CHAPTER 1. INTRODUCTION

1.1 INTRODUCTION

This project was commissioned by the Department of Immigration and Citizenship (DIAC), and has five main components. The first involves an analysis of population movements at the statistical division level for the whole of Australia. The analysis uses mobility data for the 2001-2006 period, derived from ABS census data. Using these data, the extent of intrastate, interstate and net migration has been computed for each statistical division. Further, mobility has been assessed against a range of demographic, productive and human capital criteria.

The second component involves an analysis of the mobility patterns for recent migrants. This analysis has been conducted along similar lines to that undertaken for the total population. The third component of the Report requires an investigation into the effects and impacts of recent migration on population, the labour and housing markets, and general infrastructure. This component of the project is based on analyses at the capital city statistical division and rest of state level. In considering the effect of recent migration on population, the Report gives special attention to the addition to total population made by the fertility of recent migrants.

The fourth component presents some insights into future migration scenarios between now and 2021, while the fifth component considers the implication of the various future migration scenarios, in terms of population and migration policies, regional development, provision of services related to education, health, housing, and issues such as sustainability and community harmony.

1.2 OUTLINE OF THE STUDY

The mobility analyses undertaken in Chapter 2 in this Report are based on census data which asked respondents where they lived five years ago, in 2001 and are based principally on an analysis of actual numbers, especially as they relate to net migration levels. However, there are instances where the internal migration process can be defined by a consideration based on relativities. Hence, in Chapter 3 the concept of the migration effectiveness ratio (MER) is introduced. As well, in this chapter a comparison is made between the size of net migration in any statistical division between 2001 and 2006 and its relationship to total population change that occurred between 2001 and 2006.

While mobility data based on previous residence is used to illustrate the role of internal migration on population redistribution, it overlooks the similar role that international migration can play in any period. Therefore, it is crucial to present data that illustrates both the magnitude, and distribution, of recent international migration corresponding with the 2001 to 2006 intercensal period. This therefore is a principal goal of Chapter 4, which presents data to illustrate the presence of international migrants who arrived in Australia after 2001 and before 2006. Chapter 4 of the Report also details the distribution of the population in 2006. This spatial analysis defines the distribution of the Australia-born, and compares it with that of the overseas born, with a particular emphasis on the rural/urban differences between the groups. Additional aspects of the spatial patterns of immigrants in Australia are addressed later in this chapter. Additional analyses in Chapter 4 involve disaggregating the overseas born in a number of ways, including on the basis of length of residence in Australia and birthplace, defined on the basis of whether a migrant's country of birth is a mainly English speaking country or a mainly non-English speaking country. The output of Chapter 4

is, in many respects, a contextual backdrop against which to look at the mobility characteristics of recent migrants.

Chapter 5 analyses the mobility of recent migrants, that is, those arriving after the 1996 Census, along the same lines as that undertaken for the total population in Chapter 2, while Chapter 6 considers the internal migration characteristics of the total population, and recent migrants, during the 2005-2006 period. The detail of material in this chapter is not as extensive as that undertaken in Chapters 2, 3 and 5.

Chapter 7 addresses that component of the Report which sought an investigation into the effects and impacts of recent migration on population, the labour and housing markets, and general infrastructure. The impact of recent immigration on population, labour market and housing is analysed for each capital city statistical division. As well, in considering the effect of recent migration on population, the Report gives special attention to the addition to total population made by female recent migrants of child bearing age. While it would be interesting to further investigate the impact of recent migrants on, for example intermarriage, this has not been possible in the current Report. This issue, and especially the question of how that would impact on retention rates of recent migration, is clearly an area for further research and modelling.

Chapter 8 aims to present some insights into future migration scenarios for each of the states and territories between now and 2021. Currently, there are some considerable differences between projections of migrant intakes that were prepared as recently as 2008 and the size of intakes that have actually occurred between then and the present. Chapter 8 will explain the causes of these differences, and these will clearly have implications for the future impact of migration on population within Australia. Will the generally prevailing higher than expected intakes prevail? If so, at what rates? Will there be a geographical bias to any future change? What factors may be at work to influence the impact of migration on future population in Australia. How significant will economic development be, and what will be the effect on migration of anticipated skilled labour shortages in Australia? The Chapter considers these issues and their implication for future migration scenarios, in terms of population and migration policies, regional development, provision of services related to education, health, housing, and issues such as sustainability and community harmony. Chapter 8 also assesses elements of future economic development in each of the states and territories to inform the discussion on future migration. Much of this expected development is resource based and anticipates a relatively long term continuation of the mining boom in Australia.

1.3 INTERNATIONAL MIGRATION

Migration from overseas has been a significant contributor to Australian population growth throughout the post war period and without its impacts Australia's current total population would be less than 13 million. Accordingly, international migration has also had a significant impact on the distribution of Australia's population. This impact is important, not only because of its scale but also because immigrants do not settle across the country in total accordance with the current distribution of population and their pattern of internal migration in their early years of settlement differ from the internal migration of the Australia-born (Bell and Hugo, 2000; Hugo, 2011 in that recent migrants are more mobile than non migrants, although there is a convergence with increases in their length of residence in Australia

Moreover, where immigrants settle plays an important role in their adjustment to life in Australia as well as having economic, social, cultural and environmental impacts on the

areas and populations in which they settle. Furthermore, government policy is increasingly influential. In the past, international migration policy in Australia and elsewhere has focused almost exclusively on the selection of *who* can migrate and little effort has been made to influence *where* they settle in the country of destination (Hugo, 2006). However, this has changed considerably in recent years as it has been realised that immigrants can and do play an important role in regional as well as national economic development (Hugo and Moren, 2008; Wulff *et al.*, 2008; Jentsch, 2007).

Patterns of immigrant settlement, however, remains a neglected dimension of Australian (and global) migration and settlement policy and research. This Report seeks to investigate recent changes in the settlement pattern of immigrants in Australia and how this impacts upon regional, demographic and economic change. The aim of this first chapter is to outline not only the objectives of the study but also to provide some important background on the distinctive distribution of the Australian population and the drivers of change which impinge upon that distribution.

1.4 AUSTRALIA'S DISTINCTIVE POPULATION DISTRIBUTION

Despite being one of the largest nations in the world by area, Australia also has one of the most spatially concentrated populations. This pattern of concentration has a number of dimensions (Hugo, 2003):

- 87 percent live in urban areas.
- 64 percent live in capital cities.
- 81 percent live within 50km of the coast.
- 0.8 percent of the population live in the 70.5 percent of the land area of the continent with a population density of less than 0.1 persons per km^2.
- 76 percent of the people live in the 0.33 percent of the land area within 100 persons or more per km^2.

Australia has one of the most residentially mobile populations of any country. In 2006, 31.0 percent of the population aged five years and over had lived elsewhere in Australia in 2001 (ABS, 2006 Census). Somewhat paradoxically, despite this mobility, the Australian population distribution has been remarkably stable. Griffith Taylor (1947, 44), writing before World War II, contended that the basic structure of Australia's population distribution had been established by 1860 and that future population growth would simply confirm this pattern. In many ways his contention has been proved correct. Figure 1.1 shows the location of Australia's centre of gravity of population, or 'population centroid', has moved very little over the last century with only a short shift north and west reflecting the faster growth of Queensland and Western Australia over the last decades. This pattern of overall stability in the structure of population distribution, however, is very much one of 'dynamic stability' since there is a great deal of mobility within the broad pattern of concentration of population.

However, different subgroups in the population have different spatial patterns of distribution. Figure 1.2 illustrates this by showing the population centroid for a number of different birthplace groups and while there is still a clustering in central eastern Australia there are some interesting patterns. For example, the concentration of the indigenous and New Zealand population in Queensland is evident in the northward location of their centroid. The concentration of Southeast Asian, South African and United Kingdom groups in Western

Australia leads to their centroid being displaced westwards, while the concentration of Lebanese in Sydney sees their centroid located well to the east.

Figure 1.1: Shifts in the Australian Population Centroid, 1911-2006

Source: Australian Censuses, ABS 2003, 2004 and 2007

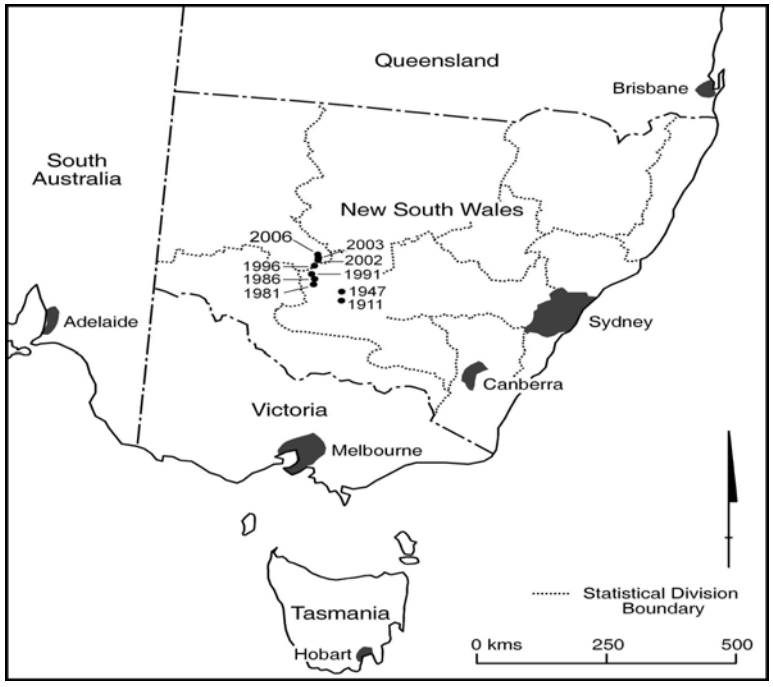
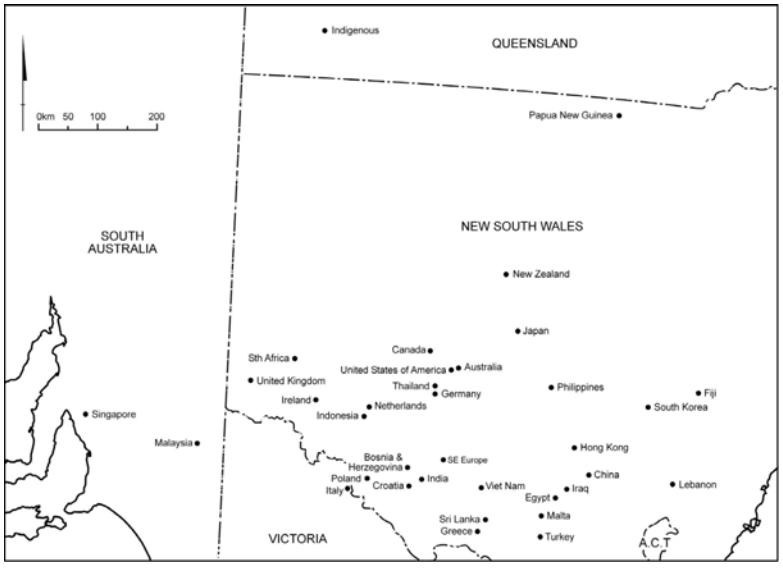


Figure 1.2: Australia: Population Centroids of Subgroups in 2006

Source: Calculated using 2006 Australian Census data



1.5 DATA SOURCES

This section presents a reasonably comprehensive assessment of a range of data sources and issues relating to research on both migration and mobility. In any analysis of population movement it is crucial to distinguish between stocks and flows of movers:

- Stocks: The number of movers in a particular place at a particular *point* in time.
- Flows: The number of movers from place(s) A to place(s) B over a set *period* of time.

Australia has some of the most comprehensive stock information relating to international and internal migrants in the world. This is largely through the comprehensive set of questions asked at quinquennial census enumerations. The principal census variables relating to international migration include:

- Country of birth
- Length of residence in Australia
- Nationality

Moreover, from a geographical perspective, these census data are available for the full hierarchy of spatial units with the basic building block being the Collection District (CD) which, for the 2006 census, has an average of about 225 dwellings (ABS, 2006a). As a result of this granularity it is possible to analyse the migrant populations of most formal and functional regions within Australia, although there is some difficulty in matching small areas across time. A critical question, which is rarely considered in discussion of Australian population census data on migrants, relates to who among the foreign-born present in Australia on the night of the population census actually get included in census immigrant data? Prior to the 1990s most of the foreign-born in Australia on census night would have been permanent settlers, but international population movement has subsequently undergone massive change. Non-permanent movement has increased in scale and complexity. Since the 1990s there has been an exponential increase in the number of temporary migrants arriving in Australia with the right to work as students, working holiday makers and temporary business migrants (457s). Further, non-settler migration has increased much more quickly than permanent migration. A crucial question becomes to what extent are these people, who are in Australia on some form of temporary visa, included in the census? The Australian census seeks to identify ‘visitors to Australia’ in order to exclude them from the usually resident population and from the tabulations of key characteristics of the population like birthplace and ancestry.

Figure 1.3: Australia: Temporary Migration, 1986-87 to 2008-09

Source: DIAC, *Population Flows: Immigration Aspects*; DIAC, 2009a

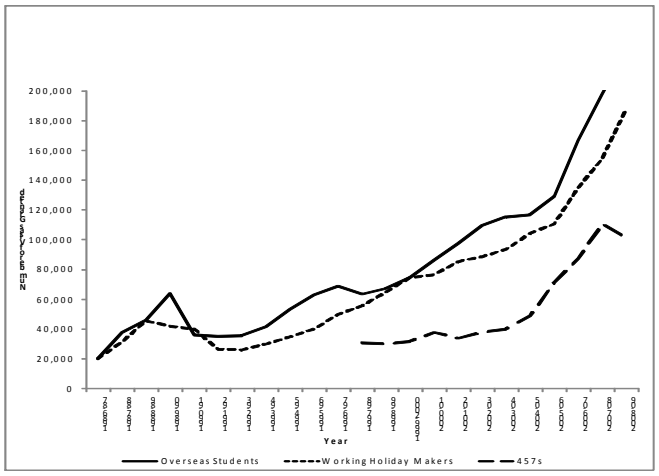


Table 1.1: Australia: Permanent, Long and Short Term Arrivals and Departures, 1996-2001 and 2001-2006

Source: DIAC unpublished data

	1996-2001	2001-2006
Settler Arrivals	446,860	549,421
Permanent Departures	184,622	288,241
Net Permanent	262,238	261,180
LT Arrivals	1,005,218	1,463,394
LT Departures	754,467	894,799
Net Long Term	250,751	568,595
ST Arrivals	38,284,493	37,060,165
ST Departures	38,352,870	37,454,263
Net Short Term	-68,377	-394,098
Net Total	444,612	435,677

Note: ST Arrivals and Departures not available for 2001-02.

Table 1.2: Overseas Persons Temporarily Present in Australia on the Night of the Census

Source: ABS, various censuses

Census year	Number
1996	139,594
2001	203,101
2006	206,358

The number of visitors identified in the 1996, 2001 and 2006 census enumerations is shown in Table 1.2. However, these numbers differ quite significantly from estimates made by the Department of Immigration and Citizenship (DIAC) of the numbers of foreign citizens 'temporarily present' on 30 June of each year presented in Table 1.3. This shows that the numbers identified by DIAC as being temporarily present is around three times greater than that identified as visitors by the census. The difference between these two counts is one of definition. In the Census, visitors are limited to people who are in Australia for less than 12 months, while temporary residents can be in Australia for much longer. Clearly much of the difference is made up of temporary residents who have been, or intend to be, in Australia more than a year. The key point is, however, that with each new census the numbers of temporary residents who are captured in the census has increased. It thus needs to be recognised that the recently arrived migrant population in Australia identified in the census includes a large number of temporary residents. This is of significance since, as Hugo (2004a, 84) shows in an analysis of 2001 census data, the distribution of temporary residents is quite different to that of permanent settlers.

Table 1.3: Australia: Number of Persons Temporarily Present, 30 June 1999-2008

Source: DIAC, *Population Flows: Immigration Aspects*, various issues

Year (30 June)	Number	Annual Percent Increase
2008	809,628	
2007	687,292	17.8
2006	630,513	14.5
2005	599,629	8.5
2004	590,566	1.7
2003	584,862	1
2002	555,569	5
2001	554,200	2.4
2000	513,900	8
1999	462,510	10

Turning to international migration flow data, Australia has a comprehensive collection of information of all persons entering or leaving the country. These are processed and published by DIAC and are used by the ABS to make quarterly estimates of the net international migration gain recorded by Australia as a whole and each state and territory. In recent years this process has become more difficult due to the increasing significance of temporary movement to Australia and the increasing importance of category jumping. The latter is explained elsewhere (Hugo, 2004a; McDonald *et al.*, 2003). Traditionally DIAC has categorised movement into permanent, short term and long term on the following basis:

- Permanent Movements
  - *Immigrants* are persons arriving with the intention of settling permanently in Australia.
  - *Emigrants* are Australian residents (including former settlers) departing with the stated intention of staying abroad permanently.
- Long Term Movements
  - Overseas arrivals of visitors with the intended or actual length of stay in Australia of 12 months or more.

- Departures of Australian residents with intended or actual length of stay abroad of 12 months or more.

- Short Term Movements
  - Travellers whose intended or actual stay in Australia or abroad is less than 12 months.

It needs to be noted that persons arriving in, and departing from, Australia nominate their state/territory of destination/origin and in the case of arrivals their intended address in Australia. While the intended address may differ from the eventual destination, the data are indicative of how international migration flows influence regions.

There has been an exponential increase in recent years in the volume of long term and short term movements in the 'category jumping' between the three categories which have made it difficult to estimate net migration gains. The ABS developed better methods of net migration estimation (ABS, 2010a).

Turning to internal migration, the Australian census asks questions on place of usual residence five years before the data of enumeration and one year previously. At least one of these questions has been included in all censuses since 1961. Of course, it excludes migration which occurred more than five years prior to the census and it does not capture multiple migrations within the intercensal period (Bell and Hugo, 2000).

It is important, however, to note the limitations of these data in studying the internal migration of the immigrant population. By definition immigrants who arrived in Australia between the 2001 and 2006 censuses are not included in five year internal migration data. In 2006, 16.0 percent of overseas born persons, or 697,356 persons, were overseas in 2001. The analysis presented here, therefore, is mainly confined to overseas-born persons who were present in Australia at both the 2001 and 2006 Censuses, and the substantial numbers of immigrants who had been in Australia less than five years at the 2006 Census are largely absent from the analysis. As Table 1.4 reveals, the numbers involved in the overseas movement over a five year period are substantial. The magnitude of the excluded migrants is further detailed in Chapter 4. Understanding this magnitude is important, since there is considerable migration in the initial years of settlement as the process of adaptation proceeds.

Table 1.4: Settler Arrivals and Departures to Australia, 1996-97 to 2000-01

Source: DIAC Overseas Arrivals and Departures Data

Year	Settler Arrivals	Settler Departures
2000-01	107,366	46,521
1999-2000	92,272	41,078
1998-99	84,143	35,181
1997-98	77,327	31,985
1996-97	85,752	29,857
Total	446,860	184,622

Table 1.5: Australia: Overseas-Born Population Resident Less Than Five Years, 1981-2001

Source: ABS Censuses 1981-2001

Intercensal Period	Overseas-Born Resident Less Than Five Years	Percent
2001	578,780	14.1
1996	491,765	13.3
1991	714,944	20.0
1986	457,700	14.5
1981	440,220	14.9

Any analysis of the changing spatial distribution of the overseas-born, which excludes recent arrivals, is going to be a partial analysis. This is clearly evident in Table 1.6, which shows that the overseas-born are disproportionately concentrated in Australia's major urban areas and that this pattern is more marked for those who had been in Australia for less than five years. Moreover, it is evident that the major urban areas have become more important for recent arrivals with each successive intercensal period since 1981. There are differences between those resident for less than five years and those for more than five years in their spatial distribution by settlement type. This could be a function of changes in the structure of Australia's major areas over time, changes in the composition of migration, or it could be due to migrant mobility converging toward that of the Australia-born over time. In fact, all three processes are probably operating.

Table 1.6: Australia: Australia-Born and Overseas-Born, Period of Residence by Section of State, 2001

Source: ABS 2001 Census

Section of State	Australia-Born		Period of Residence of the Overseas-Born					
			0-5 Years		5-10 Years		10+ Years	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Major Urban	8,163,371	59.9	515,626	89.1	385,702	89.4	2,606,948	79.6
Other Urban	3,335,084	24.5	41,487	7.2	28,931	6.7	349,224	12.0
Bounded Locality	409,723	3.0	2,736	0.5	2,234	0.5	39,356	1.4
Rural Balance	1,605,822	11.8	14,922	2.6	12,291	2.8	184,195	6.4
Migratory	5,706	0.0	150	0.0	105	0.0	1,184	0.0
Total	13,629,685	100.0	578,780	100.0	431,596	100.0	2,899,414	100.0

1.6 DATA USED IN THIS REPORT

Much of the data used in this study have been derived from the 2006 Australian Census of Population and Housing. The ABS online tool TableBuilder has been extensively used to generate most of the data. TableBuilder enables the creation of tables, and especially cross tabulated tables, of Census data by accessing all variables contained in the Census Output Record File for all ABS geographic areas.

The approach adopted in Chapter 2 has been twofold. Firstly, we have amassed internal migration data from the 2006 census to show patterns of population movement between statistical divisions for the 2001-2006 and 2005-06 periods. TableBuilder presents this data as a matrix of 2006 usual residence by previous usual residence (either in 2001 or 2005). Using statistical divisions as our defined enumeration district, the mobility matrix generated a 60x60 table, showing mobility in and between each of the sixty statistical divisions in Australia. These SDs are displayed spatially in Figure 1.4.

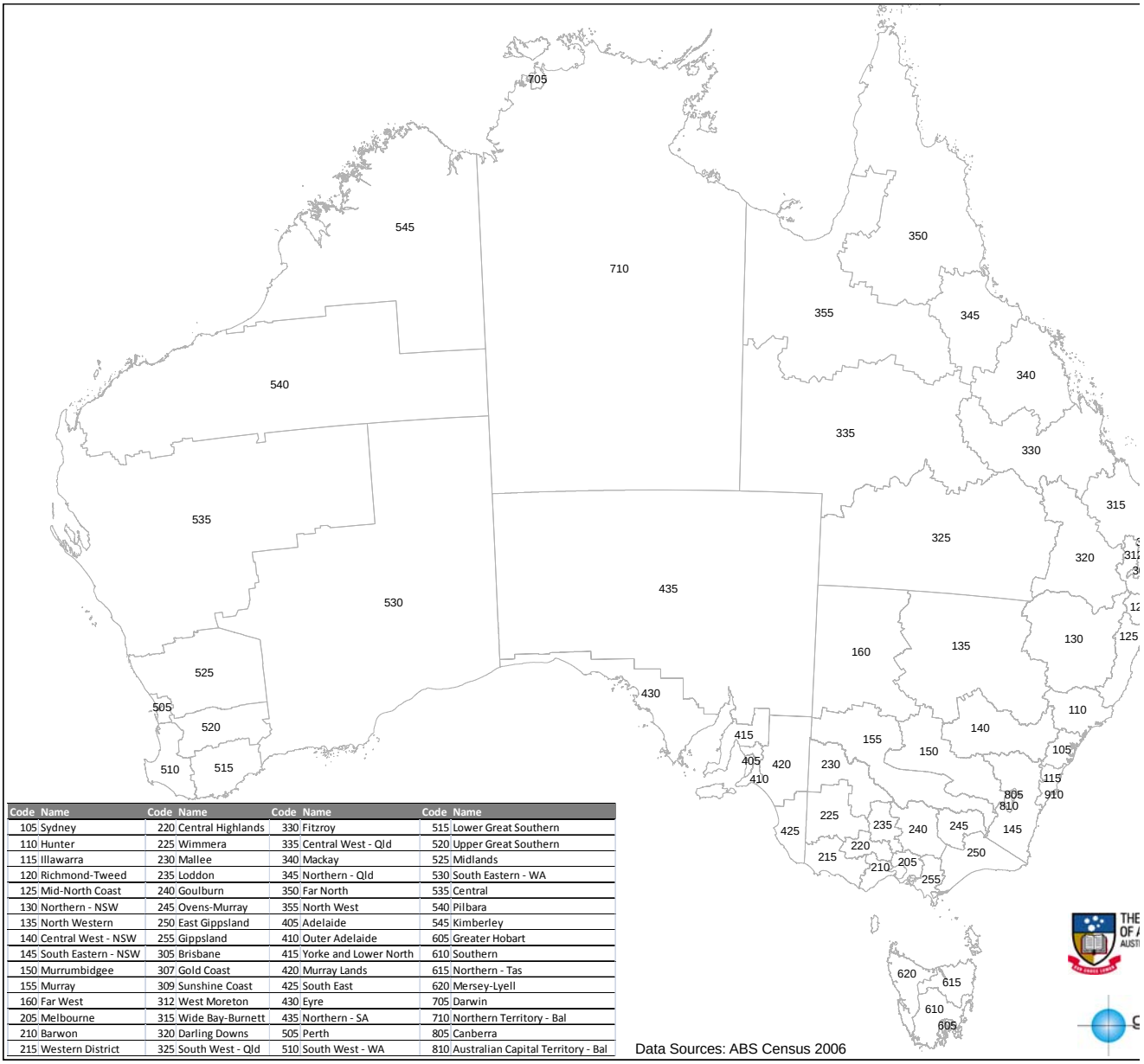
These internal migration matrices have not been included in the Report because of their sheer size. Instead, using a template customised especially for the project, we have used the matrix data to compute a number of summary indicators which represent the critical essentials of population movement in Australia between 2001-2006 and 2005-06.

The statistics that have been generated from the matrices and presented as summary mobility tables throughout the Report are:

- Total internal migration out of each statistical division
- Total internal migration into each statistical division
- Net internal migration (plus or minus) for each statistical division
- Total intrastate migration out of each statistical division
- Total intrastate migration into each statistical division
- Net intrastate migration (plus or minus) for each statistical division
- Total interstate migration out of each statistical division
- Total interstate migration into each statistical division
- Net interstate migration (plus or minus) for each statistical division

In the Report, these summary tables inform the discussion to define internal migration and the impact of specific mover characteristics on patterns of migration in Australia. The discussion principally focuses on net migration, and is based on raw numbers. This approach has been adopted because the reality is that understanding the dynamics of migration, and particularly the implications that stem from them, is all about the numbers involved, rather than percentages or other relativities. The tables do contain much information that has not been treated in the narrative, but which may provide useful additional information to the reader. For example, net migration is a useful summary statistic, but often the arrival and departure numbers that create net migration may indicate population turnovers of huge magnitude just as easily as they can be the result of low underlying numbers. However, in terms of migrant preferences, large numbers may tell a different story than a net migration level generated by small arrival and departure numbers.

Figure 1.4: Australia: Statistical Divisions, 2006



Code	Name	Code	Name	Code	Name	Code	Name
105	Sydney	220	Central Highlands	330	Fitzroy	515	Lower Great Southern
110	Hunter	225	Wimmera	335	Central West - Qld	520	Upper Great Southern
115	Illawarra	230	Mallee	340	Mackay	525	Midlands
120	Richmond-Tweed	235	Loddon	345	Northern - Qld	530	South Eastern - WA
125	Mid-North Coast	240	Goulburn	350	Far North	535	Central
130	Northern - NSW	245	Ovens-Murray	355	North West	540	Pilbara
135	North Western	250	East Gippsland	405	Adelaide	545	Kimberley
140	Central West - NSW	255	Gippsland	410	Outer Adelaide	605	Greater Hobart
145	South Eastern - NSW	305	Brisbane	415	Yorke and Lower North	610	Southern
150	Murrumbidgee	307	Gold Coast	420	Murray Lands	615	Northern - Tas
155	Murray	309	Sunshine Coast	425	South East	620	Mersey-Lyell
160	Far West	312	West Moreton	430	Eyre	705	Darwin
205	Melbourne	315	Wide Bay-Burnett	435	Northern - SA	710	Northern Territory - Bal
210	Barwon	320	Darling Downs	505	Perth	805	Canberra
215	Western District	325	South West - Qld	510	South West - WA	810	Australian Capital Territory - Bal

The summary tables have also provided the data behind an extensive presentation of net migration maps in the Report. These maps show the spatial variation of net migration patterns in Australia and allow the reader to immediately gauge the broad characteristics of mobility for any group and its related variables.

1.7 METHODOLOGICAL ISSUES

In completing the work associated with this Report, a number of methodological issues have been encountered. In this section, the approach to resolving these is detailed.

1.7.1 Identifying 'Sinks' and 'Sources'

Population mobility inevitably creates a pattern of depopulating areas and areas whose population is increasing. There are a range of 'push' and 'pull' factors which cause this. Many are economic based, but others can be related to stage of life cycle events. For example, younger persons living in Hobart or Adelaide may be attracted to a greater range of employment opportunities in, say, Sydney or Melbourne, and as a result their exodus from Hobart and Adelaide has a negative impact on those city's populations, and a positive impact on population numbers in Sydney and Melbourne. Similarly, Queensland has experienced a huge increase in numbers of older people seeking to take advantage of its climate in retirement, compared with the climate in some of the southern capitals. As a result, areas can experience a drain of population as people move to regions more suited to their immediate living requirements.

The impact of these various social and economic processes that cause people to move can be highlighted by identifying sinks and sources – a sink is an area into which population flows, while a source is an area that provides the migration stream, and which experiences an adverse effect on population as a result of mobility.

In the Report, sinks and sources are defined on the basis of net migration data for each statistical division. That is, net migration is derived by subtracting total departures from total arrivals occurring in any period. This formula can produce net migration gains or net migration losses. Where a statistical division has a net migration gain, it is a 'sink' SD, and where it has a net migration loss, it is a 'source' SD. Sink SDs receive people, whereas source SDs export people.

The summary mobility tables prepared for this Report have sorted the net migration data so that the capital city statistical divisions are shown at the top of the table, followed by the remaining SDs sorted from highest net migration to lowest net migration. In these tables, the most significant 'sink' SDs will be near the top of the table, while the most significant 'source' statistical divisions will appear at the bottom of the table.

The net migration component of the summary mobility tables prepared for each statistical division has also been used to prepare an extensive suite of maps showing the spatial variation of net migration for a rage of mobility related variables. Statistical divisions reporting a net loss of population (sources) are represented by shades of red, and those recording a net gain (sinks) have been represented in shades of blue. In the case of the mapping for recent migration mobility, an additional class interval, shaded light grey, has been used to identify those SDs which reported nil, or very low, net migration loss or gain.

1.7.2 Preparation of Mobility Data for Selected Local Government Authorities

Part of our brief for this Report asked that we prepare similar tabular data for 261 LGAs located throughout Australia. These LGAs were identified by DIAC based on LGAs meeting defined population thresholds. The preparation of these tables involved overcoming a substantial problem created by the use of TableBuilder.

TableBuilder was able to provide 2006 place of usual residence by LGA, but only provided 2001 place of usual residence data by statistical local area (SLA). Although this provided a mobility matrix, it could not be used in this form to create summary tables showing:

- Total mobility out of each local government authority

- Total mobility into each local government authority
- Net mobility (plus or minus) for each local government authority
- Total intrastate mobility out of each local government authority
- Total intrastate mobility into each local government authority
- Net intrastate mobility (plus or minus) for each local government authority
- Total interstate mobility out of each local government authority
- Total interstate mobility into each local government authority
- Net interstate mobility (plus or minus) for each local government authority

We have developed a procedure to overcome this problem and to create the summary tables for LGAs required by the research brief. The ABS, through its TableBuilder Help Desk, provided a concordance file for SLAs and LGAs. We used this information to convert the usual residence in 2001 SLAs into usual residence in 2001 LGAs. This was the first step needed to create the LGA by LGA mobility matrix.

We then developed an Excel spreadsheet template which was able to take any LGA by SLA matrix generated by TableBuilder and convert it into a LGA by LGA matrix for the same data. This matrix contained 668 LGAs. The template was then further refined to generate summary mobility data of the same type that were produced for the statistical division matrices, and described in above.

At this point, the mobility matrix involved all 668 LGAs in Australia. To cut this down to the number required for the brief, we identified in the template by a sequential number each of the selected 261 LGAs. To extract these from the template, the procedure was to copy the LGA by LGA matrix in the template to a new Excel file and then:

- Sort by selected LGAs.
- Cut those not required.
- Delete all columns containing the 2006 usual residence data for each LGA – that is 668 columns.
- Copy this table to a file representing a specific variable for inclusion in the final Report.

A cautionary note needs to be added here. These LGA mobility data have been generated from a matrix comprising nearly 964,000 cells. Therefore, it follows that a huge number of these cells will have randomly generated numbers in them, in keeping with the ABS policy of using random numbers in cells where the publication of an actual value may result in the identification of individuals or households. In fact, the policy dictates that actual values of 1, 2 or 3 will be randomised to either 0 or 3. Cells with an actual value of 0 will record a value of 0. Therefore, when using matrices with a large number of cells, there is a validity issue with the dataset.

Mindful of validity issues, we have prepared tables for total mobility, disaggregated into age and sex, for the 2001-2006 and 2005-06 periods. For the same periods, we have produced tables for mobility between LGAs of all migrants, recent migrants who arrived in Australia after 1996 and migrants who arrived in Australia prior to 1997. For recent migrants, those who arrived in Australia after 1996, we have also prepared tables for total

mobility, disaggregated into age and sex, for the periods 2001-2006 and 2005-06. These tables have been provided to DIAC as an electronic Appendix of the Report, in Excel format.

Local Government Authority personnel interested in the mobility characteristics of recent migrants in their jurisdiction, other than those defined above, will need to use the details from their statistical division as a surrogate for their LGA.