

SYDNEY AT THE MILLENNIUM

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Sydney continues to dominate Australia's urban landscape as the country's largest metropolitan centre. It is still growing and there has been considerable change in the city as it has marched its way into the new millennium. This paper reviews Sydney's recent demographic history to explain what helps drive its continuing population growth.

INTRODUCTION

This paper draws on population statistics collated or derived by the Australian Bureau of Statistics and the New South Wales Department of Infrastructure, Planning and Natural Resources. In particular, it draws on the estimated resident populations at 30 June, immigration flows and internal migration data that have been drawn from the 2001 Census of Population and Housing.

For the purposes of this paper, *Sydney* refers to the Sydney Statistical Division as defined in the 2003 Australian Standard Geographical Classification.¹ This includes the areas of the Central Coast (Gosford and Wyong) to the north, the Blue Mountains to the west and Sutherland to the south.

Sydney's total population

In 2003 there were an estimated 4.20 million people living in Sydney. This is over half a million more people than were

living in Sydney at the beginning of the 1990s (see Table 1).

Sydneysiders make up around 63 per cent of people living in New South Wales, so its demographic ebbs and flows drive the growth trends for the State as a whole.

POPULATION GROWTH IN SYDNEY

In the ten-year period 1991 to 2001, Sydney's population experienced the strongest growth since the early 1960s (see Figure 1).

Between 1991 and 1996 the population grew, on average, by 42,000 per year. In the latter half of the decade, between 1996 and 2001, population growth in Sydney averaged 49,000 per year. In the first few years of the new millennium, population growth fell to a current estimate of just over 35,000 per year — this is a drop of about 14,000 people per year from the peak growth in the late 1990s. Thus, Sydney is gaining

about 700 people every week, compared to around 1,000 people per week as was occurring a few years ago.

When we compare the population growth of Sydney with other state and territory capitals, we find that Sydney had the largest annual increase in

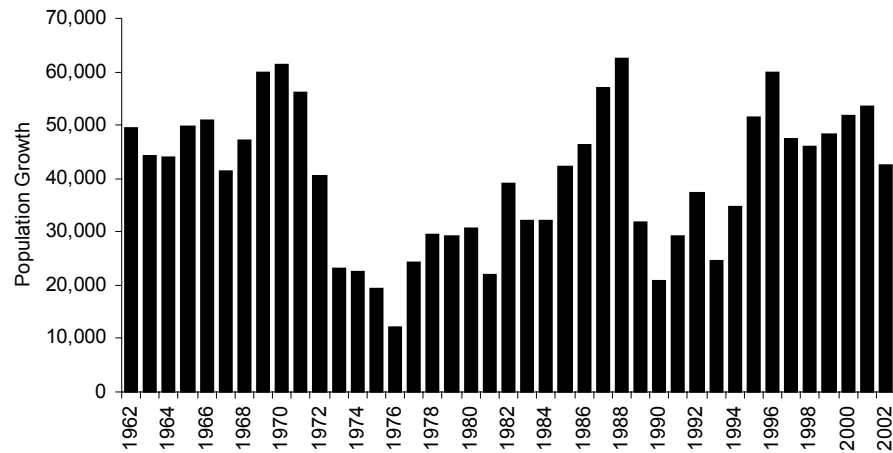
Table 1: Sydney's population and growth rates, 1991 to 2003

Year	Estimated Resident Population	Period	Average annual growth	
			%	Number
1991	3,672,855			
1996	3,881,136	1991-1996	1.11	41,700
2001	4,128,272	1996-2001	1.24	49,400
2002r	4,167,002	2001-2003	0.85	36,600
2003p	4,201,493			

r = revised; p = provisional

Source: Australian Bureau of Statistics (ABS), *Australian Demographic Statistics*, Cat. no. 3101.0, various years

Figure 1: Annual population growth, Sydney, 1961 to 2003



Source: Australian Bureau of Statistics (ABS), *Australian Historical Population Statistics*, Cat. no. 3105.065.001

numerical terms during 1996 to 2001 (see Table 2). This is to be expected given that it is Australia's largest metropolitan centre; a large population inherently generates a large numeric increase, even if the growth rates are relatively low. However, in the two years since 2001, this picture has changed, with population increases in both Brisbane and Melbourne now surpassing that of Sydney, by at least 19 per cent. Both of these cities currently have annual population increases in excess of 40,000. It is interesting to note that even the annual growth in the balance of Queensland during 2001 to 2003 (with a 2001 population of 1.98 million) was greater than Sydney's. Most of the increase outside Brisbane would have been in coastal areas, particularly the Gold Coast and Sunshine Coast.

Annual growth rates

Another way to look at population change is to examine average rates of growth. During 1996 to 2001, Sydney's population increased by 1.24 per cent per

annum, which was higher than the growth rate during the previous five-year period (1.11 per cent). Sydney's average growth rate during the latter years of the 1990s was higher than growth rates for Australia as a whole, and for most states and their capital cities. There were a few exceptions. Sydney's growth rates were surpassed by Brisbane, the balance of Queensland, Perth, the balance of Western Australia and Darwin. In contrast, in the two years since 2001 Sydney's population growth rate has dropped to an annual average of 0.85 per cent. This is lower than the growth rate for Australia as a whole, and was exceeded by growth rates in Brisbane, the balance of Queensland, Melbourne, Perth and the balance of Western Australia.

So what has brought about these apparent changes in growth patterns for Sydney? The rest of this article sets out the demographic processes that have led to population growth in Sydney, and presents possible reasons for the more recent attenuation of growth.

Table 2: Populations and population growth rates, Capital City and Balance of State/territory, States and Territories of Australia, 1996 to 2003

Area	Population			Annual population increase		Average annual growth rate %	
	1996	2001	2003	1996-01	2001-03	1996-01	2001-03
NSW	6,204,728	6,575,217	6,682,053	74,098	53,418	1.17	0.81
Sydney	3,881,136	4,128,272	4,198,543	49,427	35,136	1.24	0.85
Balance of NSW	2,323,592	2,446,945	2,483,510	24,671	18,283	1.04	0.74
Victoria	4,560,155	4,804,726	4,911,425	48,914	53,350	1.05	1.1
Melbourne	3,283,278	3,471,625	3,555,321	37,669	41,848	1.12	1.2
Balance of Victoria	1,276,877	1,333,101	1,356,104	11,245	11,502	0.87	0.86
Queensland	3,338,690	3,628,946	3,801,039	58,051	86,047	1.68	2.34
Brisbane	1,519,991	1,650,422	1,735,181	26,086	42,380	1.66	2.54
Balance of Qld	1,818,699	1,978,524	2,065,858	31,965	43,667	1.7	2.18
South Australia	1,474,253	1,511,728	1,526,301	7,495	7,287	0.5	0.48
Adelaide	1,078,437	1,107,986	1,119,097	5,910	5,556	0.54	0.5
Balance of SA	395,816	403,742	407,204	1,585	1,731	0.4	0.43
Western Australia	1,765,256	1,901,159	1,949,948	27,181	24,395	1.49	1.28
Perth	1,295,092	1,393,002	1,431,498	19,582	19,248	1.47	1.37
Balance of WA	470,164	508,157	518,450	7,599	5,147	1.57	1.01
Tasmania	474,443	471,795	477,305	-530	2,755	-0.11	0.58
Hobart	195,718	197,282	199,926	313	1,322	0.16	0.67
Balance of Tasmania	278,725	274,513	277,379	-842	1,433	-0.3	0.52
Northern territory	181,843	197,768	198,544	3,185	388	1.69	0.2
Darwin	95,829	106,842	108,039	2,203	599	2.2	0.56
Balance of NT	86,014	90,926	90,505	982	-211	1.12	-0.23
ACT	308,251	319,317	323,363	2,213	2,023	0.71	0.63
Canberra	307,917	318,939	323,004	2,204	2,033	0.71	0.64
Balance of ACT	334	378	359	9	-10	2.51	-2.55
Australia	18,310,714	19,413,240	19,872,646	220,505	229,703	1.18	1.18

Sources: ABS, *Australian Demographic Statistics*, Cat. no. 3101.0, June Quarter 2004; ABS, *Regional Population Growth*, Cat. no. 3218.0, 2000-01 and 2001-02

Dissecting Sydney's population growth

What makes a population grow? It is the overall balance of two demographic processes — natural change and migration. The extent to which a population will grow (or decline) depends on the magnitude of each of these two processes and their combined net effect. Natural change is the balance between births and deaths — where births exceed deaths, there is natural increase, and where deaths outnumber births there is natural decline. Migration involves the movement of people into or out of an area. In the case of Sydney,

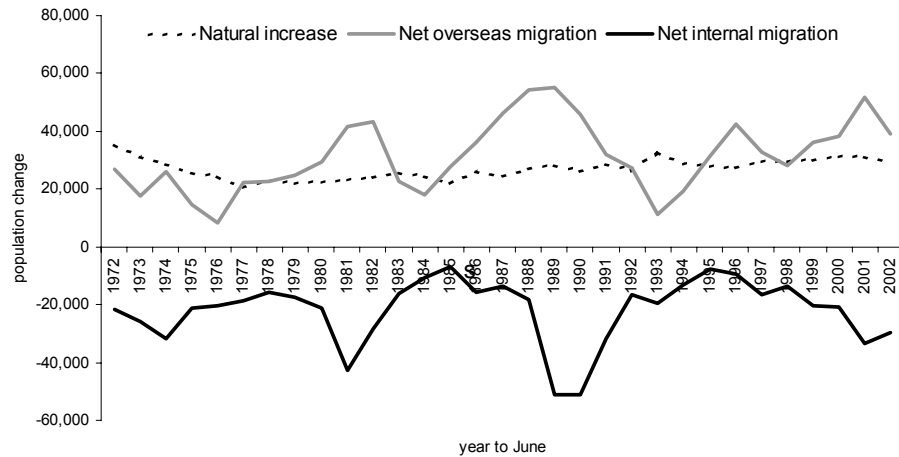
migrants can move to or from other parts of New South Wales, other states and territories of Australia, or overseas.

The different components of Sydney's population growth over the last two decades are shown in Figure 2.

Natural Increase

Natural increase has remained relatively stable in Sydney over the last two decades, with the number of both births and deaths remaining relatively unchanged. This trend also mirrors fairly constant levels of natural increase at both the New South Wales and national scales. In the

Figure 2: Components of population growth, Sydney, 1972 to 2002



Source: ABS, *Australian Demographic Statistics*, Cat. no. 3101.0, various years; ABS, unpublished vital statistics

last five years, Sydney's natural increase averaged 29,700 people per year. But not all regions of New South Wales show a similar pattern. Some areas appear to have reached a point where their population is in a state of natural decline. That is, the number of deaths exceeds the number of births. This is neither the effect of lower fertility in regional areas nor of significantly higher mortality rates. Rather it is the effect of population ageing where increased numbers of people in the older age groups produce a larger number of deaths, regardless of improvements in life expectancy or any differentials in health status.

Migration (linked to any place in Australia or overseas) has varied considerably over the last 20 years and is the reason why Sydney's overall population growth has fluctuated (see Figure 2). As the net migration flows have varied so has their relative contribution to Sydney's population growth. In some years there has been an estimated net migration loss of people from Sydney. These years

aside, generally less than half of Sydney's annual population growth can be attributed to gains from migration.

Migration can be divided into two streams — the net flow of people between Sydney and other parts of Australia (internal migration), and the net flow of people between Sydney and other countries (overseas migration). The net flow of people to Sydney from overseas has ranged from just over 11,000 in 1993 to an estimated 52,000 in 2001 and 55,000 in 1989. While the cause of the variation in these net gains is not known with absolute certainty it may reflect a combination of factors including: changing global economic conditions, Australian immigration policy, the popularity of Australia as a migrant destination and flows of Australians offshore.

Overseas Migration

Overseas migration numbers used in this paper are based on information provided through passenger cards completed on arrival in, or on departure from, Australia.

The overseas migration component of population growth comprises long-term² and permanent arrivals and departures of overseas migrants and Australian residents.

Whilst there is a degree of uncertainty in the overseas migration statistics, an analysis of net overseas migration flows to Sydney shows that this growth is cyclical, with peaks of about 60,000 per annum and lows of around 10,000 per annum (see Figure 2). In 2002 there was an estimated net gain of about 39,000 people to Sydney as a result of overseas migration, which is well below the recent peak of more than 51,000 in 2001. This figure was still higher than other components of Sydney's population growth.

Unfortunately it is not possible to separate overseas net migration flows to Sydney into component parts. However, a review of New South Wales (NSW) migration patterns suggests that net overseas migration levels to Sydney are a result of fluctuations in the number of permanent arrivals. This is in part due to changes in the volume of New Zealanders moving to Australia as New Zealanders are one of the largest settler groups in New South Wales.³ In early 2001 social security arrangements for New Zealanders changed. This change may have contributed to the higher number of permanent arrivals at the end of the 1990s. A subsequent drop in settler arrivals from New Zealand in the last few years may in part reflect these new arrangements, but also (and more likely) the improved New Zealand economy. NSW is also receiving a lower share of all overseas permanent arrivals than a few years ago, which may reflect government efforts to encourage new migrants to settle in areas where they are most needed.⁴

The net number of long-term visitors coming to NSW appears to have been steadily rising since the 1990s. This may

reflect a number of factors, including the increased visibility of Australia on the international stage (thanks to events such as the 2000 Olympics), Sydney's current economic buoyancy and extensive job opportunities, increasing numbers of overseas students and the popularity of Sydney as a destination for young travellers (especially from Western Europe).

Internal migration is the remaining component of population change in Sydney. Contrary to popular belief, Sydney does not have a net gain of people from other parts of Australia. While there is certainly a considerable movement of people to Sydney, there is a larger counterbalancing flow out of Sydney to other places in Australia. However, in most years this net internal migration loss is more than compensated by net overseas migration.

Internal Migration

The decline in net overseas migration to Sydney since 2001 is exacerbated by a greater net loss of people from Sydney to other parts of Australia. In 2002 Sydney experienced a net loss of 32,000 people, the largest in over 10 years. When overseas migration is high there has tended to be a lagged compensating effect of large net losses from Sydney to other parts of New South Wales and interstate. This phenomenon was also observed in Bell and Hugo's analysis of internal migration patterns during the early 1990s.⁵ The authors also noted from other research that '... the overseas born themselves contributed comparatively little to these periodic surges in out-migration'.⁶ However, this trend is not so evident in the late 1990s.

An analysis of data from the Australian Census of Population and Housing sheds further light on migration patterns between Sydney and other parts

of Australia. During the five-year period 1996 to 2001 Sydney had an overall net internal migration loss of almost 60,000 people to other parts of Australia (see Table 3). This is a reduction on the net internal migration loss of almost 67,000 people that took place five years earlier, between 1991 and 1996. The number of people moving between Sydney and other parts of Australia during 1996 to 2001 (more than 411,350 — see Table 3) was greater than during the early 1990s (401,020) and this was due to a reduction in the movement of Sydney residents to interstate destinations.

This net loss of people from Sydney due to internal migration is not directed to all parts of Australia. These net outflows are linked to coastal regions of New South Wales (Richmond-Tweed, Mid-north Coast), regions peripheral to Sydney (the Hunter and Illawarra) and some interstate destinations (especially Queensland). On the other hand, there is a net movement of people from some inland parts of New South Wales to Sydney (for example the Murray and Northern Tablelands regions). Some of the more recent interstate flows are a marked change from those seen between 1991 and 1996, possibly reflecting the improved economies of these other states. The most notable change was in the case of Victoria. During 1991 to 1996 the net movement was north from

Victoria to Sydney. During 1996 to 2001 this net migration was completely reversed with the net flow being south from Sydney into Victoria (and especially Melbourne). The 2006 census will reveal Sydney's most recent migration patterns. However, recent internal migration estimates suggest that the net migration loss from Sydney to other parts of Australia continues and may have increased. Interstate migration estimates suggest that New South Wales continues to have a net migration loss, particularly to Victoria and Queensland. Given the dominance of Sydney in the state's migration flows, a similar trend for Sydney is likely. The exact reasons for this pattern are not known, but may be a combination of factors including changing economic conditions and employment opportunities, relative housing affordability, changes in personal circumstances or lifestyle aspirations.⁷

Age profile of migrants to Sydney

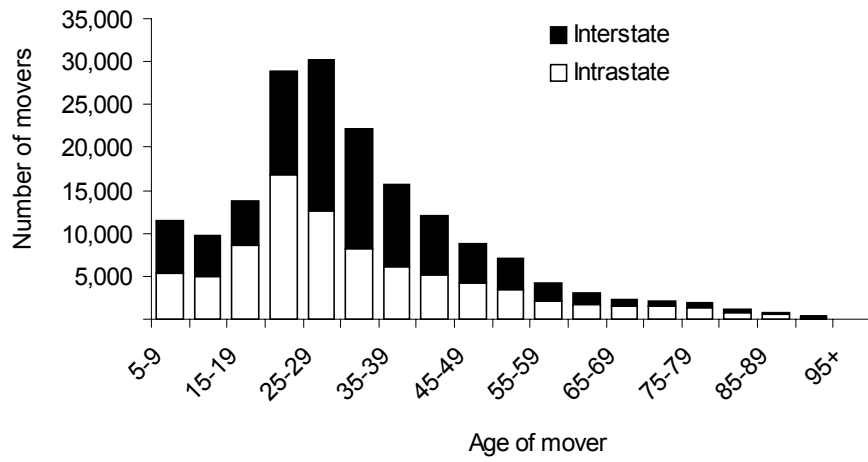
The age profile of these migration flows is an important consideration, in the light of their impact on the overall composition of Sydney's population. The peak age group of arrivals to Sydney during 1996 to 2001 from interstate destinations was young adults aged 20 to 34 years (see Figure 3). The largest group of arrivals from other parts of New South Wales tended to be slightly younger than the

Table 3: Summary of internal migration patterns for Sydney, 1991-2001

A 1991-1996			
Movement to/from regions:	In-migration to Sydney	Out-migration from Sydney	Net-migration loss from Sydney
Within NSW	80,548	116,228	-35,680
Interstate	86,597	117,647	-31,050
Total	167,145	233,875	-66,730
B 1996-2001			
Movement to/from regions:	In-migration to Sydney	Out-migration from Sydney	Net-migration loss from Sydney
Within NSW	85,362	120,738	-35,376
Interstate	90,399	114,851	-24,452
Total	175,761	235,589	-59,828

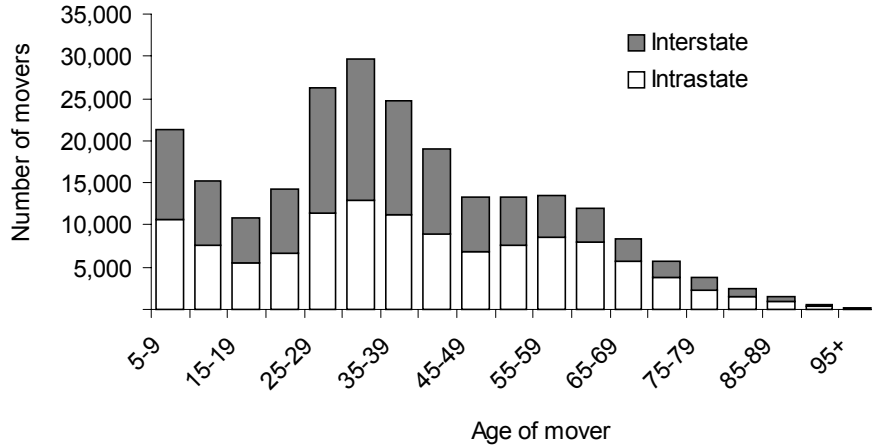
Source: ABS, customised datasets, 1996 and 2001 Censuses of Population and Housing

Figure 3: Age profile of internal migrants to Sydney between 1996 and 2001



Source: ABS, Customised dataset, 2001 census

Figure 4: Age profile of people who left Sydney for elsewhere in Australia between 1996 and 2001



Source: ABS, Customised dataset, 2001 census

The age profile of people leaving Sydney differs from that of people moving into the region (see Figure 4). The peak age groups leaving (for either regional NSW or interstate) are young adults, aged 25 to 39 years, and children aged five to nine years. This suggests that young families make up a significant share of departures from Sydney. Older movers (55 years or older) also make up a sizeable proportion of people leaving Sydney, particularly the net flow to regional areas. This is further evidence of a continuation of the so-called sea-change phenomenon that has been a feature of Australia's mobility patterns for several decades.⁸

From another angle, a person's age appears to determine the geographic scale of movement. Of the people moving to Sydney, older school-age children, younger adults and people aged 55 years or older are more likely to have moved from elsewhere in New South Wales. Adults aged 30-49 years are more likely to have moved from interstate. People aged in their early fifties are equally likely to have come from regional New South Wales or interstate. For the people who left Sydney between 1996 and 2001, children under 15 years and people aged 45 or older were more likely to have gone to other parts of New South Wales; adults aged 20-44 went interstate.

On balance, Sydney had a net loss of people through internal migration (intrastate and interstate moves) in all age groups except for young adults aged 15 to 29 years. The largest net losses from Sydney to other parts of New South Wales occurred in the retirement age groups of 55 to 64 years. The largest losses among those moving interstate were in the 35 to 39 and five to nine year age groups, that is, family groups and younger working age adults.

The age profile of people who moved to Sydney from overseas is similar to the age profile that of people who moved from

interstate. That is, the largest age groups were aged 20 to 39 years (see Figure 5). There was also a sizeable number aged 15 to 19 years and these people are most likely to be overseas students. There are relatively few people in the older age groups. This profile reflects the greater propensity for younger adults to move, particularly over longer distances.⁹ It also reflects the dominance of skilled migrants in Australia's migration program.¹⁰

SYDNEY'S AGE COMPOSITION

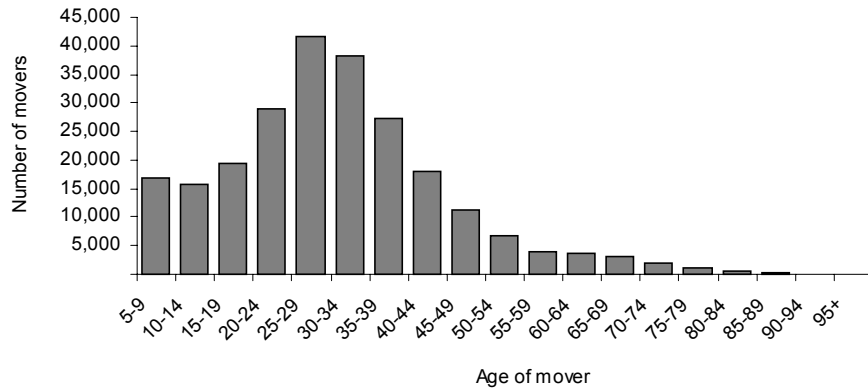
The components of population change described in this paper all have an impact on the age composition of Sydney's population. When comparing the age composition of Sydney's population with that of the balance of New South Wales, the capital's population has a noticeably greater concentration of people in the younger working age groups and proportionally fewer in the older age groups. In 2002, the most populous age groups in Sydney were the 30 to 34 year group (8.3 per cent of the population), and the 20 to 24 year and 35 to 39 year groups (both 7.9 per cent) (see Figure 6).

In the balance of New South Wales, the population presents a bi-modal population distribution, with peaks in the 40 to 44 year group (7.6 per cent) and in the 10 to 14 year group (7.5 per cent). In general, the balance of New South Wales has a greater concentration of children and mature aged people than does Sydney. Sydney continues to attract people in the young adult and working age groups.

SUMMARY

A review of Sydney's recent demographic history has shown that its growth pattern has been highly variable. There are a

Figure 5: Age profile of permanent and long-term movers to Sydney from overseas between 1996 and 2001



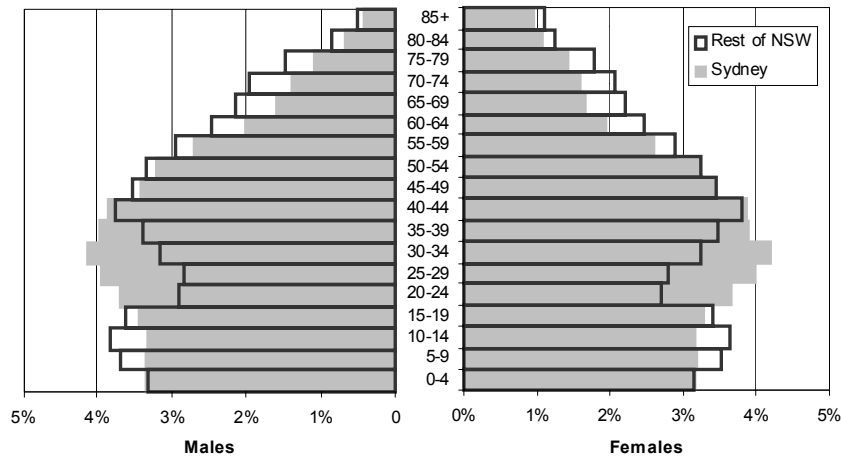
Source: ABS, Customised dataset, 2001 census

number of drivers of this growth, with migration patterns, either internal or overseas, being the most changeable.

Recent trends in net migration levels to Sydney point to a possible change in overseas migration dynamics. The impact

of recent initiatives on state-specific and regional migration, such as the recently introduced Skilled Independent Regional visas, has yet to be seen. Economic development programs in states other than New South Wales may also alter migrant

Figure 6: Population by age and sex, Sydney and rest of NSW, 2002



Source: ABS, *Population by age and sex, NSW*, Cat. no. 3235.1.55.001

flows. Issues such as the high cost of living in Sydney, falling housing affordability, traffic congestion and a myriad of other social issues will affect both the flows into and out of the city. Recent indications are that a net movement from the city may be increasing. Analysts will await the results of next year's census with much anticipation to see what population dynamics have evolved in the first few years of the new millennium.

The major difficulty, in light of these changing population dynamics, is the ability to predict future trends in Sydney's population and plan accordingly. Future trends depend on a multitude of different factors. Some of these factors are understood and can be predicted with a degree of reliability. Other factors and their underlying causes are not well understood. There is also the added complexity of the flow-on effects

of one demographic process on another (for example links between fertility patterns and migration) and the impacts of demographic processes at differing geographic scales.

The challenge for planners at all levels of government is to be able to plan for the divergent needs of the region's population in areas such as housing, infrastructure, social support services, cultural and recreation amenities. As this paper has shown, the only certainty is that population dynamics in the region will change. It is certain that the region will continue to grow in the future; the uncertainty is what levels of growth will be realised.

Note

The views in this paper are those of the authors and do not necessarily reflect those of the New South Wales government.

References

- ¹ Australian Standard Geographical Classification (ASGC), Cat. no. 1216.0, Australian Bureau of Statistics (ABS) Canberra, 2002
- ² A temporary migrant arriving for a stay of 12 months or more is termed a long-term arrival. An Australian citizen or permanent resident going overseas for a temporary period of 12 months or more is termed a long-term departure.
- ³ Department of Immigration and Multicultural and Indigenous Affairs (DIMIA), *Population Flows: Immigration Aspects*, Canberra, 2005, pp 46-48; DIMIA, *Settler Arrivals 1993-94 to 2003-04*, Canberra, 2004
- ⁴ DIMIA, 2005, op. cit.
- ⁵ M. Bell and G. Hugo, *Internal Migration in Australia 1991-1996: Overview and the Overseas-born*, DIMIA, Canberra, 2004
- ⁶ *ibid.* p. 166
- ⁷ I. Burnley and P. Murphy, *Seachange: Movement from Metropolitan to Arcadian Australia*, University of New South Wales Press, Sydney, 2004, chapters 6 and 7
- ⁸ *ibid.*
- ⁹ Bell and Hugo, op. cit., p. 33
- ¹⁰ DIMIA, 2005, op.cit.