population
GPO	General Post Office
LTSR	Life Table Survival Ratio
NI	Natural Increase
NM	Net Migration
OASD	Outer Adelaide Statistical Division
SLA	Statistical Local Area
SSD	Statistical Sub-Division