SUBMISSION TO THE HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON AGEING

Katharine Betts, December 2002

Summary

Australia has passed through the demographic transition. This means that an older population is inevitable. But we should distinguish between the normal demographic ageing that is a consequence of this transition and the hyper demographic ageing which will result from very low fertility.

If the total fertility rate can be raised to between 1.85 and 2.1 the age structure that will result by 2051 will be manageable, even beneficial. If the total fertility rate should fall to 1.6 (or below) the proportion aged 65 plus will be relatively large and the population as a whole will risk exponential decline.

It is fertility that shapes these different scenarios: immigration has a considerable effect on the overall size of the population but a minimal effect on its age composition.

Contemporary data also suggest that, after early childhood, biological age is only loosely associated with physical dependence. Social dependency, in contrast, is high at all age levels. However, as this is created by social institutions it is within our power to modify it if we wish.

We cannot avoid the ageing of the population. But we should try to ensure that we reach a state of normal ageing rather than hyper ageing, and that we provide opportunities for adults of all ages to contribute to society.

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The ageing of the population of Australia is a consequence of the demographic transition. It is inevitable and, provided we manage it appropriately, it is also desirable. This submission begins by outlining the trends which make demographic ageing inevitable. It then goes on to present data which show the difference between normal ageing and hyper ageing and which demonstrate that slightly higher fertility can ensure normal ageing while high immigration cannot. It then discusses age-related dependency and argues that physical dependency is only tightly related to biological age among infants and pre-schoolers. For most older children and adults dependency is the result of social and economic arrangements not biology. This means that we can change it if we wish.

The three stages of the demographic transition[1]

1 Pre-transition

Prior to around 1750 fertility in Europe was high, but high mortality, particularly of infants and young people, kept population growth in check. (Adam Smith reports that it was common in the Scottish highlands in the C18th for a woman to bear 20 children but to have only two living.)[2] The age structure of the population was youthful but this youthfulness was a by-product of frequent childbearing, early bereavement, waste and misery. Despite its toll in human unhappiness this regime has characterised most of human history. Demographers call this long beginning the *pre-transition* stage of the demographic transition.

2 In-transition

During the late C18th and C19th mortality fell in Europe and in European populations overseas, and life expectancy at birth increased. Much of the fall was concentrated in the younger age groups. But parents did not modify their childbearing and, because of the new lower mortality, numbers grew quite rapidly. This period is called the *in-transition* stage of the transition. It meant substantial population growth but like the pre-transition stage it, too, produced a youthful age structure. (Europe experienced this demographic change first; other areas experienced it later, particularly after WWII when the means of death control, such as sanitation, malaria control, vaccination, and improved food supplies became more widely available.)

3 Post-transition

During the late C19th and C20th fertility began to fall to match the new lower levels of mortality, and population growth from natural increase declined. Fertility decline began among European populations but spread to other areas in the latter decades of the twentieth century. Even if fertility falls to replacement level (a total fertility rate or TFR of 2.1)[3] a population entering the third stage of the transition does not stop growing from natural increase immediately; the momentum provided by its youthful age structure ensures that growth from natural increase continues for some decades. Growth, however, will eventually cease. Once a population has reached the third stage of low mortality and low fertility, it is said to be *post-transition*. A consequence of this new demographic regime is not just the end of growth from natural increase but an older age structure.

The inevitability of demographic ageing

Our journey from Neolithic times through feudalism to modernity and a post-transition demography necessarily brings us to an older age structure. There are only two ways to reverse this. We could return to the high fertility of the in-transition phase and manage the population growth that this entails. But while opinion varies on the number of people that Australia could support, at some point we would have to call a halt. If the end of growth were accomplished by lowering fertility we would be back with the older age structure that characterises all post-transition populations. An alternative is to go further back to the pre-transition stage. If we did this we could enjoy a youthful age structure with little or no population growth, but with massive costs in human suffering. No one would want to do this. Thus an older age structure is inevitable. It is also welcome because it signals our victory over the misery and early death.

Australia's path through the transition

Figure 1 shows the population of Australia at three different times. In 1901 mortality and fertility were still high, though not as high as in a pre-transition population. Not only had mortality fallen from the levels Adam Smith observed, fertility was beginning to fall too. The population was in-transition, small, youthful (median age 24), and still growing from natural increase. In 1995 the population was much larger and had been heading towards the post-transition stage since around 1970. It was still youthful (median age 33) but the youngest age-group categories were already smaller than those of people in their twenties and thirties. The projection for 2051 comes from those calculated by the ABS in 1996 (series I):[4] this assumes a TFR of 1.85 and nil net migration. It provides a snapshot of a mature post-transition society.

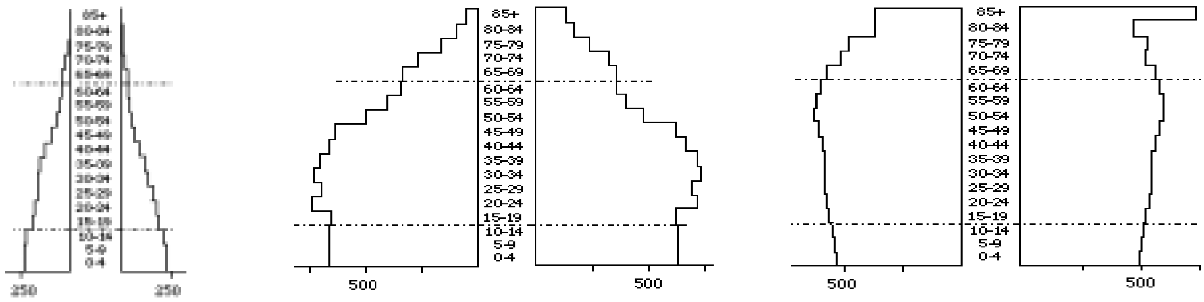
I have used the series I projections published in 1996 in Figure 1 because the most recent projections, published in 2000,[5] do not have a series with nil net migration.[6] While nil net migration is highly unlikely over the next 50 years it is useful to be able to compare projections with and without migration as this allows us to isolate the effects of fertility and natural increase.

Normal demographic ageing

A TFR assumption of 1.85 is now relatively high; in 2001 in Australia the TFR was 1.73. But the 1996 series I projections provide us with a picture of what the Australian population would look like in 2051 if fertility were raised a little and net migration were held at zero. This series provides the closest picture available from the ABS of normal demographic ageing. *Normal demographic ageing* is the phrase used here to describe the age structure that would result from replacement fertility (TFR 2.1) combined with low mortality and high life expectancy at birth.

Figure 4 (below) shows that physical dependency is much more strongly associated with infancy and childhood than it is with old age. This suggests that an older age structure, with relatively fewer children and more older people, will offer the potential for a wider proportion of the population to make an active contribution to society than is the case with a more youthful age-structure.

Figure 1: The population of Australia in 1901, 1995 and as projected for 2051 under series I (1996), thousands[7]



1901	1995	2051
		(series I projection, 1996, TFR 1.85 and nil net migration)
3.2 million	18.1 million	20.1 million
aged 65+: 4.0%	aged 65+: 11.9%	aged 65+: 25.9%
aged 15-64: 60.8%	aged 15-64: 66.6%	aged 15-64: 58.3%
aged 0-14: 35.1%	aged 0-14: 21.4%	aged 0-14: 15.8%

Hyper ageing

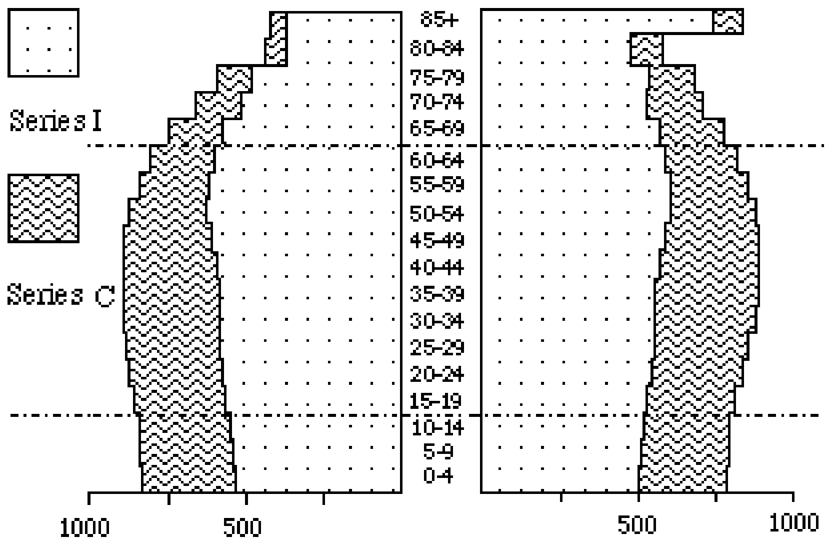
Normal ageing would produce an older age structure than the youthful model which has characterised human populations for almost all of their history. But it would be a manageable structure; indeed it would offer some social and economic advantages.

But this is not the future to which we are currently heading. The TFR is currently well below replacement and is likely to fall even further. If this should occur the age structure would indeed become difficult to manage and eventually the population would face a steep numerical decline. Any recovery from such a decline through natural increase would difficult.[8]

The effects of immigration on the age structure

For some time advocates of high migration have claimed that a large intake is an effective antidote for demographic ageing. Research refutes this claim.[9] Immigration does have a slight effect on the age structure, but this is temporary and entails large increases in the size of the population. Figure 2 superimposes the age pyramid for a projection for 2051 which assumes a TFR of 1.85 plus net annual migration of 100,000 (series C, 1996) onto the 1996 series I projection used in Figure 1. The high migration projection adds over eight million people, including many elderly people, but reduces the proportion aged 65 plus by only 5.4 per cent.

Figure 2: Series I (1996) compared with series C (1996) in 2051, thousands



Series C (TFR 1.85, net migration 100,000 pa)
population in 2051, 28.3 million
aged 65+: 22.5%
aged 15-64: 60.5%
aged 0-4: 17.1%

Series I (TFR 1.85, nil net migration)
population in 2051, 20.1 million
aged 65+: 25.9%
aged 15-64: 58.3%
aged 0-4: 15.8%

Figure 2 suggests that a large immigration-induced increase in the population has only a small effect on the age structure. Table 1 quantifies this effect in a more precise fashion. It presents a range of different projections and allows us to compare the effects of growth through higher fertility with the effects of growth through immigration.

Table 1: Population by size and median age in 1996 and as projected in 2051[10]

	TFR	Net overseas migration	Population in millions	Median age
			—in 1996	—in 1996
1996 (actual figures)	1.8	98,800	18.3	33.5
			—in 2051	—in 2051
Series P 1998	1.60	0	18.3	48.7
Series G 1998	1.75	0	19.5	46.3
Series I 1996	1.85	0	20.1	44.6
Series Three 1998	1.60	70,000	23.5	46.2
Series Two 1998	1.75	70,000	24.9	44.1
Series A 1996	1.85	70,000	26.1	42.6
Series One 1998	1.75	90,000	26.4	43.7
Series C 1996	1.85	100,000	28.3	42.2
First series 2000	1.75	110,000	28.2	43.6
Second series 2000	1.60	90,000	25.4	46.0

At first sight Table 1 suggests that advocates who argue that immigration is an antidote for ageing have a case. Series C 1996 has the second highest migration assumption and the lowest median age in 2051. But this is achieved at a cost: series C produces the highest total population. How great is this cost? Table 2 quantifies this. It takes the lowest projection with the oldest age structure, series P 1998, as the base. It then shows the extra numbers added relative to P and the fall in the median age relative to P for each of the other projections. The final column shows the 'payoff'. How far does the median age fall for each extra million people added?

If we want to minimise the median age in 2051 which of the pathways sketched in the official projections produced in 1996, 1998 and 2000 provides the most efficient route? The answer is series I. Under the series I assumptions, one million extra people provide a larger payoff in terms of the number of years shaved off the median age in 2051 than any other set of assumptions. Under series I, for each extra million people added, the median age is 2.3 years lower in 2051 than it would have been if the series P assumptions had held. All of the assumptions involving migration are less effective. Both of the high migration projections (series C 1998 and First series 2000) add large numbers of people — around 10 million each. But for each extra million they lower the median age by only 0.5 to 0.7 years.

Table 2: Population projections and the median age in 2051: payoff in fall in median age per million people added for different mixes of fertility and net migration relative to projection P

projection	TFR	net migration	millions added relative to P	fall in median age relative to P (years)	payoff: fall in median age (years) per 1 million extra people
Series P 1998	1.60	0	-	-	-
Series G 1998	1.75	0	1.2	2.4	2.0
Series I 1996	1.85	0	1.8	4.1	2.3
Series three 1998	1.60	70,000	5.2	2.5	0.5
Series two 1998	1.75	70,000	6.6	4.6	0.7
Series A 1996	1.85	70,000	7.8	6.1	0.8
Series one 1998	1.75	90,000	8.1	5.0	0.6
Series C 1996	1.85	100,000	10.0	6.5	0.7
First series 2000	1.75	110,000	9.9	5.1	0.5
Second series 2000	1.60	90,000	7.1	2.7	0.4

Immigration has a minimal effect on the age structure. In comparison, slight increases in fertility have a stronger effect. Kippen and McDonald note that the pathway to a stationary population which yields the smallest possible final population is the one which combines replacement fertility with zero net migration. They do not consider this path to be feasible and mention its age structure only in passing.[11] However their work shows that the smallest stationary population would also be the youngest. Thus replacement fertility and nil net migration would be even more effective for reducing the median age than series I.

If we wish to avoid hyper ageing, policies designed to support fertility will be more effective than policies designed to hold immigration at high levels. (They would also mean lower total numbers and thus lower infrastructure costs, and they may prove more acceptable to the general public.)

Implications of an older age structure

The main worry concerned with hyper ageing is that the population would begin a phase of exponential decline from which it would be difficult to recover. If we assume that this scenario is avoided and that we can aim for something like the age structure shown for series I in Figure 1, what would the social and economic implications be?

Analysts often assume that the population aged 15 to 64 is of working age, and that children aged 0 to 14 and elderly people aged 65 plus are dependent on this working-age population. These assumptions are crude. Many young people aged 15 to 19 (or, indeed, 20 to 24) are still economically dependent, many people aged 15 to 64 are not in paid employment and some suffer from physical disabilities which render them dependent on others. In contrast, some people aged 65 plus are still in paid employment and many others are making a substantial social contribution. However if we allow the conventional assumptions to hold for the moment, Table 3 sets out the age distribution for these three broad age-group categories from 1881 to 2001. It also includes the different projections discussed so far for 2051 and, as far as the 2000 series are concerned, for 2101.

Table 3 shows that, between 1881 and 2001, the proportion of nominally working-age people was lowest in 1881 when the population was most youthful: in 1881 only 58.5 per cent were aged 15 to 64. The proportion of the nominally working aged is currently very high (66.9 per cent) but all of the projections show proportions of working-age people within the range of historical experience. If series I in 2051 is compared to the series labelled *First* in 2051 (and 2101) we can see once again that high immigration makes a large difference to numbers but a minimal difference to the age distribution.

Table 3: The population of Australia by Age: 1881 to 1996 and in 2051 and 2101[12]

	Projection inputs			Age distribution			Numbers (millions)
	Year	TFR	net migration (thousands)	0-14 %	15-64 %	65+ %	
	1881			38.9	58.5	2.2	2.3
	1891			36.9	60.1	2.9	3.2
	1901			35.1	60.8	4.0	3.8
	1911			31.7	64.0	4.3	4.5
	1921			31.7	63.9	4.4	5.4
	1933			27.5	66.0	6.5	6.6
	1947			25.1	66.9	8.0	7.6
	1954	*(actual data)*		28.5	63.1	8.3	9.0
	1961			30.2	61.3	8.5	10.5
	1971			28.7	63.0	8.3	13.0
	1981			25.0	65.5	9.7	15.0
	1986			23.1	66.2	10.5	16.0
	1991			22.0	66.8	11.9	17.3
	1996			21.2	66.7	12.1	18.5
	2001			20.5	66.9	12.5	19.5
Series:							
C 1996	2051	1.85	100	17.1	60.4	20.0	28.3
One 1998	2051	1.75	90	15.8	60.5	23.7	26.4
A 1996	2051	1.85	70	16.8	60.0	23.1	26.1
Two 1998	2051	1.75	70	15.7	60.0	24.3	24.9
Three 1998	2051	1.6	70	14.6	61.1	24.3	23.4
I 1995	2051	1.85	0	15.8	58.3	25.9	20.1
G 1998	2051	1.75	0	14.7	58.2	27.1	19.5
P 1998	2051	1.6	0	13.1	58.0	28.9	18.3
First 2000	2051	1.75	110	16.0	59.8	24.2	28.2
Second 2000	2051	1.6	90	14.4	59.6	26.1	25.4
First 2000	2101	1.75	110	15.8	59.3	24.9	31.9
Second 2000	2101	1.6	90	14.4	58.6	27.0	25.3
Third 2000	2101	1.6	70	14.2	58.2	27.6	22.6

The low fertility projections in Table 3 (those assuming a TFR of 1.6) are consistently associated with higher proportions aged 65 plus (irrespective of immigration) but all of the projections show proportions in the 15 to 64 age group which are at least equivalent to those experienced within Australia’s history.

Figure 3 graphs the three age groups as proportions from 1881 to 2051, using series I for the projections. It illustrates the shift between youth and age over the period.

Figure 3: The population of Australia by age, 1881 to 2051 (series I projections), percentages[13]

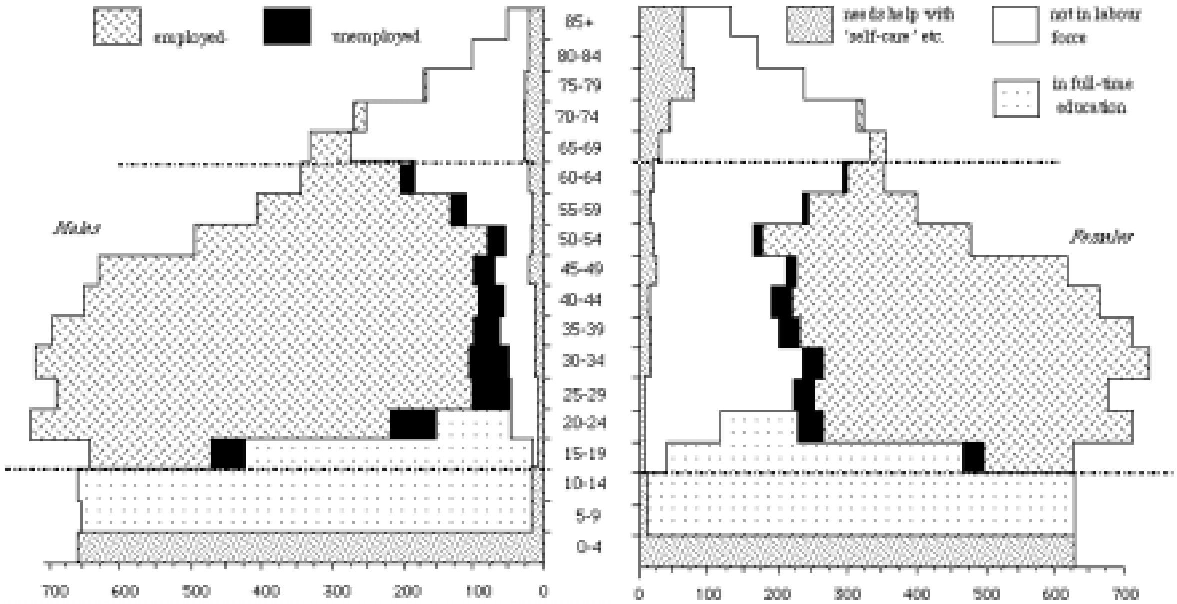
Age-related costs: public and private

It is often assumed that an ageing population means higher public costs for health and welfare. This assumption is correct. However these costs would be partly, though not entirely, offset by lower public costs for the welfare and education of children. But the private costs in money, time and forgone opportunities in caring for children are also considerable. These private costs are certainly higher than the equivalent private costs of caring for the aged. Indeed the aged themselves make a contribution to the private costs of caring for themselves, and each other, that young children cannot make. The aged also contribute to the private costs of caring for children, especially their own grandchildren.

The lower total costs to society of caring for the young will more than offset the higher costs of caring for the elderly. (However to my knowledge there has been no systematic analysis of this question which includes all costs, not just those born by the taxpayer.)[14]

So far we have assumed that the conventional demographic categories (under 15 and over 64) are good indicators of dependency and productively. But these age groupings are in fact rough indicators of people’s actual propensity to contribute to the formal economy. They are even less helpful when we consider people’s capacity to contribute to unpaid domestic labour and to the voluntary sector. Figure 4 attempts a more accurate analysis of actual and potential social contribution by age. It is based on 1995 data.

Figure 4: Population of Australia in 1995 by age, sex and dependency[15]



Population in thousands

Physical dependency and social dependency

Physical dependency

Figure 4 shows levels of ‘severe’ disability by age, the category labelled as needing help with ‘self-care’ etc. These are the people classified by the ABS as suffering from a ‘severe handicap’. They need personal help or supervision in carrying out one or more of the following activities: self care (showering, dressing, eating etc); verbal communication; mobility; health care (taking medications, foot care etc); home help (laundry and housework); home maintenance; and preparing meals. The ABS only measures this level of handicap in people aged five and over. However if we consider the real dependency of some members of society on physical attention from others to perform daily routines all children aged 0 to four should be included in this group.

Apart from very young children, physical dependency on others is more common in the older age group categories but it also occurs in every age group. Indeed even if children aged 0 to four are excluded, there are almost as many people under the age of 65 who are physically dependent on others than are people aged 65 and over.[16] Physical dependency does set limits to the contribution that individuals can make to society but, except among infants and very young children, these limits are only roughly defined by biological age.

Social dependency

As well as showing severe disability Figure 4 shows participation in paid work and full-time education by age. It also shows numbers unemployed and numbers not in workforce. Many of the unemployed would be receiving unemployment benefits; many others in the 15 to 64 age groups who are shown as not in the labour force would be on some other form of welfare benefit, including disability payments. Some of those receiving disability payments would indeed be severely handicapped according to the ABS definition, others less so. There is evidence that disability benefits are becoming a substitute for unemployment benefits in regions of Australia where work is particularly hard to find.

Table 4 shows that proportions dependent on disability benefits between the ages of 15 and 64 are relatively high for a group nominally charged with the support of the rest of the population and that they are rising. But in many cases this dependency is a consequence not of extreme infirmity but of lack of appropriate work.[17] Together with the numbers unemployed sketched in Figure 4, these data suggest that social dependency is quite high within the working age population.

Table 4: People receiving the Disability support Pension by sex and age, 1996 and 2001 (per cent)[18]

	Men		Women	
Age group	1996	2001	1996	2001
16-34	1.9	2.3	1.3	1.6
35-44	3.8	4.6	2.3	2.9
45-54	6.9	7.3	5.1	5.9
55-64	20.1	19.2	5.3	9.0
Total 16-64	5.6	6.1	2.8	3.7

Figure 4 does not show the contribution that people of all ages make to unpaid labour, including the considerable amount of domestic labour done by all people but most especially women, and it does not show contributions to volunteer work. Its sketch of dependency and productivity is rough. But the sketch is clear enough to show that it is a mistake to classify all old people as helpless dependents and all other adults as active contributors to the welfare of others.

Conclusion

The data presented in this paper show that demographic ageing is inevitable and that immigration cannot avert it. They also show that we have a choice between normal demographic ageing and hyper demographic ageing. The former will be manageable and indeed offers social and economic benefits; the latter is unsustainable. The way to ensure that we chose the former is to support Australian families so that fertility is brought back into the 1.85 to 2.1 range.

The data also suggest that, while some dependency within the population is associated with biological age, this association is strong only in the very young age groups. Most dependency is a product of social factors: the need to support children and others while they acquire an education, and the difficulties that we face in providing adequate job opportunities for adults of all ages.

The problem of turning dependency into productivity in the 15 to 64 age groups is already serious. The aged do have special needs; physical dependency does increase with old age. But systematic research which explored both social and physical dependency would probably show that, at present, the 65 plus age group contained no more real dependents in numerical terms than the 15 to 64 age group. Maintaining such a ratio as the population ages does present a challenge, but the challenges of raising fertility and decreasing dependency among those nominally of working age are more immediate. If we can meet these first challenges, managing an older population in 2040 or 2050 will not be difficult.

[1] The following outline of the demographic transition is broad-brush, not a detailed scholarly exposition.

[2] See the chapter on Smith in R. Heilbroner, *The Worldly Philosophers*, Simon and Schuster, New York, 1980.

[3] The TFR is a demographic measure based on the average number of children that would be born to a population of women if they were to pass through their childbearing years conforming to the age-specific birth rates of a given year. We can think of it as average family size without too much distortion. See A. Haupt and T. T. Kane, *Population Handbook: International Edition*, Population Reference Bureau, Inc., Washington, 1980, p. 13.

[4] *Projections of the Populations of Australia, States and Territories: 1995-2051*, Catalogue no. 3222.0, ABS, Canberra. Distributions by five-year age-group categories for series I were supplied by the ABS (unpublished).

[5] *Projections of the Populations of Australia, States and Territories: 1999-2101*, Catalogue no. 3222.0, ABS, Canberra, 2000

[6] The projections published in 1998 do contain series with nil net migration assumptions and these are also used in this submission. However these projections, series P and G 1998 in Table 1, use lower fertility assumptions than series I 1996. See *Projections of the Populations of Australia, States and Territories: 1997-2051*, Catalogue no. 3222.0, ABS, Canberra, 1998.

[7] Sources: for 1901, *Census of the Commonwealth of Australia, 3rd April, 1911*, Commonwealth Statistician, G. H. Knibbs C. M. G., Melbourne, 1914, Vol II, p. 17; 1995, *Demographic Statistics* ABS Catalogue No. 3101.0; series 1 2051, ABS, 1996, op. cit.

[8] See R. Kippen and P. McDonald, 'Achieving population targets for Australia: an analysis of the options', *People and Place*, vol. 6, no. 2, 1998, pp. 11-23.

[9] The ABS reports: 'Even large differences in the level of net overseas migration will have a relatively small impact on the age distribution'. ABS, 2000, op. cit., p. 2. See also C. Young, *Australia's Ageing Population: Policy Options*, Australian Government Publishing Service (Bureau of Immigration Research), Canberra, 1990; R. Kippen, 'A note on aging, immigration and the birth rate', *People and Place*, vol. 7, no. 2, 1999, pp. 18-22; C. Young, 'The future population and the future labour force', *People and Place*, vol. 2, no. 4, 1994, pp. 15-21; C. Young and L. Day, 'Australia's demographic future: determinants of our population', in Australian Academy of Science (Ed.), *Population 2040: Australia's Choice*, Australian Academy of Science, Canberra, 1994, pp. 25-27.

[10] Sources: The 1996 figures are from *Demographic Statistics*, Catalogue no. 3101.0, ABS, Canberra, June 1997.
The projections are from ABS, 1996, op. cit.; 1998 op. cit.; and 2000, op. cit. Details of projection I 1996 and projections P and G 1998 are from unpublished data provided by the ABS.
Notes: Projections One, Two and Three for 1998 are labelled with Roman numerals by the ABS. These labels are spelt out here to avoid confusion with series I 1996. Similarly, the three series for 2000 are also labelled with Roman numerals by the ABS. I have renamed these *First*, *Second* and *Third* series in this paper to avoid confusion with series I 1996 and the 1998 series. (The Third 2000 series is not shown in Table 1 because its assumptions are similar to series three 1998.)

[11] See Kippen and McDonald, 1998, op. cit.,Table 2, p. 17.

[12] Sources: Year Books, various years for 1981 to 1996, projections as for Table 1.

[13] Sources: Year Books, various years for 1981 to 1996; for 2001 *Demographic Statistics*, ABS Catalogue No. 3101.0, March 2002; for projections see notes to Table 1

[14] But see Guest and McDonald who use conventional economic analysis to demonstrate that, notwithstanding demographic ageing, there will be a substantial increase in the standard of living in the future. They conclude that living standards will almost double in the next 50 years. R. Guest and I. M. McDonald, 'Prospective demographic change and Australia's living standards in 2050', *People and Place*, vol. 10, no. 2, 2002, pp. 6-15.

[15] Sources: The data on labour force status and education for the people age 15+ are taken, or derived, from *The Labour Force, Australia,* July 1995, ABS, Canberra, 1995. The data on people needing help with 'self-care' etc are derived by applying the 1988 rates for 'severe handicap' by age and sex to the 1995 population. (See *Disabled and Aged Persons, Australia, 1988: Preliminary Results*, Catalogue no. 4118.0, ABS, Canberra, 1989, p. 13.)
Notes:
Handicap: The ABS did not publish all of its data on people with handicap in the five-year age-group categories used in Figure 4. Between ages 5-59 they used ten or fifteen year age-group categories. Here the numbers of the severely handicapped have been distributed across the five-year groups according to the proportionate distribution of the population. With the elderly the ABS grouped all 'severely handicapped' people into one category aged 75+. The distribution of this category across the ages 75-79, 80-84 and 85+ was allocated here as follows: 0.424 to the 75-79 group, 0.293 to the 80-84 and 0.283 to 85+. This gave the 80-84 group an average 'severe handicap' rate, the 75-79 a slightly below average rate and the 85+ group a slightly above average rate.
The 'severely' handicapped consist of people who required personal help or supervision in carrying out one or more of the following activities: self care (showering, dressing, eating etc); verbal communication; mobility; health care (taking medications, foot care etc); home help (laundry and housework); home maintenance; and preparing meals. They are illustrated in Figure 4 because this group of people is directly dependent on others for coping with daily living. 'Moderately handicapped' people were those who had difficulty with one or more of these activities but who did not require personal help or supervision, while 'mildly handicapped' people had no difficulty with the activities

provided they used a device or appliance. Because the moderately and mildly handicapped did not depend on direct assistance from others in their daily tasks they have not been added to Figure 4. The ABS excluded children aged 0-4 in its estimates of the ‘severely handicapped’ but because all young children require personal help or supervision in self care, they have been added to the group who are directly dependent on others in daily living.

Employment: The data on employment include people in part-time as well as full-time work from the age of 25 and over but only show full-time workers between the ages of 15 and 24 (because many students have part-time jobs). Full-time students who are aged 25 and over are not shown. Figure 4 assumes that no one from the group with a ‘severe’ handicap is in full-time education or in the work force. This is certainly an over-simplification, as is the assumption that children no longer need help with self-care when they turn five and start school.

This graph was originally published in Appendix 1 of K. Betts, *The Great Divide: Immigration Politics in Australia,* Duffy and Snellgrove, Sydney, 1999.

[16] If the rates of handicap measured by the ABS in 1988 are applied to the 1995 population, 360.6 thousand people aged 5 to 64 were severely handicapped in 1995 compared to 407.3 thousand aged 65 plus.

[17] See E. Healy, ‘ “Disability” or “disadvantage”: spatial variation in the disability support pension recipient rate 1996-2001’, *People and Place,* vol. 10, no. 3, 2002, pp. 68-82

[18] Derived from ibid., Tables 2 and 4